DEUTSCHE BANK AKTIENGESELLSCHAFT
Form 20-F
March 25, 2019
As filed with the Securities and Exchange Commission on March 22, 2019

UNITED STATES
SECURITIES EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
Form 20-F

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

or

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

or

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report……

Commission file number 1-15242

Deutsche Bank Aktiengesellschaft
(Exact name of Registrant as specified in its charter) Deutsche Bank Corporation
(Translation of Registrant's name into English)
Federal Republic of Germany
(Jurisdiction of incorporation or organization)
Taunusanlage 12, 60325 Frankfurt am Main, Germany
(Address of principal executive offices)
Andreas Loetscher, +49-69-910-44468, andreas.loetscher@db.com, Taunusanlage 12, 60325 Frankfurt am Main, Germany
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act
See following page

Securities registered or to be registered pursuant to Section 12(g) of the Act.
NONE
(Title of Class)
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.
NONE
(Title of Class)
Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report:

Ordinary Shares, no par value 2,065,428,987
(as of December 31, 2018)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No &#9746

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes No &#9746

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No &#9744

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes No &#9744

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer", "accelerated filer", and emerging growth company in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer

Non-accelerated filer Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards* provided pursuant to Section 13(a) of the Exchange Act.

*The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow

Item 17 Item 18 &#9744

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No &#9746

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

Yes No &#9744

Securities registered or to be registered pursuant to Section 12(b) of the Act (as of February 28, 2019)

Title of each class	Name of each exchange on which registered
Ordinary shares, no par value	New York Stock Exchange
6.55 % Trust Preferred Securities of Deutsche Bank Contingent Capital Trust II	New York Stock Exchange
6.55 % Company Preferred Securities of Deutsche Bank Contingent Capital LLC II* Subordinated Guarantees of Deutsche Bank AG in connection with Capital Securities*	
8.05 % Trust Preferred Securities of Deutsche Bank Contingent Capital Trust V	New York Stock Exchange
8.05 % Company Preferred Securities of Deutsche Bank Contingent Capital LLC V* Subordinated Guarantees of Deutsche Bank AG in connection with Capital Securities*	
Fixed to Fixed Reset Rate Subordinated Tier 2 Notes Due 2028	New York Stock Exchange
4.50 % Fixed Rate Subordinated Tier 2 Notes Due 2025	New York Stock Exchange
DB Agriculture Long Exchange Traded Notes due April 1, 2038	NYSE Arca
DB Agriculture Double Long Exchange Traded Notes due April 1, 2038	NYSE Arca
DB Base Metals Short Exchange Traded Notes due June 1, 2038	NYSE Arca
DB Base Metals Double Short Exchange Traded Notes due June 1, 2038	NYSE Arca
DB Base Metals Double Long Exchange Traded Notes due June 1, 2038	NYSE Arca
DB Commodity Short Exchange Traded Notes due April 1, 2038	NYSE Arca
DB Commodity Double Long Exchange Traded Notes due April 1, 2038	NYSE Arca

DB Crude Oil Short Exchange Traded Notes due June 1, 2038	NYSE Arca
DB Crude Oil Long Exchange Traded Notes due June 1, 2038	NYSE Arca
DB Crude Oil Double Short Exchange Traded Notes due June 1, 2038	NYSE Arca
DB Gold Double Long Exchange Traded Notes due February 15, 2038	NYSE Arca
DB Gold Double Short Exchange Traded Notes due February 15, 2038	NYSE Arca
DB Gold Short Exchange Traded Notes due February 15, 2038	NYSE Arca
ELEMENTS “Dogs of the Dow” Linked to the Dow Jones High Yield Select 10 Total Return Index due November 14, 2022	NYSE Arca
ELEMENTS Linked to the Morningstar® Wide Moat Focus(SM) Total Return Index due October 24, 2022	NYSE Arca
FI Enhanced Global High Yield Exchange Traded Notes Linked to the MSCI World High Dividend Yield USD Gross Total Return Index due October 12, 2023	NYSE Arca

*For listing purpose only, not for trading

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Deutsche Bank Aktiengesellschaft, which we also call Deutsche Bank AG, is a stock corporation organized under the laws of the Federal Republic of Germany. Unless otherwise specified or required by the context, in this document, references to "we", "us", "our", "the Group", "Deutsche Bank" and "Deutsche Bank Group" are to Deutsche Bank Aktiengesellschaft and its consolidated subsidiaries.

Due to rounding, numbers presented throughout this document may not add up precisely to the totals we provide and percentages may not precisely reflect the absolute figures.

Our registered address is Taunusanlage 12, 60325 Frankfurt am Main, Germany, and our telephone number is +49-69-910-00.

Inclusion of Our Annual Report

We have included as an integral part of this Annual Report on Form 20-F our Annual Report 2018, to which we refer for the responses to certain items hereof. Certain portions of the Annual Report 2018 have been omitted, as indicated therein. The included Annual Report 2018 contains our consolidated financial statements, which we also incorporate by reference into this report, in response to Items 8.A and 18. Such consolidated financial statements differ from those contained in the Annual Report 2018 used for other purposes in that, for Notes 44 and 45 thereto, notes addressing non-U.S. requirements have been replaced with notes addressing U.S. requirements, and Note 46 thereto has been omitted. Such consolidated financial statements have been audited by KPMG AG Wirtschaftsprüfungsgesellschaft, as described in their “Report of Independent Registered Public Accounting Firm” included in the Annual Report 2018, which report is included only in the version of the Annual Report 2018 included in this Annual Report on Form 20-F.

Cautionary Statement Regarding Forward-Looking Statements

We make certain forward-looking statements in this document with respect to our financial condition and results of operations. In this document, forward-looking statements include, among others, statements relating to:

- the potential development and impact on us of economic and business conditions and the legal and regulatory environment to which we are subject;
- the implementation of our strategic initiatives and other responses thereto;
- the development of aspects of our results of operations;
- our expectations of the impact of risks that affect our business, including the risks of losses on our trading processes and credit exposures; and
- other statements relating to our future business development and economic performance.

In addition, we may from time to time make forward-looking statements in our periodic reports to the United States Securities and Exchange Commission on Form 6-K, annual and interim reports, invitations to Annual General Meetings and other information sent to shareholders, offering circulars and prospectuses, press releases and other written materials. Our Management Board, Supervisory Board, officers and employees may also make oral forward-looking statements to third parties, including financial analysts.

Forward-looking statements are statements that are not historical facts, including statements about our beliefs and expectations. We use words such as “believe”, “anticipate”, “expect”, “intend”, “seek”, “estimate”, “project”, “should”, “poten “reasonably possible”, “plan”, “aim” and similar expressions to identify forward-looking statements.

By their very nature, forward-looking statements involve risks and uncertainties, both general and specific. We base these statements on our current plans, estimates, projections and expectations. You should therefore not place too much reliance on them. Our forward-looking statements speak only as of the date we make them, and we undertake no obligation to update any of them in light of new information or future events.

We caution you that a number of important factors could cause our actual results to differ materially from those we describe in any forward-looking statement. These factors include, among others, the following:

- the potential development and impact on us of economic and business conditions;
- other changes in general economic and business conditions;

- changes and volatility in currency exchange rates, interest rates and asset prices;
- changes in governmental policy and regulation, including measures taken in response to economic, business, political and social conditions;
- the potential development and impact on us of legal and regulatory proceedings to which we are or may become subject;
- changes in our competitive environment;
- the success of our acquisitions, divestitures, mergers and strategic alliances;
- our success in implementing our strategic initiatives and other responses to economic and business conditions and the legal and regulatory environment and realizing the benefits anticipated therefrom; and
- other factors, including those we refer to in "Item 3: Key Information – Risk Factors" and elsewhere in this document and others to which we do not refer.

Use of Non-GAAP Financial Measures

This document and other documents we have published or may publish contain non-GAAP financial measures. Non-GAAP financial measures are measures of our historical or future performance, financial position or cash flows that contain adjustments that exclude or include amounts that are included or excluded, as the case may be, from the most directly comparable measure calculated and presented in accordance with IFRS in our financial statements. Examples of our non-GAAP financial measures, and the most directly comparable IFRS financial measures, are as follows:

Non-GAAP Financial Measure	Most Directly Comparable IFRS Financial Measure
Net income attributable to Deutsche Bank shareholders	Net income
Adjusted costs	Noninterest expenses
Tangible shareholders' equity, Average tangible shareholders' equity, Tangible book value, Average tangible book value	Total shareholders' equity (book value)
Post-tax return on average shareholders' equity (based on Net income attributable to Deutsche bank shareholders)	Post-tax return on average shareholders' equity
Post-tax return on average tangible shareholders' equity	Post-tax return on average shareholders' equity
Tangible book value per basic share outstanding, Book value per basic share outstanding	Book value per share outstanding

For descriptions of these non-GAAP financial measures and the adjustments made to the most directly comparable financial measures under IFRS, please refer to "Supplementary Information: Non-GAAP Financial Measures", which is incorporated by reference herein.

When used with respect to future periods, our non-GAAP financial measures are also forward-looking statements. We cannot predict or quantify the levels of the most directly comparable financial measures under IFRS that would correspond to these measures for future periods. This is because neither the magnitude of such IFRS financial measures, nor the magnitude of the adjustments to be used to calculate the related non-GAAP financial measures from such IFRS financial measures, can be predicted. Such adjustments, if any, will relate to specific, currently unknown, events and in most cases can be positive or negative, so that it is not possible to predict whether, for a future period, the non-GAAP financial measure will be greater than or less than the related IFRS financial measure.

CRR/CRD 4 Solvency Measures

Our regulatory assets, exposures, risk-weighted assets, capital and ratios thereof are calculated for regulatory purposes as of December 31, 2018, December 31, 2017 and December 31, 2016 and set forth throughout this document under the regulation on prudential requirements for credit institutions and investment firms ("CRR") and the Capital Requirements Directive 4 ("CRD 4") implementing Basel 3, which were published on June 27, 2013 and which apply on and after January 1, 2014. CRR/CRD 4 provides for "transitional" (or "phase-in") rules, under which capital instruments that are no longer eligible under the new rules are permitted to be phased out as the new rules on regulatory adjustments are phased in, as well as regarding the risk weighting of certain categories of assets. In some cases, CRR/CRD 4 maintains transitional rules that had been adopted in earlier capital adequacy frameworks through Basel 2 or Basel 2.5. The transitional rules relate, e.g., to the risk weighting of certain categories of assets. Unless otherwise noted, our CRR/CRD 4 solvency measures as of December 31, 2018, December 31, 2017 and December 31, 2016 set forth in this document reflect these transitional rules.

We also set forth in this document such CRR/CRD 4 measures on a "fully loaded" basis, reflecting full application of the final CRR/CRD 4 framework without consideration of the transitional provisions under CRR/CRD 4, except as described below. Measures calculated pursuant to our fully loaded methodology are non-GAAP financial measures.

With effect from January 1, 2018, the CRR/CRD 4 transitional rules under which Common Equity Tier 1 (CET 1) regulatory adjustments were phased in have reached a rate of 100 %, together with the 100 % phase-out rate of minority interest only recognizable under the transitional rules. For risk-weighted assets (RWA) the grandfathering of equity investments at a risk weight of 100 % expired by the end of 2017. Instead a risk weight between 190 % and 370 % determined based on Article 155 CRR under the CRR/CRD 4 is applied. Hence, starting 2018 onwards, the CET 1 capital and RWA figures show no difference between CRR/CRD 4 and fully loaded CRR/CRD 4.

The transitional rules included rules permitting the grandfathering of equity investments at a risk-weight of 100 % instead of a risk weight between 190 % and 370 % determined based on Article 155 CRR that would apply under the CRR/CRD 4 fully loaded rules. Despite the grandfathering rule for equity investments not applying under the full application of the final CRR/CRD 4 framework, we continued to apply it in our CRR/CRD 4 fully loaded methodology for a limited subset of equity positions for periods ended December 31, 2016 and before, based on our intention to mitigate the impact of the expiration of the grandfathering rule through sales of the underlying assets or other measures prior to its expiration at end of 2017. We did not apply the grandfathering rule in our CRR/CRD 4 fully loaded methodology for periods ended on or after December 31, 2017.

As the final implementation of CRR/CRD 4 is subject to regulatory interpretation and decision making and may differ from our expectations, and our competitors' assumptions and estimates regarding such implementation may vary, our fully loaded CRR/CRD 4 measures may not be comparable with similarly labeled measures used by our competitors.

We believe that these fully loaded CRR/CRD 4 calculations provide useful information to investors as they reflect our progress against the new regulatory capital standards and as many of our competitors have been describing CRR/CRD 4 calculations on a "fully loaded" basis.

For descriptions of these fully loaded CRR/CRD 4 measures and the differences from the most directly comparable measures under the CRR/CRD 4 transitional rules, please refer to "Management Report: Risk Report: Risk and Capital Performance: Capital, Leverage Ratio and MREL" in the Annual Report 2018, in particular the subsections thereof entitled "Development of Regulatory Capital", "Development of Risk-Weighted Assets" and "Leverage Ratio", and, with respect to the effect of the grandfathering rule on our fully loaded CRR/CRD 4 measures, to "Supplementary Information: Non-GAAP Financial Measures: Fully loaded CRR/CRD 4 Measures" in the Annual Report 2018, each of which are incorporated by reference herein.

When used with respect to future periods, our fully loaded CRR/CRD 4 measures are also forward-looking statements. We cannot predict or quantify the levels of the most directly comparable transitional CRR/CRD 4 measures that would correspond to these fully loaded CRR/CRD 4 measures for future periods. In managing our business with the aim of achieving targets based on fully loaded CRR/CRD 4 measures, the relation between the fully loaded and transitional measures will depend upon, among other things, management action taken in light of future business, economic and other conditions.

Use of Internet Addresses

This document contains inactive textual addresses of Internet websites operated by us and third parties. Reference to such websites is made for informational purposes only, and information found at such websites is not incorporated by reference into this document.

PART I

Item 1: Identity of Directors, Senior Management and Advisers

Not required because this document is filed as an annual report.

Item 2: Offer Statistics and Expected Timetable

Not required because this document is filed as an annual report.

Item 3: Key Information

Selected Financial Data

We have derived the data we present in the tables below from our audited consolidated financial statements for the years presented. You should read all of the data in the tables below together with the consolidated financial statements and notes included in “Item 18: Financial Statements” and the information we provide in “Item 5: Operating and Financial Review and Prospects.” Except where we have indicated otherwise, we have prepared all of the consolidated financial information in this document in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”) and as endorsed by the European Union (“EU”). Our corporate division and segment data comes from our management reporting systems and is not in all cases prepared in accordance with IFRS. For a discussion of the major differences between our management reporting systems and our consolidated financial statements under IFRS, see Note 4 “Business Segments and Related Information” to the consolidated financial statements.

Income Statement Data

in € m.	2018	2017	2016	2015	2014

Net interest income	13,192	12,378	14,707	15,881	14,272
Provision for credit losses	525	525	1,383	956	1,134
Net interest income after provision for credit losses	12,667	11,853	13,324	14,925	13,138
Commissions and fee income	10,039	11,002	11,744	12,765	12,409
Net gains (losses) on financial assets/liabilities at fair value through profit or loss	1,332	2,926	1,401	3,842	4,299
Other noninterest income (loss)	753	141	2,161	1,037	969
Total net revenues	25,316	26,447	30,014	33,525	31,949
Compensation and benefits	11,814	12,253	11,874	13,293	12,512
General and administrative expenses	11,286	11,973	15,454	18,632	14,654
Policyholder benefits and claims	0	0	374	256	289
Impairment of goodwill and other intangible assets	0	21	1,256	5,776	111
Restructuring activities	360	447	484	710	133
Total noninterest expenses	23,461	24,695	29,442	38,667	27,699
Income (loss) before income taxes	1,330	1,228	(810)	(6,097)	3,116
Income tax expense	989	1,963	546	675	1,425
Net income (loss)	341	(735)	(1,356)	(6,772)	1,691
Net income attributable to noncontrolling interests	75	15	45	21	28
Net income (loss) attributable to Deutsche Bank shareholders and additional equity components	267	(751)	(1,402)	(6,794)	1,663
in € (unless stated otherwise)					
Basic earnings per share[1,2]	(0.01)	(0.53)	(1.08)	(4.52)	1.20
Diluted earnings per share[1,3]	(0.01)	(0.53)	(1.08)	(4.52)	1.17
Dividends paid per share[4]	0.11	0.196	0.00	0.75	0.75
Dividends paid per share in US $[5]	0.13	0.21	0.00	0.84	1.02

[1] The number of average basic shares outstanding has been adjusted for all periods before April 2017 in order to reflect the effect of the bonus element of the subscription rights issue in connection with the capital increase in April 2017. The number of average basic shares outstanding has been adjusted for 2014 in order to reflect the effect of the bonus component of subscription rights issued in connection with the capital increase completed in June 2014.

[2] We calculate basic earnings per share for each period by dividing our net income attributable to Deutsche Bank shareholders by the average number of common shares outstanding. Earnings were adjusted by € 292 million, € 298 million, € 276 million and € 228 million net of tax for the coupons paid on Additional Tier 1 Notes in April 2018, April 2017, April 2016 and April 2015, respectively.

[3] We calculate diluted earnings per share for each period by dividing our net income attributable to Deutsche Bank shareholders by the average number of common shares outstanding, both after assumed conversions. Earnings were adjusted by € 292 million, € 298 million, € 276 million and € 228 million net of tax for the coupons paid on Additional Tier 1 Notes in April 2018, April 2017, April 2016 and April 2015, respectively. No dilutive effect for 2018 as the net income was offset by coupons paid on Additional Tier 1 Notes. For 2017, 2016 and 2015, there is no dilutive effect as the Group reported a net loss.

[4] Dividends declared and paid in the year.

5Dividends declared and paid in US $ were translated from euro into US $ based on the exchange rates as of the respective payment days.

6 The dividend paid in 2017 consisted of € 0.11 for 2016 and of € 0.08 for 2015 that were paid simultaneously in 2017 after the agreement by the annual general meeting in 2017.

Balance Sheet Data

	2018	2017	2016	2015	2014
	in € m.	in € m.	in € m.	in € m.	in € m.
Total assets	1,348,137	1,474,732	1,590,546	1,629,130	1,708,703
Loans at amortized cost	400,297	401,699	408,909	427,749	405,612
Deposits	564,405	581,873	550,204	566,974	532,931
Long-term debt	152,083	159,715	172,316	160,016	144,837
Common shares1	5,291	5,291	3,531	3,531	3,531
Total shareholders' equity	62,495	63,174	59,833	62,678	68,351
Common Equity Tier 1 capital (CRR/CRD 4)2	47,486	50,808	47,782	52,429	60,103
Common Equity Tier 1 capital (CRR/CRD 4 fully loaded)2	47,486	48,300	42,279	44,101	46,076
Tier 1 capital (CRR/CRD 4)2	55,091	57,631	55,486	58,222	63,898
Tier 1 capital (CRR/CRD 4 fully loaded)2	52,082	52,921	46,829	48,651	50,695
Total regulatory capital (CRR/CRD 4)2	61,292	64,016	62,158	64,522	68,293
Total regulatory capital (CRR/CRD 4 fully loaded)2	61,292	63,250	59,502	60,976	63,072

1Capital increased from authorized capital against cash contributions through public offerings with subscription rights in April 2017 and in June 2014.

2Figures presented based on the transitional rules ("CRR/CRD 4") and the full application ("CRR/CRD 4 fully loaded") of the CRR/CRD 4 framework.

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Certain Key Ratios and Figures

	2018	2017	2016	2015	2014
Share price at period-end1	€ 6.97	€ 15.88	€ 15.40	€ 20.10	€ 22.30
Share price high1	€ 16.46	€ 17.82	€ 19.72	€ 29.83	€ 34.05
Share price low1	€ 6.68	€ 13.11	€ 8.83	€ 18.46	€ 20.22
Book value per basic share outstanding2,4	€ 29.69	€ 30.16	€ 38.14	€ 40.31	€ 44.02
Tangible book value per basic share outstanding3,4	€ 25.71	€ 25.94	€ 32.42	€ 33.83	€ 34.39
Post-tax return on average shareholders' equity5	0.4%	(1.2)%	(2.3)%	(9.8)%	2.7%
Post-tax return on average tangible shareholders' equity6	0.5%	(1.4)%	(2.7)%	(12.3)%	3.5%
Cost/income ratio7	92.7%	93.4%	98.1%	115.3%	86.7%
Compensation ratio8	46.7%	46.3%	39.6%	39.7%	39.2%
Noncompensation ratio9	46.0%	47.0%	58.5%	75.7%	47.5%

Common Equity Tier 1 capital ratio (CRR/CRD 4)10	13.6%	14.8%	13.4%	13.2%	15.2%
Common Equity Tier 1 capital ratio (CRR/CRD 4 fully loaded)10	13.6%	14.0%	11.8%	11.1%	11.7%
Tier 1 capital ratio (CRR/CRD 4)10	15.7%	16.8%	15.6%	14.7%	16.1%
Tier 1 capital ratio (CRR/CRD 4 fully loaded)10	14.9%	15.4%	13.1%	12.3%	12.9%
Employees at period-end (full-time equivalent):					
In Germany	41,669	42,526	44,600	45,757	45,392
Outside Germany	50,068	55,009	55,144	55,347	52,746
Branches at period-end:					
In Germany	1,409	1,570	1,776	1,827	1,845
Outside Germany	655	855	880	963	969

1Historical share prices have been adjusted on March 20, 2017 with retroactive effect to reflect the capital increase by multiplying a correcting factor of 0.8925 and on June 5, 2014 with retroactive effect to reflect the capital increase by multiplying a correcting factor of 0.9538.

2Shareholders' equity divided by the number of basic shares outstanding (both at period-end).

3Shareholders' equity less goodwill and other intangible assets, divided by the number of basic shares outstanding (both at period-end).

4The number of average basic shares outstanding has been adjusted for all periods before April 2017 in order to reflect the effect of the bonus element of the subscription rights issue in connection with the capital increase in April 2017 and 2014 has been adjusted in order to reflect the effect of the bonus component of subscription rights issued in connection with the capital increase completed in June 2014.

5Net income attributable to our shareholders as a percentage of average shareholders' equity.

6Net income attributable to our shareholders as a percentage of average tangible shareholders' equity.

7Total noninterest expenses as a percentage of net interest income before provision for credit losses, plus noninterest income.

8Compensation and benefits as a percentage of total net interest income before provision for credit losses, plus noninterest income.

9Noncompensation noninterest expenses, which is defined as total noninterest expenses less compensation and benefits, as a percentage of total net interest income before provision for credit losses, plus noninterest income.

10Figures are based on the transitional rules ("CRR/CRD 4") and the full application ("CRR/CRD 4 fully loaded") of the CRR/CRD 4 framework.

Dividends

The following table shows the dividend per share in euro and in US dollars for the years ended December 31, 2018, 2017, 2016, 2015 and 2014. We declare our dividends at our Annual General Meeting following each year. For 2018, the Management Board will propose to the Annual General Meeting to pay a dividend of € 0.11 per share. Our dividends are based on the non-consolidated results of Deutsche Bank AG as prepared in accordance with German accounting principles. Because we declare our dividends in euro, the amount an investor actually receives in any other currency depends on the exchange rate between euro and that currency at the time the euros are converted into that

currency.

In general, the German withholding tax applicable to dividends is 26.375 % (consisting of a 25 % withholding tax and an effective 1.375 % surcharge). According to an amendment of the German Investment Tax Act dividends received by a fund within the meaning of the German Investment Tax Act are subject to 15 % German withholding tax equal to the Treaty tax rate. For individual German tax residents the withholding tax paid represents for private dividends, generally, the full and final income tax applicable to the dividends. Dividend recipients who are tax residents of countries that have entered into a convention for avoiding double taxation may be eligible to receive a refund from the German tax authorities for a portion of the amount withheld and in addition may be entitled to receive a tax credit for the German withholding tax not refunded in accordance with their local tax law.

US residents will be entitled to receive a refund equal to 11.375 % of the dividends received. For US federal income tax purposes, the dividends we pay are not eligible for the dividends received deduction generally allowed for dividends received by US corporations from other US corporations.

Dividends in the table below are presented before German withholding tax.

See “Item 10: Additional Information – Taxation” for more information on the tax treatment of our dividends.

			Payout ratio2,3	
	Dividends per share1,4	Dividends per share4	Basic earnings per share	Diluted earnings per share
2018 (proposed)	$ 0.13	€ 0.11	N/M	N/M
2017	$ 0.13	€ 0.11	N/M	N/M
2016	$ 0.12	€ 0.11	N/M	N/M
2015	$ 0.09	€ 0.08	N/M	N/M
2014	$ 0.91	€ 0.75	63 %	64 %

N/M – Not meaningful

1For your convenience, we present dividends in US dollars for each year by translating the euro amounts at the period end rate for the last business day of each year.

2We define our payout ratio as the dividends we paid per share in respect of each year as a percentage of our basic and diluted earnings per share for that year.

3 The number of average basic and diluted shares outstanding has been adjusted in order to reflect the effect of the bonus element of the subscription rights issue in connection with the capital increase in April 2017 and in June 2014. No dilutive effect for 2018 as net income was offset by AT1 coupons paid. For 2017, 2016 and 2015, there is no dilutive effect as the Group reported a net loss attributable to shareholders.

4Dividends for 2016 and 2015 were approved by the annual general meeting in 2017 and were paid simultaneously in 2017.

Capitalization and Indebtedness

Consolidated capitalization in accordance with IFRS as of December 31, 2018

	in € m.
Debt:1,2	
Long-term debt	152,083
Trust preferred securities	3,168
Long-term debt at fair value through profit or loss	5,607
Total debt	160,859
Shareholders' equity:	
Common shares (no par value)	5,291
Additional paid-in capital	40,252
Retained earnings	16,714
Common shares in treasury, at cost	(15)
Accumulated other comprehensive income, net of tax	
Unrealized net gains (losses) on financial assets at fair value through other comprehensive income, net of tax and other	(34)
Unrealized net gains (losses) on derivatives hedging variability of cash flows, net of tax	17
Unrealized net gains (losses) on assets classified as held for sale, net of tax	0
Unrealized net gains (losses) attributable to change in own credit risk of financial liabilities designated at fair value through profit and loss, net of tax	28
Foreign currency translation, net of tax	228
Unrealized net gains (losses) from equity method investments	15
Total shareholders' equity	62,495
Equity component of financial instruments	4,675
Noncontrolling interests	1,568
Total equity	68,737
Total capitalization	229,596

[1] € 785 million (0.5 %) of our debt was guaranteed as of December 31, 2018. This consists of debt of a subsidiary which is guaranteed by the German government.

2€ 62,038 million (39 %) of our debt was secured as of December 31, 2018.

Reasons for the Offer and Use of Proceeds

Not required because this document is filed as an annual report.

Risk Factors

An investment in our securities involves a number of risks. You should carefully consider the following information about the risks we face, together with other information in this document, when you make investment decisions involving our securities. If one or more of these risks were to materialize, it could have a material adverse effect on our financial condition, results of operations, cash flows or prices of our securities.

Risks Relating to the Macroeconomic, Geopolitical and Market Environment

While the global economy showed robust growth in 2018, significant macroeconomic risks remain that could negatively affect the results of operations and financial condition in some of our businesses as well as our strategic plans, including deterioration of the economic outlook for the euro area and slowing in emerging markets, trade tensions between the United States and China as well between the United States and Europe, inflation risks, Brexit, European elections and geopolitical risks.

The global economy showed robust growth, while emerging markets slowed somewhat towards the end of the year 2018. Trade tensions between the United States and China as well between the United States and Europe reached a level that weighed on global trade. Meanwhile, the strong US economy provided positive impetus for global growth. Against this backdrop, global economic growth remained flat at 3.8 % in 2018, following 3.8 % in 2017. The global inflation rate increased to 3.3 % in 2018.

Over the course of 2018, the economic outlook for the euro area slowly deteriorated with Italy and Germany in or close to a technical recession in the second half of the year. The European economy expanded by 1.8 %, roughly 0.5 percentage points below the expectations at the start of the year, due to temporary effects in some member states as well as the worsened external economic environment. Growth was supported by domestic demand underpinned by solid income growth and accommodative financial conditions. While monetary policy remained accommodative, the European Central Bank (“ECB”) phased out its net asset purchases. Consumer prices in the euro area rose by 1.7 % in 2018. German GDP growth of 1.4 % in 2018 surprised to the downside.

The US economy showed a strong performance. Supported by tax cuts, fiscal spending as well as supportive financial conditions and consumer spending backed by wage growth and a tight labor market, US GDP grew by 2.9 % in 2018. The inflation rate reached 2.4 % and thus stood above the Federal Reserve's target of 2 %. The US central bank's monetary policy responded with four interest rate increases in 2018.

Japan’s GDP growth slowed considerably to 0.7 % in 2018. In 2018, GDP in the emerging markets increased by 4.9 %. At 6.6 %, the Chinese economy grew somewhat more strongly than expected at the beginning of 2018. Chinese exports were resilient despite growing trade tensions throughout 2018.

Our heat-map of global risks has modestly changed in 2019 compared to 2018. Macroeconomic risks are now more pronounced to the downside, especially in Asia and Europe. China’s GDP growth is slowing as policymakers focus on deleveraging and tightening fiscal policy, but officials still have available tools to respond to a downturn and we expect further easing of Chinese monetary policy this year. In Europe, growth is stagnating and the debt burden in some countries, especially Italy, is a concern. Political risks also remain elevated, which may weigh on business investment and economic activity, as Brexit negotiations continue and elections for the European Parliament are due in May 2019. Other elections are possible across the major European countries. In the United States, we remain attuned to the risk of higher inflation, given the extremely tight levels of labor market supply, as well as any signs of a more substantive slowdown. We anticipate a slower pace of growth in 2019 versus 2018, but do not view a US recession as likely. A failure to secure a trade deal between the United States and China, the imposition of additional tariffs in the automobile sector as well as on remaining China imports, or an escalation of conflicts beyond trade, could further reduce growth.

If these risks materialize, or current negative conditions persist or worsen, our business, results of operations or strategic plans could be adversely affected.

In the European Union, continued elevated levels of political uncertainty could have unpredictable consequences for the financial system and the greater economy, and could contribute to European de-integration in certain areas,

potentially leading to declines in business levels, write-downs of assets and losses across our businesses. Our ability to protect ourselves against these risks is limited.

The last several years have been characterized by increased political uncertainty as Europe in particular has been impacted by the European sovereign debt crisis, the potential withdrawal of the United Kingdom from the European Union (“ Brexit”), Italian political and economic developments, protests in France, the refugee crisis and the increasing attractiveness to voters of populist and anti-austerity movements. A disorderly Brexit could aggravate the already uncertain economic outlook in the UK and Europe and hamper growth. In Continental Europe, the confrontation between Italy and the European Commission, an escalation of the “Yellow Vest” movement in France, or uncertainties around upcoming European Parliamentary elections could heighten volatility and harm eurozone growth. Although the severity of the European debt crisis appeared to have abated somewhat over recent years as the actions by the ECB, the rescue packages and the economic recovery appeared to have stabilized the situation in Europe, political uncertainty has nevertheless continued to be at an elevated level in recent periods and could trigger unwinding of aspects of European integration that have benefitted our businesses. Against this backdrop, the prospects for national structural reform and further integration among EU member states, both viewed as important tools to reduce the eurozone’s vulnerabilities to future crises, appear to have worsened. These trends may ultimately result in material reductions in our business levels as our customers rein in activity levels in light of decreased economic output and increased uncertainty, which would materially adversely affect our operating results and financial condition.

An escalation of political risks could have consequences both for the financial system and the greater economy as a whole, potentially leading to declines in business levels, write-downs of assets and losses across our businesses.

In addition, in a number of EU member states which had national elections since 2017, including France, Germany and the Netherlands, political parties disfavoring current levels of European integration, or espousing the unwinding of European integration to varying extents, have attracted support. The Brexit vote has also given a voice to some of these political parties to challenge European integration. The resulting uncertainty could have significant effects on the value of the euro and on prospects for member states’ financial stability, which in turn could potentially lead to a significant deterioration of the sovereign debt market, especially if Brexit or any other member country’s exit did not result in the strongly adverse effects on the exiting country that many have predicted. If one or more members of the eurozone defaults on their debt obligations or decides to leave the common currency, this would result in the reintroduction of one or more national currencies. Should a eurozone country conclude it must exit the common currency, the resulting need to reintroduce a national currency and restate existing contractual obligations could have unpredictable financial, legal, political and social consequences, leading not only to significant losses on sovereign debt but also on private debt in that country. Given the highly interconnected nature of the financial system within the eurozone, and the high levels of exposure we have to public and private counterparties around Europe, our ability to plan for such a contingency in a manner that would reduce our exposure to non-material levels is likely to be limited. If the overall economic climate deteriorates as a result of one or more departures from the eurozone, our businesses could be adversely affected, and, if overall business levels decline or we are forced to write down significant exposures among our various businesses, we could incur substantial losses.

The potential withdrawal of the United Kingdom from the European Union – Brexit – may have adverse effects on our business, results of operations or strategic plans.

The UK voted on June 23, 2016 in a non-binding national referendum to withdraw from the European Union. Following an act of Parliament adopted in early 2017, on March 29, 2017, the UK formally gave notice of its withdrawal from the European Union to the European Council. Pursuant to the Treaty of the European Union, withdrawal would be effective on the date of entry into force of a withdrawal agreement or, failing that, two years after the withdrawal notification – that is, March 29, 2019 – unless the European Council and UK agree to extend the two-year period. In January 2019, the UK Parliament rejected a proposed withdrawal agreement, leaving open the possibility that withdrawal without an agreement – a so-called “no deal” or “hard” Brexit – would take place on March 29, 2019.

Given this and other uncertainties in connection with the UK's withdrawal from the European Union, it is difficult to determine the exact impact on us over the long term. However, the UK's economy and those of the eurozone countries are very tightly linked as a result of EU integration projects other than the euro, and the scale of our businesses in the UK – especially those dependent on activity levels in the City of London, to which we are heavily exposed and which may deteriorate as a result of Brexit – means that even modest effects in percentage terms can have a very substantial adverse effect on our businesses. Brexit could, in particular, lead to a disruption of the provision of cross-border financial services. A withdrawal of the UK from the EU without a withdrawal agreement may lead to greater costs to reorganize part of our business than would have been the case with an agreed phase-in solution and may restrict our ability to provide financial services to and from the UK. The currently unsettled future relationship between the EU and the UK is also likely to lead to further uncertainty in relation to the regulation of cross-border business activities.

Brexit is virtually certain to impact the structure and business model of our UK operations, though we are unable to determine this impact with any precision, as there remains a lack of clarity as to the details and timing of the changes. To prepare for the departure of the UK from the European Union, we are in the process of applying for UK authorization to continue to undertake regulated activity in the UK (previously undertaken pursuant to the European Passport provisions). The UK Prudential Regulatory Authority ("PRA") and the UK Financial Conduct Authority ("FCA") are in the process of settling new rulebooks in anticipation of UK law and regulatory regime changing as the UK withdraws from the European Union. We expect that we will be subject to additional and new UK regulation (prudential and conduct requirements), that our activities in the UK will be subject to increased supervision and monitoring by both the PRA and the FCA and that we may have to undertake operational change to comply with the new regulatory landscape in the UK.

Despite our preparations, as a result of Brexit, our business, results of operations or strategic plans could be adversely affected.

We may be required to take impairments on our exposures to the sovereign debt of European or other countries if the European sovereign debt crisis reignites. The credit default swaps into which we have entered to manage sovereign credit risk may not be available to offset these losses.

The effects of the sovereign debt crisis have been especially evident in the financial sector, as a large portion of the sovereign debt of eurozone countries is held by European financial institutions, including Deutsche Bank. As of December 31, 2018, we had a direct sovereign credit risk exposure of € 3.6 billion to Italy, € 1.8 billion to Spain, € 334 million to Ireland and € 53 million to Greece. Despite the apparent abatement of the crisis in recent years, it remains uncertain whether, in light of the current political environment, Greece or other eurozone sovereigns, such as Spain, Italy, Portugal and Cyprus, will be able to manage their debt levels in the future and whether Greece will attempt to renegotiate its past international debt restructuring. The rise of anti-austerity parties and populist sentiment in many of these countries poses a threat to the medium- to long-term measures recommended for these countries to alleviate the tensions in the eurozone caused by drastically differing economic situations among the eurozone states. In the future, negotiations or exchanges similar to the Greek debt restructuring in 2012 could take place with respect to the sovereign debt of these or other affected countries. The outcome of any negotiations regarding changed terms (including reduced principal amounts or extended maturities) of sovereign debt may result in additional impairments of assets on our balance sheet. Any negotiations are highly likely to be subject to political and economic pressures that we cannot control, and we are unable to predict their effects on the financial markets, on the greater economy or on ourselves.

In addition, any restructuring of outstanding sovereign debt may result in potential losses for us and other market participants that are not covered by payouts on hedging instruments that we have entered into to protect against the

risk of default. These instruments largely consist of credit default swaps, generally referred to as CDSs, pursuant to which one party agrees to make a payment to another party if a credit event (such as a default) occurs on the identified underlying debt obligation. A sovereign restructuring that avoids a credit event through voluntary write-downs of value may not trigger the provisions in CDSs we have entered into, meaning that our exposures in the event of a write-down could exceed the exposures we previously viewed as our net exposure after hedging. Additionally, even if the CDS provisions are triggered, the amounts ultimately paid under the CDSs may not correspond to the full amount of any loss we incur. We also face the risk that our hedging counterparties have not effectively hedged their own exposures and may be unable to provide the necessary liquidity if payments under the instruments they have written are triggered. This may result in systemic risk for the European banking sector as a whole and may negatively affect our business and financial position.

Risks Relating to Our Business and Strategy

Our results of operation and financial condition, in particular those of our Corporate & Investment Bank, continue to be negatively impacted by the challenging market environment, uncertain macroeconomic and geopolitical conditions, lower levels of client activity, increased competition and regulation, and the immediate impact of our strategic decisions. If we are unable to improve our profitability as we continue to face these headwinds, we may be unable to meet many of our strategic aspirations, and may have difficulty maintaining capital, liquidity and leverage at levels expected by market participants and our regulators.

In 2018, revenues declined in each of our corporate divisions, reflecting the negative impact of a challenging market environment characterized by low interest rates and low volatility, uncertain macroeconomic and geopolitical conditions, lower levels of client activity and increased competition and regulation. The ultra-low interest rate environment, especially in the eurozone, has put pressure on our margins in our traditional banking business and our trading and markets businesses. Additionally, the low volatility in the market has had a negative impact on our trading and client-driven businesses that may perform well in more volatile environments.

Changes in our business mix towards lower-margin, lower-risk products can limit our opportunities to profit from volatility. Regulators have generally encouraged the banking sector to focus more on the facilitation of client flow and less on risk taking. This has been effected in part by increasing capital requirements for higher-risk activities. In addition, some of our regulators have encouraged or welcomed changes to our business perimeter, consistent with their emphasis on lower-risk activities for banks. In recent years, we have reduced our exposure to a number of businesses that focused on riskier but more capital-intensive products (but that in earlier periods also had the potential to be more highly profitable). Further pressure on our revenues and profitability has resulted from long-term structural trends driven by regulation (especially increased regulatory capital, leverage and liquidity requirements and increased compliance costs) and competition that have further compressed our margins in many of our businesses. Should a combination of these factors continue to lead to reduced margins and subdued activity levels in our trading and markets business over the longer term, this could reflect structural challenges that may lead us to consider even further-reaching changes to aspects of our business mix than those embedded in our business planning and that support our financial targets.

Although we have in recent years made considerable progress resolving litigation, enforcement and similar matters broadly within our established reserves, this pattern may not continue. We currently expect these costs to be higher than in the most recent years, potentially significantly higher than the relatively low level seen in 2018. In particular, these costs could substantially exceed the level of provisions that we established for our litigation, enforcement and similar matters, which can contribute to negative market perceptions about our financial health, costing us business. This, combined with the actual costs of litigation, enforcement and other matters, could in turn adversely affect our

ability to maintain capital, liquidity and leverage at levels expected by market participants and our regulators.

Market speculation about potential legal, regulatory and enforcement matters, or about other matters, could have persistent adverse effects on our business or revenue levels. In particular, in late 2018 we suffered some reductions in business volumes and client balances, particularly in some parts of our Corporate & Investment Bank, as a result of speculation relating to our correspondent banking relationship with Danske Bank's Estonia branch and a raid by German law enforcement authorities on our offices in November 2018 relating to alleged failure to report suspicious activities potentially related to money laundering. Adverse developments, including our reporting of lower revenues, can also harm perceptions of us in the market and lead to further pressure on employee engagement, client relationships and revenues. These factors have placed pressure on the markets for our securities, along with concerns regarding our ability to overcome the numerous headwinds facing us.

As a result of this as well as the broader prospects for our business, we may find it necessary or desirable to raise additional capital in the future to maintain our capital, liquidity and leverage at levels required by our regulators or viewed by market participants as necessary for our businesses in comparison with our international peers, which would result in dilution to our current shareholders.

Market speculation about potential consolidation in the financial sector in Europe and our role in that consolidation could also have adverse effects on our business and revenue levels. Speculation has intensified in recent months concerning our participation in industry consolidation. Given the overall trend in the industry, we consider business combinations from time to time. Although speculation concerning consolidation is frequent, there are numerous impediments to completing transactions in our sector, including those posed by the regulatory environment, differing business models, valuation issues and the protracted headwinds facing the industry, including the low interest rate environment, market pressures and the high costs associated with rationalizing and simplifying institutions' businesses. Accordingly, we may determine to cease consideration of business combinations, or may determine not to pursue available opportunities. The markets may perceive us negatively if we fail to participate in industry consolidation or if we do not complete transactions that market participants expect. This could have material adverse effects on our business, and accordingly on our financial condition, results of operations and liquidity, as well as on our share price.

We may have difficulty in identifying and executing business combinations, and both engaging in combinations and avoiding them could materially harm our results of operations and our share price.

We consider business combinations from time to time. Were we to announce or complete a significant business combination transaction, our share price or the share price of the combined entity could decline significantly if investors viewed the transaction as too costly, dilutive to existing shareholders or unlikely to improve our competitive position. It is generally not feasible for our reviews of any business with which we might engage in a combination to be complete in all respects. As a result, a combination may not perform as well as expected. In addition, we may fail to integrate our operations successfully with any entity with which we participate in a business combination. Failure to complete announced business combinations or failure to achieve the expected benefits of any such combination could materially and adversely affect our profitability. Such failures could also affect investors' perception of our business prospects and management, and thus cause our share price to fall. They could also lead to departures of key employees, or lead to increased costs and reduced profitability if we felt compelled to offer them financial incentives to remain.

If we avoid entering into business combination transactions or if announced or expected transactions fail to materialize, market participants may perceive us negatively. We may also be unable to expand our businesses, especially into new business areas, as quickly or successfully as our competitors if we do so through organic growth alone. These perceptions and limitations could cost us business and harm our reputation, which could have material adverse effects on our financial condition, results of operations and liquidity.

Adverse market conditions, asset price deteriorations, volatility and cautious investor sentiment have affected and may in the future materially and adversely affect our revenues and profits, particularly in our investment banking, brokerage and other commission- and fee-based businesses. As a result, we have in the past incurred and may in the future incur significant losses from our trading and investment activities.

As a global investment bank, we have significant exposure to the financial markets and are more at risk from adverse developments in the financial markets than are institutions engaged predominantly in traditional banking activities. Sustained market declines have in the past caused and can in the future cause our revenues to decline, and, if we are unable to reduce our expenses at the same pace, can cause our profitability to erode or cause us to show material losses. Volatility can also adversely affect us, by causing the value of financial assets we hold to decline or the expense of hedging our risks to rise. Reduced customer activity can also lead to lower revenues in our “flow” business.

Specifically, our investment banking revenues, in the form of financial advisory and underwriting fees, directly relate to the number and size of the transactions in which we participate and are susceptible to adverse effects from sustained market downturns. These fees and other income are generally linked to the value of the underlying transactions and therefore can decline with asset values. In addition, periods of market decline and uncertainty tend to dampen client appetite for market and credit risk, a critical driver of transaction volumes and investment banking revenues, especially transactions with higher margins. In recent and other times in the past, decreased client appetite for risk has led to lower levels of activity and lower levels of profitability in our Corporate & Investment Bank corporate division. Our revenues and profitability could sustain material adverse effects from a significant reduction in the number or size of debt and equity offerings and merger and acquisition transactions.

Market downturns also have led and may in the future lead to declines in the volume of transactions that we execute for our clients and, therefore, to declines in our noninterest income. In addition, because the fees that we charge for managing our clients’ portfolios are in many cases based on the value or performance of those portfolios, a market downturn that reduces the value of our clients’ portfolios or increases the amount of withdrawals reduces the revenues we receive from our asset management and private banking businesses. Even in the absence of a market downturn, below-market or negative performance by our investment funds may result in increased withdrawals and reduced inflows, which would reduce the revenue we receive. While our clients would be responsible for losses we incur in taking positions for their accounts, we may be exposed to additional credit risk as a result of their need to cover the losses where we do not hold adequate collateral or cannot realize it. Our business may also suffer if our clients lose money and we lose the confidence of clients in our products and services.

In addition, the revenues and profits we derive from many of our trading and investment positions and our transactions in connection with them can be directly and negatively impacted by market prices. In each of the product and business lines in which we enter into these trading and investment positions, part of our business entails making assessments about the financial markets and trends in them. When we own assets, market price declines can expose us to losses. Many of the more sophisticated transactions of our Corporate & Investment Bank corporate division are influenced by price movements and differences among prices. If prices move in a way we have not anticipated, we may experience losses. Also, when markets are volatile, the assessments we have made may prove to lead to lower revenues or profits, or may lead to losses, on the related transactions and positions. In addition, we commit capital and take market risk to facilitate certain capital markets transactions; doing so can result in losses as well as income volatility. Such losses may especially occur on assets we hold for which there are not very liquid markets to begin with. Assets that are not traded on stock exchanges or other public trading markets, such as derivatives contracts between banks, may have values that we calculate using models other than publicly-quoted prices. Monitoring the deterioration of prices of assets like these is difficult and could lead to losses we did not anticipate. We can also be adversely affected if general perceptions of risk cause uncertain investors to remain on the sidelines of the market, curtailing their activity and in

turn reducing the levels of activity in those of our businesses dependent on transaction flow.

Our liquidity, business activities and profitability may be adversely affected by an inability to access the debt capital markets or to sell assets during periods of market-wide or firm-specific liquidity constraints. Credit rating downgrades have contributed to an increase in our funding costs, and any future downgrade could materially adversely affect our funding costs, the willingness of counterparties to continue to do business with us and significant aspects of our business model.

We have a continuous demand for liquidity to fund our business activities. Our liquidity may be impaired by an inability to access secured and/or unsecured debt markets, an inability to access funds from our subsidiaries or otherwise allocate liquidity optimally across our businesses, an inability to sell assets or redeem our investments, or unforeseen outflows of cash or collateral. This situation may arise due to circumstances unrelated to our businesses and outside our control, such as disruptions in the financial markets, or circumstances specific to us, such as reluctance of our counterparties or the market to finance our operations due to perceptions about potential outflows resulting from litigation, regulatory and similar matters, actual or perceived weaknesses in our businesses, our business model or our strategy, as well as in our resilience to counter negative economic and market conditions. For example, we have experienced steep declines in the price of our shares and increases in the spread versus government bonds at which our debt trades in the secondary markets. Reflecting these conditions, our internal estimates of our available liquidity over the duration of a stressed scenario have at times been negatively impacted in recent periods. Such effects were particularly acute in the autumn of 2016 in response to market speculation about the potential magnitude of a settlement of civil claims then being negotiated with the US Department of Justice (“DOJ”) in connection with our issuance and underwriting of residential mortgage-backed securities. In addition, negative developments concerning other financial institutions perceived to be comparable to us and negative views about the financial services industry in general have also affected us in recent years. These perceptions have affected the prices at which we have accessed the capital markets to obtain the necessary funding to support our business activities; should these perceptions exist, continue or worsen, our ability to obtain this financing on acceptable terms may be adversely affected. Among other things, an inability to refinance assets on our balance sheet or maintain appropriate levels of capital to protect against deteriorations in their value could force us to liquidate assets we hold at depressed prices or on unfavorable terms, and could also force us to curtail business, such as the extension of new credit. This could have an adverse effect on our business, financial condition and results of operations.

In addition, we have benefited in recent years from a number of incremental measures by the ECB and other central banks to provide additional liquidity to financial institutions and the financial markets, particularly in the eurozone. To the extent these actions are curtailed or halted, our funding costs could increase, or our funding supply could decrease, which could in turn result in a reduction in our business activities. In particular, any decision by the ECB to discontinue or reduce quantitative easing or further steps by the Federal Reserve to tighten its monetary policy or actions by central banks more generally to tighten their monetary policy will likely cause long-term interest rates to increase and accordingly impact the costs of our funding.

Since the start of the global financial crisis, the major credit rating agencies have lowered our credit ratings or placed them on review or negative watch on multiple occasions. These credit rating downgrades have contributed to an increase in our funding costs. Our elevated spread levels (meaning the difference between the yields on our securities as compared to benchmark government bonds) are sensitive to further adverse developments and any future downgrade could bring our credit rating into the non-investment grade category . This could materially and adversely affect our funding costs and significant aspects of our business model. The effect would depend on a number of factors including whether a downgrade affects financial institutions across the industry or on a regional basis, or is intended to reflect circumstances specific to us, such as our potential settlement of regulatory, litigation and similar

matters; any actions our senior management may take in advance of or in response to the downgrade; the willingness of counterparties to continue to do business with us; any impact of other market events and the state of the macroeconomic environment more generally.

Additionally, under many of the contracts governing derivative instruments to which we are a party, a downgrade could require us to post additional collateral, lead to terminations of contracts with accompanying payment obligations for us or give counterparties additional remedies. We take these effects into account in our liquidity stress testing analysis, as further described in “Management Report: Risk Report: Liquidity Risk: Stress Testing and Scenario Analysis” in the Annual Report 2018.

In the second quarter of 2018, we announced changes to our strategy and updates to our financial targets. If we are unable to implement our strategic plans successfully, we may be unable to achieve our financial objectives, or we may incur losses or low profitability, and our financial condition, results of operations and share price may be materially and adversely affected.

In the second quarter of 2018, we announced changes to our strategy and updates to our financial targets. Management is focused on materially improving returns to shareholders over time and on deploying our balance sheet and other resources to the highest return activities consistent with our client franchise and risk appetite. To achieve these primary objectives we have defined four key strategic imperatives: First, shift the bank to a more stable revenue and earnings profile. Second, execute on clearly defined strategies in our Private & Commercial Bank (PCB) and our Asset Management (AM) businesses. Third, reshape our Corporate & Investment Bank (CIB) towards a model which emphasizes our core strength in transaction banking, capital markets, financing and treasury solutions. And fourth, reduce our costs and commit to an uncompromising cost culture.

Our Private & Commercial Bank comprises the three business units Private and Commercial Business (Germany), Private and Commercial Business (International) and Wealth Management (Global).

Private and Commercial Business (Germany) serves more than 20 million private and commercial clients through two main brands: Deutsche Bank and Postbank. The two brands operate through a single company following the May 2018 merger of Postbank AG and Deutsche Bank Privat- und Geschäftskunden AG to form DB Privat- und Firmenkundenbank AG. We have targeted cost and revenue synergies for this business of € 900 million annually which we aim to fully realize in 2022 and beyond. A new operating model with a joint infrastructure and product platform as well as a joint management is being implemented to support pursuit of these targets. We estimate that the total cost of the planned restructuring measures to integrate Postbank into the Group and other investments will be € 1.9 billion, resulting from restructuring and severance costs as well as IT and other costs. Unforeseen difficulties may emerge in connection with the integration efforts, including potential difficulties due to differing IT systems, difficulties in integrating personnel, commitment of management resources in connection with the integration process and the potential loss of key personnel. The benefits, cost and timeframe of the integration could be adversely affected by any of these factors, as well as a variety of factors beyond our control, such as negative market developments. Should any of these risks materialize, the cost savings and other benefits we expect to realize from the integration may only come at a higher cost than anticipated, or may not be realized within the period we anticipate or to the extent we plan.

In our Private and Commercial Business (International), we continue to sharpen focus and invest into our core markets. While streamlining our geographic footprint with the completed partial exit from Poland and the ongoing disposal of our business in Portugal, we are investing into our Italian, Spanish, Belgian and Indian operations as we view them as attractive and growing markets. In Wealth Management we seek to grow our market share, both in Germany and internationally. In PCB we are also proceeding with our investments in digital solutions for banking and non-banking products through further equity investments into strategic partners and enhancements of our digital platform. We may not be able to achieve the growth we seek by the strategies for these businesses.

For DWS, with the IPO now completed, we focus on growing assets under management, improving efficiency and profitability and driving strong DWS shareholder return, including a robust dividend. The integration of service and infrastructure functions from DB Group into DWS Group seeks to enable us to achieve further operational efficiencies across the platform, including process improvements to reduce costs and enhance client experience. The IPO of DWS may not entirely mitigate the market concerns about Deutsche Bank that impacted our AM business in the past or that may arise from new challenges, and DWS may fail to grow assets under management, become more efficient or profitable or be able to achieve high levels of return for DWS shareholders. As the continued majority owner of DWS, we continue to be adversely affected by any of these factors as well.

We intend for CIB to remain a leading European corporate and investment bank with global reach. As part of the restructuring announced and completed in 2018, CIB will focus on its core product strengths and key markets. Actions from 2018 including reducing our commitment to certain businesses and investing in others. In 2019, CIB is focused on delivering controlled revenue growth from targeted resource deployment and investment. Reducing our commitment on certain businesses might negatively impact our client servicing capacity, therefore impacting our existing revenue streams. In businesses where we are increasing our investment, clients may choose not to expand their business or portfolio with us, thereby negatively influencing our ability to capitalize on these opportunities.

We aim to reduce adjusted costs in 2019 by € 1 billion to € 21.8 billion and to reduce our internal workforce to below 90,000 full-time employees by year-end 2019. We are also working towards a target for Post-tax Return on Average Tangible Equity of greater than 4 % in 2019. Over time, we aspire to achieve a circa 10 % Post-Tax Return on Tangible Equity in a normalized environment and on the basis of the achievement of our cost target.

As we execute on our near- and long-term operating targets, we intend to continue managing our balance sheet conservatively, with capital targets of a CRR/CRD 4 Common Equity Tier 1 capital ratio above 13.0 % and a CRR/CRD 4 Leverage Ratio (phase-in) of 4.5 % over time. Furthermore, we intend to target a competitive dividend payout ratio.

Our targets reflect our expectation of solid macroeconomic growth in 2019, with growth in the US specifically remaining strong, and no material distortions in foreign exchange rates. We also expect to benefit from a more normalized tax rate.

Our strategic goals are subject to various internal and external factors including those described above and to market, regulatory, economic and political uncertainties, and to limitations relating to our operating model. These could negatively impact or prevent the implementation of our strategic goals or the realization of their anticipated benefits. Economic uncertainties such as the recurrence of extreme turbulence in the markets; potential weakness in global, regional and national economic conditions; the continuation of a market environment characterized by low interest rates and low volatility; increased competition for business; and political instability, especially in Europe, may impact our ability to achieve our strategic goals. Regulatory changes could also adversely impact our ability to achieve our strategic aims. In particular, regulators could demand changes to our business model or organization that could reduce our profitability, or we may be forced to make changes that reduce our profitability in an effort to remain compliant with law and regulation. We are also involved in numerous litigation, arbitration and regulatory proceedings and investigations in Germany and in a number of jurisdictions outside of Germany, especially in the United States. Such matters are subject to many uncertainties. We expect the litigation environment to continue to be challenging. If litigation and regulatory matters occur at the same or higher rate and magnitude than they have in some recent years or if we are subject to sustained market speculation about our potential exposure to such matters, we may not be able to achieve our strategic aspirations.

The base case scenario for our financial and capital plan includes revenue growth estimates which are dependent on positive macroeconomic developments. Stagnation or a downturn in the macroeconomic environment could

significantly impact our ability to generate the revenue growth necessary to achieve these strategic financial and capital targets. While market conditions have improved as compared to those experienced in the fourth quarter of 2018, they are somewhat weaker than we had anticipated. Furthermore, even if we are able to grow our revenues in accordance with our strategic plans, the materialization of any of the regulatory changes or the costs for us – in terms of the outcomes or necessary changes to our businesses – of the litigation and regulatory matters mentioned above, including market speculation about our potential exposure to them, or any other unforeseen risk, could adversely impact our net income and thereby cause us to fall short of our strategic financial and capital targets.

Our strategic objectives are also subject to the following assumptions and risks:

- We assume that we will be able to overcome significant challenges arising from our business model. We continue to rely on our trading and markets businesses as a significant source of profit. However, these businesses, in particular our fixed income securities franchise, have continued to face an extremely challenging environment, caused by uncertainty about the duration of the market environment characterized by low interest rates and low volatility, low levels of client activity, negative perceptions about our business and central bank intervention in markets and the gradual cessation thereof. We are substantially dependent on the performance of these businesses, and this dependency exceeds that of many of our competitors. Many of our businesses dependent on client flow are increasingly challenged in the current market environment. In addition, some of our businesses may be resistant to change, posing risks to the implementation of changes to our business model. Should we be unable to implement this new business model successfully, or should the new business model fail to be profitable, we may not be able to achieve some or all of our strategic goals.
- Asset and client levels were impacted by the negative market perceptions of Deutsche Bank in the fourth quarter 2016 and again in late 2018. A continued or renewed negative market focus on Deutsche Bank could result in new client and asset outflows.
- We currently operate a highly complex infrastructure, which can compromise the quality of the overall control environment. Establishing a more efficient bank with a strong control environment depends on successfully streamlining and simplifying the IT landscape as well as cultural change. Furthermore, capital and execution plans require robust monitoring and tracking that is dependent on accurate, timely and relevant data. We have undertaken initiatives designed to address existing challenges in our IT and data architecture as well as in our data aggregation capabilities. Potential delays and challenges to implementing these initiatives would impact our ability to achieve efficiency improvements and enhance the control environment, thereby affecting our ability to implement our strategy successfully.
- A robust and effective internal control environment is necessary to ensure that we conduct our business in compliance with the laws and regulations applicable to us. We are undertaking several major initiatives to enhance the efficacy of the transaction processing environment, strengthen our controls and manage non-financial risks, in particular as a response to the circumstances that have resulted in many of the litigations and regulatory and enforcement investigations and proceedings to which the Bank has been subject in recent years. However, we may be unable to complete these initiatives as quickly as we intend or as our regulators demand, and our efforts may be insufficient to prevent all future deficiencies in our control environment or to result in fewer litigations or regulatory and enforcement investigations and proceedings in the future. Furthermore, implementation of enhanced controls may result in higher than expected costs of regulatory compliance that could offset efficiency gains. Any of these factors could affect our ability to implement our strategy in a timely manner or at all.

If we fail to implement our strategic initiatives in whole or in part or should the initiatives that are implemented fail to produce the anticipated benefits, or should the costs we incur to implement our initiatives exceed the amounts anticipated, or should we fail to achieve the publicly communicated targets we have set for implementation of these

initiatives, we may fail to achieve our financial objectives, or incur losses or low profitability or erosions of our capital base, and our financial condition, results of operations and share price may be materially and adversely affected.

We may have difficulties selling companies, businesses or assets at favorable prices or at all and may experience material losses from these assets and other investments irrespective of market developments.

We may seek to sell or otherwise reduce our exposure to assets that are not part of our core business or as part of our strategy to simplify and focus our business and to meet or exceed capital and leverage requirements, as well as to help us meet our return on tangible equity target. This may prove difficult in the current and future market environment as many of our competitors are also seeking to dispose of assets to improve their capital and leverage ratios and returns on equity. We have already sold a substantial portion of our non-core assets, and our remaining non-core assets may be particularly difficult for us to sell as quickly as we have expected at prices we deem acceptable. Where we sell companies or businesses, we may remain exposed to certain of their losses or risks under the terms of the sale contracts, and the process of separating and selling such companies or businesses may give rise to operating risks or other losses. Unfavorable business or market conditions may make it difficult for us to sell companies, businesses or assets at favorable prices, or may preclude a sale altogether. If we cannot reduce our assets according to plan, we may not be able to achieve the capital targets set out under our strategy.

Intense competition, in our home market of Germany as well as in international markets, has and could continue to materially adversely impact our revenues and profitability.

Competition is intense in all of our primary business areas, in Germany as well as in international markets. If we are unable to respond to the competitive environment in these markets with attractive product and service offerings that are profitable for us, we may lose market share in important areas of our business or incur losses on some or all of our activities. In addition, downturns in the economies of these markets could add to the competitive pressure, through, for example, increased price pressure and lower business volumes for us.

There has been substantial consolidation and convergence among financial services companies. This trend has significantly increased the capital base and geographic reach of some of our competitors and has hastened the globalization of the securities and other financial services markets. As a result, we must compete with financial institutions that may be larger and better capitalized than we are and that may have a stronger position in local markets.

In addition to our traditional competitors such as other universal banks and financial services firms, an emerging group of future competitors in the form of start-ups and technology firms are showing an increasing interest in banking services and products. These new competitors could increase competition in both core products, e.g., payments, basic accounts and loans and investment advisory, as well as in new products, e.g., peer to peer lending and equity crowd funding.

Risks Relating to Regulation and Supervision

Regulatory reforms enacted and proposed in response to weaknesses in the financial sector, together with increased regulatory scrutiny more generally, have had and continue to have a significant impact on us and may adversely affect our business and ability to execute our strategic plans. Competent regulators may prohibit us from making dividend payments or payments on our regulatory capital instruments or take other actions if we fail to comply with regulatory requirements.

In response to the global financial crisis and the European sovereign debt crisis, governments and regulatory authorities have worked to enhance the resilience of the financial services industry against future crises through changes to the regulatory framework. The pace of change of new proposals has slowed as the focus turns more to implementation of the various elements of the regulatory reform agenda outlined by the Basel Committee on Banking Supervision ("Basel Committee") and other standard-setting bodies. As a result, there continues to be uncertainty for us and the financial industry in general, though the level of uncertainty is reduced from prior periods. The range of new laws and regulations or current proposals includes, among other things:

- provisions for more stringent regulatory capital, leverage and liquidity standards,
- restrictions on compensation practices,
- restrictions on proprietary trading and other investment services;
- special bank levies and financial transaction taxes,
- recovery and resolution powers to intervene in a crisis including the "bail-in" of creditors;
- tightened large exposure limits;
- the creation of a single supervisory authority and a single resolution authority within the eurozone and any other participating member states,
- separation of certain businesses from deposit taking,
- stress testing and capital planning regimes,
- heightened reporting requirements, and
- reforms of derivatives, other financial instruments, investment products and market infrastructures.

As a core element of the reform of the regulatory framework, in December 2010, the Basel Committee published a set of comprehensive changes to minimum capital adequacy and liquidity standards, known as Basel 3, which have been implemented into European and national (in our case, German) law beginning in 2014, with the European legislative package also referred to as "CRR/CRD 4" and the Bank Recovery and Resolution Directive (or "BRRD").

In addition, regulatory scrutiny of compliance with existing laws and regulations has become more intense and supervisory expectations remain significant. The specific effects of a number of new laws and regulations remain uncertain because the drafting and implementation of these laws and regulations are still on-going and supervisory expectations continue to develop.

On November 23, 2016, the European Commission published a comprehensive package of reforms (referred to in the following as the "banking reform package") to further strengthen the resilience of European Union banks. The proposals will incorporate various remaining elements of the regulatory framework agreed within the Basel Committee and the Financial Stability Board ("FSB") to refine and supplement the global regulatory framework established by the Basel Committee, the so-called Basel Accords (Basel 1, 2 and 3). This includes more risk-sensitive capital requirements, in particular in the areas of market risk, counterparty credit risk, and for exposures to central counterparties, methodologies that reflect more accurately the actual risks to which banks may be exposed, a binding leverage ratio, a binding net stable funding ratio, tighter regulation of large exposures, and a requirement for global systemically important institutions ("G-SIIs"), such as Deutsche Bank, to hold certain minimum levels of capital and other instruments which are capable of bearing losses in resolution ("Total Loss-Absorbing Capacity" or "TLAC"). Other proposed measures are aimed at improving banks' lending capacity to support the European Union economy and at further facilitating the role of banks in achieving deeper and more liquid European Union capital markets. On December 4, 2018, the European Parliament and the Council of the European Union reached a provisional political agreement with respect to the banking reform package. The banking reform package is expected to enter into force in the first half of 2019. While many provisions will not apply until 2021, certain parts, including the TLAC requirements, are expected to apply immediately when the provisions of the banking reform package enter into force.

Furthermore, in December 2017 the Basel Committee published its final agreement ("December 2017 Agreement") on further revisions to the Basel 3 framework that aim to increase consistency in risk-weighted asset calculations and improve the comparability of banks' capital ratios. The December 2017 Agreement includes, among other things, changes to the standardized and internal ratings-based approaches for determining credit risk, revisions to the operational risk framework, and an "output floor", set at 72.5 %. The "output floor" limits the amount of capital benefit a bank can obtain from its use of internal models relative to using the standardized approach. This package of reforms is intended to finalize the Basel 3 framework and would reduce the ability of banks to apply internal models, while making the standardized approaches more risk-sensitive and granular. In addition, the December 2017 Agreement introduces a leverage ratio buffer for global systemically important banks ("G-SIBs"), such as Deutsche Bank, to be met with Tier 1 capital and sets it at 50 % of the applicable risk-based G-SIB buffer requirement. The Basel Committee also reached agreement on an implementation date for this package of January 1, 2022, with a phase-in period of five years through January 1, 2027 for the output floor.

The banking reform package, when it enters into force, will likely affect our business by raising our regulatory capital and liquidity requirements and by leading to increased costs. The December 2017 Agreement could also affect our business by imposing higher capital charges when adopted into law.

These requirements may be in addition to regulatory capital buffers that may also be increased or be in addition to those already imposed on us and could themselves materially increase our capital requirements.

Regulatory authorities have substantial discretion in how to regulate banks, and this discretion, and the means available to the regulators, have been steadily increasing during recent years. Regulation may be imposed on an ad hoc basis by governments and regulators in response to ongoing or future crises, and may especially affect financial institutions such as Deutsche Bank that are deemed to be systemically important.

In particular, the regulators with jurisdiction over us, including the ECB under the Single Supervisory Mechanism (also referred to as the "SSM"), may, in connection with the supervisory review and evaluation process ("SREP") or otherwise, conduct stress tests and have discretion to impose capital surcharges on financial institutions for risks, including for litigation, regulatory and similar matters, that are not otherwise recognized in risk-weighted assets or other surcharges depending on the individual situation of the bank and take or require other measures, such as restrictions on or changes to our business. In this context, the ECB may impose, and has imposed, on us individual capital requirements resulting from the SREP which are referred to as "Pillar 2" requirements. "Pillar 2" requirements must be fulfilled with Common Equity Tier 1 capital in addition to the statutory minimum capital and buffer requirements and any non-compliance may have immediate legal consequences such as restrictions on dividend payments.

Also following the SREP, the ECB may communicate to individual banks, and has communicated to us, an expectation to hold a further "Pillar 2" Common Equity Tier 1 capital add-on, the so-called "Pillar 2" guidance. Although the "Pillar 2" guidance is not legally binding and failure to meet the "Pillar 2" guidance does not automatically trigger legal action, the ECB has stated that it expects banks to meet the "Pillar 2" guidance.

Also, more generally, competent regulators may, if we fail to comply with regulatory requirements, in particular with statutory minimum capital requirements, "Pillar 2" requirements or buffer requirements, or if there are shortcomings in our governance and risk management processes, prohibit us from making dividend payments to shareholders or distributions to holders of our other regulatory capital instruments. This could occur, for example, if we fail to make sufficient profits due to declining revenues, or as a result of substantial outflows due to litigation, regulatory and similar matters. Generally, a failure to comply with the quantitative and qualitative regulatory requirements could

have a material adverse effect on our business, financial condition and results of operations, including our ability to pay out dividends to shareholders or distributions on our other regulatory capital instruments or, in certain circumstances, conduct business which we currently conduct or plan to conduct in the future.

Regulatory and legislative changes require us to maintain increased capital and abide by tightened liquidity requirements. These requirements may significantly affect our business model, financial condition and results of operations as well as the competitive environment generally. Any perceptions in the market that we may be unable to meet our capital or liquidity requirements with an adequate buffer, or that we should maintain capital or liquidity in excess of these requirements or another failure to meet these requirements could intensify the effect of these factors on our business and results.

The implementation of the CRR/CRD 4 legislative package resulted, among other things, in increased capital and tightened liquidity requirements, including additional capital buffer requirements which were gradually phased in through January 1, 2019. Further revisions, such as stricter rules on the measurement of risks and the changes proposed by the banking reform package and the December 2017 Agreement, could further increase risk-weighted assets and the corresponding capital demand for banks, as well as further tighten liquidity requirements (such as the introduction of a binding net stable funding ratio). In addition, the introduction of a binding leverage ratio by the banking reform package may affect our business model, financial conditions and results of operations.

Furthermore, under the SRM Regulation, the BRRD and the German Recovery and Resolution Act (Sanierungs- und Abwicklungsgesetz), we are required to meet at all times a robust minimum requirement for own funds and eligible liabilities (“MREL”) which is determined on a case-by-case basis by the competent resolution authority. In addition, the banking reform package will implement the FSB’s TLAC standard for G-SIBs (such as us) by introducing a new Pillar 1 MREL requirement for G-SIIs (the European equivalent term for G-SIBs). This new requirement is based on both risk-based and non-risk-based denominators and is expected to be set at the higher of 18 % of total risk exposure and 6.75% of the leverage ratio exposure measure following a transition period. It can be met with Tier 1 or Tier 2 capital instruments or debt that meets specific eligibility criteria. Deduction rules will apply for holdings by G-SIIs of TLAC instruments of other G-SIIs. In addition, the competent authorities will have the ability to impose a TLAC add-on requirement on G-SIIs. Such new rules are expected to apply to us with the minimum requirement starting from the moment of entry into force of the banking reform package, i.e. expected in the first half of 2019.

Both the TLAC and MREL requirements are specifically designed to require banks to maintain a sufficient amount of instruments which are eligible to absorb losses in resolution with the aim of ensuring that failing banks can be resolved without recourse to taxpayers’ money. To that end, in order to facilitate the meeting of TLAC requirements by German banks, obligations of German banks under certain, specifically defined senior unsecured debt instruments issued by them (such as bonds that are not structured debt instruments) rank, since 2017, junior to all other outstanding unsecured unsubordinated obligations of such bank (such as deposits, derivatives, money market instruments and certain structured debt instruments), but continue to rank in priority to contractually subordinated debt instruments (such as Tier 2 instruments).

As part of the harmonization of national rules on the priority of claims of banks’ creditors in the European Union, the BRRD now allows banks to issue “senior non-preferred” debt instruments ranking according to their terms (and not only statutorily) junior to the bank’s other unsubordinated debt instruments (including bonds that are not treated as “senior non-preferred” debt instruments), but in priority to the bank’s contractually subordinated liabilities (such as Tier 2 instruments). Any such “senior non-preferred” debt instruments issued by Deutsche Bank AG under such rules rank on parity with its then outstanding “senior non-preferred” debt instruments under the prior rules. This BRRD amendment was finalized and implemented into German law as of July 21, 2018.

The need to comply with these requirements may affect our business, financial condition and results of operation and in particular may increase our financing costs.

We may not have sufficient capital or other loss-absorbing liabilities to meet these increasing regulatory requirements. This could occur due to regulatory changes and other factors, such as the gradual phase out of our hybrid capital instruments qualifying as Additional Tier 1 (or AT1) capital or our inability to issue new securities which are recognized as regulatory capital or loss-absorbing liabilities under the new standards, due to an increase of risk-weighted assets based on more stringent rules for the measurement of risks or as a result of a future decline in the value of the euro as compared to other currencies, due to stricter requirements for the compliance with the non-risk based leverage ratio, due to any substantial losses we may incur, which would reduce our retained earnings, a component of Common Equity Tier 1 capital, or due to a combination of these or other factors.

If we are unable to maintain sufficient capital to meet the applicable minimum capital ratios, the buffer requirements, any specific "Pillar 2" capital requirements or TLAC or MREL requirements, we may become subject to enforcement actions and/or restrictions on the pay-out of dividends, share buybacks, payments on our other regulatory capital instruments, and discretionary compensation payments. In addition, any requirement to increase risk-based capital ratios or the leverage ratio could lead us to adopt a strategy focusing on capital preservation and creation over revenue generation and profit growth, including the reduction of higher margin risk-weighted assets. If we are unable to increase our capital ratios to the regulatory minimum in such a case or by raising new capital through the capital markets, through the reduction of risk-weighted assets or through other means, we may be required to activate our group recovery plan. If these actions or other private or supervisory actions do not restore capital ratios to the required levels, and we are deemed to be failing or likely to fail, competent authorities may apply resolution powers under the Single Resolution Mechanism ("SRM") and applicable rules and regulations, which could lead to a significant dilution of our shareholders' or even the total loss of our shareholders' or creditors' investment.

The CRR introduced a new liquidity coverage requirement intended to ensure that banks have an adequate stock of unencumbered high quality liquid assets that can be easily and quickly converted into cash to meet their liquidity needs for a 30 calendar day liquidity stress scenario. The required liquidity coverage ratio ("LCR") is calculated as the ratio of a bank's liquidity buffer to its net liquidity outflows. Also, banks must regularly report the composition of the liquid assets in their liquidity buffer to their competent authorities.

In addition, the Basel 3 framework introduced a net stable funding ratio ("NSFR") to reduce medium- to long-term funding risks by requiring banks to fund their activities with sufficiently stable sources of funding over a one-year period. The CRR contains interim reporting requirements on stable funding but does not yet include substantive provisions relating to the NSFR. Among the banking reform package is a proposal to introduce a binding NSFR. According to this proposal, the NSFR is defined as the ratio of a bank's available stable funding relative to the amount of required stable funding over a one-year period. According to the proposal, banks must maintain an NSFR of at least 100 %.

The ECB may impose on individual banks liquidity requirements which are more stringent than the general statutory requirements if the bank's continuous liquidity would otherwise not be ensured.

On February 6, 2019, the ECB launched a liquidity stress testing exercise. The exercise will constitute the supervisory stress test of 2019. The results of the exercise will feed into the ECB's ongoing supervisory assessments of banks' liquidity risk management frameworks, including the SREP. However, the outcome of the stress test will not affect supervisory capital and liquidity requirements in a mechanical way.

If we fail to meet liquidity requirements, we may become subject to enforcement actions. In addition, any requirement to maintain or increase liquidity could lead us to reduce activities that pursue revenue generation and profit growth.

In some cases, we are required to hold and calculate capital and to comply with rules on liquidity and risk management separately for our local operations in different jurisdictions, in particular in the United States.

We are required to hold and calculate capital and to comply with rules on liquidity and risk management separately for our local operations in different jurisdictions. In the United States, the Federal Reserve Board has adopted rules that impose enhanced prudential standards on our US operations. In February 2014, the Federal Reserve Board adopted rules that set forth how the US operations of certain foreign banking organizations ("FBOs"), such as Deutsche Bank, are required to be structured in the United States, as well as the enhanced prudential standards that apply to our US operations (the "FBO Rules"). Under the FBO Rules, as of July 1, 2016, a large FBO with US$ 50 billion or more in US non-branch assets, such as Deutsche Bank, was required to establish or designate a separately capitalized top-tier US intermediate holding company (an "IHC") that would hold substantially all of the FBO's ownership interests in its US subsidiaries. The Federal Reserve Board may permit an FBO subject to the US IHC requirement to establish or designate multiple US IHCs upon written request. On July 1, 2016, we designated DB USA Corporation as our IHC. In March 2018, we completed the partial initial public offering of our Asset Management division, to form DWS Group GmbH & Co. KGaA ("DWS"), in which we retain approximately 80 % of the shares. In April 2018, DWS USA Corporation was formed as a subsidiary of DWS, and, following receipt of Federal Reserve Board approval, we designated it as our second IHC, through which our US asset management subsidiaries are held. As of the date of designation or formation of each of these IHCs, they each became subject, on a consolidated basis, to the risk-based and leverage capital requirements under the US Basel 3 capital framework, capital planning and stress testing requirements (on a phased-in basis), US liquidity buffer requirements and other enhanced prudential standards comparable to those applicable to top-tier US bank holding companies of a similar size. Supplementary leverage ratio requirements applicable to DB USA Corporation took effect beginning in January 2018 and were applicable to DWS USA Corporation upon its formation. The Federal Reserve Board has the authority to examine an IHC, such as DB USA Corporation and DWS USA Corporation, and its subsidiaries, as well as US branches and agencies of FBOs, such as our New York branch.

As a bank holding company with assets of US$ 250 billion or more, Deutsche Bank AG is required under Title I of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, as amended (the "Dodd-Frank Act"), and the implementing regulations therefor to prepare and submit periodically to the Federal Reserve Board and the Federal Deposit Insurance Corporation ("FDIC") a plan for the orderly resolution of its subsidiaries and operations in the event of future material financial distress or failure (the "US Resolution Plan"). For foreign-based companies subject to these resolution planning requirements such as Deutsche Bank AG, the US Resolution Plan relates only to subsidiaries, branches, agencies and businesses that are domiciled in or whose activities are carried out in whole or in material part in the United States. Deutsche Bank AG filed its most recent US Resolution Plan in June 2018 and received written regulatory feedback in December 2018. The Federal Reserve Board and FDIC found that Deutsche Bank's US Resolution Plan had no deficiencies but identified one shortcoming in the plan, associated with governance mechanisms and related escalation triggers. Deutsche Bank is required to submit a response to its December 2018 feedback letter by April 5, 2019. Deutsche Bank's response will discuss the remediation of the shortcoming as well as enhancements of its resolution capabilities. Both the remediation of the shortcoming and enhancements must be completed prior to the submission of our next US Resolution Plan, which is currently expected to be due on July 1, 2020. If the Federal Reserve Board and the FDIC were to jointly deem our US Resolution Plan not credible and we failed to remedy the deficiencies in the required timeframe, we could be required to restructure or reorganize businesses, legal entities, operational systems and/or intra-company transactions in ways that may negatively impact our operations and strategy, or could be subject to restrictions on growth. We could also eventually be subjected to more stringent capital, leverage or liquidity requirements, or be required to divest certain assets or operations.

DB USA Corporation was subject to the Federal Reserve Board's Comprehensive Capital Analysis and Review ("CCAR") for 2018. On June 28, 2018, the Federal Reserve Board publicly indicated that it did not object to DB USA Corporation's 2018 capital plan on a quantitative basis, but that it did object for qualitative reasons. As a result of the Federal Reserve's objection, DB USA Corporation may not make any capital distribution unless the Federal Reserve has indicated in writing its non-objection to the distribution. DB USA Corporation's stressed Common Equity Tier 1 capital ratio was forecast by the Federal Reserve Board to fall to as low as 12.2 % under the supervisory severely adverse scenario. This hypothetical stressed ratio would be substantially above the minimum required ratio of 4.5 %. Stress testing results are based on hypothetical adverse scenarios and should not be viewed or interpreted as forecasts of expected outcomes or capital adequacy or of the actual financial condition of DB USA Corporation. DB USA Corporation will make its next capital plan submission to the Federal Reserve Board in April 2019, at which time DWS USA Corporation will submit its initial capital plan to the Federal Reserve Board. If the Federal Reserve Board were to object to these capital plans we could be required to increase capital or restructure businesses in ways that may negatively impact our operations and strategy or could be subject to restrictions on growth.

The US federal bank regulators in 2013 issued final rules implementing elements of the Basel 3 capital adequacy framework that are applicable to US banking organizations.

In September 2014, the Federal Reserve Board and other US regulators approved a final rule implementing liquidity coverage ratio ("LCR") requirements for large US banking holding companies and certain of their subsidiary depositary institutions that are generally consistent with the Basel Committee's revised Basel 3 liquidity standards. DB USA Corporation and our US bank subsidiary, Deutsche Bank Trust Company Americas ("DBTCA"), became subject to the full LCR requirements on April 1, 2017 and DWS USA Corporation became subject to LCR requirements on a phased-in basis upon its formation in April 2018.

On June 1, 2016, the Federal Reserve Board and other US regulators proposed rules implementing the second element of the Basel 3 liquidity framework, the net stable funding ratio ("NSFR"), which measures whether an institution maintains sufficiently stable amounts of longer-term funding. Under the proposed rules, DB USA Corporation, DWS USA Corporation and DBTCA would be subject to the full NSFR, but this proposal has yet to be finalized and is not yet in effect.

On December 15, 2016, the Federal Reserve Board adopted final rules that implement the FSB's TLAC standard in the United States. The final rules, which took effect on January 1, 2019, require, among other things, US IHCs of non-US G-SIBs, including our IHCs, DB USA Corporation and DWS USA Corporation, to maintain a minimum amount of TLAC, and separately require them to maintain a minimum amount of long-term debt meeting certain requirements.

US rules and interpretations, including those described above, could cause us to reduce assets held in the United States, inject capital and/or liquidity into or otherwise change the structure of our US operations, and could also restrict the ability of our US subsidiaries to pay dividends to us. To the extent that we are required to reduce operations in the United States or deploy capital in the United States that could be deployed more profitably elsewhere, these requirements could have an adverse effect on our business, financial condition and results of operations.

Any increased capital or liquidity requirements, including those described above, could have adverse effects on our business, financial condition and results of operations, as well as on perceptions in the market of our stability, particularly if any such proposal becomes effective and results in our having to raise capital at a time when we or the financial markets are distressed, or take other measures to increase liquidity in certain jurisdictions due to local requirements. These measures we might be required or find necessary to take in response to these shifting local

requirements may be inconsistent with, and hinder the achievement of our strategic goals. In addition, if these regulatory requirements must be implemented more quickly than currently foreseen, we may decide that the quickest and most reliable path to compliance is to reduce the level of assets on our balance sheet, dispose of divisions or otherwise segregate certain activities or reduce or close down certain business lines. The effects on our capital raising efforts in such a case could be amplified due to the expectation that our competitors, at least those subject to the same or similar capital requirements, would likely also be required to raise capital at the same time. Moreover, some of our competitors, particularly those outside the European Union, may not face the same or similar regulations, which could put us at a competitive disadvantage.

In addition to these regulatory initiatives, market sentiment may encourage financial institutions such as Deutsche Bank to maintain significantly more capital, liquidity and loss-absorbing capital instruments than regulatory-mandated minima, which could exacerbate the effects on us described above or, if we do not increase our capital to the encouraged levels, could lead to the perception in the market that we are undercapitalized relative to our peers generally.

It is unclear whether the US capital and other requirements described above, as well as similar developments in other jurisdictions could lead to a fragmentation of supervision of global banks that could adversely affect our reliance on regulatory waivers allowing us to meet capital adequacy requirements, large exposure limits and certain organizational requirements on a consolidated basis only rather than on both a consolidated and non-consolidated basis. Should we no longer be entitled to rely on these waivers, we would have to adapt and take the steps necessary in order to meet regulatory capital requirements and other requirements on a consolidated as well as a non-consolidated basis, which could result also in significantly higher costs and potential adverse effects on our profitability and dividend paying ability.

Our regulatory capital and liquidity ratios and our funds available for distributions on our shares or regulatory capital instruments will be affected by our business decisions and, in making such decisions, our interests and those of the holders of such instruments may not be aligned, and we may make decisions in accordance with applicable law and the terms of the relevant instruments that result in no or lower payments being made on our shares or regulatory capital instruments.

Our regulatory capital and liquidity ratios are affected by a number of factors, including decisions we make relating to our businesses and operations as well as the management of our capital position, of our risk-weighted assets and of our balance sheet in general, and external factors, such as regulations regarding the risk weightings we are permitted to allocate to our assets, commercial and market risks or the costs of our legal or regulatory proceedings. While we and our management are required to take into account a broad range of considerations in our and their managerial decisions, including the interests of the Bank as a regulated institution and those of our shareholders and creditors, particularly in times of weak earnings and increasing capital requirements, the regulatory requirements to build capital and liquidity may become paramount. Accordingly, in making decisions in respect of our capital and liquidity management, we are not required to adhere to the interests of the holders of instruments we have issued that qualify for inclusion in our regulatory capital, such as our shares or Additional Tier 1 capital instruments. We may decide to refrain from taking certain actions, including increasing our capital at a time when it is feasible to do so (through securities issuances or otherwise), even if our failure to take such actions would result in a non-payment or a write-down or other recovery- or resolution-related measure in respect of any of our regulatory capital instruments. Our decisions could cause the holders of such regulatory capital instruments to lose all or part of the value of their investments in these instruments due to their effect on our regulatory capital ratios, and such holders will not have any claim against us relating to such decisions, even if they result in a non-payment or a write-down or other recovery- or resolution-related measure in respect of such instruments they hold.

In addition, our annual profit and distributable reserves form an important part of the funds available for us to pay dividends on our shares and make payments on our other regulatory capital instruments, as determined in the case of each such instrument by its terms or by operation of law, and any adverse change in our financial prospects, financial position or profitability, or our distributable reserves, each as calculated on an unconsolidated basis, may have a material adverse effect on our ability to make dividend or other payments on these instruments. In addition, as part of the implementation of our strategy, we may record impairments that reduce the carrying value of subsidiaries on our unconsolidated balance sheet and reduce profits and distributable reserves. Future impairments or other events that reduce our profit or distributable reserves on an unconsolidated basis could lead us to be unable to make such payments in respect of future years in part or at all. In particular, the direct costs of our potential settlements of litigation, enforcement and similar matters, especially to the extent in excess of provisions we have established for them, and their related business impacts, if they occur, could impact such distributable amounts.

In addition, German law places limits on the extent to which annual profits and otherwise-distributable reserves, as calculated on an unconsolidated basis, may be distributed to our shareholders or the holders of our other regulatory capital instruments, such as our Additional Tier 1 capital instruments. Our management also has, subject to applicable law, broad discretion under the applicable accounting principles to influence all amounts relevant for calculating funds available for distribution. Such decisions may impact our ability to make dividend or other payments under the terms of our regulatory capital instruments.

European and German legislation regarding the recovery and resolution of banks and investment firms could, if steps were taken to ensure our resolvability or resolution measures were imposed on us, significantly affect our business operations, and lead to losses for our shareholders and creditors.

Germany participates in the SRM, which centralizes at a European level the key competences and resources for managing the failure of any bank in member states of the European Union participating in the banking union. The SRM is based on the SRM Regulation and the BRRD, which was implemented in Germany through the German Recovery and Resolution Act. In addition, the German Resolution Mechanism Act (Abwicklungsmechanismusgesetz) adapted German bank resolution laws to the SRM.

The SRM Regulation and the German Recovery and Resolution Act require the preparation of recovery and resolution plans for banks and grant broad powers to public authorities to intervene in a bank which is failing or likely to fail. For a bank directly supervised by the ECB, such as Deutsche Bank, the Single Resolution Board (referred to as the “SRB”) assesses its resolvability and may require legal and operational changes to the bank’s structure to ensure its resolvability. In the event that such bank is deemed by the ECB or the SRB as failing or likely to fail and certain other conditions are met, the SRB is responsible for adopting a resolution scheme for resolving the bank pursuant to the SRM Regulation. The European Commission and, to a lesser extent, the Council of the European Union, have a role in endorsing or objecting to the resolution scheme proposed by the SRB. The resolution scheme would be addressed to and implemented by the competent national resolution authorities (in Germany, the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, “BaFin”)) in line with the national laws implementing the BRRD. Resolution measures that could be imposed upon a bank in resolution may include the transfer of shares, assets or liabilities of the bank to another legal entity, the reduction, including to zero, of the nominal value of shares, the dilution of shareholders or the cancellation of shares outright, or the amendment, modification or variation of the terms of the bank’s outstanding debt instruments, for example by way of a deferral of payments or a reduction of the applicable interest rate. Furthermore, certain eligible unsecured liabilities, in particular certain senior “non-preferred” debt instruments specified by the German Banking Act, may be written down, including to zero, or converted into equity (commonly referred to as “bail-in”) if the bank becomes subject to resolution.

The SRM is intended to eliminate, or reduce, the need for public support of troubled banks. Therefore, financial public support for such banks, if any, would be used only as a last resort after having assessed and exploited, to the maximum extent practicable, the resolution powers, including a bail-in. The taking of actions to ensure our resolvability or the exercise of resolution powers by the competent resolution authority could materially affect our business operations and lead to a significant dilution of our shareholders or even the total loss of our shareholders' or creditors' investment.

Other regulatory reforms adopted or proposed in the wake of the financial crisis – for example, extensive new regulations governing our derivatives activities, compensation, bank levies, deposit protection, data protection or a possible financial transaction tax – may materially increase our operating costs and negatively impact our business model.

Beyond capital requirements and the other requirements discussed above, we are affected, or expect to be affected, by various additional regulatory reforms, including, among other things, regulations governing our derivatives activities, compensation, bank levies, deposit protection, data protection or a possible financial transaction tax.

On August 16, 2012, the EU Regulation on over-the-counter ("OTC") derivatives, central counterparties and trade repositories, referred to as European Market Infrastructure Regulation ("EMIR"), entered into force. EMIR introduced a number of requirements, including clearing obligations for certain classes of OTC derivatives and various reporting and disclosure obligations. EMIR implementation has led and may lead to changes that may negatively impact our profit margins. The revised Markets in Financial Instruments Directive ("MiFID 2") and the corresponding Regulation ("MiFIR") became applicable to us on January 3, 2018 and provide for, among other things, a trading obligation for those OTC derivatives which are subject to mandatory clearing and which are sufficiently standardized.

In the United States, the Dodd-Frank Act has numerous provisions that affect or may affect our operations. Pursuant to regulations implementing provisions of the Dodd-Frank Act, we provisionally registered as a swap dealer with the US Commodity Futures Trading Commission ("CFTC") and became subject to the CFTC's extensive oversight. Regulation of swap dealers by the CFTC imposes numerous corporate governance, business conduct, capital, margin, reporting, clearing, execution and other regulatory requirements on us. It also requires us to comply with certain US rules in some circumstances with respect to transactions conducted outside of the United States or with non-US persons. Although the coverage of EMIR and CFTC regulations implementing the Dodd-Frank Act is in many ways similar, certain swaps may be subject to both regulatory regimes to a significant extent. However, pursuant to the CFTC's guidance on cross-border swaps regulation, there may be instances where we can comply with the requirements of EMIR and MiFID in lieu of complying with the CFTC's requirements. The requirements under the Dodd-Frank Act may adversely affect our derivatives business and make us less competitive, especially as compared to competitors not subject to such regulation. Additionally, under the Dodd-Frank Act, security-based swaps are subject to a standalone regulatory regime under the jurisdiction of the US Securities and Exchange Commission ("SEC"). The SEC is finalizing rules for its security-based swap regime that are expected to be parallel to, but not identical to, the CFTC's regulation of swaps. This will impose further regulation of our derivatives business.

In addition, the CRR/CRD 4 legislative package provides for executive compensation reforms including caps on bonuses that may be awarded to "material risk takers" and other employees as defined therein and in the German Banking Act and other applicable rules and regulations such as the Remuneration Regulation for Institutions (Institutsvergütungsverordnung). Such restrictions on compensation, including any guidelines issued by the European Banking Authority to further implement them, could put us at a disadvantage to our competitors in attracting and retaining talented employees, especially compared to those outside the European Union that are not subject to these caps and other constraints.

Following the financial crisis, bank levies have been introduced in some countries including, among others, Germany and the United Kingdom. We accrued € 690 million for bank levies in 2018, € 596 million in 2017 and € 547 million in 2016. Also, we are required to contribute substantially to the Single Resolution Fund under the SRM (which is intended to reach a target level of 1 % of insured deposits of all banks in member states participating in the SRM by the end of 2023) and the statutory deposit guarantee and investor compensation schemes under the recast European Union directive on deposit guarantee schemes ("DGS Directive") and the European Union directive on investor compensation schemes. The DGS Directive defines a 0.8 % target level of prefunding by 2024 (similar to resolution funds), which has significantly increased the costs of the statutory deposit protection scheme. In addition, in this context, on November 24, 2015, the European Commission proposed a regulation to establish a European Deposit Insurance Scheme, or "EDIS", for bank deposits of all credit institutions that are members of any of the current national statutory deposit guarantee schemes of member states participating in the banking union. While the total impact of these future levies cannot currently be quantified, they may have a material adverse effect on our business, financial condition and results of operations in future periods.

The General Data Protection Regulation ("GDPR") became applicable in the European Union on May 25, 2018. It relates to data protection and privacy rights of individuals within the European Union and addresses the export of personal data to other jurisdictions. The GDPR primarily aims at giving individuals control over their personal data and to unifying the regulatory environment for cross-border business. The GDPR contains provisions and requirements pertaining to the processing of personal data of individuals and also applies to businesses inside the European Union that are processing personal data. The regulation furthermore applies to businesses outside of the European Union if goods or services are offered to data subjects in the European Union, or if the behavior of data subjects in the European Union is being monitored. The GDPR imposes compliance obligations and grants broad enforcement powers to supervisory authorities, including the potential to levy significant fines for non-compliance.

Separately, on January 22, 2013, the Council of the European Union adopted a decision authorizing eleven EU member states (Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Slovakia, Slovenia and Spain) to proceed with the introduction of a financial transaction tax under the European Union's "enhanced cooperation procedure". The European Commission on February 14, 2013 adopted a draft directive for the implementation of the financial transaction tax. Following several rounds of political discussions there is currently no timetable for the conclusion of an agreement. If a financial transaction tax is ultimately adopted, depending on its final details, it could result in compliance costs as well as market consequences and have a material adverse effect on our profit and business.

Risks Relating to Our Internal Control Environment

A robust and effective internal control environment and adequate infrastructure (comprising people, policies and procedures, controls testing and IT systems) are necessary to ensure that we conduct our business in compliance with the laws, regulations and associated supervisory expectations applicable to us. We have identified the need to strengthen our internal control environment and infrastructure and have embarked on initiatives to accomplish this. If these initiatives are not successful or are delayed, our reputation, regulatory position and financial condition may be materially adversely affected, and our ability to achieve our strategic ambitions may be impaired.

Our businesses are highly dependent on our ability to maintain a robust and effective internal control environment. This is needed for the Bank to process and monitor, on a daily basis, a wide variety of transactions, many of which are highly complex and occur at high speeds, volumes and frequencies, and across numerous and diverse markets and currencies. Such a robust and effective control environment is in turn dependent on the sufficiency of our infrastructure to support that environment. This infrastructure consists broadly of internal policies and procedures, testing protocols, and the IT systems and employees needed to enforce and enable them. An effective control environment is dependent on infrastructure systems and procedures that cover the processing and settling of transactions; the valuation of assets; the identification, monitoring, aggregation, measurement and reporting of risks and positions against various metrics; the evaluation of counterparties and customers for legal, regulatory and

compliance purposes; the escalation of reviews; and the taking of mitigating and remedial actions where necessary. They are also critical for regulatory reporting and other data processing and compliance activities.

Both our internal control environment and the infrastructure that underlies it fall short in a number of areas of our standards for completeness and comprehensiveness and are not well integrated across the Bank. Our IT infrastructure, in particular, is fragmented, with numerous distinct platforms, many of which need significant upgrades, in operation across the Bank. Our business processes and the related control systems often require manual procedures and actions that increase the risks of human error and other operational problems that can lead to delays in reporting information to management and to the need for more adjustments and revisions than would be the case with more seamlessly integrated and automated systems and processes. As a result, it is often difficult and labor-intensive for us to obtain or provide information of a consistently high quality and on a timely basis to comply with regulatory reporting and other compliance requirements or to meet regulatory expectations on a consistent basis and, in certain cases, to manage our risk comprehensively. Furthermore, it often takes intensive efforts to identify, when possible, inappropriate behavior by our staff and attempts by third parties to misuse our services as a conduit for prohibited activities, including those relating to anti-financial crime laws and regulation.

In addition, we may not always have the personnel with the appropriate experience, seniority and skill levels to compensate for shortcomings in our processes and infrastructure, or to identify, manage or control risks, and it often has been difficult to attract and retain the requisite talent. This has impacted our ability to remediate existing weaknesses and manage the risks inherent in our activity.

Against this backdrop, our regulators, our Management Board and our Group Audit function have increasingly and more intensively focused on our internal controls and infrastructure through numerous formal reviews and audits of our operations. These reviews and audits have identified various areas for improvement relating to a number of elements of our control environment and infrastructure. These include the infrastructure relating to transaction capturing and recognition, classification of assets, asset valuation frameworks, data and process consistency, risk identification, measurement and management and other processes required by laws, regulations, and supervisory expectations. They also include regulatory reporting, anti-money laundering (AML), “know your customer” (KYC) and other internal processes that are aimed at preventing use of our products and services for the purpose of committing or concealing financial crime. As one example, our January 2017 settlement with the UK FCA relating to trading activities involving our Russian operations stemmed in part from the FCA’s review of the AML control functions in our investment bank.

Our principal regulators, including the BaFin, the ECB and the Federal Reserve Board, have also conducted numerous reviews focused on our internal controls and the related infrastructure. These regulators have required us formally to commit to remediate our AML and other weaknesses, including the fragmented and manual nature of our infrastructure. For example, on September 21, 2018, the BaFin issued an order requiring us to implement measures on specified timelines over the coming months and years to improve our control and compliance infrastructure relating to AML and, in particular, the know-your-client (KYC) processes in CIB. Local regulators in other countries in which we do business also review the sufficiency of our control environment and infrastructure with respect to their jurisdictions. While the overall goals of the various prudential regulators having authority over us in the many places in which we do business are broadly consistent, and the general themes of our deficiencies in internal controls and the supporting infrastructure are similar, the regulatory frameworks applicable to us in the area of internal controls are generally applicable at a national or EU-wide level and are not always consistent across the jurisdictions in which we operate around the world. This adds complexity and cost to our efforts to reduce fragmentation and put in place automated systems that communicate seamlessly and quickly with one another.

In order to improve in the areas discussed above, we are undertaking several major initiatives to enhance the efficacy of the transaction processing environment, strengthen our controls and infrastructure, manage non-financial risks and

enhance the skill set of our personnel. We believe that these initiatives will better enable us to avoid the circumstances that have resulted in many of the litigations and regulatory and enforcement investigations and proceedings to which we have recently been subject, and will improve our ability to comply with laws and regulations and meet supervisory expectations. In particular, we are making efforts to reduce the complexity of our business and to integrate and automate processes and business and second-line controls. We have also exited certain businesses, for example in Russia, and high-risk countries, selectively off-boarded a number of clients, worked to strengthen our compliance culture and control functions and increased the size of and strengthened our Group Audit function. However, we may be unable to complete these initiatives as quickly as we intend or as our regulators demand, and our efforts may be insufficient to remediate existing deficiencies and prevent future deficiencies or to result in fewer litigations or regulatory and enforcement investigations, proceedings and criticism in the future. We may also, when faced with the considerable expense of these initiatives, fail to provide sufficient resources for them quickly enough or at all, especially during periods when our operating performance and profitability are challenged. If we are unable to significantly improve our infrastructure and control environment in a timely manner, we may determine to or some of our regulators may require us to reduce our exposure to or terminate certain kinds of products or businesses, counterparties or regions, which could, depending on the extent of such requirement, significantly challenge our ability to operate profitably under our current business model.

Regulators can also impose capital surcharges, requiring capital buffers in addition to those directly required under the regulatory capital rules applicable to us, to reflect the additional risks posed by deficiencies in our control environment. In extreme cases, regulators can suspend our permission to operate in the businesses and regions within their jurisdictions or require extensive and costly remedial actions. Furthermore, implementation of enhanced infrastructure and controls may result in higher-than-expected costs of regulatory compliance that could offset or exceed efficiency gains or significantly affect our profitability. Any of these factors could affect our ability to implement our strategy in a timely manner or at all.

The BaFin has ordered us to improve our control and compliance infrastructure relating to anti-money laundering and know-your-client processes in CIB, and appointed a special representative to monitor these measures' implementation. Our results of operations, financial condition and reputation could be materially and adversely affected if we are unable to significantly improve our infrastructure and control environment by the set deadline.

On September 21, 2018, the BaFin issued an order requiring us to implement measures on specified timelines over the coming months and years to improve our control and compliance infrastructure relating to AML and, in particular, the KYC processes in CIB. The BaFin also appointed KPMG as special representative, reporting to the BaFin on a quarterly basis on certain aspects of our compliance and progress with the implementation of these measures. In February 2019, the BaFin extended the special representative's mandate to cover our internal controls in the correspondent banking business. Our AML and KYC processes, as well as our other internal processes that are aimed at preventing use of our products and services for the purpose of committing or concealing financial crime and our personnel responsible for our efforts in these areas, continue to be the subject of regulatory scrutiny in a number of jurisdictions. If we are unable to significantly improve our infrastructure and control environment by the set deadline, our results of operations, financial condition and reputation could be materially and adversely affected. For example, some of our regulators, such as BaFin, would likely impose fines or require us to reduce our exposure to or terminate certain kinds of products or businesses or relationships with counterparties or regions, which could, depending on the extent of such requirement, significantly challenge our ability to operate profitably under our current business model.

Risks Relating to Litigation, Regulatory Enforcement Matters and Investigations

We operate in a highly and increasingly regulated and litigious environment, potentially exposing us to liability and other costs, the amounts of which may be substantial and difficult to estimate, as well as to legal and regulatory sanctions and reputational harm.

The financial services industry is among the most highly regulated industries. Our operations throughout the world are regulated and supervised by the central banks and regulatory authorities in the jurisdictions in which we operate. In recent years, regulation and supervision in a number of areas has increased, and regulators, law enforcement authorities, governmental bodies and others have sought to subject financial services providers to increasing oversight and scrutiny, which in turn has led to additional regulatory investigations or enforcement actions. This trend has accelerated markedly as a result of the global financial crisis and the European sovereign debt crisis. There has been a steep escalation in the severity of the terms which regulators and law enforcement authorities have required to settle legal and regulatory proceedings against financial institutions, with settlements in recent years including unprecedented monetary penalties as well as criminal sanctions. As a result, we may continue to be subject to increasing levels of liability and regulatory sanctions, and may be required to make greater expenditures and devote additional resources to addressing these liabilities and sanctions. Regulatory sanctions may include status changes to local licenses or orders to discontinue certain business practices.

We and our subsidiaries are involved in various litigation proceedings, including civil class action lawsuits, arbitration proceedings and other disputes with third parties, as well as regulatory proceedings and investigations by both civil and criminal authorities in jurisdictions around the world. We expect that the costs to us arising from the resolution of litigation, enforcement and similar matters pending against us to continue to be significant in the near to medium term and to adversely affect our business, financial condition and results of operations. Litigation and regulatory matters are subject to many uncertainties, and the outcome of individual matters is not predictable with assurance. We may settle litigation or regulatory proceedings prior to a final judgment or determination of liability. We may do so for a number of reasons, including to avoid the cost, management efforts or negative business, regulatory or reputational consequences of continuing to contest liability, even when we believe we have valid defenses to liability. We may also do so when the potential consequences of failing to prevail would be disproportionate to the costs of settlement. Furthermore, we may, for similar reasons, reimburse counterparties for their losses even in situations where we do not believe that we are legally compelled to do so. The financial impact of legal risks might be considerable but may be difficult or impossible to estimate and to quantify, so that amounts eventually paid may exceed the amount of provisions made or contingent liabilities assessed for such risks.

Actions currently pending against us or our current or former employees may not only result in judgments, settlements, fines or penalties, but may also cause substantial reputational harm to us. The risk of damage to our reputation arising from such proceedings is also difficult or impossible to quantify.

Regulators have increasingly sought admissions of wrongdoing in connection with settlement of matters brought by them. This could lead to increased exposure in subsequent civil litigation or in consequences under so-called "bad actor" laws, in which persons or entities determined to have committed offenses under some laws can be subject to limitations on business activities under other laws, as well as adverse reputational consequences. In addition, the DOJ conditions the granting of cooperation credit in civil and criminal investigations of corporate wrongdoing on the company involved having provided to investigators all relevant facts relating to the individuals responsible for the alleged misconduct. This policy may result in increased fines and penalties if the DOJ determines that we have not provided sufficient information about applicable individuals in connection with an investigation. Other governmental authorities could adopt similar policies.

In addition, the financial impact of legal risks arising out of matters similar to some of those we face have been very large for a number of participants in the financial services industry, with fines and settlement payments greatly exceeding what market participants may have expected and, as noted above, escalating steeply over the last few years

to unprecedented levels. The experience of others, including settlement terms, in similar cases is among the factors we take into consideration in determining the level of provisions we maintain in respect of these legal risks. Developments in cases involving other financial institutions in recent years have led to greater uncertainty as to the predictability of outcomes and could lead us to add to our provisions. Moreover, the costs of our investigations and defenses relating to these matters are themselves substantial. Further uncertainty may arise as a result of a lack of coordination among regulators from different jurisdictions or among regulators with varying competencies in a single jurisdiction, which may make it difficult for us to reach concurrent settlements with each regulator. Should we be subject to financial impacts arising out of litigation and regulatory matters to which we are subject in excess of those we have calculated in accordance with our expectations and the relevant accounting rules and contrary to our publicly communicated expectation that 2015 and 2016 were peak years for the financial impact of litigation and regulatory matters, our provisions in respect of such risks may prove to be materially insufficient to cover these impacts. This could have a material adverse effect on our results of operations, financial condition or reputation as well as on our ability to maintain capital, leverage and liquidity ratios at levels expected by market participants and our regulators. In such an event, we could find it necessary to reduce our risk-weighted assets (including on terms disadvantageous to us) or substantially cut costs to improve these ratios, in an amount corresponding to the adverse effects of the provisioning shortfall.

We are currently the subject of industry-wide investigations by regulatory and law enforcement agencies relating to interbank and dealer offered rates, as well as civil actions. Due to a number of uncertainties, including those related to the high profile of the matters and other banks' settlement negotiations, the eventual outcome of these matters is unpredictable, and may materially and adversely affect our results of operations, financial condition and reputation.

We have responded to requests for information from, and cooperated with, various regulatory and law enforcement agencies in connection with industry-wide investigations concerning the setting of the London Interbank Offered Rate (LIBOR), Euro Interbank Offered Rate (EURIBOR), Tokyo Interbank Offered Rate (TIBOR) and other interbank and dealer offered rates. The investigations underway have the potential to result in the imposition of significant financial penalties and other consequences for the Bank.

As previously reported, we paid € 725 million to the European Commission pursuant to a settlement agreement dated December 4, 2013 in relation to anticompetitive conduct in the trading of interest rate derivatives. Also as previously reported, on April 23, 2015, we reached settlements with the DOJ, the CFTC, FCA, and the New York State Department of Financial Services ("DFS") to resolve investigations into misconduct concerning the setting of LIBOR, EURIBOR, and TIBOR. Under the terms of these agreements, we agreed to pay penalties of US$ 2.175 billion to the DOJ, CFTC and DFS and GBP 226.8 million to the FCA. As part of the resolution with the DOJ, DB Group Services (UK) Limited. (an indirectly-held, wholly-owned subsidiary of ours) pled guilty to one count of wire fraud in the US District Court for the District of Connecticut and we entered into a Deferred Prosecution Agreement with a three year term, which expired in 2018. On October 25, 2017, we entered into a settlement with a working group of US state attorneys general resolving their interbank offered rate investigation. Among other conditions, we made a settlement payment of US$ 220 million. The factual admissions we have made in connection with these settlements could make it difficult for us to defend against pending and future claims. Other investigations of us concerning the setting of various interbank offered rates remain ongoing.

In addition, we are party to 45 US civil actions concerning alleged manipulation relating to the setting of various interbank and/or dealer offered rates, as well as single actions pending in each of the UK, Israel and Argentina. Most of the civil actions, including putative class actions, are pending in the US District Court for the Southern District of New York (SDNY), against us and numerous other defendants. All but four of the US civil actions were filed on behalf of parties who allege losses as a result of manipulation relating to the setting of US dollar LIBOR. The four civil actions pending against us that do not relate to US dollar LIBOR are also pending in the SDNY, and include one consolidated action concerning Pound Sterling (GBP) LIBOR, one action concerning Swiss franc (CHF) LIBOR, one action concerning two Singapore Dollar (SGD) benchmark rates, the Singapore Interbank Offered Rate (SIBOR) and the Swap Offer Rate (SOR), and one action concerning the Canadian Dealer Offered Rate (CDOR).

We cannot predict the effect on us of the interbank and dealer offered rates matters, which could include fines levied by government bodies, damages from private litigation for which we may be liable, legal and regulatory sanctions (including possible criminal sanctions) and other consequences.

Regulators and law enforcement authorities are investigating, among other things, our compliance with the US Foreign Corrupt Practices Act and other laws with respect to our hiring practices related to candidates referred by clients, potential clients and government officials, and our engagement of finders and consultants.

Certain regulators and law enforcement authorities in various jurisdictions, including the SEC and the DOJ, are investigating, among other things, our compliance with the US Foreign Corrupt Practices Act and other laws with respect to our hiring practices related to candidates referred by clients, potential clients and government officials, and our engagement of finders and consultants. We are responding to and continuing to cooperate with these investigations. Certain regulators in other jurisdictions have also been briefed on these investigations. In the event that any violations of law or regulation are found to have occurred or are alleged to have occurred, and an enforcement action is filed, legal and regulatory sanctions in respect thereof may materially and adversely affect our results of operations, financial condition and reputation.

We are currently involved in civil proceedings in connection with our voluntary takeover offer for the acquisition of all shares of Postbank. The extent of our financial exposure to this matter could be material, and our reputation may be harmed.

On September 12, 2010, we announced the decision to make a voluntary takeover offer for the acquisition of all shares in Deutsche Postbank AG (Postbank). On October 7, 2010, we published the official offer document. In our takeover offer, we offered Postbank shareholders consideration of € 25 for each Postbank share. The takeover offer was accepted for a total of approximately 48.2 million Postbank shares.

In November 2010, a former shareholder of Postbank, Effecten-Spiegel AG, which had accepted the takeover offer, brought a claim against us alleging that the offer price was too low and was not determined in accordance with the applicable law of the Federal Republic of Germany. The plaintiff alleges that we had been obliged to make a mandatory takeover offer for all shares in Postbank, at the latest, in 2009. The plaintiff avers that, at the latest in 2009, the voting rights of Deutsche Post AG in Postbank had to be attributed to us pursuant to Section 30 of the German Takeover Act. Based thereon, the plaintiff alleges that the consideration offered by us for the shares in Postbank in the 2010 voluntary takeover offer needed to be raised to € 57.25 per share.

The Regional Court Cologne (Landgericht) dismissed the claim in 2011 and the Cologne appellate court dismissed the appeal in 2012. The Federal Court set aside the Cologne appellate court's judgment and referred the case back to the appellate court. In its judgment, the Federal Court stated that the appellate court had not sufficiently considered the plaintiff's allegation that we and Deutsche Post AG "acted in concert" in 2009.

Starting in 2014, additional former shareholders of Postbank, who accepted the 2010 tender offer, brought similar claims as Effecten-Spiegel AG against us which are pending with the Regional Court Cologne and the Higher Regional Court of Cologne, respectively. On October 20, 2017, the Regional Court Cologne handed down a decision granting the claims in a total of 14 cases which were combined in one proceeding. The Regional Court Cologne took the view that we were obliged to make a mandatory takeover offer already in 2008 so that the appropriate consideration to be offered in the takeover offer should have been € 57.25 per share. Taking the consideration paid into account, the additional consideration per share owed to shareholders which have accepted the takeover offer would thus amount to € 32.25. We appealed this decision and the appeal has been assigned to the 13th Senate of the Higher

Regional Court of Cologne, which also is hearing the appeal of Effecten-Spiegel AG.

On November 8, 2017, a hearing took place before the Higher Regional Court of Cologne in the Effecten-Spiegel case. In that hearing, the Higher Regional Court indicated that it disagreed with the conclusions of the Regional Court Cologne and took the preliminary view that we were not obliged to make a mandatory takeover offer in 2008 or 2009. Initially the Higher Regional Court resolved to announce a decision on December 13, 2017. However, this was postponed to February 2018 because the plaintiff challenged the three members of the 13th Senate of the Higher Regional Court of Cologne for alleged prejudice. The challenge was rejected by the Higher Regional Court of Cologne at the end of January 2018. In February 2018, the court granted a motion by Effecten-Spiegel AG to re-open the hearing.

The Higher Regional Court informed the parties by notice dated February 19, 2019 that it has doubts that an acting in concert can be based on the contractual clauses which the Regional Court Cologne found to be sufficient to assume an acting in concert (and to grant the plaintiffs' claims in October 2017). Against this background, the Higher Regional Court resolved to take further evidence and to call a number of witnesses in both cases who shall be heard from October 30, 2019 until at least December 11, 2019 in weekly hearings. The individuals to be heard include current and former board members of Deutsche Bank, Deutsche Post AG and Postbank as well as other persons involved in the Postbank transaction. The court further informed the parties that it is considering to request from us the production of relevant transaction documents.

We have been served with a large number of additional lawsuits filed against us shortly before the end of 2017, almost all of which are now pending with the Regional Court Cologne. Some of the new plaintiffs allege that the consideration offered by us for the shares in Postbank in the 2010 voluntary takeover should be raised to € 64.25 per share.

The claims for payment against us in relation to these matters total almost € 700 million (excluding interest).

In September 2015, former shareholders of Postbank filed in the Regional Court Cologne shareholder actions against Postbank to set aside the squeeze-out resolution taken in the shareholders meeting of Postbank in August 2015. Among other things, the plaintiffs allege that we were subject to a suspension of voting rights with respect to its shares in Postbank based on the allegation that we failed to make a mandatory takeover offer at a higher price in 2009. The squeeze out is final and the proceeding itself has no reversal effect, but may result in damage payments. The claimants in this proceeding refer to legal arguments similar to those asserted in the Effecten-Spiegel proceeding described above. In a decision on October 20, 2017, the Regional Court Cologne declared the squeeze-out resolution to be void. The court, however, did not rely on a suspension of voting rights due to an alleged failure by us to make a mandatory takeover offer, but argued that Postbank violated information rights of Postbank shareholders in Postbank's shareholders meeting in August 2015. Postbank has appealed this decision.

The legal question of whether we had been obliged to make a mandatory takeover offer for all Postbank shares prior to its 2010 voluntary takeover may also impact two pending appraisal proceedings (Spruchverfahren). These proceedings were initiated by former Postbank shareholders with the aim to increase the cash compensation offered in connection with the squeeze-out of Postbank shareholders in 2015 and the cash compensation offered and annual guaranteed dividend paid in connection with the execution of a domination and profit and loss transfer agreement (Beherrschungs- und Gewinnabführungsvertrag) between DB Finanz-Holding AG (now DB Beteiligungs-Holding GmbH) and Postbank in 2012. The Regional Court Cologne issued resolutions indicating that it is inclined to consider a potential obligation of Deutsche Bank to make a mandatory takeover offer for Postbank at an offer price of € 57.25 when determining the adequate cash compensation in the appraisal proceedings. The cash compensation paid in

connection with the domination and profit and loss transfer agreement was € 25.18 and was accepted for approximately 0.5 million shares. The squeeze-out compensation paid in 2015 was € 35.05 and approximately 7 million shares were squeezed-out.

The extent of our financial exposure to this matter could be material, and our reputation may be harmed.

We have investigated the circumstances around equity trades entered into by certain clients in Moscow and London and have advised regulators and law enforcement authorities in several jurisdictions about those trades. In the event that violations of law or regulation are found to have occurred, any resulting penalties against us may materially and adversely affect our results of operations, financial condition and reputation.

We have investigated the circumstances around equity trades entered into by certain clients with us in Moscow and London that offset one another. The total volume of transactions reviewed is significant. Our internal investigation of potential violations of law, regulation and policy and into the related internal control environment has concluded, and we have assessed the findings identified during the investigation; to date we have identified certain violations of our policies and deficiencies in our control environment. We have advised regulators and law enforcement authorities in several jurisdictions (including Germany, Russia, the UK and the United States) of this investigation and have taken disciplinary measures with regards to certain individuals in this matter.

On January 30 and 31, 2017, the DFS and FCA announced settlements with the Bank related to their investigations into this matter. The settlements conclude the DFS and the FCA's investigations into the bank's AML control function in its investment banking division, including in relation to the equity trading described above. Under the terms of the settlement agreement with the DFS, Deutsche Bank entered into a consent order, and agreed to pay civil monetary penalties of US$ 425 million and to engage an independent monitor to conduct a comprehensive review of its existing AML compliance programs that pertain to or affect activities conducted by or through our US bank subsidiary DBTCA and our New York branch for a term of up to two years. Under the terms of the settlement agreement with the FCA, we agreed to pay civil monetary penalties of approximately GBP 163 million. On May 30, 2017, the Federal Reserve announced its settlement with us resolving this matter as well as additional AML issues identified by the Federal Reserve. We paid a penalty of US$ 41 million. We also agreed to retain independent third parties to assess our Bank Secrecy Act/AML program and review certain foreign correspondent banking activity of DBTCA. We are also required to submit written remediation plans and programs.

We continue to cooperate with regulators and law enforcement authorities, including the DOJ which has its own ongoing investigation into these securities trades. In the event that violations of law or regulation are found to have occurred, legal and regulatory sanctions in respect thereof may materially and adversely affect our results of operations, financial condition and reputation.

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We are currently involved in civil and criminal proceedings in connection with transactions with Monte dei Paschi di Siena. The extent of our financial exposure to these matters could be material, and our reputation may be harmed.

In March 2013, Banca Monte dei Paschi di Siena ("MPS") initiated civil proceedings in Italy against us alleging that we assisted former MPS senior management in an accounting fraud on MPS, by undertaking repo transactions with MPS and "Santorini", a wholly owned special-purpose vehicle of MPS, which helped MPS defer losses on a previous transaction undertaken with us. Subsequently, in July 2013, the Fondazione Monte dei Paschi di Siena ("FMPS"), MPS' largest shareholder, also commenced civil proceedings in Italy for damages based on substantially the same facts. In December 2013, we reached an agreement with MPS to settle the civil proceedings and the transactions were unwound. The civil proceedings initiated by FMPS, in which damages of between € 220 million and € 381 million were

claimed, were also recently settled upon payment by us of € 17.5 million. FMPS's separate claim filed in July 2014 against FMPS's former administrators and a syndicate of 12 banks including DB S.p.A. for € 286 million continues to be pending before the first instance Florence courts.

A criminal investigation was launched by the Siena Public Prosecutor into the transactions entered into by MPS with us and certain unrelated transactions entered into by MPS with other parties. Such investigation was moved in summer 2014 from Siena to the Milan Public Prosecutors as a result of a change in the alleged charges being investigated. On February 16, 2016, the Milan Public Prosecutors issued a request of committal to trial against us and six current and former employees. The committal process concluded with a hearing on October 1, 2016, during which the Milan court committed all defendants in the criminal proceedings to trial. Our potential exposure is for administrative liability under Italian Legislative Decree n. 231/2001 and for civil vicarious liability as an employer of current and former employees who are being criminally prosecuted. A verdict is not expected before summer 2019.

On May 22, 2018, CONSOB, the authority responsible for regulating the Italian financial markets, issued fines of € 100,000 each against the six current and former employees of ours who are individual defendants in the criminal proceedings. The six individuals were also banned from performing management functions in Italy and for Italian based institutions for three to six months each. No separate fine or sanction was imposed on us but we are jointly and severally liable for our six current/former employees' fines. On June 14, 2018, we and the six individuals filed an appeal in the Milan Court of Appeal challenging CONSOB's decision and one of the individuals sought a stay of enforcement of the fine against that individual. The stay was granted on July 21, 2018. The hearing of the appeal is scheduled for June 5, 2019 with a verdict expected by the end of 2019.

The extent of our financial exposure to these matters could be material, and our reputation may suffer material harm as a result of these matters.

We are under continuous examination by tax authorities in the jurisdictions in which we operate. Tax laws are increasingly complex and are evolving. The cost to us arising from the conclusion and resolution of routine tax examinations, tax litigation and other forms of tax proceedings or tax disputes may increase and may adversely affect our business, financial condition and results of operation.

We are under continuous examination by tax authorities in the jurisdictions in which we operate. Tax laws are increasingly complex. In the current political and regulatory environment, tax administrations' and courts' interpretation of tax laws and regulations and their application are evolving, and scrutiny by tax authorities has become increasingly intense. On December 22, 2017, the new US tax legislation, known as the "Tax Cuts and Jobs Act" or "TCJA", was signed into law. The TCJA includes a number of provisions, such as the Base Erosion Anti-Abuse Tax, for which proposed regulations were issued on December 13, 2018. While providing a certain level of clarity, the proposed regulations are subject to further changes before being made final, and certain issues will require further interpretative guidance over the coming months and years. In addition, wide ranging changes in the principles of international taxation emanating from the OECD's Base Erosion and Profit Shifting agenda are generating significant uncertainties for us and our subsidiaries and may result in an increase in instances of bilateral tax disputes going forward, as member states may take different approaches in transposing these requirements into national law. Tax administrations have also been focusing on the eligibility of taxpayers for reduced withholding taxes on dividends in connection with certain cross-border lending or derivative transactions with the German Federal Ministry of Finance having issued administrative guidance in this area in 2017. As a result, the cost to us arising from the conclusion and resolution of routine tax examinations, tax litigation and other forms of tax proceedings or tax disputes, as well as from rapidly changing and increasingly complex and uncertain tax laws and principles, may increase and may adversely affect our business, financial condition and results of operation.

We are currently involved in a legal dispute with the German tax authorities in relation to the tax treatment of certain income received with respect to our pension plan assets. The proceeding is pending in front of the German supreme fiscal court (Bundesfinanzhof). Should the courts ultimately rule in favor of the German tax authorities, the outcome could have a material effect on our comprehensive income and financial condition.

We sponsor a number of post-employment benefit plans on behalf of our employees. In Germany, the pension assets that fund the obligations under these pension plans are held by Benefit Trust GmbH. The German tax authorities are challenging the tax treatment of certain income received by Benefit Trust GmbH in the years 2010 to 2013 with respect to its pension plan assets. For the year 2010 Benefit Trust GmbH paid the amount of tax and interest assessed of € 160 million to the tax authorities and is seeking a refund of the amounts paid in litigation with the relevant lower fiscal court. For 2011 to 2013 the matter is stayed pending the outcome of the 2010 tax litigation. The amount of tax and interest under dispute for years 2011 to 2013, which also has been paid to the tax authorities, amounts to € 456 million. In March 2017, the lower fiscal court ruled in favor of Benefit Trust GmbH and in September 2017 the tax authorities appealed the decision to the German supreme fiscal court (Bundesfinanzhof). A decision by the supreme fiscal court is not expected for a number of years. An ultimate decision by the courts that is unfavorable to us could materially and adversely affect our comprehensive income and financial condition.

US Congressional committees and other US governmental entities have sought and may seek information from us concerning potential dealings between us and the US executive branch, the President, his family and other close associates, exposing us in particular to risk to our reputation and potential loss of business as a result of extensive media attention.

A number of media entities have reported that US Congressional committees and other US governmental entities are seeking or may seek information from us concerning, among other things, potential dealings between the Bank and certain members of the Executive branch of the US government, the President, his family, and other close associates. Attention surrounding such actual or potential requests and inquiries and our responses can create reputational and other risks that could have a material adverse effect on us. Our policy is to cooperate with all authorized government inquiries.

We have received requests for information from regulatory and law enforcement agencies concerning our correspondent banking relationship with Danske Bank, exposing us in particular to risk to our reputation and potential loss of business as a result of extensive media attention.

We have received requests for information from regulatory and law enforcement agencies concerning our correspondent banking relationship with Danske Bank, including our historical processing of correspondent banking transactions on behalf of customers of Danske Bank's Estonia branch prior to cessation of the correspondent banking relationship with that branch in 2015. We are providing information to and otherwise cooperating with the investigating agencies. We are also conducting an internal investigation into these matters, including of whether any violations of law, regulation or policy occurred and the effectiveness of the related internal control environment. Media and market attention surrounding these requests can create reputational risks in particular, even if our investigations and those of our regulators and the authorities do not result in evidence of wrongdoing. We could in particular suffer diminished volumes of business as a result, which could have a material adverse effect on our financial condition and results of operations.

In November 2018, our offices in Frankfurt were searched by German law enforcement authorities on the suspicion that two employees and as-yet unidentified further individuals deliberately abstained from issuing suspicious activity reports (SARs) in a timely manner and aided and abetted money laundering, exposing us in particular to risk to our reputation and potential loss of business as a result of extensive media attention.

On November 29, 2018, based on a search warrant issued by the Local Court (Amtsgericht) in Frankfurt, our offices in Frankfurt were searched by German law enforcement authorities on the suspicion that two employees and as-yet

unidentified further individuals deliberately abstained from issuing suspicious activity reports (SARs) in a timely manner and aided and abetted money laundering in connection with our offshore trust business. The physical searches ended on November 30, 2018. Nevertheless, the search remains formally open until we have completed additional data deliveries. We are cooperating in the investigation, as has been publicly acknowledged by the Frankfurt Public Prosecutor's Office. Attention surrounding such search and investigation can create reputational risks in particular, even if our investigations and those of our regulators and the authorities do not result in evidence of wrongdoing. We could in particular suffer diminished volumes of business as a result, which could have a material adverse effect on our financial condition and results of operations.

Guilty pleas by or convictions of us or our affiliates in criminal proceedings may have consequences that have adverse effects on certain of our businesses.

We and our affiliates have been and are subjects of criminal proceedings or investigations. In particular, as part of the resolution of the investigation of the DOJ into misconduct relating to London interbank offered rates, our subsidiary DB Group Services (UK) Limited entered into a plea agreement with the DOJ, pursuant to which the company pled guilty to one count of wire fraud, and, subsequently, a judgment of conviction was issued against the company. Also, in connection with the KOSPI Index unwind matters, our subsidiary Deutsche Securities Korea Co. was convicted of vicarious corporate criminal liability in respect of spot/futures linked market manipulation by one of its employees; though the criminal trial verdict has been overturned on appeal, the Korean prosecutor's office has appealed the decision. We and our subsidiaries are also subjects of other criminal proceedings or investigations.

Guilty pleas or convictions against us or our affiliates could lead to our ineligibility to use an important trading exemption under ERISA. In particular, such guilty pleas or convictions could cause our asset management affiliates to no longer qualify as "qualified professional asset managers" ("QPAMs") under the QPAM Prohibited Transaction Exemption, which exemption is relied on to provide asset management services to certain pension plans in connection with certain asset management strategies. While there are a number of statutory exemptions and numerous other administrative exemptions that our asset management affiliates may use to trade on behalf of ERISA plans, and in many instances they may do so in lieu of relying on the QPAM exemption, loss of QPAM status could cause customers who rely on such status (whether because they are legally required to do so or because we have agreed contractually with them to maintain such status) to cease to do business or refrain from doing business with us and could negatively impact our reputation more generally. For example, clients may mistakenly see the loss as a signal that our asset management affiliates are somehow no longer approved as asset managers generally by the US Department of Labor ("DOL"), the agency responsible for ERISA, and cease to do business or refrain from doing business with us for that reason. This could have a material adverse effect on our results of operations, particularly those of our asset management business in the United States. On December 29, 2017, the DOL published an individual exemption permitting certain of our affiliates to retain their QPAM status despite both the conviction of DB Group Services (UK) Limited and the conviction of Deutsche Securities Korea Co. The exemption applies through April 17, 2021 but may terminate earlier if, among other things, we or our affiliates are convicted of crimes in other matters. The disqualification period arising from these convictions extends until April 17, 2027, so we will need to obtain a further exemption by April 18, 2021 to avoid a loss of QPAM status at that time, with the potential for the adverse effects described above if such further exemption is not granted.

Other Risks

In addition to our traditional banking businesses of deposit-taking and lending, we also engage in nontraditional credit businesses in which credit is extended in transactions that include, for example, our holding of securities of third parties or our engaging in complex derivative transactions. These nontraditional credit businesses materially increase

our exposure to credit risk.

As a bank and provider of financial services, we are exposed to the risk that third parties who owe us money, securities or other assets will not perform their obligations. Many of the businesses we engage in beyond the traditional banking businesses of deposit-taking and lending also expose us to credit risk.

In particular, much of the business we conduct through our Corporate & Investment Bank corporate division entails credit transactions, frequently ancillary to other transactions. Nontraditional sources of credit risk can arise, for example, from holding securities of third parties; entering into swap or other derivative contracts under which counterparties have obligations to make payments to us; executing securities, futures, currency or commodity trades that fail to settle at the required time due to nondelivery by the counterparty or systems failure by clearing agents, exchanges, clearing houses or other financial intermediaries; and extending credit through other arrangements. Parties to these transactions, such as trading counterparties, may default on their obligations to us due to bankruptcy, political and economic events, lack of liquidity, operational failure or other reasons.

Many of our derivative transactions are individually negotiated and non-standardized, which can make exiting, transferring or settling the position difficult. Certain credit derivatives require that we deliver to the counterparty the underlying security, loan or other obligation in order to receive payment. In a number of cases, we do not hold, and may not be able to obtain, the underlying security, loan or other obligation. This could cause us to forfeit the payments otherwise due to us or result in settlement delays, which could damage our reputation and ability to transact future business, as well as impose increased costs on us. Legislation in the European Union (EMIR) and the United States (the Dodd-Frank Act) has introduced requirements for the standardization, margining, central clearing and transaction reporting of certain over-the-counter derivatives. While such requirements are aimed at reducing the risk posed to counterparties and the financial system by such derivatives, they may reduce the volume and profitability of the transactions in which we engage, and compliance with such provisions may impose substantial costs on us.

The exceptionally difficult market conditions experienced during the global financial crisis severely adversely affected certain areas in which we do business that entail nontraditional credit risks, including the leveraged finance and structured credit markets, and similar market conditions, should they occur, may do so in the future.

A substantial proportion of our assets and liabilities comprise financial instruments that we carry at fair value, with changes in fair value recognized in our income statement. As a result of such changes, we have incurred losses in the past, and may incur further losses in the future.

A substantial proportion of the assets and liabilities on our balance sheet comprise financial instruments that we carry at fair value, with changes in fair value recognized in the income statement. Fair value is defined as the price at which an asset or liability could be exchanged in an arm’s length transaction between knowledgeable, willing parties, other than in a forced or liquidation sale. If the value of an asset carried at fair value declines (or the value of a liability carried at fair value increases) a corresponding unfavorable change in fair value is recognized in the income statement. These changes have been and could in the future be significant.

Observable prices or inputs are not available for certain classes of financial instruments. Fair value is determined in these cases using valuation techniques we believe to be appropriate for the particular instrument. The application of valuation techniques to determine fair value involves estimation and management judgment, the extent of which will vary with the degree of complexity of the instrument and liquidity in the market. Management judgment is required in the selection and application of the appropriate parameters, assumptions and modeling techniques. If any of the assumptions change due to negative market conditions or for other reasons, subsequent valuations may result in

significant changes in the fair values of our financial instruments, requiring us to record losses.

Our exposure and related changes in fair value are reported net of any fair value gains we may record in connection with hedging transactions related to the underlying assets. However, we may never realize these gains, and the fair value of the hedges may change in future periods for a number of reasons, including as a result of deterioration in the credit of our hedging counterparties. Such declines may be independent of the fair values of the underlying hedged assets or liabilities and may result in future losses.

Pursuant to accounting rules, we must periodically test the value of the goodwill of our businesses and the value of our other intangible assets for impairment. In the event such test determines that criteria for impairment exists, we are required under accounting rules to write down the value of such asset. Impairments of goodwill and other intangible assets have had and may have a material adverse effect on our profitability results of operations.

Goodwill arises on the acquisition of subsidiaries and associates and represents the excess of the aggregate of the cost of an acquisition and any noncontrolling interests in the acquiree over the fair value of the identifiable net assets acquired at the date of the acquisition. Goodwill on the acquisition of subsidiaries is capitalized and reviewed for impairment annually or more frequently if there are indications that impairment may have occurred. Intangible assets are recognized separately from goodwill when they are separable or arise from contractual or other legal rights and their fair value can be measured reliably. These assets are tested for impairment and their useful lives reaffirmed at least annually. The determination of the recoverable amount in the impairment assessment of non-financial assets requires estimates based on quoted market prices, prices of comparable businesses, present value or other valuation techniques, or a combination thereof, necessitating management to make subjective judgments and assumptions. These estimates and assumptions could result in significant differences to the amounts reported if underlying circumstances were to change.

Impairments of goodwill and other intangible assets have had and may have a material adverse effect on our profitability and results of operations. In 2016, changes in goodwill included impairments of € 285 million in Sales & Trading and of € 500 million in Asset Management. The impairment in Sales & Trading was the result of a transfer of certain businesses from Asset Management to Sales & Trading. The goodwill impairment in Asset Management was recorded in relation to the sale of the Abbey Life business and the formation of a disposal group held for sale.

Pursuant to accounting rules, we must review our deferred tax assets at the end of each reporting period. To the extent that it is no longer probable that sufficient taxable income will be available to allow the benefit of part or all of deferred tax assets to be utilized, we have to reduce the carrying amounts. These reductions have had and may in the future have material adverse effects on our profitability, equity and financial condition.

We recognize deferred tax assets for future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, unused tax losses and unused tax credits. Deferred tax assets are recognized only to the extent that it is probable that sufficient taxable profit will be available against which those unused tax losses, unused tax credits and deductible temporary differences can be utilized. As of December 31, 2018 and December 31, 2017, we recognized deferred tax assets of € 6.5 billion and € 5.9 billion, respectively in entities which have suffered a loss in either the current or preceding period.

In determining the amount of deferred tax assets, we use historical tax capacity and profitability information and, if relevant, forecasted operating results based upon approved business plans, including a review of the eligible carry-forward periods, available tax planning opportunities and other relevant considerations. Each quarter, we re-evaluate our estimate related to deferred tax assets, including our assumptions about future profitability. The accounting estimate related to the deferred tax assets depends upon underlying assumptions that can change from period to period and requires significant management judgment. For example tax law changes or variances in future

projected operating performance could result in an adjustment to the deferred tax assets that would be charged to income tax expense or directly to equity in the period such determination was made.

These adjustments have had and may in the future have material adverse effects on our profitability or equity. In 2017, we recognized a one-time tax charge of € 1.4 billion attributable to the remeasurement of US deferred tax assets as a result of the US tax reform.

Our risk management policies, procedures and methods leave us exposed to unidentified or unanticipated risks, which could lead to material losses.

We have devoted significant resources to developing our risk management policies, procedures and assessment methods and intend to continue to do so in the future. Nonetheless, the risk management techniques and strategies have not been and may in the future not be fully effective in mitigating our risk exposure in all economic market environments or against all types of risk, including risks that we fail to identify or anticipate. Some of our quantitative tools and metrics for managing risk are based upon our use of observed historical market behavior. We apply statistical and other tools to these observations to arrive at quantifications of our risk exposures. During the financial crisis, the financial markets experienced unprecedented levels of volatility (rapid changes in price direction) and the breakdown of historically observed correlations (the extent to which prices move in tandem) across asset classes, compounded by extremely limited liquidity. In this volatile market environment, our risk management tools and metrics failed to predict some of the losses we have experienced, and they may in the future fail to predict important risk exposures. In addition, our quantitative modeling does not take all risks into account and makes numerous assumptions regarding the overall environment, which may not be borne out by events. As a result, risk exposures have arisen and could continue to arise from factors we did not anticipate or correctly evaluate in our statistical models. This has limited and could continue to limit our ability to manage our risks especially in light of geopolitical developments, many of the outcomes of which are currently unforeseeable. Our losses thus have been and may in the future be significantly greater than the historical measures indicate.

In addition, our more qualitative approach to managing those risks not taken into account by our quantitative methods could also prove insufficient, exposing us to material unanticipated losses. Also, if existing or potential customers or counterparties believe our risk management is inadequate, they could take their business elsewhere or seek to limit their transactions with us. This could harm our reputation as well as our revenues and profits. See “Management Report: Risk Report” in the Annual Report 2018 for a more detailed discussion of the policies, procedures and methods we use to identify, monitor and manage our risks.

Operational risks, which may arise from errors in the performance of our processes, the conduct of our employees, instability, malfunction or outage of our IT system and infrastructure, or loss of business continuity, or comparable issues with respect to our vendors, may disrupt our businesses and lead to material losses.

We face operational risk arising from errors, inadvertent or intentional, made in the execution, confirmation or settlement of transactions or from transactions not being properly recorded, evaluated or accounted for. An example of this risk concerns our derivative contracts, which are not always confirmed with the counterparties on a timely basis. For so long as the transaction remains unconfirmed, we are subject to heightened credit and operational risk and in the event of a default may find it more difficult to enforce the contract.

In addition, our businesses are highly dependent on our ability to process manually or through our systems a large number of transactions on a daily basis, across numerous and diverse markets in many currencies. Some of the transactions have become increasingly complex. Moreover, management relies heavily on its financial, accounting

and other data processing systems that include manual processing components. If any of these processes or systems do not operate properly, or are disabled, or subject to intentional or inadvertent human error, we could suffer financial loss, a disruption of our businesses, liability to clients, regulatory intervention or reputational damage.

We are also dependent on our employees to conduct our business in accordance with applicable laws, regulations and generally accepted business standards. If our employees do not conduct our business in this manner, we may be exposed to material losses. Furthermore, if an employee's misconduct reflects fraudulent intent, we could also be exposed to reputational damage. We categorize these risks as conduct risk, which comprises inappropriate business practices, including selling products that are not suitable for a particular customer, fraud, unauthorized trading and failure to comply with applicable regulations, laws and internal policies.

We in particular face the risk of loss events due to the instability, malfunction or outage of our IT system and IT infrastructure. Such losses could materially affect our ability to perform business processes and may, for example, arise from the erroneous or delayed execution of processes as either a result of system outages or degraded services in systems and IT applications. A delay in processing a transaction, for example, could result in an operational loss if market conditions worsen during the period after the error. IT-related errors may also result in the mishandling of confidential information, damage to our computer systems, financial losses, additional costs for repairing systems, reputational damage, customer dissatisfaction or potential regulatory or litigation exposure.

Business continuity risk is the risk of incurring losses resulting from the interruption of normal business activities. We operate in many geographic locations and are frequently subject to the occurrence of events outside of our control. Despite the contingency plans we have in place, our ability to conduct business in any of these locations may be adversely impacted by a disruption to the infrastructure that supports our business, whether as a result of, for example, events that affect our third party vendors or the community or public infrastructure in which we operate. Any number of events could cause such a disruption including deliberate acts such as sabotage, terrorist activities, bomb threats, strikes, riots and assaults on the bank's staff; natural calamities such as hurricanes, snow storms, floods, disease pandemic and earthquakes; or other unforeseen incidents such as accidents, fires, explosions, utility outages and political unrest. Any such disruption could have a material adverse effect on our business and financial position.

We utilize a variety of vendors in support of our business and operations. Services provided by vendors pose risks to us comparable to those we bear when we perform the services ourselves, and we remain ultimately responsible for the services our vendors provide. Furthermore, if a vendor does not conduct business in accordance with applicable standards or our expectations, we could be exposed to material losses or regulatory action or litigation or fail to achieve the benefits we sought from the relationship.

We utilize a variety of vendors in support of our business and operations. We do so in order to focus on our core competencies and to seek improvements in costs, efficiency and effectiveness in our operations, for instance in connection with our IT modernization efforts. Services provided by vendors pose risks to us comparable to those we bear when we perform the services ourselves, and we remain ultimately responsible for the services our vendors provide. We depend on our vendors to conduct their delivery of services in compliance with applicable laws, regulations and generally accepted business standards and in accordance with the contractual terms and service levels they have agreed with us. If our vendors do not conduct business in accordance with these standards, we may be exposed to material losses and could be subject to regulatory action or litigation as well as be exposed to reputational damage. More generally, if a vendor relationship does not meet our expectations, we could be exposed to financial risks, such as the costs and expenses associated with migration of the services to another vendor and business and operational risks related to the transition, and we could fail to achieve the benefits we sought from the relationship.

Our operational systems are subject to an increasing risk of cyber-attacks and other internet crime, which could result in material losses of client or customer information, damage our reputation and lead to regulatory penalties and financial losses.

Among the operational risks we face is the risk of breaches of the security of our or our vendors' computer systems due to unauthorized access to networks or resources, the introduction of computer viruses or malware, or other forms of cybersecurity attacks or incidents. Such breaches could threaten the confidentiality of our or our clients' data and the integrity of our systems. We devote significant resources toward the protection of our computer systems against such breaches and toward ensuring that our vendors employ appropriate cybersecurity safeguards. To address the evolving cyber threat risk, we have expended significant resources to modify and enhance our protective measures and to investigate and remediate any information security vulnerabilities. These measures, however, may not be effective against the many security threats we face.

The increasing frequency and sophistication of recent cyber-attacks has resulted in an elevated risk profile for many organizations around the world, and significant attention by our management has been paid to the overall level of preparedness against such attacks. Cybersecurity is growing in importance due to factors such as the continued and increasing reliance on our technology environment. We and other financial institutions have experienced attacks on computer systems, including attacks aimed at obtaining unauthorized access to confidential company or customer information or damaging or interfering with company data, resources or business activities, or otherwise exploiting vulnerabilities in our infrastructure. We expect to continue to be the target of such attacks in the future. Although we have to date not experienced any material business impact from these attacks, we may not be able to effectively anticipate and prevent more material attacks from occurring in the future. A successful attack could have a significant negative impact on us, including as a result of disclosure or misappropriation of client or proprietary information, damage to computer systems, financial losses, remediation costs (such as for investigation and re-establishing services), increased cybersecurity costs (such as for additional personnel, technology, or third-party vendors), reputational damage, customer dissatisfaction and potential regulatory or litigation exposure.

The size of our clearing operations exposes us to a heightened risk of material losses should these operations fail to function properly.

We have large clearing and settlement businesses and an increasingly complex and interconnected information technology (IT) landscape. These give rise to the risk that we, our customers or other third parties could lose substantial sums if our systems fail to operate properly for even short periods. This will be the case even where the reason for the interruption is external to us. In such a case, we might suffer harm to our reputation even if no material amounts of money are lost. This could cause customers to take their business elsewhere, which could materially harm our revenues and profits.

Ongoing global benchmark reform efforts initiated by the FSB, specifically the transition from interbank offered rates to alternative reference rates, including so-called "risk-free-rates", that are under development, introduce a number of inherent risks to our business and the financial industry. These risks, should they materialize, may have adverse effects on our business, results of operations and profitability.

Regulators and central banks have set the goal of improving the robustness of financial benchmarks, especially interest rate benchmarks. As a result of this initiative, the ongoing availability of, among other benchmarks, the London Interbank Offered Rate ("LIBOR"), the Euro Interbank Offered Rate ("EURIBOR") and the Euro Overnight Index Average rate ("EONIA" and, together with LIBOR, EURIBOR and other interbank benchmark rates, "IBORs") is uncertain. In the UK, the FCA has announced that it will no longer compel panel banks to submit rates for the calculation of LIBOR after 2021. As a result, LIBOR may be modified or discontinued after 2021. EURIBOR reform to comply with the EU financial benchmarks regulation is underway, but there is a risk that the process will not be completed by the end of the transition period in the regulation, which leaves EURIBOR's future availability in doubt. Additionally, the administrator of EONIA expects the rate to be unavailable for use in the EU after the end of the

transition period. The transition period currently ends at the end of 2019, but an extension of the transition period for critical and third country benchmarks, which would allow these rates to remain available through 2021, has been agreed by EU policymakers in February 2019 and is expected to be enacted into law in the coming months.

We and other market participants are actively engaged in industry working groups to identify and recommend alternative “risk-free-rates” (“RFRs”) and processes through which parties can transition to such rates, and a number of sub-working groups have been set up to address open questions and issues surrounding these changes.

In addition, there are ongoing initiatives of benchmark administrators and their respective regulators to revise existing benchmark methodologies with the aim of improving the robustness of such benchmarks. As a contributing bank to a range of interest rate benchmarks, including LIBOR and EURIBOR, we are closely involved with such initiatives.

A material portion of our assets and liabilities, including financial instruments we trade and other transactions and services we are involved in, have interest rates that are linked to IBORs that may be subject to potential discontinuation, requiring us to prepare for such discontinuation and for a potential transition to RFRs. The discontinuation of these IBORs and the transition to RFRs pose a variety of risks to us, including the following:

- Legal and compliance risk (including conduct risk) may arise due to possible disputes regarding disclosures to clients or provisions in financial contracts with counterparties. Many financial instruments linked to IBORs contain provisions for the use of a successor interest rate in the event of the discontinuation of such IBORs, while others do not. In connection with such a discontinuation and transition, the counterparty to the financial instrument may challenge the rate determined for such instrument, particularly if we are the obligor under such financial instrument or are otherwise involved in the determination or setting of the successor rate, whether in respect of the particular financial instrument or in respect of the applicable benchmarks generally. Such disputes could result in claims of market abuse and mistreatment of customers, litigation or regulatory action.
- Liquidity risk may arise due to slow acceptance, take-up, and development of liquidity in RFR-related products, leading to market dislocation or fragmentation. Additionally, bid/offer spreads may widen impacting funding and collateral postings. Also, replacement of IBORs with a new benchmark rate could adversely impact the value of and return on existing instruments and contracts and the market for securities and other instruments whose returns are linked to IBOR benchmarks.
- Market risk may arise due to interest rate “basis” risks – the risks posed by different interest rate provisions applying to assets than to liabilities – across tenors and currencies, driven by differing fallback methodologies and timings. Different timings of adoption of fallback protocols will create new basis and potentially make hedging more costly or less effective, and losses may result from value transfer in the fallback methodology adopted. In the event of discontinuation of IBORs and a transition to a successor interest rate, we may incur losses in respect of our assets and liabilities linked to IBORs if the successor interest rate is not economically equivalent to the discontinued IBORs.
- Introduction of new RFRs will require us to develop new pricing and risk models related to new RFR-linked products. The models we develop may require approval by competent regulators if they differ significantly from existing models, which may introduce delays.
- Finance and tax risk may arise due to the discontinuation of IBORs and transition to RFRs, which could cause hedge accounting items to be derecognized, adversely impacting our profitability or causing us to incur losses. Discontinuation and transition could also pose difficulties for the independent price verification of financial instruments, where market data is unavailable for the new or modified financial instrument. Tax uncertainties could arise if a discontinuation or transition is viewed as a significant modification of a financial instrument that results in a profit or loss recognition event for tax purposes.

- Technology and operational risk may arise as a result of the complexity of transition processes, which will require collaboration with our regulators and central banks as well as a wide range of market participants. Also, significant change efforts – relating to RFR product development, re-documentation of client contracts and infrastructure change, including to systems, processes and models across the business and our Finance, Risk and Treasury functions –, will be required. Successful transition processes are, to some extent, dependent on achieving industry and client consensus on standards and conventions, timing and sequencing of transition steps, creation of term versions of the RFRs and the timely re-documenting of client contracts.

Initiatives to reform existing benchmarks and our participation in them potentially give risk to similar legal and other risks.

The necessity and potential timing of the discontinuation of IBORs, the prospects for transition to RFRs in the various markets in which they would be required, and industry, market and regulatory response, remain highly uncertain. Also, as mentioned, there are external factors, such as required actions of regulators or counterparties, which create risks that an individual institution, or the industry as a whole, would find difficult to address. Depending how such contingencies develop, and the adequacy of the response of the industry, the market, regulators and us to them, the discontinuation of IBORs and transition to RFRs could have adverse effects on our business, results of operations and profitability.

We are subject to laws and other requirements relating to financial and trade sanctions and embargoes. If we breach such laws and requirements, we can be subject, and have in the past been subject, to material regulatory enforcement actions and penalties.

We are required to monitor, evaluate, and observe laws and other requirements relating to financial and trade sanctions and embargoes set by the EU, the Deutsche Bundesbank, Germany's Federal Office for Economic Affairs and Export Control, and other authorities, such as the US Treasury Department's Office of Foreign Assets Control (OFAC) and the UK Treasury Department. If we breach such laws and requirements, we can be subject, and have in the past been subject, to material regulatory enforcement actions and penalties.

Transactions with counterparties in countries designated by the US State Department as state sponsors of terrorism or persons targeted by US economic sanctions may lead potential customers and investors to avoid doing business with us or investing in our securities, harm our reputation or result in regulatory or enforcement action which could materially and adversely affect our business.

We engage or have engaged in a limited amount of business with counterparties, including government-owned or -controlled counterparties, in certain countries or territories that are subject to comprehensive US sanctions, including Iran and Cuba (referred to as "Sanctioned Countries"), or with persons targeted by US economic sanctions (referred to as "Sanctioned Persons"). US law generally prohibits US persons or any other persons acting within US jurisdiction from doing business with Sanctioned Countries or Sanctioned Persons. Additionally, US indirect or "secondary" sanctions threaten retaliation against certain activities, including categories of transactions with certain entities and countries, by non-US persons entirely outside of US jurisdiction. Thus, US regulations may extend to activities in other geographic areas and by non-US persons depending on the circumstances. Our US subsidiaries, branch offices, and employees are, and our non-US subsidiaries, branch offices, and employees may become, subject to those prohibitions and other regulations.

We are a German bank and our activities with respect to Sanctioned Countries and Sanctioned Persons have been subject to policies and procedures designed to avoid the involvement of persons acting under US jurisdiction in any

managerial or operational role and to ensure compliance with United Nations, European Union and German sanctions and embargoes; in reflection of legal developments in recent years, we have further developed our policies and procedures with the aim of ensuring – to the extent legally permitted – compliance with regulatory requirements extending to other geographic areas regardless of jurisdiction. However, should our policies prove to be, or have been, ineffective, we may be subject to regulatory or enforcement action that could materially and adversely affect our reputation, financial condition, or business. We have taken action to reduce the risk of compliance violations. In 2007, our Management Board decided that we will not engage in new business with counterparties in countries such as Iran, Syria, Sudan and North Korea and to exit existing business to the extent legally possible. It also decided to limit our business with counterparties in Cuba. Iran, North Korea Sudan and Syria are currently designated as state sponsors of terrorism by the US State Department.

We had a representative office in Tehran, Iran, which we discontinued on December 31, 2007. Our remaining business with Iranian counterparties consisted mostly of participations as lender and/or agent in a few large trade finance facilities arranged before 2007 to finance the export contracts of exporters in Europe and Asia. The lifetime of most of these facilities is ten years or more and we were legally obligated to fulfil our contractual obligations. We do not believe our business activities with Iranian counterparties are or had been material to our overall business, with the outstanding loans to Iranian borrowers representing substantially less than 0.01 % of our total assets over recent years. As of December 31, 2018, those loans were fully repaid, and the revenues from such activities represented less than 0.01 % of our total revenues for the year ended December 31, 2018.

In recent years, the United States has taken steps to deter foreign companies from dealing with Iran by providing for a variety of secondary sanctions against companies engaged in targeted activities there. Many of these secondary sanctions were suspended following the occurrence on January 16, 2016 of “Implementation Day” of the Joint Comprehensive Plan of Action (referred to as the “JCPoA”) between the “P5+1” parties and Iran, but they were re-instated between May and November 2018 by the United States following its withdrawal from the JCPoA. Following the Implementation Day, we engaged in new activities with respect to Iran, but only to a limited extent. We executed cash payments in Euro from or to Iran on behalf of our own non-Iranian clients with enhanced due diligence. We remained restrictive towards any new trade finance activities and did not engage in loan arrangements with Iranian counterparties. We do not believe we have engaged in activities likely to result in the imposition of sanctions under Iran-related secondary sanctions, but we do engage in limited non-US dollar transactions with certain German branches or offices of Iranian banks that are targets of US secondary sanctions, and the US authorities have considerable discretion in applying the statutes, and any imposition of sanctions against us could be material. In light of the inherent regulatory, operational and reputational risks resulting from this environment and in the wake of the repositioning of the US Government in relation to the JCPoA, which became fully effective on November 5, 2018, we have processed the aforementioned cash payments only in very restricted cases and have since then further restricted our approach.

As required by Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012 (Section 13(r) of the Securities Exchange Act of 1934, as amended) we have disclosed certain information regarding our activities or transactions with persons subject to US sanctions against Iran and other persons subject to such provision. Such disclosure is set forth in the section of this document entitled “Disclosures Under Iran Threat Reduction and Syria Human Rights Act of 2012”, which follows “Item 16H: Mine Safety Disclosure”.

We are also engaged in a limited amount of business with counterparties domiciled in Cuba, which is not subject to any United Nations, European Union or German embargoes. The business consists of a limited number of letters of credit and of cash payments, each without a US nexus, and it represented substantially less than 0.01 % of our assets as of December 31, 2018. The letters of credit served to finance commercial products such as machinery as well as

medical products.

We have set up appropriate processes and procedures aimed at complying with other substantial changes in US economic sanctions that have occurred since 2017. In August 2017, the United States enacted the “Countering America’s Adversaries Through Sanctions Act” (referred to as “CAATSA”), which codifies existing US sanctions against Russia (including designation of Russian entities under US sanctions), expands US secondary sanctions against Russia, tightens existing sectoral sanctions (targeting specific sectors of the Russian economy), and permits the imposition of sectoral sanctions against additional sectors of the Russian economy. In particular, expanded US secondary sanctions under CAATSA allow for the imposition of US sanctions on non-US entities who engage in “significant” transactions with Russian SDNs or specific entities in the Russian defense and intelligence sectors. We do not believe we have engaged or are currently engaged in any transactions with Russian entities that violate, or are sanctionable under, US sanctions. However, given the broad discretion US authorities have in interpreting and enforcing US sanctions, there can be no assurances that US authorities will not bring enforcement actions against us, or impose secondary sanctions on us for our ongoing activities. Any such actions could have a material impact on our business and harm our reputation. It is also possible that the United States could impose broader sanctions on Russia or Russian entities in the future and that such sanctions could have a material impact on our business activities.

Additionally, since 2017, the US Administration has imposed number of sanctions against the Government of Venezuela and Venezuelan officials. These sanctions prohibit, inter alia, transactions or other dealings by US persons or within US jurisdiction involving new debt of and certain bonds issued by the Government of Venezuela (including state-owned or state-controlled enterprises), the direct or indirect purchases of securities from the Government of Venezuela, or (beginning on January 28, 2019) virtually all unlicensed Petróleos de Venezuela S.A. transactions. A substantial portion of economic activity within US jurisdiction involving the Government of Venezuela is now prohibited by US sanctions. We have taken appropriate steps and established appropriate processes and procedures aimed at complying with these US sanctions against the Government of Venezuela. In response to these US sanctions, we have wound down several client relationships. With respect to entities of the Government of Venezuela, we are currently only engaged in legacy transactions. We do not believe that any of our remaining activities related to the Government of Venezuela violate US sanctions. However, given the broad discretion US authorities have in interpreting and enforcing US sanctions, there can be no assurances that US authorities do not allege that our ongoing activities violate US sanctions.

We are aware, through press reports and other means, of initiatives by governmental and non-governmental entities in the United States and elsewhere to adopt laws, regulations or policies prohibiting transactions with or investment in, or requiring divestment from, entities doing business with Sanctioned Countries, particularly Iran. Such initiatives may result in our being unable to gain or retain entities subject to such prohibitions as customers or as investors in our securities. In addition, our reputation may suffer due to our association with such countries. Such a result could have significant adverse effects on our business or the price of our securities. It is also possible that new direct or indirect secondary sanctions could be imposed by the United States or other jurisdictions without warning as a result of geopolitical developments.

Item 4: Information on the Company

History and Development of the Company

The legal and commercial name of our company is Deutsche Bank Aktiengesellschaft. It is a stock corporation organized under the laws of Germany.

Deutsche Bank Aktiengesellschaft originated from the reunification of Norddeutsche Bank Aktiengesellschaft, Hamburg, Rheinisch-Westfälische Bank Aktiengesellschaft, Düsseldorf, and Süddeutsche Bank Aktiengesellschaft, Munich. Pursuant to the Law on the Regional Scope of Credit Institutions, these were disincorporated in 1952 from Deutsche Bank, which had been founded in 1870. The merger and the name were entered in the Commercial Register of the District Court Frankfurt am Main on May 2, 1957.

We are registered under registration number HRB 30 000. Our registered address is Taunusanlage 12, 60325 Frankfurt am Main, Germany, and our telephone number is +49-69-910-00. Our agent in the United States is: DB USA Corporation, c/o Office of the Secretary, 60 Wall Street, Mail Stop NYC60-4099, New York, NY 10005.

For information on significant capital expenditures and divestitures, please see “Management Report: Operating and Financial Review: Deutsche Bank Group: Significant Capital Expenditures and Divestitures” in the Annual Report 2018.

The Securities and Exchange Commission (“SEC”) maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, such as Deutsche Bank Aktiengesellschaft, with the address http://www.sec.gov. Our filings are available on the SEC’s Internet site under File Number 001-15242. Our Internet address is http://www.db.com.

Business Overview

Our Organization

Please see “Management Report: Operating and Financial Review: Deutsche Bank Group: Our Organization” in the Annual Report 2018. For information on net revenues by geographic area and by corporate division please see Note 4 “Business Segments and Related Information: Entity-Wide Disclosures” to the consolidated financial statements and “Management Report: Operating and Financial Review: Results of Operations: Segment Results of Operations” in the Annual Report 2018.

Management Structure

Please see “Management Report: Operating and Financial Review: Deutsche Bank Group: Management Structure” in the Annual Report 2018.

Our Business Strategy

We are a leading European bank with global reach supported by a strong home base in Germany, Europe’s largest economy. We provide services in commercial and investment banking, retail banking as well as wealth and asset management products to corporations, governments, institutional investors, small and medium-sized businesses, and private individuals.

In the second quarter of 2018, we announced changes to our strategy and updates to our financial targets. Management is focused on materially improving returns to shareholders over time and on deploying our balance sheet and other resources to the highest return activities consistent with our client franchise and risk appetite. To achieve these primary objectives we have defined four key strategic imperatives: First, shift the bank to a more stable revenue and

earnings profile. Second, execute on clearly defined strategies in our Private & Commercial Bank (PCB) and our Asset Management (AM) businesses. Third, reshape our Corporate & Investment Bank (CIB) towards a model which emphasizes our core strength in transaction banking, capital markets, financing and treasury solutions. And fourth, reduce our costs and commit to an uncompromising cost culture.

As the basis of our strategy, we seek to continue building on our 2018 achievements: we intend to retain our cost discipline and plan to continue to reduce expenditures. However, we also aim to begin a new phase – one of controlled growth. We aim to grow in all our business divisions, at the same time not relinquishing our cost discipline or compromising our integrity.

Achieving a more stable revenue and earnings profile

We aim to increase the share of revenues coming from stable sources characterized by lower earnings volatility and to expand our more stable businesses – Private & Commercial Bank, our Asset Management division DWS and Global Transaction Banking. The more stable business mix is intended to lower our funding costs, support our credit rating and make our performance more resilient even in very challenging environments or markets.

Growth in our Private & Commercial Bank and DWS

Our Private & Commercial Bank comprises the three business units Private and Commercial Business (Germany), Private and Commercial Business (International) and Wealth Management (Global).

Our Private and Commercial Business (Germany) serves more than 20 million private and commercial clients and pursues a differentiated, customer-focused approach with two main distinct and strong brands: Deutsche Bank and Postbank. The strong positioning of the two brands, the broad customer base and the use of complementary strengths build the basis for significant cost and revenue synergies of € 900 million annually which we aim to fully realize in 2022 and beyond. A new operating model with a joint infrastructure and product platform as well as a joint management will help to pursue towards the achievements of these targets.

In our Private and Commercial Business (International), we continue to sharpen focus and invest into our core markets. While streamlining our geographic footprint with the completed partial exit from Poland and the ongoing disposal of our business in Portugal, we are investing into our Italian, Spanish, Belgian and Indian operations as we view them as attractive and growing markets.

In Wealth Management (Global) we seek to grow our market share, both in Germany and internationally.

We are also proceeding with our investments in digital solutions for banking and non-banking products through further equity investments into strategic partners and enhancements of our digital platform.

For DWS, with the IPO now completed, we are focusing on growing assets under management, improving efficiency and profitability and driving strong DWS shareholder return, including a robust dividend.

Reshaping Corporate & Investment Bank

We intend to remain a leading European Corporate & Investment Bank with global reach. As part of the restructuring announced and completed in 2018, CIB will focus on its core product strengths and key markets.

We announced three strategic updates for CIB. First, we optimized our Origination and Advisory business: we will maintain a strong presence but we are focusing on sectors and segments that are most relevant for our most important clients or in which we have a strong global position. Second, we pivoted to our strengths in Fixed Income & Currencies (FIC) focused around our core strengths while reducing exposure to US Rates. Third, in Equities, we refocused our resources around our existing profitable customer relationships.

Going forward, we will focus our resources on our key strengths in transaction banking, capital markets, financing and treasury solutions. Additionally, we intend to significantly reduce our cost to serve via workforce reductions and through modernization of platform.

Rigorous cost management

Given the progress made in reducing adjusted costs in 2018, management is now committed to reduce adjusted costs by a further € 1 billion to € 21.8 billion in 2019, thereby lowering the target we set ourselves in 2018 by € 200 million. Costs in 2019 should benefit from the full run rate of previously enacted measures as well as from our planned additional headcount reductions, the synergies from our German retail merger and completion of the sale of our Portuguese retail operations. We also aim to benefit from management's ongoing effort to reduce non-compensation costs, including further rationalizing vendor spending and our real estate footprint. At the same time, we will continue to invest in our technology and controls.

Our Financial Targets

Near-term operating targets

- Post-tax Return on Average Tangible Equity of greater than 4 % in 2019
- Adjusted costs of € 21.8 billion in 2019
- Full-time equivalent internal employees of below 90,000 by year-end 2019

Long-term operating target

- Post-tax Return on Average Tangible Equity of circa 10 % in a normalized environment and on the basis of the achievement of our cost targets

As we execute on our near- and long-term operating targets, we intend to continue managing our balance sheet conservatively, with the following capital targets:

Capital targets

- CRR/CRD 4 Common Equity Tier 1 capital ratio above 13 %
- CRR/CRD 4 Leverage Ratio (phase-in) of 4.5 % over time
- A competitive dividend payout ratio

Strategy implementation

In 2018, we delivered on our adjusted cost and headcount targets. Our adjusted costs of € 22.8 billion, were below our € 23 billion target. Noninterest expenses were € 23.5 billion. On a full-time equivalent (FTE) basis, we reduced the number of internal employees to 91,737 at year end 2018, compared to our target of below 93,000. Our Common Equity Tier 1 ratio at 13.6 % is above our target, and our leverage ratio on a phased-in basis improved to 4.3 % compared to 4.5 %, our target over time.

Strategy in Corporate & Investment Bank

The Corporate & Investment Bank (CIB) comprises our Global Transaction Banking, Origination & Advisory, Sales & Trading (FIC) and Sales & Trading (Equity) businesses. CIB was created in 2017 with the aim to ensure greater alignment of product and sales efforts, enabling the bank to deliver a better service to clients, a more focused resource allocation and to drive cost efficiency.

During 2018, CIB announced headcount and resource reductions as part of the division's strategic reshaping. These actions were successfully delivered across the second and third quarter of 2018. Measures included: reprioritizing our presence in Origination & Advisory in sectors where we have strong market position; decreasing leverage exposure within Equities, mainly in Prime Finance, and US Rates including repo financing; and reducing our Equities headcount by approximately 25 %. We continued to implement further measures to reduce our cost base, while the risk weighted assets and leverage exposure of assets identified as not consistent with CIB's strategy continue to roll off as planned. Through achievement of greater revenue and resource productivity as well as cost efficiency we aim to improve CIB's profitability going forward.

In 2019, CIB is focused on delivering controlled revenue growth from targeted resource deployment and investment. This will be supported by a more focused client coverage and product offering, leading to an improved ability to direct resources to the highest return relationships, ultimately increasing share of clients' "wallet" (amounts clients spend on banking products). CIB continues to reinvigorate its client-led franchise through more effective coverage, as evidenced by the creation of an integrated Institutional and Treasury Coverage Group in 2018. The aim of this group is to achieve synergies from closer alignment and shared expertise. Further expense management initiatives in 2019 are focused on middle and back office functions.

We continue to see a clear opportunity for CIB to occupy an attractive position as one of the handful of globally relevant European participants in the Global CIB market. CIB intends to pursue a number of objectives to achieve revenue growth:

Global Transaction Banking

We intend to capitalize on our market position in payments, improving our liquidity, collateral and risk management platforms, implementing liquidity initiatives and achieving further enhanced product offering opportunities with foreign exchange as well as the provision of credit to provide payments solutions. We also continue to see growth potential for our global trade finance franchise, especially in structured transactions.

Origination and Advisory

We intend to regain market share, building on the positive momentum in Debt Origination in 2018, in particular with regards to leveraged finance through controlled resource deployment, in addition to an intensified focus on investment grade acquisition financing. Within Equity Origination our focus is on initial public offerings, acquisition financing and corporate derivatives. In Advisory we intend to reinvigorate our focus on winning cross-border mandates.

Sales & Trading Fixed Income and Currencies

We target retaining a top-five position globally and a top-three position in EMEA. We intend to maintain a leading Credit Financing and Solutions franchise with particular emphasis on Asset Based Financing, Commercial Real Estate, and the Transport, Infrastructure and Energy sector. We continue to focus on building innovative technology solutions, for example in foreign exchange. Within Rates, we target opportunities with regards to customized solutions for insurance companies, pension funds and other investors.

Sales & Trading Equities

We aim to build on the strengths of our refocused platform. We target a further build out of electronic solutions within cash trading and to deliver improved client service and offering within derivatives. We also continue to focus on optimizing our client balances in Prime Finance.

Finally, the portfolio of assets identified as not consistent with CIB's strategy continues to roll off as planned and the capacity released will be redeployed to core areas in coming years.

Strategy in Private & Commercial Bank

For Private & Commercial Bank Corporate division, following the successful merger of Deutsche Bank Privat- und Geschäftskunden AG and Postbank in the second quarter of 2018, we took further actions in the fourth quarter of 2018 to achieve our future organizational structure. Going forward, PCB consists of the following business units: Private and Commercial Business (Germany), Private and Commercial Business (International) and Wealth Management (Global).

Private and Commercial Business (Germany)

In our Private and Commercial Business (Germany) business division, we pursue a differentiated, customer-focused approach with two main brands – "Deutsche Bank" and "Postbank". With our "Deutsche Bank" brand we focus on providing our private customers with banking and financial products and services that include sophisticated and individual advisory solutions. For small and medium-sized corporate clients, we provide an integrated commercial banking coverage model. The focus of our "Postbank" brand remains on providing our retail and corporate customers with standard products and daily retail banking services. In cooperation with Deutsche Post DHL AG, we also offer postal and parcel services in the Postbank branches.

As announced in March 2017, Postbank AG and the Deutsche Bank private and commercial client business were merged in the second quarter of 2018 to form DB Privat- und Firmenkundenbank AG (DB PFK AG). The firm operates with a strengthened position in our home market as the largest private and commercial bank in Germany. The new entity aims to be the leading private sector bank in Germany by capturing market opportunities and leveraging joint product strengths. The basis for establishing an integrated steering and governance with one head office, management team and IT platform, single product management and harmonized regional coverage across Germany was laid, and the detailed transformation and implementation process have started.

In 2018, we further optimized the Private and Commercial Business (Germany) sales organization and also enhanced our sales infrastructure as well as branch formats. To streamline our head office, we announced a dedicated leadership team for our product governance and management and defined the head office target operating model. Additionally, we strengthened our digital platform by the launch of our digital brand "Yunar" and we were among the first banks in Germany to offer Apple Pay to our clients.

DB PFK AG expects its ongoing digital efforts to support efficiency goals and create an opportunity to gain market share. The company intends to implement its agenda to digitalize its business based on three core principles: First, transformation of the core business through entire digitalized end-to-end processes; second, innovative segment portals; and third, enhancement of the digital ecosystem to unlock new target groups and generate growth. Due to the continuous low interest rate environment, the increasing competitive pressure and regulatory requirements, the bank also focuses on integration-related efficiency measures to reduce the cost base and on fostering credit and investment

volume growth as well as fee-based products to increase revenues. In addition, the launch of new digital offerings is intended to not only enhance the customer experience but also generate higher revenues.

Private and Commercial Business (International)

In Private and Commercial Business (International), we provide advisory and relationship banking services to predominantly affluent clients and small and medium-sized companies, complemented by a strong retail proposition in Italy. We are present in selective attractive markets in Europe (Italy, Spain and Belgium) and India. We offer a comprehensive range of products with a strong emphasis on investment products and financing solutions, leveraging DB Group's long-standing expertise in commercial business and universal banking. We reviewed and updated our strategies of our continued businesses to position them for further targeted growth. In Belgium, we will focus on investment advisory business with affluent and private banking clients, while we will scale up our commercial business in India, supported by a digital transformation.

In 2018, we continued to execute the bank's strategy to sharpen its focus and reduce complexity. The announced disposal of the majority of our retail business in Poland was successfully closed in the course of the fourth quarter of 2018, while the sale of the local retail business in Portugal is progressing on track and the parties intend to close the transaction in the second quarter of 2019, subject to regulatory approvals and other conditions. In Italy and Spain, we have further refined our business models to improve client coverage and efficiency, supported by an optimized sales network and streamlined organization, and we are continuing to focus on improving the returns of our businesses in India and Belgium.

Wealth Management (Global)

In Wealth Management (Global), we combine deep local heritage and global reach, offering expert advice with an extensive range of services from standardized to highly tailored solutions paired with industry-leading risk return engineering, aiming to deliver lasting value for our clients. Our focus is on serving high-net-worth (HNW) and ultra-high-net-worth (UHNW) individuals, their families and businesses as well as professional clients such as Family Offices providing them access to a full product suite and connecting them to the bank's wider capabilities. We plan to further expand our global presence by organically hiring front office staff in selected core growth markets and to continue to digitally enhance our client experience. In addition to our growth strategy, we constantly aim to make our global Wealth Management business more focused and efficient.

In 2018, we made further progress towards our strategic agenda focusing on improving the efficiency and robustness of our platform while putting emphasis on growth, notably in core ultra-high-net-worth (UHNW) markets, through targeted front-office hiring. Over the course of 2018, WM further invested in strengthening its control framework. At the same time, various projects were undertaken aimed to enhance the client experience through improved digital offerings, quicker onboarding, as well as approaching clients with a more nuanced client service model. A significant milestone in the simplification of our management structure was the launch of a new regional structure in the fourth quarter of 2018 moving from four to three regions (Americas, Europe, Emerging Markets). And we successfully completed the integration of Sal. Oppenheim's Wealth Management business into Deutsche Bank Group in the second quarter of 2018.

Strategy in Asset Management

Asset Management (AM) is a core business of Deutsche Bank that has generated stable income and relatively high returns by earning recurring fee-based revenues. AM has a market-leading position as the largest retail asset manager

in Germany and the number two position in European Exchange Traded Funds (ETFs)/ Exchange Traded Products (ETPs), based on publicly disclosed assets under management (AuM).

Following the successful IPO of DWS in In March 2018, we became a listed company on the Frankfurt Stock Exchange, enabling us to operate more autonomously and build the foundation for long-term growth. As a standalone asset manager, we have established the DWS brand globally for our business in order to ensure a consistent brand appearance and to enhance our external perception. The integration of service and infrastructure functions from DB Group into DWS Group seeks to enable us to achieve further operational efficiencies across the platform, including process improvements to reduce costs and enhance client experience.

DWS and BNP Paribas Securities Services jointly decided not to proceed with the transfer of our fund administration services in Germany and Luxembourg to BNP Paribas Securities Services and the provision of depositary and custody services to our retail funds, as announced in June 2018.

Asset Management has seen continued progress with our Environment, Social and Governance (ESG) strategy, illustrated by the recent expansion of our product suite across the Active, Passive and Alternatives investment spaces.

An efficiency and transformation program has been established with dedicated initiatives to challenge and reduce expenditures as well as to enhance efficiency and productivity by simplifying our operating model.

Over the medium term, the industry's global AuM are expected to substantially increase, driven by strong net flows in passive strategies, alternatives and multi asset solutions, as clients increasingly demand value-for-money, transparency and outcome oriented products. Due to our capabilities in active and passive products, alternative investments and multi asset solutions, we believe AM is well-positioned to grow market share amid these industry growth trends, supported by strategic hires into the client coverage teams, in part to bolster institutional growth, as well as support the Passive business. While AM's digital capabilities are also creating new channels for it to distribute products and services, bottom line results are expected to be challenged by fee compression, rising costs of regulation and competitive dynamics. In the face of this challenge, AM intends to focus its growth initiatives on products and services where it has a competitive advantage, while also maintaining a disciplined cost base. We believe that AM, with its strong and diverse investment capabilities, is well positioned to address the challenges facing the industry and capture opportunities.

We intend to undertake a number of strategic initiatives to support our medium term targets and deliver shareholder value through net flows, revenue growth, cost discipline and dividend distributions. We believe the broad range of well-performing products and investment solutions gives AM a strong basis for growing assets and revenues. The business-growth goals will be supported by a planned medium term investment in our digital capabilities, the investment group, and additional distribution hires and adding new distributors to the proprietary digital investment platform. Through cost efficiency initiatives, we are targeting medium-term annual savings in our adjusted costs relative to 2018.

Our Corporate Divisions

Please see "Management Report: Operating and Financial Review: Deutsche Bank Group: Corporate Divisions" in the Annual Report 2018.

The Competitive Environment

2018 The Global Economy

The global economy showed robust growth with industrialized countries saw a peak in their economic cycle, while emerging markets slowed somewhat towards the end of the year 2018. Trade tensions between the US and China as well between the US and Europe reached a level that weighed on global trade. Meanwhile the strong US economy provided positive impetus for global growth. Against this backdrop, global economic growth remained flat at 3.8 % in 2018, following 3.8 % in 2017. The global inflation rate increased to 3.3 % in 2018. In the industrialized countries, GDP grew by 2.2 % and consumer prices rose by 2.0 % while in emerging markets economies GDP increased by 4.9 % and inflation reached 4.1 %.

Over the course of 2018, the economic outlook for the euro area slowly deteriorated. The economy expanded by 1.8 %, roughly 0.5 percentage points below the expectations at the start of the year, due to temporary effects in some member states as well as the worsened external economic environment. Growth was supported by domestic demand underpinned by solid income growth and easy financial conditions. While monetary policy remained accommodative, the ECB phased out its net asset purchases. Consumer prices in the euro area rose by 1.8 % in 2018. With a GDP growth of 1.4 % in 2018, German GDP growth surprised to the downside. Delays in emissions-related certification of new vehicles hampered automobile production and thus macroeconomic value added. A very tight labor market led to strong wage agreements.

The US economy showed a strong performance. Supported by tax cuts, fiscal spending as well as supportive financial conditions and consumer spending backed by wage growth and a tight labor market, US GDP grew by 2.9 % in 2018. The inflation rate reached 2.4 % and thus stood above the Federal Reserve's target of 2 %. The US central bank's monetary policy responded with four interest rate hikes in 2018.

Japan’s GDP growth slowed considerably to 0.7 % in 2018 due to less dynamic private consumption spending and lower employment growth as well as weaker external demand. The inflation rate doubled to 1.0 %, following 0.5 % in 2017.

In 2018, GDP in the emerging markets increased by 4.9 %. With GDP growth of 6.2 %, the emerging markets in Asia were once again a global driving force as intra-Asian trade remained strong. At 6.6 %, the Chinese economy grew somewhat more strongly than expected at the beginning of 2018. Chinese inflation edged up to 2.1 %. The government has maintained a tight policy stance in the property sector. Lower land sales resulted in sliding fiscal revenues. Chinese exports were resilient despite growing trade tensions throughout 2018.

2019 Outlook

Global economic activity is still set to expand in 2019 but with a slower pace than in 2018. We expect global GDP to grow by 3.5 % due to a flattening of growth in the US and a slower growth in China as well as in Europe. While economic fundamentals are solid, a less accommodative monetary policy could lead to heightened risks with more frequent incidents of higher volatility. The global inflation rate is forecast to slow gradually to 3.1 %, from 3.3 % in 2018. For industrialized countries, we expect GDP growth to slow to 1.7 % and consumer prices to increase by 1.4 % in 2019. Economic growth in the emerging markets is projected to decline slightly to 4.6 % in 2019 while inflation is expected to rise to 4.2 %, from 4.1 % in 2018.

In the Eurozone, we expect GDP growth to slow to 0.9 % in 2019, as the deteriorating external environment threatens to overpower domestic resilience. The growth outlook within the Eurozone should be supported by lower oil prices and fiscal easing in certain large member states including France. These positive benefits could be challenged by one-off factors including the prolonged weakness in the German automotive sector and a no deal outcome in Brexit

negotiations. In 2019, Eurozone inflation is expected to fall to 1.3 %. Following GDP growth of 1.5 % in 2018, we expect the German economy to expand by 1 % in 2019, driven by domestic demand.

We expect US economic growth to decelerate slightly to 2.5 % in 2019. Economic growth should be supported by strong domestic consumption and capital expenditures. Tax cuts and fiscal spending should act as a tailwind and should support the economy through the year. Escalation of the trade disputes, leading to higher tariffs could provide a material downside risk. We expect the Federal Reserve to raise its policy rate twice in 2019 to 2.875 %. We expect the inflation rate to decline to 1.5 % in 2019, reflecting lower energy prices.

The Japanese economy is expected to decline by 0.7 % in 2019, below its potential growth rate. Growth is likely to be negatively impacted by slower capital expenditure and decelerating investment growth as well as the impact of the increase in consumption taxes. These negative effects should be partly offset by higher public spending. We expect net exports to be a minor headwind to GDP growth, although exports could positively surprise in the event of successful trade negotiations between the US and Japan at the start of 2019. We expect the inflation rate of 0.4 % in 2019.

In 2019, economic growth in emerging markets is projected to decline slightly to 4.6 %, and in Asia (excluding Japan) to 5.7 %. Inflation in emerging markets is expected to rise to 4.2 %, from 4.1 % in 2018. In 2019, growth in the Chinese economy is forecast to slow modestly to 6.1 %, the lowest growth rate for decades. The slower growth is likely to be driven by slower growth in the property market, weaker consumer sentiment and the US-China trade war. The negative impacts should be partly offset by expected tax cuts, easing of property regulations and an increase in the credit supply. Two more cuts in the reserve requirement ratio should also be supportive. Inflation is forecasted to increase to 2.4 % in 2019.

The heat-map of global risks is modestly changed from 2018. Macroeconomic risks are now more pronounced to the downside, especially in Asia and Europe. China is slowing as policymakers focus on deleveraging and fiscal policy tightens, but officials still have available tools to respond to a downturn. Indeed, we expect further monetary easing this year. In Europe, growth is stagnating and the debt burden in some countries, especially Italy, is a danger. Political risks also remain elevated, which may weigh on business investment and economic activity, as Brexit negotiations continue and elections for the European Parliament are due this spring. Other snap elections are possible across the major European countries. In the US, we remain attuned to the risk of higher inflation, given the extremely tight levels of labor market slack, as well as any signs of a more substantive slowdown. We anticipate a slower pace of growth in 2019 versus 2018, but do not view a recession as likely.

Competitor Landscape

Against this backdrop, Deutsche Bank competes in the financial services sector with a spectrum of competitors, who include other universal banks, commercial banks, savings banks, public sector banks, brokers and dealers, investment banking firms, asset management firms, private banks, investment advisors, payments services providers, financial technology firms and insurance companies. Some of the competitors are global like Deutsche Bank, while others have a regional, product or niche client footprint. Deutsche Bank competes on a number of factors, including the quality of client relationships, transaction execution, products and services, innovation, reputation and price.

The European banking industry’s performance was roughly stable in 2018. On the macroeconomic front, slower growth contributed to a slight fall in revenues, offset by lower expenses and a further declining loan loss provisions. The low interest rate environment continues to keep the net interest margin under pressure, yet loan growth with non-financial companies is at its highest since the financial crisis. At the microeconomic level, several European banks are still running complex restructuring programs, while also delivering on sizeable regulatory requirements.

Good progress has been made on all these fronts, however this has also led to management distraction and the loss of market share to US competitors within Europe.

The European banking sector in 2019 may face greater headwinds from a deteriorating macroeconomic environment, but may also benefit from lower restructuring and litigation costs and from increased clarity on major regulatory initiatives. While the potential benefits from monetary tightening by central banks remain in doubt, the single biggest political and regulatory risk for European banks remains the uncertainty and complexity created by the decision of the United Kingdom to leave the European Union in the so-called “Brexit”, scheduled to be effective on March 29, 2019. This has required extensive contingency planning by us and the industry generally during 2018 and is likely to have implications for the structure and operations of all banks currently operating cross-border from entities or branches in the United Kingdom once these plans are executed. While political negotiations continue, there is no clarity yet around precisely what constraints on cross-border banking activity may emerge and what the implications will be for us or our peers. In the absence of any clarity regarding the ratification of the withdrawal agreement and the availability of a transition period, preparation against a March 29, 2019 hard Brexit has accelerated. The related risks in 2019 and thereafter will depend on the availability of relief from European and national regulators.

In our home market, Germany, the retail banking market remains fragmented and our competitive environment is influenced by the three pillar system of private banks, public banks and cooperative banks. Competitive intensity has increased in recent years following some consolidation activity, particularly among public regional banks (Landesbanken) and private banks, and increased activity levels from foreign players.

Looking at the wider banking ecosystem, the evolution of financial technology firms remains as much an opportunity as a challenge for banks. While we see the risk of banking disruption in select product areas, particularly the unregulated segments, there is also the opportunity to selectively partner with financial technology firms and leverage their solutions to become more efficient and/or develop differentiated delivery channels for the end clients.

Regulatory Environment

The uncertainty around the outcome and timing of key regulations has declined with the finalization of the Basel 3 package at the end of 2017 and the implementation date of the revised directive on markets in financial instruments, referred to as MiFID 2, and the related regulation on markets in financial instruments (MiFIR) in early 2018. As the flow of new legislative proposals under the post-crisis global regulatory reform agenda has slowed, the focus of regulators has turned to implementation and supervision.

While a number of regulatory reforms impacting Deutsche Bank are already in force, others continue to be developed on an international level and implemented regionally. Where primary legislation has been agreed on by lawmakers, regulators have yet to develop detailed rules, or determine their cross-border application, which might lead to a fragmented and inconsistent landscape. Moreover, certain post-crisis reforms which have already been implemented are or have been subject to reviews that might lead to additional changes in legislation in the coming years. The impact of the implementation of such final or revised standards on specific institutions remains uncertain. In some instances there remains a lack of clarity around the final rules and the impact that they might have on banks in different regions.

During 2018, a number of international developments in the area of banking regulation and supervision have been implemented and will continue to be further refined, in particular with a view to strengthening international standards to create financially resilient institutions and ensuring resolvability of banks.

Capital, liquidity and leverage requirements – On November 23, 2016, the European Commission published a

comprehensive package of reforms (referred to in the following as the "banking reform package") to further strengthen the resilience of European Union banks. The proposals will incorporate various remaining elements of the regulatory framework agreed within the Basel Committee on Banking Supervision ("Basel Committee") and the Financial Stability Board ("FSB") to refine and supplement the global regulatory framework established by the so-called Basel Accords (Basel 1, 2 and 3). This includes more risk-sensitive capital requirements, in particular in the area of market risk, counterparty credit risk, and for exposures to central counterparties, methodologies that reflect more accurately the actual risks to which banks may be exposed, a binding leverage ratio, a binding net stable funding ratio, tighter regulation of large exposures, and a requirement for global systemically important institutions ("G-SIIs"), such as Deutsche Bank, to hold certain minimum levels of capital and other instruments which are capable of bearing losses in resolution ("Total Loss-Absorbing Capacity" or "TLAC"). Other proposed measures are aimed at improving banks' lending capacity to support the European Union economy and at further facilitating the role of banks in achieving deeper and more liquid European Union capital markets. On December 4, 2018, the European Parliament and the Council of the European Union reached a provisional political agreement with respect to the banking reform package. The banking reform package is expected to enter into force in the first half of 2019. While many provisions will not apply until 2021, certain parts, including the TLAC requirements, are expected to apply immediately when the provisions of the banking reform package enter into force.

At the international level, the Basel Committee published its final agreement ("December 2017 Agreement") on further revisions to the Basel 3 framework that aim to increase consistency in risk-weighted asset calculations and improve the comparability of banks' capital ratios. The December 2017 Agreement includes, among other things, changes to the standardized and internal ratings-based approaches for determining credit risk, revisions to the operational risk framework, and an "output floor", set at 72.5 %. The "output floor" limits the amount of capital benefit a bank can obtain from its use of internal models relative to using the standardized approach. This package of reforms is intended to finalize the Basel 3 framework and would reduce the ability of banks to apply internal models, while making the standardized approaches more risk-sensitive and granular. In addition, the December 2017 Agreement introduces a leverage ratio buffer for global systemically important banks ("G-SIBs"), such as Deutsche Bank, to be met with Tier 1 capital and sets it at 50 % of the applicable risk-based G-SIB buffer requirement. The Basel Committee also reached agreement on an implementation date for this package of January 1, 2022, with a phase-in period of five years through January 1, 2027 for the output floor.

The banking reform package, when it enters into force, will likely affect our business by raising our regulatory capital and liquidity requirements and by leading to increased costs. The December 2017 Agreement could also affect our business by imposing higher capital charges when adopted into law.

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Capital planning and stress testing – In 2018, the European Banking Authority ("EBA") and the European Central Bank ("ECB", our principal regulator) performed an EU-wide stress test, for which the EBA published the results on November 2, 2018. This exercise assessed the resilience of 48 EU banks, including Deutsche Bank, and of the EU banking system to economic shocks. It analyzed both a 'baseline' scenario and a hypothetical 'adverse' scenario over a stress horizon up to the end of 2020. In 2018, the EBA's 'adverse' scenario was substantially more severe than in the previous stress tests (2014 and 2016), notably because it assumed a deterioration of the European economy which is worse than under the assumptions used in previous tests.

This stress test was not a pass-fail exercise. The ECB, however, will use the results when deciding about future capital guidance. The results demonstrated Deutsche Bank's resilience under stress and the strength of our balance sheet and capital position. Deutsche Bank's fully loaded Common Equity Tier 1 (CET 1) ratio came out stronger than in previous stress tests despite a more severe 'adverse' scenario. Under the EBA's 'adverse' scenario, credit, market and operational risk showed greater resilience. Notably, credit risk losses would account for 2.2 % of the capital ratio depletion in this

scenario, well below peer average.

We are subject to a supervisory review and evaluation process ("SREP") for an ongoing assessment of risks, governance arrangements and the capital and liquidity situation, which is a review of the arrangements, strategies, processes and mechanisms of supervised banks on a regular basis, in order to evaluate risks to which these banks are or might be exposed, risks they could pose to the financial system, and risks revealed by stress testing. The SREP can result in Pillar 2 capital and liquidity requirements or guidance for the relevant institution.

DB USA Corporation, our main US intermediate holding company, was subject to the Federal Reserve Board's Comprehensive Capital Analysis and Review for 2018. On June 28, 2018, the Federal Reserve Board publicly indicated that it did not object to DB USA Corporation's 2018 capital plan on a quantitative basis, but that it did object for qualitative reasons. In its supervisory stress tests, the Federal Reserve Board projected that DB USA Corporation's capital ratios would exceed the quantitative minimum requirements even under the supervisor's hypothetical severely adverse stress scenario. DB USA Corporation will make its next capital plan submission to the Federal Reserve Board in April 2019, at which time DWS USA Corporation, our second US intermediate holding company, will submit its initial capital plan.

Recovery and resolution – The major jurisdictions where we have significant group operations have now finalized the implementation of the FSB's Key Attributes for Effective Resolution Regimes. Under the European Union's Single Resolution Mechanism, to which we are subject, competent authorities have far-reaching powers to impose resolution measures upon banks that are deemed to be failing or likely to fail. Resolution measures, in particular, include the power to reduce, including to zero, the nominal value of shares, or to cancel shares outright, and to write down certain eligible subordinated and unsubordinated unsecured liabilities, including to zero, or convert them into equity (commonly referred to as "bail in"). To ensure sufficient availability of liabilities with loss-absorbing capacity that could be bailed in, banks in the European Union must meet, or will have to meet, certain minimum requirements such as TLAC or MREL (as further explained below).

For a bank directly supervised by the ECB, such as Deutsche Bank, the Single Resolution Board ("SRB") draws up the resolution plan, assesses the bank's resolvability and may require legal and operational changes to the bank's structure to ensure its resolvability.

In the United States, Deutsche Bank AG is required under Title I of the Dodd-Frank Act, as amended and the implementing regulations therefor, to prepare and submit periodically to US regulators a plan for the orderly resolution of its US subsidiaries and operations in the event of future material financial distress or failure (the "US Resolution Plan"). Deutsche Bank AG filed its most recent US Resolution Plan in June 2018 and received written regulatory feedback in December 2018. The Federal Reserve Board and FDIC found that Deutsche Bank's US Resolution Plan had no deficiencies but identified one shortcoming in the plan, associated with governance mechanisms and related escalation triggers. Deutsche Bank is required to submit a response to its December 2018 feedback letter by April 5, 2019. Deutsche Bank's response will discuss the remediation of the shortcoming as well as enhancements of its resolution capabilities. Both the remediation of the shortcoming and enhancements must be completed prior to the submission of our next US Resolution Plan, which is currently expected to be due on July 1, 2020.

Loss-absorbing capacity – Following the FSB's final term sheet on TLAC in November 2015, several jurisdictions have started to implement the TLAC standard in their regulatory frameworks. The TLAC standard is designed to ensure that G-SIBs, such as Deutsche Bank, maintain enough capital and long-term debt instruments that can be effectively bailed-in to absorb losses and recapitalize the bank. The banking reform package intends to implement the

FSB's TLAC standard for G-SIBs by introducing a new "Pillar 1" minimum requirement for eligible liabilities (or "MREL") for G-SIIs (the European equivalent term for G-SIBs). This new requirement is based on both risk-based and non-risk-based denominators and is expected to be set at the higher of 18 % of total risk exposure and 6.75 % of the leverage ratio exposure measure following a transition period. It can be met with Tier 1 or Tier 2 capital instruments or debt that meets specific eligibility criteria. In addition, the competent authorities will have the ability to impose a TLAC add-on requirement on G-SIIs. We also are subject to TLAC requirements in other jurisdictions. For example, the Federal Reserve Board's rules implementing the TLAC standard in the United States are effective as of January 2019, with TLAC requirements that apply to US intermediate holding companies (such as ours) of non-US G-SIBs. These rules include a minimum TLAC requirement, a minimum long-term debt requirement and clean holding company requirements.

Completion of the Banking Union and reduction of non-performing exposures – A European Deposit Insurance Scheme (EDIS) is supposed to complete the Banking Union but the corresponding proposal is still under negotiation. Discussions have centered on the backstop to the Single Resolution Fund and EDIS. As some voices have requested more progress on risk reduction as a prerequisite for the implementation of any risk sharing arrangement, the recent focus has been to reduce non-performing exposures of banks in the European Union, and political agreement was reached in December 2018 on a proposal in this respect.

Development of the Capital Markets Union and related regulation – Before the backdrop of Brexit, financial markets in Europe are adapting to significant regulatory changes introduced by provisions included in MiFID 2 and MiFIR and other legal acts that have become effective in the recent past. The European Union aims to further strengthen the Capital Markets Union in future years. Related initiatives include a harmonized EU framework for covered bonds and a pan-European pension product. A European financial transaction tax is still under discussion.

Benchmarks – Following a number of conduct-related scandals involving financial benchmarks, regulatory initiatives by, among others, the International Organization of Securities Commissions ("IOSCO") have resulted in changes to the way benchmarks are being used, authorized and regulated globally. Financial benchmarks comprise a wide range of interest rate, currency, securities, commodity and other indices and reference prices. In the European Union, the EU Benchmarks Regulation came into force in January 2018, with a transition period until the end of 2019, with a proposed extension through 2021 for critical and third country benchmarks. The FSB has set up the Official Sector Steering Group (OSSG) to coordinate international work to review and reform interest rate benchmarks and welcomes progress that has been made on the identification and development of overnight risk-free rates ("RFRs"). These RFRs are considered to be more robust and less susceptible to market manipulation due to their transaction based nature. The FSB recommends the transition from existing IBOR rates to RFRs where the long-term viability of an IBOR is in question, i.e. LIBOR. Other jurisdictions pursue a two-rate approach with reform of existing benchmark rate while pursuing the identification of a RFR to devise robust fallbacks.

Digital Transformation – Digital transformation and the increased recognition of risks posed by new technologies as well as cyber risk and data protection are expected to be important areas of regulatory discussions, initiatives and action in 2019.

Climate change, environmental and social issues

The Sustainable Development Goals address the most pressing economic, social and environmental challenges of our time. These challenges include issues closely related to global warming and climate change, whose impacts have gained in importance in the public discourse. In 2018, there were major developments in defining the financial sector's role in combating climate change and supporting sustainable economic development. This resulted in a number of regulatory proposals known as the EU Action Plan for Sustainable Finance, which highlight a leading role financial institutions should take in contributing to low carbon development.

Another enduring global trend is poverty and migration. More than 800 million people around the world live in extreme poverty, while 65 million people are refugees (half of them children). Around 57 million children below the age of 10 have no access to schooling or education, and many youngsters are disenfranchised, even in the Western world. Goal 17 of the United Nations' 2030 agenda aims to revitalize the global partnership for sustainable development by promoting effective public-private and civil society cooperation to tackle worlds' greatest challenges. Leveraging their corporate citizenship, global firms like Deutsche Bank have the opportunity to create a positive impact – especially when they join forces with others to promote targeted initiatives that create shared value.

As a corporate citizen, Deutsche Bank works to enable communities and economies around the world to prosper. Our initiatives have a strategic focus on education, social enterprise, and community, and we encourage our employees to underpin the bank's citizenship activities. Our education projects seek to enable young people to reach their full potential. We work with pioneering social enterprises to help drive positive change in society. And wherever Deutsche Bank does business, we seek to contribute to stronger and more inclusive communities. We do this together with like-minded partners and with our Plus You employee volunteering and giving community. Our Corporate Social Responsibility initiatives made a positive impact on the lives of 1.8 million people in 2018. In addition to making a difference on the ground, we seek to create large-scale change through advocacy and field leadership.

Regulation and Supervision

Our operations throughout the world are regulated and supervised by the relevant authorities in each of the jurisdictions where we conduct business. Such regulation relates to licensing, capital adequacy, liquidity, risk concentration, conduct of business as well as organizational and reporting requirements. It affects the type and scope of the business we conduct in a country and how we structure specific operations. In reaction to the 2008 financial crisis, the regulatory environment has undergone and is still undergoing significant changes.

Highlights

On November 23, 2016, the European Commission published a comprehensive package of reforms (referred to in the following as the "banking reform package") to further strengthen the resilience of European Union banks. The proposals will incorporate various remaining elements of the regulatory framework agreed within the Basel Committee on Banking Supervision ("Basel Committee") and the Financial Stability Board ("FSB") to refine and supplement the global regulatory framework established by the Basel Committee, the so-called Basel Accords (Basel 1, 2 and 3). This includes more risk-sensitive capital requirements, in particular in the area of market risk, counterparty credit risk, and for exposures to central counterparties, methodologies that reflect more accurately the actual risks to which banks may be exposed, a binding leverage ratio, a binding net stable funding ratio, tighter regulation of large exposures, and a requirement for global systemically important institutions ("G-SIIs"), such as Deutsche Bank, to hold certain minimum levels of capital and other instruments which are capable of bearing losses in resolution ("Total Loss-Absorbing Capacity" or "TLAC"). Other proposed measures are aimed at improving banks' lending capacity to support the European Union economy and at further facilitating the role of banks in achieving deeper and more liquid European Union capital markets. On December 4, 2018, the European Parliament and the Council of the European Union reached a provisional political agreement with respect to the banking reform package. The banking reform package is expected to enter into force in the first half of 2019. While many provisions will not apply until 2021, certain parts, including the TLAC requirements, are expected to apply immediately when the provisions of the banking reform package enter into force. The banking reform package, when it enters into force, will likely affect our business by raising our regulatory capital and liquidity requirements and by leading to increased costs. The December 2017 Agreement could also affect our business by imposing higher capital charges when adopted into law.

The banking reform package includes amendments to the existing regulation on prudential requirements for credit institutions and investment firms, also referred to as the Capital Requirements Regulation ("CRR"), the directive on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, also referred to as Capital Requirements Directive 4 ("CRD 4"), the European Union's Regulation establishing Uniform Rules and a Uniform Procedure for the Resolution of Credit Institutions and certain Investment Firms in the Framework of a Single Resolution Mechanism and a Single Resolution Fund (the "SRM Regulation") and the Bank Resolution and Recovery Directive ("BRRD"),

On December 18, 2018, a provisional agreement was reached on a further amendment of the CRR. The amendment relates to minimum loss coverage for non-performing exposures, creating a statutory prudential backstop against excessive future build-up of non-performing loans without sufficient loss coverage on banks' balance sheets.

With respect to the United Kingdom's decision to leave the European Union, if the United Kingdom and the European Union do not enter into a withdrawal agreement, the United Kingdom could leave the European Union as early as March 29, 2019. Deutsche Bank AG is in the process of applying for UK authorization to provide banking and other financial services in the United Kingdom. Deutsche Bank AG is planning to continue to provide banking and other financial services on a cross-border basis into the UK as well as through its London branch, which it will retain. Following the withdrawal of the United Kingdom from the European Union, Deutsche Bank AG expects that it will be subject to additional UK regulation and that its activities in the UK will be supervised and monitored by both the Prudential Regulatory Authority ("PRA") and the Financial Conduct Authority ("FCA"). The PRA and FCA would likely impose new prudential and conduct requirements for Deutsche Bank AG.

The following sections present a description of the regulation and supervision of our business in our home market Germany under the European Union framework of regulation and in the United States.

Regulation in Germany under the Regulatory Framework of the European Union

We are subject to comprehensive regulation under German law and regulations promulgated by the European Union which are directly applicable law in Germany.

The German Banking Act (Kreditwesengesetz) and the CRR are important sources of regulation for German banks with respect to prudential regulation, licensing requirements, and the business activities of financial institutions. In particular, the German Banking Act requires that an enterprise which engages in one or more of the activities categorized in the German Banking Act as "banking business" or "financial services" in Germany must be licensed as a credit institution (Kreditinstitut) or financial services institution (Finanzdienstleistungsinstitut), as the case may be. Deutsche Bank AG is licensed as a credit institution and is authorized to conduct banking business and to provide financial services.

Significant parts of the regulatory framework for banks in the European Union are governed by the CRR. The CRR includes requirements relating to regulatory capital, risk-based capital adequacy, monitoring and control of large exposures, consolidated supervision, leverage, liquidity and public disclosure, including Basel 3 standards.

Certain other requirements that apply to us, including those with respect to capital buffers, organizational and risk management requirements, are set forth in the German Banking Act and other German laws, partly implementing European Union directives such as CRD 4.

Deutsche Bank AG, headquartered in Frankfurt am Main, Germany, is the parent institution of Deutsche Bank Group. Under the CRR, Deutsche Bank AG, as credit institution and parent company, is responsible for regulatory consolidation of all subsidiary credit institutions, financial institutions, asset management companies and ancillary service undertakings. Generally, the bank regulatory requirements under the CRR and the German Banking Act apply both on a stand-alone and a consolidated basis. However, banks forming part of a consolidated group may receive a waiver with respect to the application of specific regulatory requirements on an unconsolidated basis if certain conditions are met. As of December 31, 2018, Deutsche Bank AG benefited from such a waiver, according to which Deutsche Bank AG needs to apply the requirements relating to own funds, large exposures, exposures to transferred credit risks, leverage and disclosure by institutions, as well as certain risk management requirements, only on a consolidated basis.

Capital Adequacy Requirements

Minimum Capital Adequacy Requirements (Pillar 1)

The minimum capital adequacy requirements for banks are primarily set forth in the CRR. The CRR requires German banks to maintain an adequate level of regulatory capital in relation to the total of their risk positions, referred to as total risk exposure amount or risk-weighted assets. Risk positions include credit risk positions, market risk positions and operational risk positions (including, among other things, risks related to certain external factors, as well as to technical errors and errors of employees). The most important type of capital for compliance with the capital requirements under the CRR is Common Equity Tier 1 capital. Common Equity Tier 1 capital primarily consists of share capital, retained earnings and other reserves, subject to certain regulatory adjustments. Another component of regulatory capital is Additional Tier 1 capital, which includes, for example, certain unsecured subordinated perpetual capital instruments and related share premium accounts. An important feature of Additional Tier 1 capital is that the principal amount of the instruments will be written down, or converted into Common Equity Tier 1 capital when the Common Equity Tier 1 capital ratio of the financial institution falls below a minimum of 5.125 % (or such higher level as the issuing bank may determine). Regulators may require an earlier conversion, for example for stress-testing purposes. Common Equity Tier 1 capital and Additional Tier 1 capital together constitute Tier 1 capital. An additional type of regulatory capital is Tier 2 capital which generally consists of long-term subordinated debt instruments. Tier 1 capital and Tier 2 capital together constitute own funds. Pursuant to the CRR, hybrid capital instruments that qualified as Tier 1 or Tier 2 capital under what is known as Basel 2.5 cease to qualify as such and will be gradually phased out through the end of 2021.

Under the CRR, banks are required to maintain a minimum ratio of Tier 1 capital to total risk exposure amount of 6 % and a minimum ratio of Common Equity Tier 1 capital to total risk exposure amount of 4.5 %. The minimum total capital ratio of own funds to total risk exposure amount is 8 %.

Capital Buffers

The German Banking Act also requires banks to build up a mandatory capital conservation buffer (Common Equity Tier 1 capital amounting to 2.5 % of total risk exposure amount), and authorizes the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht (“BaFin“)) to set a domestic counter-cyclical capital buffer for Germany (Common Equity Tier 1 capital of generally 0 % to 2.5 % of total risk exposure amount, or more in particular circumstances) during periods of high credit growth. In order to comply with the countercyclical capital buffer requirement, banks must calculate their institution-specific countercyclical capital buffer as the weighted average of the countercyclical capital buffers that apply to them in the jurisdictions where their relevant credit

exposures are located. Accordingly, the total countercyclical buffer requirement, if any, with which we need to comply also depends on the corresponding buffer requirements in other jurisdictions. In addition, the BaFin may require banks to build up a systemic risk buffer (Common Equity Tier 1 capital of between 1 % and 3 % of total risk exposure amount for all exposures and – in exceptional cases – up to 5 % for domestic and third-country exposures) to prevent and mitigate long term non-cyclical systemic or macro-prudential risks not otherwise covered by CRR/CRD 4. G-SIIs, such as Deutsche Bank, are subject to an additional capital buffer (Common Equity Tier 1 capital of between 1 % and 3.5 % of total risk exposure amount), which the BaFin determines for German banks based on a scoring system measuring the bank's global systemic importance. The BaFin can also determine a capital buffer of Common Equity Tier 1 capital of up to 2 % of risk-weighted assets for other systemically important banks (so-called O-SIIs, such as Deutsche Bank) in Germany, based on criteria measuring, among others, the bank's importance for the economy in Germany and the European Economic Area. The systemic risk buffer, the buffers for G-SIIs and the buffer for O-SIIs are generally not cumulative; only the highest of these buffers applies. If a bank fails to build up the required capital buffers, it will be subject to restrictions on the pay-out of dividends, share buybacks and discretionary compensation payments. Also, within the single supervisory mechanism ("SSM"), the European Central Bank ("ECB") may require banks to maintain higher capital buffers than those required by the BaFin.

Leverage Ratio

The Basel 3 framework also proposes a non-risk based leverage ratio as a complement to the risk-based capital requirements. While the CRR, as currently in effect, does not require banks to comply with a specific leverage ratio, banks are required to report and publish their leverage ratios for a future assessment and calibration of the leverage ratio. The banking reform package (see "Highlights" above) includes a proposal to introduce a binding minimum leverage ratio requirement of 3 % of Tier 1 capital. In addition, in December 2017, the Basel Committee adopted a leverage ratio buffer for global systemically important banks ("G-SIBs") (such as Deutsche Bank) to be applied from January 2022 onwards, which must be met with Tier 1 capital and is set at 50 % of a G-SIB's risk-weighted capital buffer. In order for the Basel Committee's standards to become binding on banks, they must be implemented in the laws of the European Union and the individual member jurisdictions.

Pillar 2 Capital Requirements and Guidance

Furthermore, the ECB may impose capital requirements on individual significant credit institutions which are more stringent than the statutory minimum requirements set forth in the CRR, the German Banking Act or the related regulations. Upon completion of the supervisory review and evaluation process ("SREP") discussed in greater detail below, the competent supervisory authority makes an SREP decision in relation to each relevant bank, which may include specific capital and liquidity requirements for each affected bank. Any such additional bank-specific capital requirements resulting from the SREP are referred to as "Pillar 2" requirements that must be met with Common Equity Tier 1 capital in addition to the statutory minimum capital and buffer requirements. In addition, the ECB may decide following the SREP, to communicate to individual banks an expectation to hold a further Pillar 2 Common Equity Tier 1 capital add-on, the so-called Pillar 2 guidance. The ECB has stated that it expects banks to meet the Pillar 2 guidance although it is not legally binding and failure to meet the Pillar 2 guidance does not automatically have legal consequences. The competent supervisory authority may take a range of other measures based on the SREP outcome to address shortcomings in a bank's governance and risk management processes or its capital or liquidity position, such as prohibiting dividend payments to shareholders or distributions to holders of regulatory capital instruments.

For details of Deutsche Bank's regulatory capital, see "Management Report: Risk Report: Risk and Capital Performance" in our Annual Report 2018.

MREL Requirements

As discussed below under “Recovery and Resolution”, to ensure that European banks have a sufficient amount of liabilities with loss-absorbing capacity, they are required to meet minimum requirements for own funds and eligible liabilities (“MREL”) determined for each institution individually on a case-by-case basis. The banking reform package (see “Highlights” above) further intends to implement the FSB’s TLAC standard for G-SIBs (such as us) by introducing a new Pillar 1 MREL requirement for G-SIIs (the European equivalent term for G-SIBs). This new requirement is based on both risk-based and non-risk-based denominators and is expected to be set at the higher of 18 % of total risk exposure and 6.75 % of the leverage ratio exposure measure following a transition period. It can be met with Tier 1 or Tier 2 capital or debt that meets specific eligibility criteria. Deduction rules will apply for holdings by G-SIIs of TLAC instruments of other G-SIIs. In addition, the competent authorities will have the ability to impose an MREL add-on requirement on G-SIIs.

Limitations on Large Exposures

The CRR also contains the primary restrictions on large exposures, which limit a bank’s concentration of credit risks. The German Banking Act and the Large Exposure Regulation (Großkredit- und Millionenkreditverordnung) supplement the CRR. Under the CRR, our exposure to a customer and any customers affiliated with such customer is deemed to be a “large exposure” when the value of such exposure is equal to or exceeds 10 % of our eligible regulatory capital. All exposures to a single customer and any customers affiliated with such customer are aggregated for these purposes. In general, no large exposure may exceed 25 % of our eligible regulatory capital. “Eligible regulatory capital” for this purpose means the sum of Tier 1 capital and Tier 2 capital where the latter may not exceed one third of Tier 1 capital. If the customer is a credit institution or investment firm, the exposure is limited to the higher of 25 % of our eligible regulatory capital or € 150 million. Competent authorities may set a lower limit than € 150 million. For exposures in the trading book, the large exposure regime may give greater latitude, subject to an additional own funds requirement.

The banking reform package (see “Highlights” above) includes a proposal to restrict a bank’s exposures to a single counterparty to 25 % of its Tier 1 capital (instead of 25 % of the sum of its Tier 1 and Tier 2 capital) and to further limit exposures between banks designated as G-SIIs, such as Deutsche Bank, to 15 % of Tier 1 capital.

Liquidity Requirements

The CRR introduced a new liquidity coverage requirement intended to ensure that banks have an adequate stock of unencumbered high quality liquid assets that can be easily and quickly converted into cash to meet their liquidity needs for a 30-calendar day liquidity stress scenario. The required liquidity coverage ratio (“LCR”) is calculated as the ratio of a bank’s liquidity buffer to its net liquidity outflows. Also, banks must regularly report the composition of the liquid assets in their liquidity buffer to their competent authorities.

In addition, Basel 3 contains a proposal to introduce a net stable funding ratio (“NSFR”) to reduce medium- to long-term funding risks by requiring banks to fund their activities with sufficiently stable sources of funding over a one-year period. The CRR contains interim reporting requirements on stable funding but does not yet include substantive provisions relating to the NSFR. Among the banking reform package (see “Highlights” above) is a proposal to introduce a binding NSFR. According to this proposal, the NSFR is defined as the ratio of a bank’s available stable funding relative to the amount of required stable funding over a one-year period. According to the proposal, banks must maintain an NSFR of at least 100 %.

The ECB may impose on individual banks liquidity requirements which are more stringent than the general statutory requirements if the bank’s continuous liquidity would otherwise not be ensured.

Separation of Proprietary Trading Activities by Universal Banks

The German Separation Act provides that deposit-taking banks and their affiliates are prohibited from engaging in proprietary trading that does not constitute a service for others, high-frequency trading, and credit or guarantee transactions with hedge funds and comparable enterprises that are substantially leveraged, unless such activities are exempt or excluded, or in the case no such exemption or exclusion is available, is transferred to a separate legal entity, referred to as a financial trading institution (Finanzhandelsinstitut). The separation requirement applies if certain thresholds are exceeded, which is the case for us. In addition, the German Separation Act authorizes the BaFin to prohibit the deposit-taking bank and its affiliates, on a case-by-case basis, from engaging in market-making and other activities that are comparable to the activities prohibited by law, if these activities may put the solvency of the deposit-taking bank or any of its affiliates at risk. In the event that the BaFin orders such a prohibition, the respective activities must be discontinued or transferred to a separate financial trading institution. The financial trading institution may be established in the form of an investment firm or a bank and may be part of the same group as the deposit-taking bank. However, it must be economically and organizationally independent from the deposit-taking bank and its other affiliates, and it has to comply with enhanced risk management requirements. We have established a compliance and control framework to ensure that no prohibited activities are conducted. Deutsche Bank has not established a financial trading institution.

Anti-Financial Crime, Sanctions, Bribery and Corruption

Financial sector participants are required to take steps to prevent the abuse of the financial system through money laundering and other financial crime. The European Union has continually sought to strengthen its framework for anti-money laundering and combating the financing of terrorism, in line with international standards set by the Financial Action Task Force. Recent developments include the European Union's Fifth Anti-Money Laundering Directive, which has been in force since July 9, 2018 and is to be implemented in the Member States by January 2020. It aims to enhance transparency on beneficial ownership and reinforce the framework for the assessment of high-risk third countries, address other risk and further the cooperation between anti-money-laundering and prudential supervisors. Furthermore, the requirements set out in the German AML Act (Geldwäschegesetz) and German Banking Act apply to all business lines and infrastructure units as well as all subsidiaries and affiliates that undertake AML-relevant business and in which Deutsche Bank AG has a dominating influence.

We are required to comply with international sanctions, which are measures to protect national security interests or international law by countries, multilateral or regional organizations against certain countries, organizations or individuals restricting economic activity. In 2018, various sanctions laws were issued or changed requiring us to update policies, processes or name list screening or transaction filtering.

We are subject to bribery and corruption laws and regulations under the German Criminal Code and in the other countries in which we conduct business. The UK Bribery Act 2010 has extraterritorial impact and requires us to design and develop appropriate measures to mitigate bribery and corruption risk and to administer controls and safeguards to mitigate such risks.

Data Protection and Cyber Risk

We have to comply with all applicable data protection laws in the countries in which we operate. The regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, also referred to as the General Data Protection Regulation ("GDPR"), became applicable in the European Union on

May 25, 2018. It relates to data protection and privacy rights of individuals within the European Union and addresses the export of personal data to other jurisdictions. The GDPR primarily aims at giving individuals control over their personal data and to unifying the regulatory environment for cross-border business. Superseding the 1995 Data Protection Directive, the GDPR contains provisions and requirements pertaining to the processing of personal data of individuals and also applies to businesses inside the European Union that are processing personal data. The regulation furthermore applies to businesses outside of the European Union if goods or services are offered to data subjects in the European Union, or if the behavior of data subjects in the European Union is being monitored. The GDPR imposes compliance obligations and grants broad enforcement powers to supervisory authorities, including the potential to levy significant fines for non-compliance.

Under the German Banking Act and the BaFin's Minimum Requirements for Risk Management for Banks (Mindestanforderungen an das Risikomanagement) information security needs to be an integral part of a financial institution's IT strategy and risk management. The BaFin requires that financial institutions establish a comprehensive information and cyber security program, define standards, implement controls and adhere to their resulting security policies and standards in accordance with evolving business requirements, regulatory guidance, and an emerging threat landscape. Information security risk management is part of vendor risk management for any procurement if information technology or outsourcing activity include the use of new technologies like cloud services. Information security risk (also referred to as cyber risk) is a component of operational risk assessed in the context of the SREP under Guidelines on Information and Communication Technology Risk Assessment issued by the European Banking Authority, which expects financial institutions to protect the confidentiality, integrity, and availability of customer data and information assets.

Remuneration Rules

Under the German Banking Act and the German Credit Institution Remuneration Regulation (Institutsvergütungsverordnung), we are subject to certain restrictions on the remuneration we pay our management board members and employees. These remuneration rules implement requirements of the CRD 4 and impose a cap on bonuses. Pursuant to this cap, the variable remuneration for management board members and employees must not exceed the fixed remuneration. The variable remuneration may be increased to twice the management board member's or employee's fixed remuneration if expressly approved by the shareholders' meeting with the required majority. In addition, we are obliged to identify individuals who have a material impact on our risk profile ("material risk takers"). Such material risk takers are subject to additional rules, such as the requirement that at least 40 % to 60 % of the variable remuneration granted to them must be on a deferred basis. The deferral period must be at least three to five years. Also at least 50 % of the variable remuneration for material risk takers must be paid in the form of instruments that adequately reflect the credit quality of the bank, such as shares or instruments linked to shares. Finally, we are required to comply with certain disclosure requirements relating to the remuneration we pay to, and our remuneration principles in respect of, our material risk takers and other affected employees.

For details of Deutsche Bank's remuneration system, see "Management Report: Compensation Report" in our Annual Report 2018.

Deposit Protection and Investor Compensation in Germany

The Deposit Protection Act and the Investor Compensation Act

The German Deposit Protection Act (Einlagensicherungsgesetz) and the German Investor Compensation Act (Anlegerentschädigungsgesetz) provide for a mandatory deposit protection and investor compensation system in Germany, based on a European Union directive on deposit guarantee schemes ("DGS Directive") and a European Union

directive on investor compensation schemes.

The German Deposit Protection Act requires that each German bank participates in one of the statutory government-controlled deposit protection schemes (Entschädigungseinrichtungen). The Entschädigungseinrichtung deutscher Banken GmbH acts as the deposit protection scheme for private sector banks such as Deutsche Bank, collects and administers the contributions of the member banks, and settles any compensation claims of depositors in accordance with the German Deposit Protection Act.

Under the German Deposit Protection Act, deposit protection schemes are generally liable for obligations resulting from deposits denominated in any currency in an amount of up to € 100,000 per depositor and bank. Certain depositors, such as banks, insurance companies, investment funds and governmental bodies, are excluded from coverage.

Deposit protection schemes are financed by annual contributions of the participating banks proportionate to their potential liabilities, depending on the amount of its covered deposits and the degree of risk the bank is exposed to. A target level of 0.8 % of the total covered deposits of the participating banks is supposed to be reached by July 3, 2024. Deposit protection schemes may also levy special contributions if required to settle compensation claims.

Deposit protection schemes will be required to contribute to bank resolution costs where resolution tools are used. The contribution made by the deposit protection scheme is limited to the compensation it would have to pay if the affected bank had become subject to insolvency proceedings. Furthermore, deposit protection schemes may provide funding to its participating banks to avoid their failure under certain circumstances.

Under the German Investor Compensation Act, in the event that the BaFin ascertains a compensation case, Entschädigungseinrichtung deutscher Banken GmbH as our deposit protection scheme is also required to compensate 90 % of the aggregate claims of each covered creditor arising from securities transactions denominated in euro or in a currency of any other European Union Member State up to an amount of the equivalent of € 20,000. Many financial sector participants such as banks, insurance companies, investment funds, governmental bodies or medium-sized and large corporations do not benefit from this coverage.

European Deposit Insurance Scheme

The European Union is still aiming for a common European Deposit Insurance Scheme (“EDIS”) based upon a proposal of the European Commission originally published in 2015. EDIS is still under discussion at the European Union level and the ultimate impact on us is uncertain.

Voluntary Deposit Protection System

Liabilities to creditors that are not covered by a statutory compensation scheme may be covered by the Deposit Protection Fund (Einlagensicherungsfonds) set up by the Association of German Banks (Bundesverband deutscher Banken e.V.) of which Deutsche Bank AG is a member. The Deposit Protection Fund protects deposits, i.e., generally credit balances credited to an account or resulting from interim positions which the bank is required to repay, subject to certain exclusions, up to an amount equal to 20 % of the bank’s own funds (Eigenmittel) as further specified in the Deposit Protection Fund’s by-laws. This limit will be reduced to 15 % from January 1, 2020 onwards and to 8.75 % from January 1, 2025 onwards.

The financial resources of the Deposit Protection Fund are funded by contributions of the participating banks. If the resources of the Fund are insufficient, banks may be required to make special contributions. If one or more German

banks are in financial difficulties, we may participate in their restructuring even where we have no business relationship or strategic interest, in order to avoid making special contributions to the Deposit Protection Fund in case of an insolvency of such bank or banks, or we may be required to make such special contributions.

Market Conduct, Investor Protection and Infrastructure Regulation

Under the German Securities Trading Act (Wertpapierhandelsgesetz), the BaFin regulates and supervises securities trading, including the provision of investment services, in Germany. The German Securities Trading Act contains, among other things, disclosure and transparency rules for issuers of securities that are listed on a German exchange and organizational requirements as well as rules of conduct which apply to all businesses that provide investment services. Investment services include, in particular, the purchase and sale of securities or derivatives for others and the intermediation of transactions in securities or derivatives as well as investment advice. The BaFin has broad powers to investigate businesses providing investment services to monitor their compliance with the organizational requirements, rules of conduct and reporting requirements. In addition, the German Securities Trading Act requires an independent auditor to perform an annual audit of the investment services provider's compliance with its obligations under the German Securities Trading Act.

A related area is the Market Abuse Regulation ("MAR") which establishes a common European Union framework for, inter alia, insider dealing, the public disclosure of inside information, market manipulation, and managers' transactions. The German Securities Trading Act, which had contained rules on market abuse prior to the entering into force of the MAR, continues to supplement the MAR in this respect, for example by providing for sanctions in case of violations of the MAR.

In addition, the revised Markets in Financial Instruments Directive ("MiFID 2"), implemented primarily through amendments to the German Securities Trading Act, and the new Markets in Financial Instruments Regulation ("MiFIR") became applicable on January 3, 2018. Their objectives are greater regulation and oversight of financial firms providing investment services or activities in the European Union by covering additional markets and instruments, the extension of pre- and post-trade transparency rules from equities to all financial instruments, greater restrictions on operating trading platforms, and greater sanctioning powers. The trading venues under supervision now also include organized trading facilities. In addition, MiFID 2/MiFIR, introduced a trading obligation for those OTC derivatives which are subject to mandatory clearing and which are sufficiently standardized, and new investor protection rules that significantly impact the way investment firms distribute products. The Regulation on Key Information Documents or Packaged Retail and Insurance-based Investment Products (PRIIPs) applies since January 1, 2018. It focuses on disclosure and transparency requirements when advising on or selling retail structured products and other complex and packaged investment products and aims at increasing investor protection.

Beyond the infrastructure-related provisions of MiFID 2 and MiFIR, market infrastructure has been the focus of other regulatory initiatives of the European Union that are relevant for Deutsche Bank. The Regulation on Transparency of Securities Financing Transaction aims at increasing transparency and reducing risks associated with such transactions. The regulation requires that repos, securities lending transactions and transactions with equivalent effect and margin lending transactions be reported to trade repositories and requires risk disclosures and consent before assets are reused or re-hypothecated. For the OTC derivatives markets, the European Regulation on OTC Derivatives, Central Counterparties and Trade Repositories, also referred to as European Market Infrastructure Regulation ("EMIR"), pursues the goals of reducing system, counterparty and operational risk and increase transparency in the OTC derivatives markets. The regulation introduced requirements for standardized over-the-counter derivatives, such as central clearing, margining, portfolio reconciliation or reporting to trade repositories.

In addition, the European Union's Regulation on Financial Benchmarks seeks to ensure the integrity and accuracy of

indices used as benchmarks for financial instruments and contracts, and prevent their manipulation. European Union-regulated banks, investment firms, fund managers and certain other supervised entities are only permitted to use benchmarks provided in accordance with the regulation. Benchmark administrators in the European Union are required to obtain authorization or registration, and are subject to rules and oversight regarding their organization, governance and conduct. Benchmarks provided by non-EU administrators are permissible under certain conditions.

Payment Services Regulation

Payment services in Germany are governed by the Payment Services Directive II ("PSD II") as transposed into German law by the Payment Services Supervision Law (Zahlungsdiensteaufsichtsgesetz, "ZAG"). Payment services regulation is aimed at increasing competition for payment services and providing a level playing field by harmonizing consumer protection and rights and obligations of payment services providers and users within the European Union. The PSD II and the ZAG provide the legal framework for the rapidly progressing digitalization in payment services and promote consistent interpretation and application of the provisions throughout the European Union.

Legal Requirements relating to Financial Statements and Audits

As required by the German Commercial Code (Handelsgesetzbuch), Deutsche Bank AG prepares its non-consolidated financial statements in accordance with German GAAP. Deutsche Bank Group's consolidated financial statements are prepared in accordance with International Financial Reporting Standards ("IFRS"), and our compliance with capital adequacy requirements and large exposure limits is determined solely based upon such consolidated financial statements.

Under German law, Deutsche Bank AG is required to be audited annually by a certified public accountant (Wirtschaftsprüfer). Deutsche Bank AG's auditor is appointed each year at the annual shareholders' meeting. However, the supervisory board mandates the auditor and supervises the audit. The BaFin and the Deutsche Bundesbank ("Bundesbank"), the German central bank, must be informed of the appointment and the BaFin may reject the auditor's appointment. The German Banking Act requires that a bank's auditor inform the BaFin and the Bundesbank of any facts that come to the auditor's attention which would lead it to refuse to certify or to limit its certification of the bank's annual financial statements or which would adversely affect the bank's financial position. The auditor is also required to notify the BaFin and the Bundesbank in the event of a material breach by management of the articles of association or of any other applicable law. The auditor is required to prepare a detailed and comprehensive annual audit report (Prüfungsbericht) for submission to the bank's supervisory board, the BaFin and the Bundesbank. The BaFin and the Bundesbank share their information with the ECB. In addition to the statutory audit directive and its amendment that has been implemented into national law, Deutsche Bank is also subject to the European Union's Regulation on Specific Requirements regarding Statutory Audit of Public-Interest Entities which includes requirements for mandatory audit firm rotation and restrictions on non-audit services.

Banking Supervision under the Single Supervisory Mechanism

Under the European Union's system of financial supervision referred to as the single supervisory mechanism ("SSM"), the ECB is the primary supervisor of all systemically important or significant credit institutions (such as Deutsche Bank AG) and their banking affiliates in the relevant Member States. The competent national authorities supervise the remaining, less significant banks under the oversight of the ECB. As a result, Deutsche Bank AG is supervised by the ECB, the BaFin and the Bundesbank.

With respect to us and other significant credit institutions, the ECB is the primary supervisor and is responsible for most tasks of prudential supervision, such as compliance with regulatory requirements concerning own funds, large exposure limits, leverage, liquidity, securitizations, corporate governance, business organization and risk management requirements. The ECB carries out its day-to-day supervisory functions through a joint supervisory team ("JST")

established for Deutsche Bank Group. The JST is led by the ECB and comprises staff from the ECB and national supervisory authorities, including the BaFin and the Bundesbank. In addition, and regardless of whether an institution is significant or not, the ECB is responsible for issuing new licenses to credit institutions and for assessing the acquisition and increase of significant participations (also referred to as qualifying holdings) in credit institutions established in those Member States of the European Union that participate in the SSM and where notification of such changes must be filed.

The BaFin is our principal supervisor for regulatory matters with respect to which we are not supervised by the ECB. These include business conduct in the securities markets, in particular when providing investment services to clients, anti-money laundering, terrorist financing and payment services, as well as certain special areas of bank regulation, such as those related to the issuance of covered bonds (Pfandbriefe) and the supervision of German home loan banks (Bausparkassen) with regard to certain regulatory requirements specifically applicable to such home loan banks. Generally, the BaFin also supervises us with respect to those requirements under the German Banking Act that are not based upon European law. The Bundesbank supports the BaFin and the ECB and closely cooperates with them. The cooperation includes the ongoing review and evaluation of reports submitted by us and of our audit reports as well as assessments of the adequacy of our capital base and risk management systems. The ECB, the BaFin and the Bundesbank receive comprehensive information from us in order to monitor our compliance with applicable legal requirements and to obtain information on our financial condition.

Supervisory Review and Evaluation Process

For significant institutions such as Deutsche Bank, the JST conducts the supervisory review and evaluation process (or “SREP”) for an ongoing assessment of risks, governance arrangements and the capital and liquidity situation. The SREP requires that the JSTs review the arrangements, strategies, processes and mechanisms of supervised banks on a regular basis, in order to evaluate risks to which these banks are or might be exposed, risks they could pose to the financial system, and risks revealed by stress testing.

The SREP framework consists of a business model analysis, an assessment of internal governance and institution-wide control arrangements, an assessment of risks to capital and adequacy of capital to cover these risks; and an assessment of risks to liquidity and adequacy of liquidity resources to cover these risks. The SREP can result in Pillar 2 capital and liquidity requirements or guidance for the relevant institution (see above “Pillar 2 Capital Requirements and Guidance”).

Audits, Investigations and Enforcement

Investigations and Supervisory Audits

The ECB and the BaFin may conduct audits of banks on a discretionary basis, as well as for cause. In particular, the ECB may audit our compliance with requirements with respect to which it supervises us, such as those set forth in CRR/CRD 4. The BaFin may also decide to audit our compliance with requirements with respect to which it supervises us, such as those relating to business conduct in the securities markets and the regulation of anti-money laundering, to counter terrorist financing and payment services, as well as certain special areas of bank regulation, such as those related to the issuance of covered bonds and the supervision of German home loan banks.

The ECB as well as the BaFin may require a bank to furnish information and documents in order to ensure that the bank is complying with applicable bank supervisory laws. The ECB and the BaFin may conduct investigations

without having to state a reason therefor. Such investigations may also take place at a foreign entity that is part of a bank's group for regulatory purposes. Investigations of foreign entities are limited to the extent that the law of the jurisdiction where the entity is located restricts such investigations.

The ECB and the BaFin may attend meetings of a bank's supervisory board and shareholders meetings. They also have the authority to require that such meetings be convened.

Supervisory and Enforcement Powers

The ECB has a wide range of enforcement powers in the event it discovers any irregularities concerning adherence to requirements with respect to which it supervises us.

It may, for example,

- impose additional own funds or liquidity requirements in excess of statutory minimum requirements;
- restrict or limit a bank's business;
- require the cessation of activities to reduce risk;
- require a bank to use net profits to strengthen its own funds;
- restrict or prohibit dividend payments to shareholders or distributions to holders of Additional Tier 1 instruments; or
- remove the members of the bank's management or supervisory board members from office.

To the extent necessary to carry out the tasks granted to it, the ECB may also require national supervisory authorities to make use of their powers under national law. If these measures are inadequate, the ECB may revoke the bank's license. Furthermore, the ECB has the power to impose administrative penalties in case of breaches of directly applicable European Union laws, such as the CRR, or of applicable ECB regulations and decisions. Penalties imposed by the ECB may amount to up to twice the amount of profits gained or losses avoided because of the violation, or up to 10 % of the total annual turnover of the relevant entity in the preceding business year or such other amounts as may be provided for in relevant European Union law. In addition, where necessary to carry out the tasks granted to it, the ECB may also require that the BaFin initiate proceedings to ensure that appropriate penalties are imposed on the affected bank.

The BaFin also retains a wide range of enforcement powers. As discussed above, it may take action if instructed by the ECB in connection with supervisory tasks granted to the ECB. With respect to supervisory tasks remaining with the BaFin, the BaFin may take action upon its own initiative. In particular, if a bank is in danger of defaulting on its obligations to creditors, the BaFin may take emergency measures to avert default. These emergency measures may include:

- issuing instructions relating to the management of the bank;
- prohibiting the acceptance of deposits and the extension of credit;
- prohibiting or restricting the bank's managers from carrying on their functions;
- prohibiting payments and disposals of assets;
- closing the bank's customer services; and
- prohibiting the bank from accepting any payments other than payments of debts owed to the bank.

The BaFin may also impose administrative pecuniary penalties under the German Banking Act and other German laws. Penalties under the German Banking Act may amount to generally up to € 5 million or, in certain cases,

€ 20 million, depending of the type of offense. If the economic benefit derived from the offense is higher, the BaFin may impose penalties of up to 10 % of the net turnover of the preceding business year or twice the amount of the economic benefit derived from the violation.

Finally, violations of the German Banking Act may result in criminal penalties against the members of the Management Board or senior management.

Recovery and Resolution

Germany participates in the European Union's single resolution mechanism ("SRM"), which centralizes at a European level the key competences and resources for managing the failure of banks in Member States of the European Union participating in the banking union. The SRM is based on the SRM Regulation and the BRRD, which was implemented in Germany through the German Recovery and Resolution Act (Sanierungs- und Abwicklungsgesetz). In addition, the German Resolution Mechanism Act (Abwicklungsmechanismusgesetz) adapted German bank resolution laws to the SRM.

Under the SRM, broad resolution powers with respect to banks domiciled in the participating Member States are granted to the Single Resolution Board ("SRB") as the central European resolution authority and to the competent national resolution authorities. Resolution powers in particular include the power to reduce, including to zero, the nominal value of shares, or to cancel shares outright, and to write down certain eligible subordinated and unsubordinated unsecured liabilities, including to zero, or convert them into equity (commonly referred to as "bail-in").

For a bank directly supervised by the ECB, such as Deutsche Bank, the SRB draws up the resolution plan, assesses the bank's resolvability and may require legal and operational changes to the bank's structure to ensure its resolvability. In the event that a bank is failing or likely to fail and certain other conditions are met, in particular where there is no reasonable prospect that any alternative private sector measures would prevent the failure and resolution measures are necessary in the public interest, the SRB is responsible for adopting a resolution scheme for resolving the bank pursuant to the SRM Regulation. The European Commission and, to a lesser extent, the Council of the European Union, have a role in endorsing or objecting to the resolution scheme proposed by the SRB. The resolution scheme would be addressed to and implemented by the competent national resolution authorities (the BaFin in Germany).

Resolution measures that could be imposed upon a failing bank may include a range of measures including the transfer of shares, assets or liabilities of the bank to another legal entity, the reduction, including to zero, of the nominal value of shares, the dilution of shareholders of a failing bank or the cancellation of shares outright, or the amendment, modification or variation of the terms of the bank's outstanding debt instruments, for example by way of deferral of payments or a reduction of the applicable interest rate. Furthermore, by way of a "bail-in", certain liabilities may be written down, including to zero, or converted into equity after the bank's regulatory capital has been exhausted.

To ensure that resolution measures can be effectively taken, contractual obligations governed by the laws of a non-EU country or that are subject to jurisdiction outside the European Union are required to include contractual provisions that ensure that the relevant obligation can be bailed in. In the case of financial contracts governed by the laws of a non-EU country or that are subject to jurisdiction outside the European Union, stay acceptance clauses need to be included.

To ensure sufficient availability of liabilities with loss-absorbing capacity that could be bailed in, the SRM Regulation and the German Recovery and Resolution Act introduced a requirement for banks to meet minimum requirements for

own funds and eligible liabilities ("MREL"). The required level of MREL is determined by the competent resolution authorities for each supervised bank individually on a case-by-case basis. MREL is set by the Member State resolution authority on an institution-by-institution basis, depending on preferred resolution strategy. In the case of Deutsche Bank AG, MREL is determined by the SRB. While there is no minimum level of MREL, the BRRD and a delegated regulation set out criteria which the resolution authority must consider when setting it.

The banking reform package (see "Highlights" above) intends to implement the FSB's TLAC standard for G-SIBs by introducing a new "Pillar 1" MREL requirement for G-SIIs. This proposed new requirement is based on both risk-based and non-risk-based denominators and is expected to be set at the higher of 18 % of total risk exposure and 6.75 % of the leverage ratio exposure measure following a transition period. It can be met with Tier 1 or Tier 2 capital instruments or debt that meets specific eligibility criteria. In addition, the competent authorities will have the ability to impose an MREL add-on requirement on G-SIIs.

We anticipate that G-SIIs will need to predominantly rely on capital instruments or eligible subordinated debt for this purpose. Effective January 1, 2017, the German Banking Acts provided for a new class of statutorily subordinated debt securities that rank as senior non-preferred below the bank's other senior liabilities (but in priority to the bank's contractually subordinated liabilities, such as those qualifying as Tier 2 instruments). Following a harmonization effort by the European Union implemented in Germany effective July 21, 2018, banks are permitted to decide if a specific issuance of eligible senior debt will rank as senior non-preferred debt or as senior preferred debt.

The SRB is charged with administering the Single Resolution Fund, a pool of money which is financed by bank levies raised at national level and intended to reach a target level of 1 % of insured deposits of all banks in Member States participating in the SRM by the end of 2023. It will be used for resolving failing banks after other options, such as the bail-in tool, have been exhausted. In line with the German Recovery and Resolution Act, public financial support for a failing bank should only be used as a last resort, after having assessed and exploited, to the maximum extent possible, resolution measures set forth in the SRM Regulation and the German Recovery and Resolution Act, including the bail-in tool.

In addition, a German bank could become subject to a stabilization plan or reorganization proceedings under the German Credit Institution Reorganization Act (Gesetz zur Reorganisation von Kreditinstituten).

Regulation in the European Economic Area and Brexit

Since 1989 the European Union has worked to create a single European Union-wide market with almost no internal barriers on banking and financial services. To this end, the European Union pursues common standards of laws and regulations to create consistency across the internal market and reduce compliance and regulatory burdens for businesses operating on a cross-border basis. The Agreement on the European Economic Area extends this single market to Iceland, Liechtenstein and Norway. These non-EU members of the European Economic Area have agreed to enact legislation similar to that passed in the European Union in many areas. Within this market, our branches generally operate under the so-called "European Passport". Under the European Passport, our branches are subject to regulation and supervision primarily by the ECB and the BaFin. Similarly, we also provide cross-border services in the European Economic Area under the "European Passport" directly without intermediation of branches. To the extent that activities are carried out within its jurisdiction, the authorities of the host country supervise the conduct of such activities. This includes, for example, rules on treating clients fairly and rules governing a bank's conduct in the securities market.

To prepare for the departure of the United Kingdom from the European Union Deutsche Bank AG is in the process of applying for UK authorization to continue to undertake regulated activity in the UK (previously undertaken pursuant to the European Passport provisions). Deutsche Bank AG expects that it will be subject to additional UK regulation and that its activities in the UK will be supervised and monitored by both the PRA and the FCA. The PRA and FCA

would likely impose new prudential and conduct requirements for Deutsche Bank AG.

Regulation and Supervision in the United States

Our operations are subject to extensive federal and state banking, securities and derivatives regulation and supervision in the United States. We engage in US banking activities directly through our New York branch. We also control US banking organization subsidiaries, including DB USA Corporation and Deutsche Bank Trust Company Americas (“DBTCA”), and US broker-dealers, such as Deutsche Bank Securities Inc., US nondeposit trust companies and nonbanking subsidiaries. We hold our US subsidiaries through two intermediate holding companies, DB USA Corporation, through which our US banking subsidiaries and the large majority of our other US subsidiaries are held, and DWS USA Corporation, through which our US asset management subsidiaries are held.

In 2010, the United States enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”), which provides a broad framework for significant regulatory changes that extend to almost every area of US financial regulation. While rulemaking in respect of many of the provisions of the Dodd-Frank Act has already taken place, full implementation of the Dodd-Frank Act will require further detailed rulemaking and uncertainty remains about the final details, timing and impact of some rules. Some existing regulations implementing the Dodd-Frank Act are undergoing tailoring as part of the implementation process. In addition, the substance and impact of the Dodd-Frank Act may be affected by subsequent legislation and changes in the US political landscape.

The Dodd-Frank Act provisions known as the “Volcker Rule” limit the ability of banking entities and their affiliates to engage as principal in certain types of proprietary trading and to sponsor or invest in private equity or hedge funds or similar funds (“covered funds”), subject to certain exclusions and exemptions. In the case of non-US banking entities such as Deutsche Bank AG, these exemptions permit certain activities conducted outside the United States, provided that certain criteria are satisfied. The Volcker Rule also limits the ability of banking entities and their affiliates to enter into certain transactions with covered funds with which they or their affiliates have certain relationships. The Volcker Rule also requires banking entities to establish comprehensive compliance programs designed to help ensure and monitor compliance with restrictions under the Volcker Rule. In May 2018, the US regulatory agencies with authority over the Volcker Rule issued a notice of proposed rulemaking to amend the Volcker Rule. The proposed amendments are intended to provide banking entities with greater clarity and certainty about the scope of the rule, improve effective allocation of compliance resources and improve the ability of the agencies to examine for, and make supervisory assessments regarding, compliance with the Volcker Rule. The timing of the adoption of final amended Volcker Rule regulations, and their content, is currently unclear.

The Dodd-Frank Act also provides regulators with tools to provide greater capital, leverage and liquidity requirements and other prudential standards, particularly for financial institutions that pose significant systemic risk. US regulators are also able to restrict the size and growth of systemically significant non-bank financial companies and large interconnected bank holding companies. US regulators are also required to impose bright-line debt-to-equity ratio limits on financial companies that the Financial Stability Oversight Council determines pose a grave threat to financial stability if it determines that the imposition of such limits is necessary to minimize the risk.

With respect to prudential standards, in February 2014, the Federal Reserve Board adopted rules that set forth how the US operations of certain foreign banking organizations (“FBOs”), such as Deutsche Bank, are required to be structured, as well as the enhanced prudential standards that apply to our US operations (the “FBO Rules”). Under the FBO Rules, as of July 1, 2016, a large FBO with US$ 50 billion or more in US non-branch assets, such as Deutsche Bank, was required to establish or designate a separately capitalized top-tier US intermediate holding company (an “IHC”) that

would hold substantially all of the FBO's ownership interests in its US subsidiaries. The Federal Reserve Board may permit an FBO subject to the US IHC requirement to establish or designate multiple US IHCs upon written request. On July 1, 2016, we designated DB USA Corporation as our IHC. In March 2018, we completed the partial initial public offering of our Asset Management division, consolidating these activities in DWS Group GmbH & Co. KGaA, in which we retain approximately 80 % of the shares. In April 2018, DWS USA Corporation was formed as a subsidiary of DWS Group GmbH & Co. KGaA, and, following receipt of Federal Reserve Board approval, we designated it as our second IHC, through which our US asset management subsidiaries are held. As of the date of their designation or formation, they each became subject, on a consolidated basis, to the risk-based and leverage capital requirements under the US Basel 3 capital framework, capital planning and stress testing requirements (on a phased-in basis), US liquidity buffer requirements and other enhanced prudential standards comparable to those applicable to top-tier US bank holding companies of a similar size. Supplementary leverage ratio requirements applicable to DB USA Corporation took effect beginning in January 2018 and were applicable to DWS USA Corporation upon its formation.

On October 31, 2018, the Federal Reserve Board, Federal Deposit Insurance Corporation ("FDIC") and Office of the Comptroller of the Currency issued notices of proposed rulemaking that would tailor how certain capital and liquidity requirements and other prudential standards would apply to large US banking organizations. The proposals would assign US banking organizations with $100 billion or more in total consolidated assets to one of four categories based on their size and other risk-based indicators, and an institution's assigned category would determine the capital and liquidity requirements and enhanced prudential standards to which it would be subject. The proposals expressly would not apply to FBOs, including their US IHCs, or their US operations, but the Federal Reserve noted that it plans to issue a separate tailoring proposal relating to FBOs and their US operations.

The Federal Reserve Board has the authority to examine an IHC, such as DB USA Corporation and DWS USA Corporation, and its subsidiaries, as well as US branches and agencies of FBOs, such as our New York branch. An FBO's US branches and agencies are not held beneath an IHC; however, the US branches and agencies of the FBO are subject to certain liquidity requirements, as well as other specific enhanced prudential standards, such as risk management and, under certain circumstances, asset maintenance requirements. Additionally, the FBO Rules also placed requirements on the FBO itself related to the adequacy and reporting of the FBO's home country capital and stress testing regime.

On June 14, 2018, the Federal Reserve Board adopted requirements relating to single counterparty credit limits that apply to an FBO's combined US operations and its IHCs. Our IHCs will each be prohibited from having net credit exposure to a single unaffiliated counterparty in excess of 25 percent of each IHC's tier 1 capital beginning on July 1, 2020. In addition, our combined US operations (including our IHCs and our New York branch) would become separately subject to similar restrictions beginning January 1, 2020 unless Deutsche Bank AG certifies compliance with a home country large exposure regime that is consistent with the Basel large exposure framework.

In addition, the Federal Reserve Board proposed but has not adopted an "early remediation" framework under which it would implement prescribed restrictions and penalties against the FBO and its US operations, such as restrictions on the ability of the FBO and its US operations to make discretionary compensation payments to certain of its officers and directors, if the FBO and/or its US operations do not meet certain risk-based capital, leverage, liquidity, stress testing or other risk management requirements, and would authorize the termination of US operations under certain circumstances.

As a bank holding company with assets of US$ 250 billion or more, Deutsche Bank AG is required under Title I of the Dodd-Frank Act, as amended, and the implementing regulations therefor to prepare and submit periodically to the

Federal Reserve Board and the FDIC a plan for the orderly resolution of its subsidiaries and operations in the event of future material financial distress or failure (the "US Resolution Plan"). For foreign-based companies subject to these resolution planning requirements such as Deutsche Bank AG, the US Resolution Plan relates only to subsidiaries, branches, agencies and businesses that are domiciled in or whose activities are carried out in whole or in material part in the United States.

Deutsche Bank AG filed its most recent US Resolution Plan in June 2018. The US Resolution Plan describes the single point of entry strategy for our US Material Entities, Core Business Lines, Critical Operations and prescribes that DB USA Corporation, our single US intermediate holding company as of December 31, 2017, would provide support to its US Material Entity subsidiaries and ensure their solvent wind-down outside of applicable resolution proceedings. In December 2018, Deutsche Bank AG received written regulatory feedback from the Federal Reserve and FDIC, which found that Deutsche Bank's US Resolution Plan had no deficiencies but identified one shortcoming in the plan, associated with governance mechanisms and related escalation triggers. Deutsche Bank is required to submit a response to its December 2018 feedback letter by April 5, 2019. Deutsche Bank's response will discuss the remediation of the shortcoming as well as enhancements of its resolution capabilities. Both the remediation of the shortcoming and enhancements must be completed prior to the submission of our next US Resolution Plan, which is currently expected to be due on July 1, 2020.

DB USA Corporation was subject to the Federal Reserve Board's Comprehensive Capital Analysis and Review ("CCAR") for 2018. On June 28, 2018, the Federal Reserve Board publicly indicated that it did not object to DB USA Corporation's 2018 capital plan on a quantitative basis, but that it did object for qualitative reasons. As a result of the Federal Reserve's objection, DB USA Corporation may not make any capital distribution unless the Federal Reserve has indicated in writing its non-objection to the distribution. DB USA Corporation's stressed Common Equity Tier 1 capital ratio was forecast by the Federal Reserve Board to fall to as low as 12.2 % under the supervisory severely adverse scenario. This hypothetical stressed ratio would be substantially above the minimum required ratio of 4.5 %. Stress testing results are based on hypothetical adverse scenarios and should not be viewed or interpreted as forecasts of expected outcomes or capital adequacy or of the actual financial condition of DB USA Corporation. DB USA Corporation will make its next capital plan submission to the Federal Reserve Board in April 2019, at which time DWS USA Corporation will submit its initial capital plan to the Federal Reserve Board.

In September 2014, the Federal Reserve Board and other US regulators approved a final rule implementing liquidity coverage ratio ("LCR") requirements for large US banking holding companies and certain of their subsidiary depositary institutions that are generally consistent with the Basel Committee's revised Basel 3 liquidity standards. DB USA Corporation and DBTCA became subject to the full LCR requirements on April 1, 2017 and DWS USA Corporation became subject to LCR requirements on a phased-in basis following its formation in April 2018.

On June 1, 2016, the Federal Reserve Board and other US regulators proposed rules implementing the second element of the Basel 3 liquidity framework, the net stable funding ratio ("NSFR"). Under the proposed rules, DB USA Corporation, DWS USA Corporation and DBTCA would be subject to the full NSFR; however, this proposal has yet to be finalized and, accordingly, such entities are not currently subject to the proposed requirements.

On December 15, 2016, the Federal Reserve Board adopted final rules that implement a US version of the FSB's TLAC standard in the United States. The final rules require, among other things, the US IHCs of non-US G-SIBs, including DB USA Corporation and DWS USA Corporation, to maintain a minimum TLAC amount, and separately require them to maintain a minimum amount of eligible long-term debt. Under the final rules, the required TLAC amount and the ability or inability of the IHC to count long-term debt issued externally towards the requirements varies depending on the G-SIB's planned resolution strategy. DB USA Corporation and DWS USA Corporation are

each considered a “non-resolution covered IHC”, which means that they are intended, under the planned resolution strategy of their G-SIB parent (Deutsche Bank AG), to continue to operate outside of resolution proceedings while the G-SIB parent is subject to a bail-in under the applicable European resolution regime. The final rules require a “non-resolution covered IHC” to maintain, beginning in 2019, (i) internal minimum TLAC of at least 16 % of its risk-weighted assets, 6 % of its Basel 3 leverage ratio denominator and 8 % of its average total consolidated assets, and (ii) internal eligible long-term debt of at least 6 % of its risk-weighted assets, 2.5 % of its Basel 3 leverage ratio denominator and 3.5 % of its average total consolidated assets. Eligible long-term debt instruments for non-resolution covered IHCs are required to meet certain criteria, including issuance to a foreign company that controls directly or indirectly the covered IHC or a foreign affiliate (a non-US entity that is wholly owned, directly or indirectly, by the non-US G-SIB) and the inclusion of a contractual trigger allowing for, in limited circumstances, the immediate conversion or exchange of some or all of the instrument into Common Equity Tier 1 instruments upon an order by the Federal Reserve Board. Internal TLAC requirements may be satisfied with a combination of eligible long-term debt instruments and Tier 1 capital. Each of DB USA Corporation and DWS USA Corporation would also face restrictions on its discretionary bonus payments and capital distributions if it fails to maintain a TLAC buffer consisting of Common Equity Tier 1 capital above the minimum TLAC requirement equal to 2.5 % of risk-weighted assets. The final rules also prohibit or limit the ability of DB USA Corporation and DWS USA Corporation to engage in certain types of financial transactions.

Furthermore, the Dodd-Frank Act provides for an extensive framework for the regulation of over-the-counter (“OTC”) derivatives, including mandatory clearing, exchange trading and transaction reporting of certain OTC derivatives, as well as rules regarding the registration of, and capital, margin and business conduct standards for, swap dealers, security-based swap dealers, major swap participants and major security-based swap participants. The Commodity Futures Trading Commission (“CFTC”) adopted final rules in 2016 that will require additional interest rate swaps to be cleared, with a phased implementation schedule that ended in October 2018. In December 2016, also pursuant to the Dodd-Frank Act, the CFTC re-proposed regulations to impose position limits on certain commodities and economically equivalent swaps, futures and options. More recently, in November 2018 the CFTC proposed amendments to rules that would significantly expand swap mandatory trading requirements. These proposals have not yet been finalized. The Securities and Exchange Commission (“SEC”) has also finalized rules regarding registration, reporting, business conduct standards and trade acknowledgement and verification requirements for security-based swap dealers and major security-based swap participants, although these rules will not come into effect until the SEC completes further security-based swap rulemakings. Finally, the US prudential regulators (the Federal Reserve Board, the FDIC, the Office of the Comptroller of the Currency, the Farm Credit Administration and the Federal Housing Finance Agency) have adopted final rules establishing margin requirements for non-cleared swaps and security-based swaps, and the CFTC has adopted final rules establishing margin requirements for non-cleared swaps. The final margin rules follow a phased implementation schedule, with certain initial margin and variation margin requirements in effect as of September 2016, additional variation margin requirements in effect as of March 2017, and additional initial margin requirements phased in on an annual basis from September 2017 through September 2020, with the relevant compliance dates depending in each case on the transactional volume of the parties and their affiliates. The SEC proposal to establish margin requirements for non-cleared security-based swaps has not yet been finalized.

The Dodd-Frank Act also requires broader regulation of hedge fund and private equity fund managers, as well as credit rating agencies, and imposes requirements with respect to securitization activities. The federal regulatory agencies have issued final rules, which became effective in 2015 and 2016, to implement the credit risk retention requirements of Section 941 of the Dodd-Frank Act, which generally require securitizers of different types of asset-backed securitizations, including transactions backed by residential mortgages, commercial mortgages, and commercial, credit card and auto loans, to retain at least five percent of the credit risk of the assets being securitized, with an exemption for securitizations that are wholly composed of “qualified residential mortgages.”

The Dodd-Frank Act, as amended, also established a regulatory framework and enhanced regulation for several other areas, including but not limited to the following. The Dodd-Frank Act established a new regime for the orderly liquidation of failing financial companies through the appointment of the FDIC as receiver that is available only if the US Secretary of the Treasury determines in consultation with the US President that certain criteria are met, including that the failure of the company and its resolution under otherwise applicable federal or state law would have serious adverse effects on US financial stability. In addition, the Dodd-Frank Act requires US regulatory agencies to prescribe regulations with respect to incentive-based compensation at financial institutions in order to prevent inappropriate behavior that could lead to a material financial loss. Other provisions require issuers with securities listed on US stock exchanges, which may include foreign private issuers such as Deutsche Bank, to establish a “clawback” policy to recoup previously awarded executive compensation in the event of an accounting restatement; in May 2016, the SEC re-proposed rules to implement this provision of the Dodd-Frank Act that would cover foreign private issuers, but such rules have not yet been adopted. The Dodd-Frank Act also grants the SEC discretionary rule-making authority to impose a new fiduciary standard on brokers, dealers and investment advisers, and expands the extraterritorial jurisdiction of US courts over actions brought by the SEC or the United States with respect to violations of the antifraud provisions of the Securities Act of 1933, the Securities Exchange Act of 1934 and the Investment Advisers Act of 1940.

Implementation of the Dodd-Frank Act and related final regulations will result in additional costs and could limit or restrict the way we conduct our business.

Regulatory Authorities

We, as well as our wholly owned subsidiary DB USA Corporation are bank holding companies under the US Bank Holding Company Act of 1956, as amended (the “Bank Holding Company Act“), by virtue of, among other things, our and its ownership of DBTCA. As bank holding companies, we and DB USA Corporation have elected to become financial holding companies. As a result, we and our US operations are subject to regulation, supervision and examination by the Federal Reserve Board as our US “umbrella supervisor”.

DBTCA is a New York state-chartered bank whose deposits are insured by the FDIC to the extent permitted by law. DBTCA is subject to regulation, supervision and examination by the Federal Reserve Board and the New York State Department of Financial Services and to relevant FDIC regulation. In addition, DBTCA is also subject to regulation by the Consumer Financial Protection Bureau in relation to retail products and services offered to its customers. Deutsche Bank Trust Company Delaware is a Delaware state-chartered bank which is subject to regulation, supervision and examination by the FDIC and the Office of the State Bank Commissioner of Delaware. Deutsche Bank AG’s New York branch is supervised by the Federal Reserve Board and the New York State Department of Financial Services. Deutsche Bank’s federally chartered nondeposit trust companies are subject to regulation, supervision and examination by the Office of the Comptroller of the Currency. We and our subsidiaries are also subject to regulation, supervision and examination by state banking regulators of certain states in which we and they conduct banking operations.

Restrictions on Activities

As described below, federal and state banking laws and regulations restrict our ability to engage, directly or indirectly through subsidiaries, in activities in the United States. Among others, we are required to obtain the prior approval of the Federal Reserve Board before directly or indirectly acquiring the ownership or control of more than 5 % of any class of voting shares of US banks, certain other depository institutions, and bank or depository institution holding companies. Under applicable US federal banking law, our US banking operations are also restricted from engaging in certain “tying” arrangements involving products and services.

Our two US FDIC-insured bank subsidiaries, as well as our New York branch, are subject to requirements and restrictions under federal and state law, including requirements to maintain reserves against deposits, restrictions on the types and amounts of loans that may be made and the interest that may be charged thereon, and limitations on the types of investments that may be made and the types of services that may be offered.

In addition to the business of banking, and managing or controlling banks, so long as we are a financial holding company under US law, we may also engage in nonbanking activities in the United States that are financial in nature, or incidental or complementary to such financial activity, including certain securities, merchant banking, insurance and other financial activities, subject to certain limitations on the conduct of such activities and to prior regulatory approval in some cases. As a non-US bank, Deutsche Bank AG and our non-US subsidiaries are generally authorized under US law and regulations to acquire a non-US company engaged in non-financial activities as long as that company's US operations do not exceed certain thresholds and certain other conditions are met.

In November 2018, the Federal Reserve Board adopted a revised supervisory rating system for bank holding companies with US$ 100 billion or more in total consolidated assets and for IHCs with US$ 50 billion or more in total consolidated assets, such as DB USA Corporation. The revised system will also generally apply to DWS USA Corporation. Under the revised system, which became effective February 1, 2019, covered companies will receive separate ratings from the Federal Reserve Board for (i) capital planning and positions, (ii) liquidity risk management and positions and (iii) governance and controls. Each of these component areas will receive one of the following four ratings: (i) Broadly Meets Expectations, (ii) Conditionally Meets Expectations, (iii) Deficient-1, and (iv) Deficient-2. A covered company will have to maintain a rating of Broadly Meets Expectations or Conditionally Meets Expectations for each of the three components to be considered "well managed."

In August 2017, the Federal Reserve Board issued proposed guidance intended to enhance the effectiveness of boards of directors and refocus the Federal Reserve Board's supervisory expectations for boards of directors on their core responsibilities, and also to delineate between roles and responsibilities for boards of directors and for senior management. Although the proposed guidance does not directly apply to DB USA Corporation or DWS USA Corporation, the Federal Reserve Board indicated that it expects to issue a separate proposal on governance specific to IHCs.

Our status as a financial holding company, and our resulting ability to engage in a broader range of nonbanking activities, are dependent on Deutsche Bank AG, DB USA Corporation and our two insured US depository institutions qualifying as "well capitalized" and "well managed" under applicable regulations and upon our insured US depository institutions meeting certain requirements under the Community Reinvestment Act. The Federal Reserve Board's and other US regulators' "well capitalized" standards are generally based on specified quantitative thresholds set at levels above the minimum requirements to be considered "adequately capitalized." For our two insured depository institution subsidiaries, Deutsche Bank Trust Company Americas and Deutsche Bank Trust Company Delaware, the well-capitalized thresholds under the US Basel 3 framework are a Common Equity Tier 1 capital ratio of 6.5 %, a Tier 1 capital ratio of 8 %, a Total capital ratio of 10 %, and a US leverage ratio of 5 %. For bank holding companies, including Deutsche Bank AG and DB USA Corporation, the well-capitalized thresholds are a Tier 1 capital ratio of 6 % and a Total capital ratio of 10 %, both of which in the case of Deutsche Bank AG are calculated for Deutsche Bank AG under its home country standards.

State-chartered banks (such as DBTCA) and state-licensed branches and agencies of foreign banks (such as our New York branch) may not, with certain exceptions that require prior regulatory approval, engage as a principal in any type of activity not permissible for their federally chartered or licensed counterparts. In addition, DBTCA and Deutsche Bank Trust Company Delaware are subject to their respective state banking laws pertaining to legal lending limits and

permissible investments and activities. Likewise, the United States federal banking laws also subject state branches and agencies to the single-borrower lending limits that apply to federal branches or agencies, which are substantially similar to the lending limits applicable to national banks. The single-borrower lending limits applicable to branches and agencies are calculated based on the dollar equivalent of the capital of the foreign bank (i.e., Deutsche Bank AG in the case of the New York branch).

The Federal Reserve Board may terminate the activities of any US office of a foreign bank if it determines that the foreign bank is not subject to comprehensive supervision on a consolidated basis in its home country or that there is reasonable cause to believe that such foreign bank or its affiliate has violated the law or engaged in an unsafe or unsound banking practice in the United States or, for a foreign bank that presents a risk to the stability of the United States financial system, the home country of the foreign bank has not adopted, or made demonstrable progress toward adopting, an appropriate system of financial regulation to mitigate such risk.

Also, under the so-called swaps “push-out” provisions of the Dodd-Frank Act, certain structured finance derivatives activities of FDIC-insured banks and US branch offices of foreign banks (including our New York branch) are restricted.

There are various qualitative and quantitative restrictions on the extent to which we and our nonbank subsidiaries can borrow or otherwise obtain credit from our US banking subsidiaries or engage in certain other transactions involving those subsidiaries, including derivative transactions and securities borrowing or lending transactions. In general, these transactions must be on terms that would ordinarily be offered to unaffiliated entities, must be secured by designated amounts of specified collateral and are subject to volume limitations. These restrictions also apply to certain transactions of our New York branch with our US broker-dealers and certain of our other US affiliates.

A major focus of US governmental policy relating to financial institutions is aimed at preventing money laundering and terrorist financing and compliance with economic sanctions in respect of designated countries or activities. Failure of an institution to have policies and procedures and controls in place to prevent, detect and report money laundering and terrorist financing could in some cases have serious legal, financial and reputational consequences for the institution.

New York Branch

The New York branch of Deutsche Bank AG is licensed by the Superintendent of the New York State Department of Financial Services to conduct a commercial banking business and is required to maintain and pledge eligible high-quality assets with banks in the State of New York (up to a maximum of US$ 100 million of assets pledged so long as the foreign bank remains designated as “well-rated” by the Superintendent of Financial Services). Should we cease to be designated as “well-rated” by the Superintendent of Financial Services, we may need to maintain substantial additional amounts of eligible assets. The Superintendent of Financial Services may also impose asset maintenance requirements on foreign banks with branch offices in New York. In addition, the Federal Reserve Board is authorized to impose institution-specific asset maintenance requirements under certain conditions, pursuant to the FBO Rules. Currently, no such requirements have been imposed upon our New York branch.

The New York State Banking Law authorizes the Superintendent of Financial Services to take possession of the business and property of a New York branch of a foreign bank under certain circumstances, generally involving violation of law, conduct of business in an unsafe manner, impairment of capital, suspension of payment of obligations, or initiation of liquidation proceedings against the foreign bank at its domicile or elsewhere. In liquidating

or dealing with a branch's business after taking possession of a branch, only the claims of depositors and other creditors which arose out of transactions with a branch are to be accepted by the Superintendent of Financial Services for payment out of the business and property of the foreign bank in the State of New York or in the US and reflected on the books of the New York branch, without prejudice to the rights of the holders of such claims to be satisfied out of other assets of the foreign bank. After such claims are paid, the Superintendent of Financial Services will turn over the remaining assets, if any, first to the liquidators of other offices of the foreign bank that are being liquidated in the United States and then, if any assets remain, to the foreign bank or its duly appointed liquidator or receiver.

Deutsche Bank Trust Company Americas

The Federal Deposit Insurance Corporation Improvement Act of 1991 ("FDICIA") provides for extensive regulation of depository institutions (such as DBTCA and its direct and indirect parent companies), including requiring federal banking regulators to take "prompt corrective action" with respect to FDIC-insured banks that do not meet minimum capital requirements. As an insured bank's capital level declines and the bank falls into lower categories (or if it is placed in a lower category by the discretionary action of its supervisor), greater limits are placed on its activities and federal banking regulators are authorized (and, in many cases, required) to take increasingly more stringent supervisory actions, which could ultimately include the appointment of a conservator or receiver for the bank (even if it is solvent). In addition, FDICIA generally prohibits an FDIC-insured bank from making any capital distribution (including payment of a dividend) or payment of a management fee to its holding company if the bank would thereafter be undercapitalized. If an insured bank becomes "undercapitalized", it is required to submit to federal regulators a capital restoration plan guaranteed by the bank's holding company. Since the enactment of FDICIA, both of our US insured banks have maintained capital above the "well capitalized" standards, the highest capital category under applicable regulations.

DBTCA, like other FDIC-insured banks, is required to pay assessments to the FDIC for deposit insurance under the FDIC's Deposit Insurance Fund (calculated using the FDIC's risk-based assessment system). The minimum reserve ratio for the Deposit Insurance Fund was increased under the Dodd-Frank Act from 1.15 % to 1.35 %, with the target of 1.35 % to be reached by 2020 and with the incremental cost charged to banks with more than US$ 10 billion in assets. In addition, the FDIC has set the designated reserve ratio at 2 % as a long-term goal. This shift has had financial implications for all FDIC-insured banks, including DBTCA. In order to achieve the 1.35 % goal, in March 2016, the FDIC adopted a rule imposing an additional surcharge of 4.5 % per $ 100 of the quarterly assessments (after making certain adjustments) of insured depository institutions with total consolidated assets of US$ 10 billion or more, including DBTCA. The surcharge took effect on July 1, 2016 and ended as of September 30, 2018, when the 1.35 % goal had been met. The FDIC's standard maximum deposit insurance amount per customer at an insured depository institution is US$ 250,000.

Other

In the United States, our US-registered broker-dealers are regulated by the SEC. Broker-dealers are subject to regulations that cover all aspects of the securities business, including sales methods, trade practices among broker-dealers, use and safekeeping of customers' funds and securities, capital structure, recordkeeping, the financing of customers' purchases and the conduct of directors, officers and employees.

Our principal US SEC-registered broker-dealer subsidiary, Deutsche Bank Securities Inc., is a member of the New York Stock Exchange (and other securities exchanges) and is regulated by the Financial Industry Regulatory Authority, Inc. ("FINRA") and the individual state securities authorities in the states in which it operates. The US

government agencies and self-regulatory organizations, as well as state securities authorities in the United States having jurisdiction over our US broker-dealer affiliates, are empowered to conduct administrative proceedings that can result in censure, fine, the issuance of cease-and-desist orders or the suspension or expulsion of a broker-dealer or its directors, officers or employees. Deutsche Bank Securities Inc. is also registered with and regulated by the SEC as an investment adviser, and by the CFTC and the National Futures Association as a futures commission merchant and commodity pool operator.

Under the Dodd-Frank Act, with certain exceptions, our entities that are swap dealers, security-based swap dealers, major swap participants or major security-based swap participants are registered or will be required to register with the SEC or CFTC, or both. Currently, Deutsche Bank AG is provisionally registered as a swap dealer. At a future date, we will be required to register one or more subsidiaries as security-based swap dealers with the SEC and may be required to register additional subsidiaries as swap dealers with the CFTC and certain subsidiaries as CFTC-regulated major swap participants and/or SEC-regulated major security-based swap participants. Registration, including provisional registration, as swap dealers, security-based swap dealers, major swap participants or major security-based swap participants subjects us to requirements as to capital, margin, business conduct and recordkeeping, among other requirements.

Organizational Structure

We operate our business along the structure of our three corporate divisions. Deutsche Bank AG is the direct or indirect holding company for our subsidiaries. The following table sets forth the significant subsidiaries we own, directly or indirectly, as of December 31, 2018. We used the three-part test set out in Section 1-02 (w) of Regulation S-X under the U.S. Securities Exchange Act of 1934 to determine significance. We do not have any other subsidiaries we believe are material based on other, less quantifiable, factors.

We own 100 % of the equity and voting interests in these subsidiaries except for DWS Group GmbH & Co. KGaA, of which we own 79.49 % of equity and voting interests. These subsidiaries prepare financial statements as of December 31, 2018, and are included in our consolidated financial statements. Their principal countries of operation are the same as their countries of incorporation.

Subsidiary	Place of Incorporation
DB USA Corporation1	Delaware, United States
Deutsche Bank Americas Holding Corporation2	Delaware, United States
DB U.S. Financial Markets Holding Corporation3	Delaware, United States
Deutsche Bank Securities Inc.4	Delaware, United States
Deutsche Bank Trust Corporation5	New York, United States
Deutsche Bank Trust Company Americas6	New York, United States
Deutsche Bank Luxembourg S.A.7	Luxembourg
DB Privat- und Firmenkundenbank AG8	

	Frankfurt am Main, Germany
DB Beteiligungs-Holding GmbH9	Frankfurt am Main, Germany
DWS Group GmbH & Co. KGaA10	Frankfurt am Main, Germany

1DB USA Corporation is the top-level holding company for our subsidiaries in the United States other than those held through DWS Group.

2Deutsche Bank Americas Holding Corporation is a second tier holding company for subsidiaries in the United States.

3DB U.S. Financial Markets Holding Corporation is a second tier holding company for subsidiaries in the United States.

4Deutsche Bank Securities Inc. is a U.S. company registered as a broker dealer and investment advisor with the Securities and Exchange Commission and as a futures commission merchant with the Commodities Futures Trading Commission.

5Deutsche Bank Trust Corporation is a bank holding company under Federal Reserve Board regulations.

6 Deutsche Bank Trust Company Americas is a New York State-chartered bank and member of the Federal Reserve System. It originates loans and other forms of credit, accepts deposits, arranges financings and provides numerous other commercial banking and financial services.

7The company's primary business model comprises loan business with international clients (Corporate & Investment Bank), where the bank acts globally as lending office and as risk transfer hub for the Credit Portfolio Strategies Group of Deutsche Bank, as well as structured finance activities covering long-term infrastructure projects and high quality investment goods. Furthermore, the bank offers tailor-made solutions with a wide range of products and services to their Wealth Management clients.

8The company serves private individuals, affluent clients as well as small and medium sized corporate clients with banking products. In May 2018, Deutsche Postbank AG was merged with Deutsche Bank Privat- und Geschäftskunden AG and in addition this entity was renamed to DB Privat- und Firmenkundenbank AG.

9The company holds the majority stake in DWS Group GmbH & Co. KGaA.

10 On February 20, 2018, the general shareholders' meeting of DWS Group SE resolved to change the legal form of the Company into a partnership limited by shares (Kommanditgesellschaft auf Aktien) with a German limited liability company (Gesellschaft mit beschränkter Haftung) as a general partner, organized under German law, and changed the Company's legal name to DWS Group GmbH & Co. KGaA. These changes became effective upon registration with the Commercial Register on March 3, 2018. The business purpose of the company is the holding of participations in as well as the management and support of a group of financial services providers. DWS Group GmbH & Co. KGaA was publicly listed on the Frankfurt Stock Exchange on March 23, 2018, almost a year after Deutsche Bank AG announced its plan to separate its asset management division into a new subsidiary and list the shares of this subsidiary on the stock exchange. DWS Group GmbH & Co. KGaA was established to act as the parent company of the separated Deutsche Bank Asset Management business. The transfer of all Deutsche Bank Group Asset Management related operations to DWS Group GmbH & Co. KGaA has been carried out in stages, materially completed in 2017 and the first half of 2018.

Property and Equipment

As of December 31, 2018, we operated in 59 countries out of 2,064 branches around the world, of which 68 % were in Germany. We lease a majority of our offices and branches under long-term agreements.

We continue to review our property requirements worldwide taking into account cost containment measures as well as growth initiatives in selected businesses. Please see Note 23 “Property and Equipment” to the consolidated financial statements for further information.

Information Required by Industry Guide 3

Please see pages S-1 through S-20 of the Supplemental Financial Information, which pages are incorporated by reference herein, for information required by SEC Industry Guide 3.

Item 4A: Unresolved Staff Comments

We have not received written comments from the Securities and Exchange Commission regarding our periodic reports under the Exchange Act, as of any day 180 days or more before the end of the fiscal year to which this annual report relates, which remain unresolved.

Item 5: Operating and Financial Review and Prospects

Overview

The following discussion and analysis should be read in conjunction with the consolidated financial statements and the related notes to them included in “Item 18: Financial Statements” of this document, on which we have based this discussion and analysis.

We have prepared our consolidated financial statements in accordance with IFRS as issued by the International Accounting Standards Board (“IASB”) and as endorsed by the European Union (“EU”).

Significant Accounting Policies and Critical Accounting Estimates

Our significant accounting policies are essential to understanding our reported results of operations and financial condition. Certain of these accounting policies require critical accounting estimates that involve complex and subjective judgments and the use of assumptions, some of which may be for matters that are inherently uncertain and susceptible to change. Such critical accounting estimates could change from period to period and have a material impact on our financial condition, changes in financial condition or results of operations. Critical accounting estimates could also involve estimates where management could have reasonably used another estimate in the current accounting period. Actual results may differ from these estimates if conditions or underlying circumstances were to change. See Note 1 “Significant Accounting Policies and Critical Accounting Estimates” to the consolidated financial statements for a discussion on our significant accounting policies and critical accounting estimates.

We have identified the following significant accounting policies that involve critical accounting estimates:

- the impairment of associates
- the impairment of financial assets available for sale
- the impairment of financial assets classified as fair value through other comprehensive income
- the determination of fair value
- the recognition of trade date profit
- the impairment of loans and provisions for off-balance sheet positions
- the impairment of goodwill and other intangibles
- the recognition and measurement of deferred tax assets
- the accounting for legal and regulatory contingencies and uncertain tax positions

Recently Adopted Accounting Pronouncements and New Accounting Pronouncements

See Note 2 “Recently Adopted and New Accounting Pronouncements” to the consolidated financial statements for a discussion on our recently adopted and new accounting pronouncements.

Operating Results

You should read the following discussion and analysis in conjunction with our consolidated financial statements.

Executive Summary

Please see “Management Report: Operating and Financial Review: Executive Summary” in the Annual Report 2018.

Trends and Uncertainties

For insight into the trends impacting our performance please see the “Management Report: Operating and Financial Review” section of the Annual Report 2018. Key risks and uncertainties for the Bank are discussed in “Item 3: Key Information – Risk Factors”.

The Bank’s future performance and the implementation of our strategic goals could be influenced by a number of uncertainties. Challenges may arise from sustained market volatility, increasing competitive pressures, potential deterioration of international trade relations, outcome of Brexit negotiations, weakness of global, regional and national economic conditions and political instability in key markets.

In addition, regulatory, tax and supervisory requirements continue to evolve. Regulatory changes have and may continue to increase our costs, restrict our operations, or require structural change, which could put pressure on our capital position. In addition, we are involved in litigation, tax examinations, arbitration and regulatory proceedings and investigations in Germany and in a number of jurisdictions outside Germany, especially in the US. Such matters are subject to many uncertainties.

While we seek to achieve efficiencies in our operations, the realization of planned savings are dependent on the successful and timely implementation of our updated strategy measures. The benefits, costs and timeframe of the

implementation of our strategy could be adversely affected by unforeseen difficulties in the implementation process as well as factors beyond our control, such as negative market developments.

Risks to Corporate & Investment Bank (CIB) outlook include potential impacts on our business model from Brexit and other macro and global geopolitical uncertainty. Risks regarding a potential deterioration of international trade relations cause further concerns. Uncertainty around central bank policies, ongoing regulatory developments (e.g., Basel III framework agreement) also pose risks, while challenges such as event risks and levels of client activity may also have an adverse impact.

Risks to Private & Commercial Bank (PCB) outlook are slower economic growth in our major operating countries, a delayed or less pronounced interest rate recovery than expected, and lower client activity in the investment business. Client activity could be affected by adverse developments or market uncertainties, including higher than expected volatility in equity and credit markets. The implementation of regulatory requirements including consumer protection measures and delays in the implementation of our strategic projects could also have a negative impact on our revenue and costs.

Risks to Asset Management (AM) outlook include the longevity of the bull market, continued low interests rates in developed markets, pace of emerging economies growth and increase in wealth, as well as the increasing demand for retirement products in developed countries' aging populations. Continued elevated levels of political uncertainty worldwide, protectionist and anti-trade policies, and the United Kingdom's decision to leave the European Union could have unpredictable consequences in the economy, market volatility and investor's confidence, which may lead to declines in business and could affect our revenues and profits as well as the execution of our strategic plans. In addition, the evolving regulatory framework could lead to unforeseen regulatory compliance costs and possible delays in the implementation of our efficiency measures due to jurisdictional restrictions, which could have an adverse impact on our cost base.

Performance in Corporate & Other is impacted by valuation and timing differences from different accounting methods used for management reporting and IFRS, plus unallocated items. We still expect volatility from these items in our future results.

Our effective tax rate was primarily impacted by changes in the recognition and measurement of deferred tax assets and share based payments related tax effects. Going forward these items may continue to impact our effective tax rate depending upon our performance and movements in our share price. The effective tax rate in future periods may also be influenced by changes in tax laws or interpretative guidance, the occurrence of non-tax deductible goodwill impairment, litigation and other charges, or the resolution of tax examinations and investigations.

Results of Operations

Please see "Management Report: Operating and Financial Review: Results of Operations" in the Annual Report 2018 and our discussion of Non-GAAP financial measures in the "Supplementary Information (Unaudited)" in the Annual Report 2018.

Financial Position

Please see "Management Report: Operating and Financial Review: Financial Position" in the Annual Report 2018.

Liquidity and Capital Resources

For a detailed discussion of our liquidity risk management, see “Management Report: Risk Report: Liquidity Risk” in the Annual Report 2018.

For a detailed discussion of our capital management, see “Management Report: Risk Report: Capital Management” in the Annual Report 2018.

Post-Employment Benefit Plans

Please see “Management Report: Employees: Post-Employment Benefit Plans” in the Annual Report 2018.

Off-Balance Sheet Arrangements

For information on the nature, purpose and extent of our off-balance sheet arrangements, please see Note 40 “Structured Entities” to the consolidated financial statements. For further information on off-balance sheet arrangements, including allowances for off-balance sheet positions, please refer to “Management Report: Risk Report: Asset Quality: Allowance for Credit Losses” in the Annual Report 2018 and Note 21 “Allowance for Credit Losses” to the consolidated financial statements. For information on irrevocable lending commitments and contingent liabilities with respect to third parties, please see Note 30 “Credit related Commitments” to the consolidated financial statements.

Tabular Disclosure of Contractual Obligations

Please see “Management Report: Operating and Financial Review: Tabular Disclosure of Contractual Obligations” in the Annual Report 2018.

Research and Development, Patents and Licenses

Not applicable.

Item 6: Directors, Senior Management and Employees

Directors and Senior Management

In accordance with the German Stock Corporation Act (Aktiengesetz), we have a Management Board (Vorstand) and a Supervisory Board (Aufsichtsrat). The German Stock Corporation Act prohibits simultaneous membership on both the Management Board and the Supervisory Board. The members of the Management Board are the executive officers of our company. The Management Board is responsible for managing our company and representing us in dealings with third parties. The Supervisory Board oversees the Management Board, appoints and removes its members and determines their remuneration and other compensation components, including pension benefits. According to German law, our Supervisory Board represents us in dealings with members of the Management Board. Therefore, no members of the Management Board may enter into any agreement with us without the prior consent of our Supervisory Board.

German law does not require the members of the Management Board nor the members of the Supervisory Board to own any of our shares to be qualified. In addition, German law has no requirement that members of the Management Board retire based on an age limit. However, age limits for members of the Management Board are defined contractually. Age limits also exist for the members of the Supervisory Board according to the Terms of Reference (Geschäftsordnung) for our Supervisory Board. There is a maximum age limit of 70 years for members of the Supervisory Board. In exceptional cases, a Supervisory Board member can be elected or appointed for a period that extends no longer than until the end of the fourth Ordinary General Meeting that takes place after he/she has turned the age of 70.

The Supervisory Board may not make management decisions. However, German law and our Articles of Association (Satzung) require the Management Board to obtain the approval of the Supervisory Board for certain actions. The most important of these actions are:

- granting of general powers of attorney (Generalvollmachten). A general power of attorney authorizes its holder to represent the company in substantially all legal matters without limitation to the affairs of a specific office;
- acquisitions and disposals (including transactions carried out by a dependent company) of real estate in so far as the object involves more than € 500,000,000;
- granting of credits and the acquisition of participations in other companies, where the German Banking Act (Kreditwesengesetz) requires approval by the Supervisory Board. In particular, pursuant to the German Banking Act, it requires inter alia the approval of the Supervisory Board if we grant a loan (to the extent legally permissible) to a member of the Management Board or the Supervisory Board or one of our employees who holds a procuration (Prokura) or general power of attorney; and
- acquisitions and disposals (including transactions carried out by a dependent company) of other participations, insofar as the object involves more than € 1 billion. The Supervisory Board must be informed without delay of any acquisition or disposal of such participations involving more than € 500,000,000.

The Management Board must submit regular reports or ad-hoc reports, as the case may be, to the Supervisory Board on our current operations and future business planning as well as on our risk situation. The Supervisory Board may also request special reports from the Management Board at any time.

With respect to voting powers, a member of the Supervisory Board or the Management Board may not vote on resolutions open to a vote at a board meeting if the proposed resolution concerns:

- a legal transaction between us and the member; or
- commencement, settlement or completion of legal proceedings between us and the member.

A member of the Supervisory Board or the Management Board may not directly or indirectly exercise voting rights on resolutions open to a vote at a shareholders' meeting (Hauptversammlung, which we refer to as the General Meeting) if the proposed resolution concerns:

- ratification of the member's acts;
- a discharge of liability of the member; or
- enforcement of a claim against the member by us.

Supervisory Board and Management Board

In carrying out their duties, members of both the Management Board and Supervisory Board must exercise the

standard of care of a prudent and diligent business person, and they are liable to us for damages if they fail to do so.

The liability of the members of the Management Board or the Supervisory Board under the German Stock Corporation Act for breach of their fiduciary duties is to the company rather than individual shareholders. However, individual shareholders that hold at least 1 % or € 100,000 of the subscribed capital and are granted standing by the court may also invoke such liability to the company. The underlying concept is that all shareholders should benefit equally from amounts received under this liability by adding such amounts to the company's assets rather than disbursing them to plaintiff shareholders. We may waive the right to claim damages or settle these claims if at least three years have passed since the alleged breach and if the shareholders approve the waiver or settlement at the General Meeting with a simple majority of the votes cast, and provided that opposing shareholders do not hold, in the aggregate, one tenth or more of our share capital and do not have their opposition formally noted in the minutes maintained by a German notary.

Supervisory Board

Our Articles of Association require our Supervisory Board to have twenty members. In the event that the number of members on our Supervisory Board falls below twenty and remains below twenty for more than three months or falls below ten, upon application to a competent court, the court must appoint replacement members to serve on the board until official appointments are made.

The German Co-Determination Act of 1976 (Mitbestimmungsgesetz) requires that the shareholders elect half of the members of the supervisory board of large German companies, such as Deutsche Bank, and that employees in Germany elect the other half. None of the current members of either of our boards were selected pursuant to any arrangement or understandings with major shareholders, customers or others.

Each member of the Supervisory Board generally serves for a fixed term of approximately five years. For the election of shareholder representatives, the General Meeting may establish that the terms of office of individual members may begin or end on differing dates. Pursuant to German law, the term expires at the latest at the end of the Annual General Meeting that approves and ratifies such member's actions in the fourth fiscal year after the year in which the Supervisory Board member was elected. Supervisory Board members may also be re-elected. The shareholders may, by a majority of the votes cast in a General Meeting, remove any member of the Supervisory Board they have elected in a General Meeting. The employees may remove any member they have elected by a vote of three-quarters of the employee votes cast.

The members of the Supervisory Board elect the chairperson and the deputy chairperson of the Supervisory Board. Traditionally, the chairperson is a representative of the shareholders, and the deputy chairperson is a representative of the employees. At least half of the members of the Supervisory Board must be present at a meeting or must have submitted their vote in writing to constitute a quorum. In general, approval by a simple majority of the members of the Supervisory Board present and voting is required to pass a resolution. In the case of a deadlock, the resolution is put to a second vote. In the case of a second deadlock, the chairperson has the deciding vote.

For additional information on our Supervisory Board, including a table providing the names of and biographical information for the current members, see "Corporate Governance Statement/Corporate Governance Report: Management Board and Supervisory Board: Supervisory Board" in the Annual Report 2018.

Standing Committees

For information on the standing committees of our Supervisory Board, please see "Corporate Governance Statement/ Corporate Governance Report: Management Board and Supervisory Board: Standing Committees" in the Annual Report 2018.

The business address of the members of the Supervisory Board is the same as our business address, Taunusanlage 12, 60325 Frankfurt am Main, Germany.

Management Board

Our Articles of Association require the Management Board to have at least three members. Our Management Board currently has nine members. The Supervisory Board has also appointed a Chairman (CEO) and two Deputy Chairmen (Presidents) of the Management Board.

The Supervisory Board appoints the members of the Management Board for a maximum term of five years and oversees them. They may be re-appointed or have their term extended for one or more terms of up to a maximum of five years each. The Supervisory Board may remove a member of the Management Board prior to the expiration of his or her term for good cause.

Pursuant to our Articles of Association, two members of the Management Board, or one member of the Management Board together with a holder of procuration, may represent us for legal purposes. A holder of procuration is an attorney-in-fact who holds a legally defined power under German law, which cannot be restricted with respect to third parties. However, pursuant to German law, the Management Board itself must resolve on certain matters as a whole and may not delegate the decision to one or more individual members. In particular, it may not delegate the determination of our business and risk strategies, and the coordinating or controlling responsibilities. The Management Board is required to ensure that shareholders are treated on an equal basis and receive equal information. The Management Board is also responsible for ensuring our proper business organization, which includes appropriate and effective risk management as well as compliance with legal requirements and internal guidelines, and for taking the necessary measures to ensure that adequate internal guidelines are developed and implemented.

Other selected responsibilities of the Management Board in accordance with the Terms of Reference for the Management Board and/or German law are:

- appointing key personnel at the level directly below the Management Board, in particular, appointing the Global Key Function Holders employed by us;
- making decisions regarding significant credit exposures or other risks which have not been delegated to individual risk management units;
- acquisition and disposal of equity investments, including capital measures in all cases in which (i) the law or our Articles of Association require approval by the Supervisory Board, or (ii) the equivalent of € 100 million is exceeded;
- acquisition and disposal of real estate – directly or by separate legal entities – in all cases in which: (i) the law or our Articles of Association require approval by the Supervisory Board, or (ii) the real estate's equivalent exceeds € 100 million;
- individual vendor or intra Group-outsourcings (or material changes to those outsourcings) in all cases in which the equivalent of € 100 million is exceeded on an annual basis or include the delegation of core organizational duties of the Management Board;
- calling shareholders' meetings;
- filing petitions to set aside shareholders' resolutions;
- preparing and executing shareholders' resolutions; and
- reporting to the Supervisory Board.

For additional information on our Management Board, including the names of and biographical information for the current members, see “Corporate Governance Statement/Corporate Governance Report: Management Board and Supervisory Board: Management Board” in the Annual Report 2018. The Terms of Reference of the Management Board are published on our website www.db.com/ir/en/documents.htm.

Board Practices of the Management Board

The Terms of Reference for the Management Board are in accordance with the Supervisory Board resolution of January 31, 2019. These Terms of Reference provide that the members of the Management Board have the collective responsibility for managing Deutsche Bank. Notwithstanding this principle, the allocation of functional responsibilities to the individual members of the Management Board and their substitution (in case of temporary absence) are set out in the business allocation plan for the Management Board in accordance with the Supervisory Board resolution of January 1, 2019. The allocation of functional responsibilities does not exempt any member of the Management Board from collective responsibility for the management of the business. The members of the Management Board have primary responsibility for the proper performance and/or delegation of their duties and the clear allocation of accountabilities and responsibilities within the area of own functional responsibility (so-called “ Ressort ”).

Members of the Management Board are bound to the corporate interest of Deutsche Bank. No member of the Management Board may pursue personal interests in his/her decisions or use business opportunities intended for the company for himself/herself. As permitted by German law, individual members of the Management Board may exercise Deutsche Bank Group-external mandates, honorary offices or special assignments. In order to effectively prevent any conflicts of interest, the members of the Management Board may accept such activities only upon the approval of the other members of the Management Board and the Chairman’s Committee of the Supervisory Board. Management Board members generally do not accept the chair of supervisory boards of Group-external companies.

Section 161 of the German Stock Corporation Act requires that the management board and supervisory board of any German stock exchange-listed company declare annually that the company complies with the recommendations of the German Corporate Governance Code or, if not, which recommendations the company does not comply with (so-called “comply or explain”-principle). These recommendations go beyond the requirements of the German Stock Corporation Act. The Management Board and Supervisory Board issued a new Declaration of Conformity in accordance with Section 161 of the German Stock Corporation Act on October 25, 2018, which is available on our internet website at www.db.com/ir/en/ documents.htm under the heading “Declaration of Conformity pursuant to § 161 German Stock Corporation Act (AktG), Oct 2018”.

For information on the Management Board’s terms of office, please see “Corporate Governance Statement/Corporate Governance Report: Management Board and Supervisory Board: Management Board” in the Annual Report 2018. For details of the Management Board’s service contracts providing benefits upon termination, please see “Compensation Report: Pension and Transitional Benefits” and “Compensation Report: Other Benefits upon Early Termination” in the Management Report of the Annual Report 2018.

Compensation

For information on the compensation of the members of our Management Board, see “Management Report: Compensation Report: Management Board Compensation Report” in the Annual Report 2018.

For information on the compensation of the members of our Employees, see “Management Report: Compensation Report: Employee Compensation Report” in the Annual Report 2018.

For information on the compensation of the members of our Supervisory Board, see “Management Report: Compensation Report: Compensation System for Supervisory Board Members” in the Annual Report 2018.

Employees

For information on our employees, see “Management Report: Employees” in the Annual Report 2018.

Share Ownership

For the share ownership of the Management Board, see “Management Report: Compensation Report: Management Board Share Ownership” in the Annual Report 2018.

For the share ownership of the members of the Supervisory Board, see “Corporate Governance Statement/Corporate Governance Report: Reporting and Transparency: Directors’ Share Ownership” in the Annual Report 2018.

For a description of our employee share programs, please see Note 35 “Employee Benefits” to the consolidated financial statements.

Item 7: Major Shareholders and Related Party Transactions

Major Shareholders

On December 31, 2018, our issued share capital amounted to € 5,290,939,215.36 divided into 2,066,773,131 no par value ordinary registered shares.

On December 31, 2018, we had 644.013 registered shareholders. 1,032,635,943 of our shares were registered in the names of 631,991 shareholders resident in Germany, representing 50.16 % of our share capital. 279,848,317 of our shares were registered in the names of 668 shareholders resident in the United States, representing 13.59 % of our share capital.

The German Securities Trading Act (Wertpapierhandelsgesetz) requires investors in publicly-traded corporations whose investments reach certain thresholds to notify both the corporation and the BaFin of such change within four trading days. The minimum disclosure threshold is 3 % of the corporation’s issued voting share capital.

BlackRock, Inc., Wilmington, DE, has notified us that as of January 31, 2019 it held 4.88 % of our shares. We have received no further notification by BlackRock, Inc., Wilmington, DE, through March 1, 2019.

Douglas L. Braunstein (Hudson Executive Capital LP), has notified us that as of October 31, 2018 he held 3.14 % of our shares. We have received no further notification by Douglas L. Braunstein (Hudson Executive Capital LP), through March 1, 2019.

Paramount Services Holdings Ltd., British Virgin Islands, has notified us that as of August 20, 2015 it held 3.05 % of our shares. We have received no further notification by Paramount Services Holdings Ltd., British Virgin Islands, through March 1, 2019.

Supreme Universal Holdings Ltd., Cayman Islands, has notified us that as of August 20, 2015 it held 3.05 % of our shares. We have received no further notification by Supreme Universal Holdings Ltd., Cayman Islands, through March 1, 2019.

Stephen A. Feinberg (Cerberus), has notified us that as of November 14, 2017 he held 3.001 % of our shares. We have received no further notification by Stephen A. Feinberg (Cerberus), through March 1, 2019.

C-QUADRAT Special Situations Dedicated Fund, Cayman Islands, has notified us that as of July 13, 2018 it held 1.01 % of our shares (total percentage of voting rights: 7.64 % (voting rights attached to shares: 1.01 %, voting rights through financial instruments: 6.63 %)). We have received no further notification by C-QUADRAT Special Situations Dedicated Fund, Cayman Islands, through March 1, 2019.

We are neither directly nor indirectly owned nor controlled by any other corporation, by any government or by any other natural or legal person severally or jointly.

Pursuant to German law and our Articles of Association, to the extent that we may have major shareholders at any time, we may not give them different voting rights from any of our other shareholders.

We are not aware of any arrangements which may at a subsequent date result in a change in control of our company.

Related Party Transactions

We have business relationships with a number of the companies in which we own significant equity interests. We also have business relationships with a number of companies where members of our Management Board also hold positions on boards of directors. Our business relationships with these companies cover many of the financial services we provide to our clients generally. For more detailed information, refer to Note 38 “Related Party Transactions” to the consolidated financial statements.

We conduct our business with these companies on terms equivalent to those that would prevail if we did not have equity holdings in them or management members in common, and we have conducted business with these companies on that basis in 2018 and prior years. None of these transactions is or was material to us.

Among our business with related party companies in 2018, there have been and currently are loans, guarantees and commitments, which totaled € 189 million (including loans amounting to € 186 million) as of December 31, 2018, compared to € 313 million (including loans amounting to € 213 million) as of December 31, 2017.

All these credit exposures

- were made in the ordinary course of business,
- were made on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with other persons, and

- did not involve more than the normal risk of collectability or present other unfavorable features compared to loans to nonrelated parties at their initiation.

Related Party Impaired Loans

In addition to our other shareholdings, we hold acquired equity interests in some of our clients arising from our efforts to protect our then-outstanding lending exposures to them.

Impaired loans to related parties which may exhibit more than normal risk of collectability or present other unfavorable features compared to performing loans to related parties amount to € 10 million, unchanged from December 31, 2017. The following table presents an overview of the impaired loans we hold of our related parties as of December 31, 2018.

in € m.	Amount outstanding as of Decem- ber 31, 2018	Largest amount outstanding January 1, to December 31, 2018	Provision for loan losses in 2018[1]	Allowance for loan losses as of Decem- ber 31, 2018	Nature of the loan and transaction in which incurred
Customer A	10	10	7 [2]	10	Company was put into a court-supervised debt moratorium process in 2016. This triggered a debt to equity swap for 70% of our loans and a € 25 million write-off in 2017. Received shares are not valued due to debt moratorium and 1-year trading lock-up period. According to the proposed investor plan no payments are expected until 2022.
Total	10	10	7	10	

1The allowance for loan losses is calculated by subtracting the net present value of future expected cash flows from the current outstanding. The year-end balance of the loan loss allowance is in most cases lower than the amount of provision for credit losses required for the recognition due to unwinding effects based upon passage of time which are recognized in interest income.

2Including FX effect of € 0.4 million and unwinding of € 0.4 million.

In the above table, customer A is a company in which we hold a minority share and which is not consolidated at equity.

We have not disclosed the name of the related party customer described above because we have concluded that such disclosure would violate applicable privacy laws, such as customer confidentiality and data protection laws, and this customer has not waived application of these privacy laws. A legal opinion regarding the applicable privacy laws is filed as Exhibit 14.1 hereto.

Interests of Experts and Counsel

Not required because this document is filed as an annual report.

Item 8: Financial Information

Consolidated Statements and Other Financial Information

Consolidated Financial Statements

The Financial Statements of this Annual Report on Form 20-F consist of the Consolidated Financial Statements including Notes 1 to 45 thereto, which are set forth as Part 2 of the Annual Report 2018, and, as described in Note 1 “Significant Accounting Policies and Critical Accounting Estimates” thereto in the third paragraph under “Basis of Accounting”, certain parts of the Management Report set forth as Part 1 of the Annual Report 2018. Such Consolidated Financial Statements have been audited by KPMG AG Wirtschaftsprüfungsgesellschaft, as described in their “Report of Independent Registered Public Accounting Firm” included in the Annual Report 2018.

Legal Proceedings

General. We and our subsidiaries operate in a legal and regulatory environment that exposes us to significant litigation risks. As a result, we are involved in litigation, arbitration and regulatory proceedings and investigations in Germany and in a number of jurisdictions outside Germany, including the United States. Please refer to Note 29 “Provisions” to the Consolidated Financial Statements for descriptions of certain significant legal proceedings. Additional legal proceedings that may have, or have had in the recent past, significant effects on our financial position or profitability are described below.

Bank Bill Swap Rate Claims. On August 16, 2016, a putative class action was filed in the US District Court for the Southern District of New York against Deutsche Bank and other defendants, bringing claims based on alleged collusion and manipulation in connection with the Australian Bank Bill Swap Rate (“BBSW”) on behalf of persons and entities that engaged in US-based transactions in BBSW-linked financial instruments from 2003 through the date on which the effects of the alleged unlawful conduct ceased. The complaint alleges that the defendants, among other things, engaged in money market transactions intended to influence the BBSW fixing, made false BBSW submissions, and used their control over BBSW rules to further the alleged misconduct. An amended complaint was filed on December 16, 2016. On November 26, 2018, the court partially granted defendants’ motions to dismiss the amended complaint, dismissing all claims against Deutsche Bank. On March 4, 2019, the court granted plaintiffs permission to file a second amended complaint.

Challenge of the General Meeting’s Resolution Not to Pay a Dividend for the 2015 Fiscal Year. In May 2016, Deutsche Bank AG’s General Meeting resolved that no dividend was to be paid to Deutsche Bank’s shareholders for the 2015 fiscal year. Some shareholders filed a lawsuit with the Regional Court Frankfurt am Main (Landgericht), challenging (among other things) the resolution on the grounds that Deutsche Bank was required by law to pay a minimum dividend in an amount equal to 4 % of Deutsche Bank’s share capital. In December 2016, the Regional Court ruled in favor of the plaintiffs. Deutsche Bank initially appealed the court’s decision. However, consistent with Deutsche Bank’s updated strategy, Deutsche Bank withdrew its appeal prior to Deutsche Bank’s 2017 General Meeting, as a result of which the challenged resolution became void. Deutsche Bank’s General Meeting in May 2017 resolved the payment of a dividend of approximately € 400 million from Deutsche Bank’s distributable profit for 2016 which amount contains a component reflecting the distributable profit carried forward from 2015 of approximately € 165 million. Such dividend was paid to the shareholders shortly after the annual General Meeting. The resolution was also challenged in court based on the argument that the way the decision was taken was not correct. On January 18, 2018, the Regional Court Frankfurt am Main dismissed the shareholder actions as regards the dividend resolution taken in May 2017. The plaintiffs have appealed to the Higher Regional Court Frankfurt am Main. A hearing took

place on January 29, 2019 and the court indicated its intention to hand down a decision on March 26, 2019.

CO2 Emission Rights. The Frankfurt am Main Office of Public Prosecution (the "OPP") has investigated alleged value-added tax (VAT) fraud in connection with the trading of CO2 emission rights by certain trading firms, some of which also engaged in trading activity with Deutsche Bank. The OPP alleges that certain employees of Deutsche Bank knew that their counterparties were part of a fraudulent scheme to avoid VAT on transactions in CO2 emission rights, and it searched Deutsche Bank in April 2010 and December 2012.

On June 13, 2016, the Regional Court Frankfurt am Main sentenced seven former Deutsche Bank employees for VAT evasion and for aiding and abetting VAT evasion in connection with their involvement in CO2 emissions trading. On May 15, 2018, the Federal Supreme Court (Bundesgerichtsho f) handed down its decision in the appeal proceedings. The Federal Supreme Court partly granted the appeal of one former employee and referred the case back to the trial court. In relation to the other cases where appeal proceedings were pending, the Federal Supreme Court confirmed the trial court's judgment, which meant that the judgment became final and binding and the cases are closed. The majority of the other investigations by the OPP against former and current employees which were ongoing have meanwhile been closed. In addition to the case which was referred back to the trial court, investigations remain ongoing against one current and one former employee.

Cum-ex Investigations and Litigations. Deutsche Bank has received inquiries from law enforcement authorities, including requests for information and documents, in relation to cum-ex transactions of clients. "Cum-ex" refers to trading activities in German shares around dividend record dates (trade date before and settlement date after dividend record date) for the purpose of obtaining German tax credits or refunds in relation to withholding tax levied on dividend payments including, in particular, transaction structures that have resulted in more than one market participant claiming such credit or refund with respect to the same dividend payment. Deutsche Bank is cooperating with the law enforcement authorities in these matters.

The Public Prosecutor in Cologne has been conducting a criminal investigation since August 2017 concerning two former employees of Deutsche Bank in relation to cum-ex transactions of certain former clients of the Bank. Deutsche Bank is a potential secondary participant pursuant to Section 30 of the German Law on Administrative Offences in this proceeding. Deutsche Bank is cooperating with this investigation.

In February 2018, Deutsche Bank received from the Federal Central Tax Office (Bundeszentralamt für Steuern) a demand of approximately € 49 million for tax refunds paid to a former custody client. Deutsche Bank had filed withholding tax refund claims through the electronic refund procedure (elektronisches Datenträgerverfahren) on behalf of the client in connection with the client's cum-ex transactions. Deutsche Bank expects to receive a formal notice for the same amount in the near future.

By letter dated February 26, 2018, The Bank of New York Mellon SA/NV ("BNY") informed Deutsche Bank of its intention to seek indemnification for potential cum-ex related tax liabilities incurred by BHF Asset Servicing GmbH ("BAS") and/or Frankfurter Service Kapitalanlage-GmbH ("FSKAG"). Deutsche Bank had acquired BAS and FSKAG as part of the acquisition of Sal. Oppenheim in 2010 and sold them to BNY in the same year. BNY estimates the potential tax liability to amount to up to € 120 million.

On February 6, 2019, the Regional Court Frankfurt am Main (Landgericht) served Deutsche Bank with a claim by M.M.Warburg & CO Gruppe GmbH and M.M.Warburg & CO (AG & Co.) KGaA (together "Warburg") in connection with cum-ex transactions of Warburg with a custody client of Deutsche Bank during 2007 to 2011. Warburg claims from Deutsche Bank indemnification against German taxes in relation to transactions conducted in the years 2010 and

2011. Further, Warburg claims compensation of unspecified damages relating to these transactions and declaratory relief that Deutsche Bank will have to indemnify Warburg against any potential future tax assessments for cum-ex transactions conducted in the years 2007 to 2009. According to Warburg's claim, the Hamburg Tax Office has claimed from Warburg German taxes of approximately € 42.7 million plus interest of approximately € 14.6 million for 2010 and German taxes of approximately € 4 million plus interest of approximately € 1.6 million for 2011. According to the claim, neither taxes nor interest have yet been assessed against Warburg for the years 2007 to 2009. Deutsche Bank estimates that for the years 2007 to 2009 the aggregate amount of German taxes and interest could be as high as approximately € 88.9 million and approximately € 45.9 million, respectively.

Deutsche Bank Shareholder Litigations. Deutsche Bank and certain of its current and former officers and management board members are the subject of a purported class action, filed in the US District Court for the Southern District of New York, asserting claims under Sections 10(b) and 20(a) of the US Securities Exchange Act of 1934 on behalf of persons who purchased or otherwise acquired securities of Deutsche Bank on a United States exchange or pursuant to other transactions within the United States between January 31, 2013 and July 26, 2016. Plaintiffs allege that Deutsche Bank's SEC Annual Reports on Form 20-F for the years 2012, 2013, 2014 and 2015 were materially false and misleading in failing to disclose (i) serious and systemic failings in controls against financing terrorism, money laundering, aiding organizations subject to international sanctions and committing financial crime and (ii) that the Bank's internal control over financial reporting and its disclosure controls and procedures were not effective. On February 21, 2017, Deutsche Bank and the individual defendants served at the time with the summons and complaint moved to dismiss the consolidated amended complaint. On June 28, 2017, the court granted the motion to dismiss as to all defendants, without leave to replead. On June 30, 2017, the court entered judgment dismissing the lawsuit. The plaintiffs appealed the court's decision. Following completion of briefing, the Court of Appeals held oral argument on March 28, 2018. On April 13, 2018, the Court of Appeals issued a Summary Opinion affirming the dismissal of the action.

Deutsche Bank and certain of its current and former officers and management board members are the subject of a purported class action, filed in the United States District Court for the Southern District of New York, asserting claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 on behalf of persons who purchased or otherwise acquired securities of Deutsche Bank on a United States exchange or pursuant to other transactions within the United States between March 20, 2017 and May 30, 2018. Plaintiffs allege that Deutsche Bank's SEC Annual Reports on Form 20-F for the years 2016 and 2017 and its quarterly interim reports on Form 6-K for calendar 2017 contained materially false and misleading statements regarding its business, operational and compliance policies and internal control environment. On January 25, 2019, the lead plaintiff filed an amended class action complaint. Deutsche Bank is defending the action.

Esch Funds Litigation. Prior to its acquisition by Deutsche Bank in 2010, Sal. Oppenheim jr. & Cie. AG & Co. KGaA ("Sal. Oppenheim") was involved in the marketing and financing of participations in closed end real estate funds. These funds were structured as partnerships under German law. Usually, Josef Esch Fonds-Projekt GmbH carried out the planning and project development in connection with the funds' investments . Sal. Oppenheim held an indirect interest in this company via a joint-venture. In relation to this business , a number of civil claims have been filed against Sal. Oppenheim. Some , but not all , of these claims are also directed against former managing partners of Sal. Oppenheim and other individuals. The investors are seeking to unwind their fund participation and to be indemnified against potential losses incurred in connection with the investment. The claims are based in part , on an alleged failure of Sal. Oppenheim to adequately disclose related risks and other material aspects important for the investors' investment decision. The claims brought against Sal. Oppenheim relate to investments in an amount of originally approximately € 1.1 billion. After certain claims have either been dismissed or settled, claims relating to investments in an amount of originally approximately € 6 million are still pending. Based on the facts of the individual

cases, some courts have decided in favor and some against Sal. Oppenheim. In some cases, appeals are pending. Currently, the aggregate amount claimed in the pending proceedings is approximately € 10 million .

KOSPI Index Unwind Matters. Following the decline of the Korea Composite Stock Price Index 200 (the "KOSPI 200") in the closing auction on November 11, 2010 by approximately 2.7 %, the Korean Financial Supervisory Service ("FSS") commenced an investigation and expressed concerns that the fall in the KOSPI 200 was attributable to a sale by Deutsche Bank of a basket of stocks, worth approximately € 1.6 billion, that was held as part of an index arbitrage position on the KOSPI 200. On February 23, 2011, the Korean Financial Services Commission, which oversees the work of the FSS, reviewed the FSS' findings and recommendations and resolved to take the following actions: (i) to file a criminal complaint to the Korean Prosecutor's Office for alleged market manipulation against five employees of Deutsche Bank group and Deutsche Bank's subsidiary Deutsche Securities Korea Co. (DSK) for vicarious corporate criminal liability; and (ii) to impose a suspension of six months, commencing April 1, 2011 and ending September 30, 2011, of DSK's business for proprietary trading of cash equities and listed derivatives and DMA (direct market access) cash equities trading, and the requirement that DSK suspend the employment of one named employee for six months. On August 19, 2011, the Korean Prosecutor's Office announced its decision to indict DSK and four employees of Deutsche Bank group on charges of spot/futures-linked market manipulation. The criminal trial commenced in January 2012. On January 25, 2016, the Seoul Central District Court rendered guilty verdicts against a DSK trader and DSK. A criminal fine of KRW 1.5 billion (less than € 2.0 million) was imposed on DSK. The Court also ordered forfeiture of the profits generated on the underlying trading activity. The Group disgorged the profits on the underlying trading activity in 2011. The criminal trial verdicts against both the DSK trader and against DSK were overturned on appeal in a decision rendered by the Seoul High Court on December 12, 2018. The Korean Prosecutor's Office has appealed the Seoul High Court decision.

In addition, a number of civil actions have been filed in Korean courts against Deutsche Bank and DSK by certain parties who allege they incurred losses as a consequence of the fall in the KOSPI 200 on November 11, 2010. First instance court decisions were rendered against the Bank and DSK in some of these cases starting in the fourth quarter of 2015. The outstanding claims known to Deutsche Bank have an aggregate claim amount of less than € 50 million (at present exchange rates).

Monte Dei Paschi. In March 2013, Banca Monte dei Paschi di Siena ("MPS") initiated civil proceedings in Italy against Deutsche Bank alleging that Deutsche Bank assisted former MPS senior management in an accounting fraud on MPS, by undertaking repo transactions with MPS and "Santorini", a wholly owned special-purpose vehicle of MPS, which helped MPS defer losses on a previous transaction undertaken with Deutsche Bank. Subsequently, in July 2013, the Fondazione Monte dei Paschi di Siena ("FMPS"), MPS' largest shareholder, also commenced civil proceedings in Italy for damages based on substantially the same facts. In December 2013, Deutsche Bank reached an agreement with MPS to settle the civil proceedings and the transactions were unwound. The civil proceedings initiated by FMPS, in which damages of between € 220 million and € 381 million were claimed, were also recently settled upon payment by Deutsche Bank of € 17.5 million. FMPS's separate claim filed in July 2014 against FMPS's former administrators and a syndicate of 12 banks including Deutsche Bank S.p.A. for € 286 million continues to be pending before the first instance Florence courts.

A criminal investigation was launched by the Siena Public Prosecutor into the transactions entered into by MPS with Deutsche Bank and certain unrelated transactions entered into by MPS with other parties. Such investigation was moved in summer 2014 from Siena to the Milan Public Prosecutors as a result of a change in the alleged charges being investigated. On February 16, 2016, the Milan Public Prosecutors issued a request of committal to trial against Deutsche Bank and six current and former employees. The committal process concluded with a hearing on October 1, 2016, during which the Milan court committed all defendants in the criminal proceedings to trial. Deutsche Bank's

potential exposure is for administrative liability under Italian Legislative Decree n. 231/2001 and for civil vicarious liability as an employer of current and former Deutsche Bank employees who are being criminally prosecuted. A verdict is not expected before summer 2019.

On May 22, 2018, CONSOB, the authority responsible for regulating the Italian financial markets, issued fines of € 100,000 each against the six current and former employees of Deutsche Bank who are individual defendants in the criminal proceedings. The six individuals were also banned from performing management functions in Italy and for Italian based institutions for three to six months each. No separate fine or sanction was imposed on Deutsche Bank but it is jointly and severally liable for the six current/former Deutsche Bank employees' fines. On June 14, 2018, Deutsche Bank and the six individuals filed an appeal in the Milan Court of Appeal challenging CONSOB's decision and one of the individuals sought a stay of enforcement of the fine against that individual. The stay was granted on July 21, 2018. The hearing of the appeal is scheduled for June 5, 2019 with a verdict expected by the end of 2019.

Pas-de-Calais Habitat. On May 31, 2012, Pas-de-Calais Habitat ("PDCH"), a public housing office, initiated proceedings before the Paris Commercial Court against Deutsche Bank in relation to four swap contracts entered into in 2006, restructured on March 19, 2007 and January 18, 2008 and subsequently restructured in 2009 and on June 15, 2010. PDCH asked the Court to declare the March 19, 2007 and January 18, 2008 swap contracts null and void, or terminated, or to grant damages to PDCH in an amount of approximately € 170 million on the grounds that, inter alia, Deutsche Bank committed fraudulent and deceitful acts, manipulated the LIBOR and EURIBOR rates which are used as a basis for calculating the sums due by PDCH under the swap contracts and breached its obligations to warn, advise and inform PDCH. In December 2018, Deutsche Bank and PDCH reached an agreement to settle these proceedings.

Pension Plan Assets. The Group sponsors a number of post-employment benefit plans on behalf of its employees. In Germany, the pension assets that fund the obligations under these pension plans are held by Benefit Trust GmbH. The German tax authorities are challenging the tax treatment of certain income received by Benefit Trust GmbH in the years 2010 to 2013 with respect to its pension plan assets. For the year 2010 Benefit Trust GmbH paid the amount of tax and interest assessed of € 160 million to the tax authorities and is seeking a refund of the amounts paid in litigation. For 2011 to 2013 the matter is stayed pending the outcome of the 2010 tax litigation. The amount of tax and interest under dispute for years 2011 to 2013, which also has been paid to the tax authorities, amounts to € 456 million. In March 2017, the lower fiscal court ruled in favor of Benefit Trust GmbH and in September 2017 the tax authorities appealed the decision to the German supreme fiscal court (Bundesfinanzhof). A decision by the supreme fiscal court is not expected for a number of years.

Precious Metals Investigations and Litigations. Deutsche Bank received inquiries from certain regulatory and law enforcement authorities, including requests for information and documents, pertaining to investigations of precious metals trading and related conduct. Deutsche Bank is cooperating with these investigations, and engaging with relevant authorities, as appropriate. On January 29, 2018, the Bank entered into a US$ 30 million settlement with the US Commodity Futures Trading Commission ("CFTC") to resolve the CFTC's investigation concerning spoofing, manipulation and attempted manipulation in precious metals futures, as well as the manipulation and attempted manipulation of stop loss orders. The order requires that the Bank, among other things, maintain systems and controls reasonably designed to detect spoofing, and maintain training regarding spoofing, manipulation and attempted manipulation. The order also requires the Bank to continue to cooperate with the CFTC.

Deutsche Bank is a defendant in two consolidated class action lawsuits pending in the US District Court for the Southern District of New York. The suits allege violations of US antitrust law, the US Commodity Exchange Act and related state law arising out of the alleged manipulation of gold and silver prices through participation in the Gold and Silver Fixes, but do not specify the damages sought. Deutsche Bank has reached agreements to settle the gold action for US$ 60 million and the silver action for US $ 38 million. The agreements remain subject to final court approval.

In addition, Deutsche Bank is a defendant in Canadian class action proceedings in the provinces of Ontario and Quebec concerning gold and silver. Each of the proceedings seeks damages for alleged violations of the Canadian

Competition Act and other causes of action. Deutsche Bank has reached agreements to settle these actions. The agreements remain subject to court approval, and the amounts are not material to the Bank.

Pre-Release ADRs. Deutsche Bank and certain affiliates have received inquiries from certain European regulatory, tax and law enforcement authorities, including requests for documents and information, with respect to American Depositary Receipts (ADRs), including ADRs that have been issued on a "pre-release" basis (“pre-release ADRs”). Deutsche Bank is cooperating with these inquiries.

On July 20, 2018, the US Securities and Exchange Commission (SEC) announced that it had reached civil settlements with Deutsche Bank Trust Company Americas (“DBTCA”) and Deutsche Bank Securities Inc. (“DBSI”) in this matter. The settlements resolved SEC claims that DBTCA was negligent in issuing pre-release ADRs under certain circumstances, and that DBSI failed reasonably to supervise employees who were negligent in borrowing and lending pre-release ADRs. The settlements required DBTCA and DBSI to pay a combined financial sanction of approximately US$ 75 million, and the SEC ordered DBTCA to cease and desist from committing or causing any violations and any future violations of Section 17(a)(3) of the Securities Act of 1933.

Regula Ltd. Clients AML Investigations. On November 29, 2018, based on a search warrant issued by the Local Court (Amtsgericht) in Frankfurt, Deutsche Bank’s offices in Frankfurt were searched by German law enforcement authorities on the suspicion that two employees – and as-yet unidentified further individuals – deliberately abstained from issuing suspicious activity reports (SARs) in a timely manner and aided and abetted money laundering in connection with our offshore trust business. The physical searches ended on November 30, 2018. Nevertheless, the search remains formally open until Deutsche Bank has completed additional data deliveries. The Bank is cooperating in the investigation, as has been publicly acknowledged by the Frankfurt Public Prosecutor’s Office.

Transfer of Lease Assets. In December 2017, a claim for damages was filed with the Regional Court Frankfurt am Main against Deutsche Bank AG in the amount of approximately € 155 million (excluding interest). In 2006, Deutsche Bank AG (indirectly, through a special-purpose vehicle) entered into transactions according to which the plaintiff transferred certain lease assets to the special-purpose vehicle against, among others things, receipt of a preference dividend. The plaintiff alleges that Deutsche Bank had entered into an agreement with it under which Deutsche Bank provided flawed contractual documentation as a result of which the German tax authorities have disallowed the plaintiff’s expected tax savings. At a hearing in September 2018, the court indicated that it intended to dismiss the claims. The plaintiff filed a post-hearing brief arguing that the claims should not be dismissed. In December 2018, the court issued an advisory order according to which Deutsche Bank AG is required to respond to the plaintiff`s brief, and scheduled a further hearing for the end of June 2019.

Vestia. In December 2016, Stichting Vestia, a Dutch housing association, commenced proceedings against Deutsche Bank in England. The proceedings relate to derivatives entered into between Stichting Vestia and Deutsche Bank between 2005 and 2012. Stichting Vestia alleges that certain of the transactions entered into by it with Deutsche Bank should be set aside on the grounds that they were not within its capacity and/or were induced by the bribery of Vestia's treasurer by an intermediary involved in those transactions. The sums claimed by Stichting Vestia are made up of different elements, some of which have not yet been quantified. The amount claimed at this stage ranges between € 757 million and € 837 million, plus compound interest. The trial is due to commence on May 9, 2019 and is scheduled to last for 8 to 10 weeks. Deutsche Bank is defending against the claim.

Dividend Policy

For 2018, the Management Board will propose to the General Meeting to pay a dividend of € 0.11 per share. In 2015, we did not pay a dividend. In 2016, we paid a dividend of € 0.19 per share in the aggregate out of the distributable profit for 2016, reflecting the pay out of € 0.08 per share eligible for a dividend for the 2015 financial year out of the distributable profit carried forward from 2015 of approximately € 165 million and a dividend of € 0.11 per share eligible for a dividend for the 2016 financial year from the remaining distributable profit for 2016. In 2017, we paid a dividend of € 0.11 per share. Historically, however, we have paid dividends at higher levels, including dividends per share of € 0.75 for 2014. However, we cannot assure investors that we will pay dividends as for 2014 or previous years, or at any other level, or at all, in any future period. If the company is not profitable, we may not pay dividends at all.

Furthermore, if Deutsche Bank AG fails to meet the regulatory capital adequacy requirements under CRR/CRD 4 (including individually imposed capital requirements (so-called “Pillar 2” requirements) and the combined buffer requirement), it may be prohibited from making, and the ECB or the BaFin may suspend or limit, the payment of dividends. In addition, the ECB expects banks to meet “Pillar 2” guidance. If Deutsche Bank AG operates or expects to operate below “Pillar 2” guidance, the ECB will review the reasons why the Bank’s capital level has fallen or is expected to fall and may take appropriate and proportionate measures in connection with such shortfall. Any such measures might have an impact on Deutsche Bank AG’s willingness or ability to pay dividends. For further information on regulatory capital adequacy requirements and the powers of Deutsche Bank AG’s regulators to suspend dividend payments, see “Item 4: Information on the Company – Regulation and Supervision – Capital Adequacy Requirements” and “– Investigative and Enforcement Powers.”

Under German law, Deutsche Bank AG’s dividends are based on the unconsolidated results of Deutsche Bank AG as prepared in accordance with German accounting rules. Deutsche Bank AG’s Management Board, which prepares the annual financial statements of Deutsche Bank AG on an unconsolidated basis, and its Supervisory Board, which reviews them, first allocate part of Deutsche Bank AG’s annual surplus (if any) to Deutsche Bank AG’s statutory reserves and to any losses carried forward, as it is legally required to do. They then allocate the remainder between other revenue reserves (or retained earnings) and balance sheet profit. They may allocate up to one-half of this remainder to other revenue reserves, and must allocate at least one-half to balance sheet profit. A profit distribution from balance sheet profit is only permitted to the extent that the balance sheet profit plus distributable earnings exceeds potential dividend blocking items, which consist of deferred tax assets, self-developed software and unrealized gains on plan assets, all net of respective deferred tax liabilities.

Deutsche Bank AG then distributes up to the full amount of the balance sheet profit not subject to dividend blocking of Deutsche Bank AG if the annual General Meeting so resolves. The annual General Meeting may resolve a non-cash distribution instead of, or in addition to, a cash dividend. However, Deutsche Bank AG is not legally required to distribute its balance sheet profit to its shareholders to the extent that it has issued participatory rights (Genussrechte) or granted a silent participation (stille Gesellschaft) that accord their holders the right to a portion of Deutsche Bank AG’s distributable profit.

German corporate law provides that, should the annual General Meeting resolve to carry forward profits or to allocate profits to the reserves, shareholders may contest the resolution of the General Meeting if such carrying forward or allocation is not, on the basis of a reasonable commercial assessment, deemed necessary to ensure the viability or economic resilience of the company and the shareholders do not receive a minimum dividend in the amount equal to 4 % of the share capital. On these grounds, shareholders challenged the resolution of the 2016 annual General Meeting not to pay a dividend for 2015. Meanwhile, according to Section 10 (5) of the German Banking Act

("Kreditwesengesetz") as amended in July 2017 this provision of German corporate law is no longer applicable to credit institutions subject to the CRR, i.e. the minimum dividend requirement no longer applies to Deutsche Bank AG.

Deutsche Bank AG declares dividends by resolution of the annual General Meeting and pays them (if any) once a year. Dividends approved at a General Meeting are payable on the third business day after that meeting, unless a later date has been determined at that meeting or by the Articles of Association. In accordance with the German Stock Corporation Act, the record date for determining which holders of Deutsche Bank AG's ordinary shares are entitled to the payment of dividends, if any, or other distributions whether cash, stock or property, is the date of the General Meeting at which such dividends or other distributions are declared.

Significant Changes

Except as otherwise stated in this document, there have been no significant changes subsequent to December 31, 2018.

Item 9: The Offer and Listing

Offer and Listing Details and Markets

Our share capital consists of ordinary shares issued in registered form without par value. Under German law, shares without par value are deemed to have a "nominal" value equal to the total amount of share capital divided by the number of shares. Our shares have a nominal value in this sense of € 2.56 per share.

The principal trading market for our shares is the Frankfurt Stock Exchange, where it trades under the symbol DBK. Our shares are also traded on the six other German stock exchanges (Berlin, Duesseldorf, Hamburg, Hanover, Munich and Stuttgart, where on each exchange it also trades under the symbol DBK), on the Eurex and the New York Stock Exchange, where it trades under the symbol DB.

We maintain a share register in Frankfurt am Main and, for the purposes of trading our shares on the New York Stock Exchange, a share register in New York.

All shares on German stock exchanges trade in euros, and all shares on the New York Stock Exchange trade in U.S. dollars.

You should not rely on our past share performance as a guide to our future share performance.

Plan of Distribution

Not required because this document is filed as an annual report.

Selling Shareholders

Not required because this document is filed as an annual report.

Dilution

Not required because this document is filed as an annual report.

Expenses of the Issue

Not required because this document is filed as an annual report.

Item 10: Additional Information

Share Capital

Not required because this document is filed as an annual report.

Memorandum and Articles of Association

The following is a summary of certain information relating to certain provisions of our Articles of Association, our share capital and German law. This summary is not complete and is qualified by reference to our Articles of Association and German law in effect at the date of this filing. Copies of our Articles of Association are publicly available at the Commercial Register (Handelsregister) in Frankfurt am Main, and an English translation is filed as Exhibit 1.1 to this Annual Report.

Our Business Objectives

Section 2 of our Articles of Association sets out the objectives of our business:

- to transact all aspects of banking business;
- to provide financial and other services; and
- to promote international economic relations.

Our Articles of Association permit us to pursue these objectives directly or through subsidiaries and affiliated companies.

Our Articles of Association also provide that, to the extent permitted by law, we may transact all business and take all steps that appear likely to promote our business objectives. In particular, we may:

- acquire and dispose of real estate;
- establish branches in Germany and abroad;
- acquire, administer and dispose of participations in other enterprises; and
- conclude intercompany agreements (Unternehmensverträge).

Supervisory Board and Management Board

For more information on our Supervisory Board and Management Board, see “Item 6: Directors, Senior Management and Employees.”

Voting Rights and Shareholders' Meetings

Each of our shares entitles its registered holder to one vote at our General Meeting. Our Annual General Meeting takes place within the first eight months of our fiscal year. Pursuant to our Articles of Association, we may hold the meeting in Frankfurt am Main, Düsseldorf or any other German city with over 500,000 inhabitants. Unless a shorter period is permitted by law, we must give the notice convening the General Meeting at least 30 days before the last day on which shareholders can register their attendance of the General Meeting (which is the fifth day immediately preceding that General Meeting). Shorter periods apply if the General Meeting is called to adopt a resolution on a capital increase in the context of early intervention measures pursuant to the Act on the Recovery and Resolution of Institutions and Financial Groups (Gesetz zur Sanierung und Abwicklung von Instituten und Finanzgruppen). We are required to include details regarding the shareholder attendance registration process and the issuance of admission cards in our invitation to the General Meeting.

The Management Board or the Supervisory Board may also call an extraordinary General Meeting. Shareholders holding in the aggregate at least 5 % of the nominal value of our share capital may also request that such a meeting be called.

According to our Articles of Association our shares are issued in the form of registered shares. For purposes of registration in the share register, all shareholders are required to notify us of the number of shares they hold and, in the case of natural persons, of their name, address and date of birth and, in the case of legal persons, of their registered name, business address and registered domicile. Both being registered in our share register and the timely registration for attendance of the General Meeting constitute prerequisite conditions for any shareholder’s attendance and exercise of voting rights at the General Meeting. Shareholders may register their attendance of a General Meeting with the Management Board (or as otherwise designated in the invitation) by written notice or electronically, no later than the fifth day immediately preceding the date of that General Meeting. Any shareholders who have failed to comply with certain notification requirements summarized under “Notification Requirements” below are precluded from exercising any rights attached to their shares, including voting rights.

Under German law, upon our request a registered shareholder must inform us whether that shareholder owns the shares registered in its name or whether that shareholder holds the shares for any other person as a nominee shareholder. Both the nominee shareholder and the person for whom the shares are held have an obligation to provide the same personal data as required for registration in the share register with respect to the person for whom the shares are held. For so long as a registered shareholder does not provide the requested information as to its holding of the shares or, in the case of nominee shareholding, the required information about the person for whom the shares are held has not been provided, the shares held by the registered shareholder carry no voting rights.

Shareholders may appoint proxies to represent them at General Meetings. As a matter of German law, a proxy relating to voting rights granted by shares may be revoked at any time.

As a foreign private issuer, we are not required to file a proxy statement under US securities law. The proxy voting process for our shareholders in the United States is substantially similar to the process for publicly held companies incorporated in the United States.

The Annual General Meeting normally adopts resolutions on the following matters:

- appropriation of distributable balance sheet profits (Bilanzgewinn) from the preceding fiscal year;
- formal ratification of the acts (Entlastung) of the members of the Management Board and the members of the Supervisory Board in the preceding fiscal year; and
- appointment of independent auditors for the current fiscal year.

A simple majority of votes cast is generally sufficient to approve a measure, except in cases where a greater majority is otherwise required by our Articles of Association or by law. Under the German Stock Corporation Act and the German Transformation Act (Umwandlungsgesetz), certain resolutions of fundamental importance require a majority of at least 75 % of the share capital represented at the General Meeting adopting the resolution, in addition to a majority of the votes cast. Such resolutions include the following matters, among others:

- amendments to our Articles of Association changing our business objectives;
- capital increases that exclude subscription rights;
- capital reductions;
- creation of authorized or conditional capital;
- our dissolution;
- “transformations” under the German Transformation Act such as mergers, spin-offs and changes in our legal form;
- transfer of all our assets;
- integration of another company; and
- intercompany agreements (in particular, domination and profit-transfer agreements).

Under certain circumstances, such as when a resolution violates our Articles of Association or the German Stock Corporation Act, shareholders may file a shareholder action with the appropriate Regional Court (Landgericht) in Germany to set aside resolutions adopted at the General Meeting.

Under German law, the rights of shareholders as a group can be changed by amendment of the company's articles of association. Any amendment of our Articles of Association requires a resolution of the General Meeting. The authority to amend our Articles of Association, insofar as such amendments merely relate to the wording, such as changes of the share capital as a result of the issuance of shares from authorized capital, has been assigned to our Supervisory Board by our Articles of Association. Pursuant to our Articles of Association, the resolutions of the General Meeting are taken by a simple majority of votes and, insofar as a majority of capital stock is required, by a simple majority of capital stock, except where law or our Articles of Association determine otherwise. The rights of individual shareholders can only be changed with their consent. Amendments to the Articles of Association become effective upon their registration in the Commercial Register.

Share Register

We maintain a share register with Link Market Services GmbH and our New York transfer agent, pursuant to an agency agreement between us and Link Market Services GmbH and a sub-agency agreement between Link Market Services GmbH and the New York transfer agent.

Our share register will be open for inspection by shareholders during normal business hours at our offices at Taunusanlage 12, 60325 Frankfurt am Main, Germany. The share register generally contains each shareholder's surname, first name, date of birth, address and the number or the quantity of our shares held. Shareholders may prevent their personal information from appearing in the share register by holding their securities through a bank or

custodian. Although the shareholder would remain the beneficial owner of the securities, only the bank's or custodian's name would appear in the share register.

Dividend Rights

For a summary of our dividend policy and legal basis for dividends under German law, see “Item 8: Financial Information – Dividend Policy.”

Increases in Share Capital

German law and our Articles of Association permit us to increase our share capital in any of three ways:

- Resolution by our General Meeting authorizing the issuance of new shares.
- Resolution by our General Meeting authorizing the Management Board, subject to the approval of the Supervisory Board, to issue new shares up to a specified amount (no more than 50 % of existing share capital) within a specified period, which may not exceed five years. This is referred to as authorized capital (genehmigtes Kapital).
- Resolution by our General Meeting authorizing the issuance of new shares up to a specified amount (no more than 50 % of existing share capital) for specific purposes, such as for employee stock options, for use as consideration in a merger or to issue to holders of convertible bonds or other convertible securities. This is referred to as conditional capital (bedingtes Kapital).

The issuance of new ordinary shares by resolution of the General Meeting requires the simple majority of the votes cast and of the share capital represented at the General Meeting. Resolutions of the General Meeting concerning the creation of authorized or conditional capital require the simple majority of the votes cast and a majority of at least 75 % of the share capital represented at the General Meeting.

Liquidation Rights

The German Stock Corporation Act requires that if we are liquidated, any liquidation proceeds remaining after the payment of all our liabilities will be distributed to our shareholders in proportion to their shareholdings.

Preemptive Rights

In principle, holders of our shares have preemptive rights allowing them to subscribe any shares, bonds convertible into, or attached warrants to subscribe for, our shares or participatory certificates we issue. Such preemptive rights exist in proportion to the number of shares currently held by the shareholder. Preemptive rights of shareholders may be excluded with respect to any capital increase, however, as part of the resolution by the General Meeting on such capital increase. Such a resolution by the General Meeting on a capital increase that excludes the shareholders’ preemptive rights with respect thereto requires both a majority of the votes cast and a majority of at least 75 % of the share capital represented at the General Meeting. A resolution to exclude preemptive rights requires that the proposed exclusion is expressly disclosed in the agenda to the General Meeting and that the Management Board presents the reasons for the exclusion to the shareholders in a written report. Under the German Stock Corporation Act, preemptive rights may in particular be excluded with respect to capital increases not exceeding 10 % of the existing share capital with an issue price payable in cash not significantly below the stock exchange price at the time of issuance. In addition, shareholders may, in a resolution by the General Meeting on authorized capital, authorize the Management

Board to exclude the preemptive rights with respect to newly issued shares from authorized capital in specific circumstances set forth in the resolution.

Shareholders are generally permitted to transfer their preemptive rights. Preemptive rights may be traded on one or more German stock exchanges for a limited number of days prior to the final day the preemptive rights can be exercised.

Notices and Reports

We publish notices pertaining to our shares and the General Meeting in the electronic German Federal Gazette (Bundes- anzeiger) and, when so required, in at least one national newspaper designated for exchange notices.

We send our New York transfer agent, through publication or otherwise, a copy of each of our notices pertaining to any General Meeting, any adjourned General Meeting or our actions with respect to any cash or other distributions or the offering of any rights. We provide such notices in the form given or to be given to our shareholders. Our New York transfer agent is requested to arrange for the mailing of such notices to all shareholders registered in the New York registry.

We will make all notices we send to shareholders available at our principal office for inspection by shareholders. Link Market Services GmbH and our New York transfer agent will send copies of all notices pertaining to General Meetings to all registered shareholders. Link Market Services GmbH and our New York transfer agent will send copies of other notices or information material, such as quarterly reports or shareholder letters, to those registered shareholders who have requested to receive such notices or information material.

Charges of Transfer Agents

We pay Link Market Services GmbH and our New York transfer agent customary fees for their services as transfer agents and registrars. Our shareholders will not be required to pay Link Market Services GmbH or our New York transfer agent any fees or charges in connection with their transfers of shares in the share register. Our shareholders will also not be required to pay any fees in connection with the conversion of dividends from euros to US dollars.

Liability of Transfer Agents

Neither Link Market Services GmbH nor our New York transfer agent will be liable to shareholders if prevented or delayed by law, or any circumstances beyond their control, from performing their obligations as transfer agents and registrars.

Notification Requirements

Disclosure of Interests in a Listed Stock Corporation

Disclosure Obligations under the German Securities Trading Act

Deutsche Bank AG, as a listed company, and its shareholders are subject to the shareholding disclosure obligations under the German Securities Trading Act (Wertpapierhandelsgesetz). Pursuant to the German Securities Trading Act, any shareholder whose voting interest in a listed company like Deutsche Bank AG, through acquisition, sale or by other means, reaches, exceeds or falls below a 3 %, 5 %, 10 %, 15 %, 20 %, 25 %, 30 %, 50 % or 75 % threshold must

notify us and the BaFin of its current aggregate voting interest in writing and without undue delay, but at the latest within four trading days. In connection with this requirement, the German Securities Trading Act contains various provisions regarding the attribution of voting rights to the person who actually controls the voting rights attached to the shares.

Furthermore, the voting rights attached to a third party's shares are attributed to a shareholder if the shareholder coordinates its conduct concerning the listed company with the third party (so-called "acting in concert") either through an agreement or other means. Acting in concert is deemed to exist if the parties coordinate their voting at the listed company's general meeting or, outside the general meeting, coordinate their actions with the goal of significantly and permanently modifying the listed company's corporate strategy. Each party's voting rights are attributed to each of the other parties acting in concert.

Shareholders failing to comply with their notification obligations are prevented from exercising any rights attached to their shares (including voting rights and the right to receive dividends) until they have complied with the notification requirements. If the failure to comply with the notification obligations specifically relates to the size of the voting interest in the Deutsche Bank AG and is the result of willful or grossly negligent conduct, the suspension of shareholder rights is – subject to certain exceptions in case of an incorrect notification deviating no more than 10 % from the actual percentage of voting rights – extended by a six-month period commencing upon the submission of the required notification.

Except for the 3 % threshold, similar notification obligations exist for reaching, exceeding or falling below the thresholds described above when a person holds, directly or indirectly, certain instruments other than shares. This applies to instruments which grant upon maturity an unconditional right to acquire existing voting shares of Deutsche Bank AG, a discretionary right to acquire such shares, as well as to instruments that refer to such shares and have an economic effect similar to that of the aforementioned instruments, irrespective of whether such instruments are physically or cash-settled. These instruments include, for example, transferable securities, options, futures contracts and swaps. Voting rights to be attributed to a person based on any such instrument will generally be aggregated with the person's other voting rights deriving from shares or other instruments.

Notice must be given without undue delay, but within four trading days at the latest. The notice period commences as soon as the person obliged to notify knows, or, under the circumstances should know, that his or her voting rights reach, exceed or fall below any of the abovementioned relevant thresholds, but in any event no later than two trading days after reaching, exceeding or falling below the threshold. Only in case that the voting rights reach, exceed or fall below any of the thresholds as a result of an event affecting all voting rights, the notice period might commence at a later stage. Deutsche Bank AG must publish the foregoing notifications without undue delay, but no later than within three trading days after their receipt, and report such publication to the BaFin. Furthermore, the Deutsche Bank AG must publish a notification in case of any increase or decrease of the total number of voting rights without undue delay, but within two trading days at the latest, and such notification must be reported to the BaFin and forwarded to the German Company Register (Unternehmensregister). An exception applies where the increase of the total number of voting rights is due to the issue of new shares from conditional capital. In this case, Deutsche Bank AG must publish the increase at the end of the month in which it occurred. However, such increase must also be notified without undue delay, but within two trading days at the latest, where any other increase or decrease of the total number of voting rights triggers the aforementioned notification requirement.

Non-compliance with the disclosure requirements regarding shareholdings and holdings of other instruments may result in a significant fine imposed by the BaFin. In addition, the BaFin publishes, on its website, sanctions imposed and measures taken indicating the person or entity responsible and the nature of the breach (so-called "naming and shaming").

Shareholders whose voting rights reach or exceed thresholds of 10 % of the voting rights in a listed company, or higher thresholds, are obliged to inform the company within 20 trading days of the purpose of their investment and the

origin of the funds used for such investment, unless the articles of association of the listed company provide otherwise. Our Articles of Association do not contain such a provision.

Disclosure Obligations under the German Securities Acquisition and Takeover Act

Pursuant to the German Securities Acquisition and Takeover Act (Wertpapiererwerbs- und Übernahmegesetz), any person whose voting interest reaches or exceeds 30 % of the voting shares of a listed stock corporation must, within seven calendar days, publish this fact (including the percentage of its voting rights) on the Internet and by means of an electronically operated financial information dissemination system. In addition, the person must subsequently make a mandatory public tender offer within four weeks to all shareholders of the listed company unless an exemption has been granted. The German Securities Acquisition and Takeover Act contains a number of provisions intended to ensure that shareholdings are attributed to those persons who actually control the voting rights attached to the shares. The provisions regarding coordinated conduct as part of the German Securities Acquisition and Takeover Act (so-called “acting in concert”) and the rules on the attribution of voting rights attached to shares of third parties are the same as the statutory securities trading provisions described above under “Disclosure Obligations under the German Securities Trading Act” except with respect to voting rights of shares underlying instruments whose holders are vested with the right to unilaterally acquire existing voting shares of the listed company or voting rights which may be acquired on the basis of instruments with similar economic effect. If a shareholder fails to provide notice on reaching or exceeding the 30 % threshold, or fails to make a public tender offer, the shareholder will be precluded from exercising any rights associated with its shares (including voting and dividend rights) until it has complied with the requirements under the German Securities Acquisition and Takeover Act. In addition, non-compliance with the disclosure requirement may result in a fine.

Disclosure of Participations in a Credit Institution

The German Banking Act (Kreditwesengesetz) requires any person intending to acquire, alone or acting in concert with another person, a qualifying holding (bedeutende Beteiligung) in a credit or financial services institution to notify the BaFin and the Bundesbank without undue delay and in writing of the intended acquisition. A qualifying holding is a direct or indirect holding in an undertaking which represents 10 % or more of the capital or voting rights or which makes it possible to exercise a significant influence over the management of such undertaking. The required notice must contain information demonstrating, among other things, the reliability of the person or, in the case of a corporation or other legal entity, the reliability of its directors and officers.

A person holding a qualifying holding shall also notify the BaFin and the Bundesbank without undue delay and in writing if he intends to increase the amount of the qualifying holding up to or beyond the thresholds of 20 %, 30 % or 50 % of the voting rights or capital or in such way that the institution comes under such person’s control or if such person intends to reduce the participation below 10 % or below one of the other thresholds described above.

The BaFin will have to confirm the receipt of a complete notification within two working days in writing to the proposed acquirer. Within a period of 60 working days from the BaFin’s written confirmation that a complete notification has been received (assessment period), the BaFin will review and, in accordance with Council Regulation (EU) No 1024/2013 of October 15, 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions, forward the notification and a proposal for a decision whether or not to object to the acquisition to the ECB. The ECB will decide whether or not to object to the acquisition on the basis of the applicable assessment criteria. Within the assessment period the ECB may prohibit the intended acquisition in particular if there appears to be reason to assume that the acquirer or its directors and officers are not reliable or that the acquirer is not financially sound, that the participation would impair the effective supervision of the relevant credit institution, that a prospective managing director (Geschäftsleiter) is not reliable or not qualified, that

money laundering or financing of terrorism has occurred or been attempted in connection with the intended acquisition, or that there would be an increased risk of such illegal acts as a result of the intended acquisition. During the assessment period the BaFin may request further information necessary for its or the ECB's assessment. Generally, such a request delays the expiration of the assessment period by up to 30 business days. If the information submitted is incomplete or incorrect the ECB may prohibit the intended acquisition.

If a person acquires a qualifying holding despite such prohibition or without making the required notification, the competent authority may prohibit the person from exercising the voting rights attached to the shares. In addition, non-compliance with the disclosure requirement may result in the imposition of a fine in accordance with statutory provisions. Moreover, the competent authority may order that any disposition of the shares requires its approval and may ultimately appoint a trustee to exercise the voting rights attached to the shares or to sell the shares to the extent they constitute a qualifying holding.

Review of Acquisition of 25 % or more by the German Federal Ministry of Economics and Technology

Pursuant to the German Foreign Trade Act (Außenwirtschaftsgesetz) and the German Foreign Trade Regulation (Außenwirtschaftsverordnung), the direct or indirect acquisition of 25 % or more of the voting rights in a German company by investors from outside the European Union and the European Free Trade Association (Iceland, Liechtenstein, Norway and Switzerland) or by entities which are owned by 25 % or more by investors from outside the aforementioned region may be reviewed by the German Federal Ministry of Economics and Technology. If the Ministry determines that the acquisition poses a threat to the public policy or public security of Germany, it may impose conditions on or suspend the acquisition or require that it is unwound. The conclusion of an acquisition contract for critical infrastructure and security-related technologies has to be notified to the German Federal Ministry of Economics and Technology in writing. The decision to review an acquisition must be made within three months following the Ministry's knowledge of the conclusion of the contract, of the publication of the decision to launch a take-over bid or of the publication of the acquisition of control. The review must be completed within four months following receipt of the complete acquisition documents. A review is precluded if more than 5 years have passed since the acquisition. The acquirer may seek pre-clearance of a proposed acquisition from the Federal Ministry of Economics and Technology.

EU Short Selling Regulation (ban on naked short selling)

Regulation (EU) No 236/2012 of the European Parliament and of the Council of March 14, 2012 on short selling and certain aspects of credit default swaps (the "EU Short Selling Regulation") came into force on November 1, 2012. The EU Short Selling Regulation, the regulations adopted by the EU Commission implementing it, and the German act implementing the EU Short Selling Regulation replace the previously applicable German federal provisions governing the ban on naked short selling of shares and certain debt securities. (Short sales are sales of securities that the seller does not own, with the intention of buying back an identical security at a later point in time in order to be able to deliver the security. A short sale is "naked" when the seller has not borrowed the securities at the time of the short sale, or ensured they can be borrowed.) Under the EU Short Selling Regulation, short sales of shares are permitted only under certain conditions. Significant net short positions in shares must be reported to the BaFin and, if a certain threshold is exceeded, they must also be publicly disclosed. Net short positions are calculated by netting the long and short positions held by a natural or legal person in the issued capital of the company concerned. The details are set forth in the EU Short Selling Regulation and the regulations adopted by the EU Commission implementing it. In certain situations described in greater detail in the EU Short Selling Regulation, the BaFin is permitted to limit short

selling and comparable transactions.

Disclosure of Transactions of Managers

Art. 19 of Regulation (EU) No 596/2014 of the European Parliament and of the Council of April 16, 2014 on market abuse (the "EU Market Abuse Regulation") requires persons with management responsibilities ("Managers") in a listed company like Deutsche Bank AG to notify the company and the BaFin of their own transactions in shares or debt instruments of the company or financial instruments based thereon, in particular derivatives. Such notifications must be made promptly and no later than three business days after the date of the transaction. The notification obligation also applies to persons who are closely associated with a Manager. The obligation does not apply if the aggregate annual transactions by a Manager or persons with whom he or she is closely associated do not, individually, exceed an amount of € 5,000.00 through the end of a calendar year. The BaFin may decide to increase this threshold up to € 20,000.00.

Deutsche Bank AG is required to promptly publish any notification received but in any case no later than three business days after the transaction. The publication must be made in a manner which enables fast access to this information on a non-discriminatory basis in accordance with the implementing standards published by the European Securities and Markets Authority. Furthermore, Deutsche Bank AG must without undue delay notify the BaFin and forward the notification to the Company Register (Unternehmensregister). For the purposes of the EU Market Abuse Regulation, the following persons are deemed to be a Manager: members of management, administrative or supervisory bodies of Deutsche Bank AG as well as senior executives who are not such members but who have regular access to inside information relating directly or indirectly to the Company and who have power to take managerial decisions affecting the future developments and business prospects of the Company. The following persons are deemed to be closely associated with a Manager: spouses, registered civil partners (eingetragene Lebenspartner), dependent children and other relatives who at the time of the transaction requiring notification have lived in the same household with the Manager for at least one year. Legal entities for which the aforementioned persons have management responsibilities are also subject to the notification requirement. The aforementioned provisions also apply to legal entities, companies and institutions directly or indirectly controlled by a Manager or by a person closely associated with a Manager, which have been founded to the benefit of such a person, or whose economic interests correspond to a considerable extent to those of such a person. Non-compliance with the notification requirements may result in a fine.

Material Contracts

In the usual course of our business, we enter into numerous contracts with various other entities. We have not, however, entered into any material contracts outside the ordinary course of our business within the past two years.

Exchange Controls

As in other member states of the European Union, regulations issued by the competent European Union authorities to comply with United Nations resolutions have caused freeze orders on assets of certain legal and natural persons designated in such regulations. In addition, the European Union maintained a wide range of autonomous economic and financial sanctions on Iran. While all nuclear-related economic and financial EU sanctions against Iran were repealed on January 16, 2016, some restrictions remain in force.

With some exceptions, corporations or individuals residing in Germany are required to report to the Bundesbank any payment received from, or made to or for the account of, a nonresident corporation or individual that exceeds € 12,500

(or the equivalent in a foreign currency). This reporting requirement is for statistical purposes.

Subject to the above-mentioned exceptions, there are currently no German laws, decrees or regulations that would prevent the transfer of capital or remittance of dividends or other payments to our shareholders who are not residents or citizens of Germany.

There are also no restrictions under German law or our Articles of Association concerning the right of nonresident or foreign shareholders to hold our shares or to exercise any applicable voting rights. Where the investment reaches or exceeds certain thresholds, however, certain reporting obligations apply and the investment may become subject to review by the BaFin, the European Central Bank and other competent authorities. For more information see “Item 10: Additional Information – Notification Requirements”.

Taxation

The following is a general summary of material German and United States federal income tax consequences of the ownership and disposition of shares for a resident of the United States for purposes of the income tax convention between the United States and Germany (the “Treaty”) who is fully eligible for benefits under the Treaty. A U.S. resident will generally be entitled to Treaty benefits if it is:

- the beneficial owner of shares (and of the dividends paid with respect to the shares);
- an individual resident of the United States, a U.S. corporation, or a partnership, estate or trust to the extent its income is subject to taxation in the United States in its hands or in the hands of its partners or beneficiaries;
- not also a resident of Germany for German tax purposes; and
- not subject to “anti-treaty shopping” articles under German domestic law or the Treaty that apply in limited circumstances.

The Treaty benefits discussed below generally are not available to shareholders who hold shares in connection with the conduct of business through a permanent establishment in Germany. The summary does not discuss the treatment of those shareholders.

The summary does not purport to be a comprehensive description of all of the tax considerations that may be relevant to any particular shareholder, including tax considerations that arise from rules of general application or that are generally assumed to be known by shareholders. In particular, the summary deals only with shareholders that will hold shares as capital assets and does not address the tax treatment of shareholders that are subject to special rules, such as fiduciaries of pension, profit-sharing or other employee benefit plans, banks, insurance companies, dealers in securities or currencies, persons that hold shares as a position in a straddle, conversion transaction, synthetic security or other integrated financial transaction, persons that elect mark-to-market treatment, persons that own, directly or indirectly, 10 % or more of our stock, measured by vote or value, persons that hold shares through a partnership or hybrid entity and persons whose “functional currency” is not the U.S. dollar. The summary is based on German and U.S. laws, treaties and regulatory interpretations, including in the United States current and proposed U.S. Treasury regulations as of the date hereof, all of which are subject to change (possibly with retroactive effect).

Shareholders should consult their own advisors regarding the tax consequences of the ownership and disposition of shares in light of their particular circumstances, as well as the effect of any state, local or other national laws.

Taxation of Dividends

In general, dividends that we pay are subject to German withholding tax at an aggregate rate of 26.375 % (consisting of a 25 % withholding tax and a 1.375 % surcharge). Under the Treaty, a U.S. resident will be entitled to receive a refund from the German tax authorities of 11.375 in respect of a declared dividend of 100. For example, for a declared dividend of 100, a U.S. resident initially will receive 73.625 and may claim a refund from the German tax authorities of 11.375 and, therefore, receive a total cash payment of 85 (i.e., 85 % of the declared dividend). According to an amendment of the German Investment Tax Act dividends received by a fund within the meaning of the German Investment Tax Act are generally subject to 15 % German withholding tax equal to the Treaty tax rate.

For U.S. tax purposes, a U.S. resident will be deemed to have received total dividends of 100. The gross amount of dividends that a U.S. resident receives (which includes amounts withheld in respect of German withholding tax) generally will be subject to U.S. federal income taxation as foreign source dividend income, and will not be eligible for the dividends received deduction generally allowed to U.S. corporations. German withholding tax at the 15 % rate provided under the Treaty will be treated as a foreign income tax that, subject to generally applicable limitations under U.S. tax law, is eligible for credit against a U.S. resident's U.S. federal income tax liability or, at its election, may be deducted in computing taxable income. Thus, for a declared dividend of 100, a U.S. resident will be deemed to have paid German taxes of 15. A U.S. resident cannot claim credits for German taxes that would have been refunded to it if it had filed a claim for refund. Foreign tax credits will not be allowed for withholding taxes imposed in respect of certain short-term or hedged positions. The creditability of foreign withholding taxes may be limited in certain situations, including where the burden of foreign taxes is separated inappropriately from the related foreign income.

Subject to certain exceptions for short-term and hedged positions, "qualified dividends" received by certain non-corporate U.S. shareholders will generally be subject to taxation in the United States at a lower rate than other ordinary income. Dividends received will be qualified dividends if we (i) are eligible for the benefits of a comprehensive income tax treaty with the United States that the U.S. Internal Revenue Service ("IRS") has approved for purposes of the qualified dividend rules and (ii) were not, in the year prior to the year in which the dividend was paid, and are not, in the year in which the dividend is paid, a passive foreign investment company ("PFIC"). The Treaty has been approved for purposes of the qualified dividend rules, and we believe we qualify for benefits under the Treaty. The determination of whether we are a PFIC must be made annually and is dependent on the particular facts and circumstances at the time. It requires an analysis of our income and valuation of our assets, including goodwill and other intangible assets. Based on our audited financial statements and relevant market and shareholder data, we believe that we were not a PFIC for U.S. federal income tax purposes with respect to our taxable years ended December 31, 2016 or December 31, 2017. In addition, based on our current expectations regarding the value and nature of our assets, the sources and nature of our income, and relevant market and shareholder data, we do not currently anticipate becoming a PFIC for our taxable year ending December 31, 2018, or for the foreseeable future. However, the PFIC rules are complex and their application to financial services companies is unclear. Each U.S. shareholder should consult its own tax advisor regarding the potential applicability of the PFIC regime to us and its implications for their particular circumstances.

If a U.S. resident receives a dividend paid in euros, it will recognize income in a U.S. dollar amount calculated by reference to the exchange rate in effect on the date of receipt, regardless of whether the payment is in fact converted into U.S. dollars. If dividends are converted into U.S. dollars on the date of receipt, a U.S. resident generally should not be required to recognize foreign currency gain or loss in respect of the dividend income but may be required to recognize foreign currency gain or loss on the receipt of a refund in respect of German withholding tax to the extent the U.S. dollar value of the refund differs from the U.S. dollar equivalent of that amount on the date of receipt of the underlying dividend.

Refund Procedures

To claim a refund, a U.S. resident must submit, within four years from the end of the calendar year in which the dividend is received, a claim for refund to the German tax authorities. The claim for refund must be accompanied by a withholding tax certificate (Kapitalertragsteuerbescheinigung) on an officially prescribed form and issued by the institution that withheld the tax.

Claims for refunds are made on a German claim for refund form, which must be filed with the German tax authorities: Bundeszentralamt für Steuern, An der Küppe 1, D-53225 Bonn, Germany. The German claim for refund forms can be downloaded from the homepage of the Bundeszentralamt für Steuern (www.bzst.de). A U.S. resident must also submit to the German tax authorities a certification (on IRS Form 6166) with respect to its last filed U.S. federal income tax return. Requests for IRS Form 6166 are made on IRS Form 8802, which requires payment of a user fee. IRS Form 8802 and its instructions can be obtained from the IRS website at www.irs.gov. Instead of the individual refund procedure described above, a U.S. resident may use an IT-supported quick-refund procedure ("Datenträgerverfahren – DTV"/"Data Medium Procedure – DMP"). If the U.S. resident's bank or broker elects to participate in the DMP, it will perform administrative functions necessary to claim the Treaty refund for the beneficiaries. The refund beneficiaries must provide specified information to the DMP participant and confirm to the DMP participant that they meet the conditions of the Treaty provisions and that they authorize the DMP participant to file applications and receive notices and payments on their behalf.

The refund beneficiaries also must provide a "certification of filing a tax return" on IRS Form 6166 with the DMP participant. In addition, if the individual refund procedure requires a withholding tax certificate (see above), such certificate is generally also necessary under the DMP.

The German tax authorities reserve the right to audit the entitlement to tax refunds for several years following their payment pursuant to the Treaty in individual cases. The DMP participant must assist with the audit by providing the necessary details or by forwarding the queries to the respective refund beneficiaries/shareholders. Presently the DMP cannot be used if the Treaty tax rate is below 15 %.

The German tax authorities will issue refunds denominated in euros. In the case of shares held through banks or brokers participating in the Depository Trust Company, the refunds will be issued to the Depository Trust Company, which will convert the refunds to U.S. dollars. The resulting amounts will be paid to banks or brokers for the account of holders.

If a U.S. resident holds its shares through a bank or broker who elects to participate in the DMP, it could take at least three weeks for it to receive a refund after a combined claim for refund has been filed with the German tax authorities. If a U.S. resident files a claim for refund directly with the German tax authorities, it could take at least eight months for it to receive a refund. The length of time between filing a claim for refund and receipt of that refund is uncertain and we can give no assurances as to when any refund will be received.

Taxation of Capital Gains

Under the Treaty, a U.S. resident will not be subject to German capital gains tax in respect of a sale or other disposition of shares. For U.S. federal income tax purposes, a U.S. holder will recognize capital gain or loss on the sale or other disposition of shares in an amount equal to the difference between such holder's tax basis in the shares and the U.S. dollar value of the amount realized from their sale or other disposition. Such gain or loss will be capital gain or loss and will be long-term capital gain or loss if the shares were held for more than one year. The net amount of long-term capital gain realized by an individual generally is subject to taxation at a lower rate than ordinary

income. Any such gain generally would be treated as income arising from sources within the United States; any such loss would generally be allocated against U.S. source income. The ability to offset capital losses against ordinary income is subject to limitations.

Shareholders whose shares are held in an account with a German bank or financial services institution (including a German branch of a non-German bank or financial services institution) are urged to consult their own advisors. This summary does not discuss their particular tax situation.

United States Information Reporting and Backup Withholding

Dividends and payments of the proceeds on a sale of shares, paid within the United States or through certain U.S.-related financial intermediaries are subject to information reporting and may be subject to backup withholding unless the U.S. resident (i) is a corporation (other than an S corporation) or other exempt recipient or (ii) provides a taxpayer identification number and certifies (on IRS Form W-9) that no loss of exemption from backup withholding has occurred. Shareholders that are not U.S. persons generally are not subject to information reporting or backup withholding.

However, a non-U.S. person may be required to provide a certification (generally on IRS Form W-8BEN or W-8BEN-E) of its non-U.S. status in connection with payments received in the United States or through a U.S.-related financial intermediary.

Backup withholding tax is not an additional tax, and any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a holder's U.S. federal income tax liability, provided the required information is furnished to the IRS.

Shareholders may be subject to other U.S. information reporting requirements. Shareholders should consult their own advisors regarding the application of U.S. information reporting rules in light of their particular circumstances.

German Gift and Inheritance Taxes

Under the current estate, inheritance and gift tax treaty between the United States and Germany (the "Estate Tax Treaty"), a transfer of shares generally will not be subject to German gift or inheritance tax so long as the donor or decedent, and the heir, donee or other beneficiary, were not domiciled in Germany for purposes of the Estate Tax Treaty at the time the gift was made, or at the time of the decedent's death, and the shares were not held in connection with a permanent establishment or fixed base in Germany.

The Estate Tax Treaty provides a credit against U.S. federal estate and gift tax liability for the amount of inheritance and gift tax paid in Germany, subject to certain limitations, where shares are subject to German inheritance or gift tax and United States federal estate or gift tax.

Other German Taxes

There are currently no German net wealth, transfer, stamp or other similar taxes that would apply to a U.S. resident as a result of the receipt, purchase, ownership or sale of shares.

Dividends and Paying Agents

Not required because this document is filed as an annual report.

Statement by Experts

Not required because this document is filed as an annual report.

Documents on Display

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended. In accordance with these requirements, we file reports and other information with the Securities and Exchange Commission. You may inspect and copy these materials, including this document and its exhibits, at the Commission's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of the materials from the Public Reference Room at prescribed rates. You may obtain information on the operation of the Commission's Public Reference Room by calling the Commission in the United States at 1-800-SEC-0330. Our Securities and Exchange Commission filings are also available over the Internet at the Securities and Exchange Commission's website at www.sec.gov under File Number 001-15242.

Subsidiary Information

Not applicable.

Item 11: Quantitative and Qualitative Disclosures about Credit, Market and Other Risk

For Quantitative and Qualitative Disclosures about Credit, Market and Other Risk, please see "Management Report: Risk Report" in the Annual Report 2018.

Please see pages S-1 through S-20 of the Supplemental Financial Information, which pages are incorporated by reference herein, for information required by SEC Industry Guide 3.

Item 12: Description of Securities other than Equity Securities

Not required because this document is filed as an annual report and our ordinary shares are not represented by American Depositary Receipts.

PART II

Item 13: Defaults, Dividend Arrearages and Delinquencies

Not applicable.

Item 14: Material Modifications to the Rights of Security Holders and Use of Proceeds

With effect from January 1, 2017, the German Banking Act – as amended by the German Resolution Mechanism Act – introduced a new class of statutorily subordinated debt securities. As a result, unsecured, non-structured plain vanilla debt securities were considered "senior non-preferred" debt instruments which rank by law junior to a bank's "senior preferred" liabilities (such as deposits, derivatives, money market instruments and debt instruments that are "structured" as defined in the German Banking Act), but in priority to the bank's contractually subordinated liabilities, such as those qualifying as Tier 2 instruments. In the event of insolvency or resolution proceedings affecting Deutsche Bank AG, senior non-preferred debt instruments bear losses after the Bank's contractually subordinated liabilities but before the Bank's other unsubordinated liabilities. This statutory subordination applies to all relevant non-structured senior debt securities, even if issued prior to January 1, 2017.

Effective July 21, 2018, however, the German Banking Act was modified again to implement an amendment to the European Union's Bank Recovery and Resolution Directive that aimed to harmonize the ranking of unsecured debt instruments issued by banks in the European Union. For non-structured senior debt instruments issued on or after July 21, 2018, banks are permitted to decide at issuance if a specific issuance of eligible senior debt will be in the non-preferred or in the preferred category. Eligible debt instruments issued on or after that date constitute "senior non-preferred" debt only if they contain an express reference to their lower ranking. Senior non-preferred debt instruments issued by Deutsche Bank AG since July 21, 2018 rank on parity with the then-outstanding debt instruments that were classified as "non-preferred" under the prior rules described above.

We may continue to issue non-structured debt securities as senior non-preferred debt instruments ranking junior to, among other instruments, "senior preferred" debt securities. In addition, we are now able to issue non-structured senior debt securities as senior preferred debt securities, ranking on parity with our structured senior debt securities, which was not possible before July 21, 2018. Such new senior preferred debt securities, whether structured or non-structured, rank on parity with other unsecured senior liabilities such as debt instruments with an initial term of less than one year, derivatives and deposits not subject to special protections in the event of resolution measures or insolvency.

Item 15: Controls and Procedures

Disclosure Controls and Procedures

An evaluation was carried out under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of December 31, 2018. There are, as described below, inherent limitations to the effectiveness of any control system, including disclosure controls and procedures. Accordingly, even effective disclosure controls and procedures can provide only reasonable assurance of achieving their control objectives. Based upon such evaluation, our Chief

Executive Officer and Chief Financial Officer concluded that the design and operation of our disclosure controls and procedures were effective as of December 31, 2018.

Management's Annual Report on Internal Control over Financial Reporting

Management of Deutsche Bank Aktiengesellschaft, together with its consolidated subsidiaries, is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed under the supervision of our principal executive officer and our principal financial officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the firm's financial statements for external reporting purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and as endorsed by the European Union. As of December 31, 2018, management conducted an assessment of the effectiveness of our internal control over financial reporting based on the framework established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on the assessment performed, management has determined that our internal control over financial reporting as of December 31, 2018 was effective based on the COSO framework (2013).

KPMG AG Wirtschaftsprüfungsgesellschaft, the registered public accounting firm that audited the financial statements included in this document, has issued a report on our internal control over financial reporting, which is set forth below.

Report of Independent Registered Public Accounting Firm

To the Supervisory Board of Deutsche Bank Aktiengesellschaft:

Opinion on Internal Control over Financial Reporting

We have audited Deutsche Bank Aktiengesellschaft and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes, and the specific disclosures described in Note 1 to the consolidated financial statements as being part of the financial statements (collectively, the "consolidated financial statements") and our report dated March 15, 2019 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying ‘Management’s Annual Report on Internal Control over Financial Reporting’. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Frankfurt am Main, Germany

March 15, 2019

KPMG AG

Wirtschaftsprüfungsgesellschaft

Change in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation referred to above that occurred during the year ended December 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. As such, disclosure controls and procedures or systems for internal control over financial reporting may not prevent all error and all fraud. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and any design may not succeed in achieving its stated goals under all potential future conditions; over time, control may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Item 16A: Audit Committee Financial Expert

Please see “Corporate Governance Statement/Corporate Governance Report: Auditing and Controlling: Audit Committee Financial Expert” in the Annual Report 2018.

Item 16B: Code of Ethics

Please see “Corporate Governance Statement/Corporate Governance Report: Values and Leadership Principles of Deutsche Bank AG and Deutsche Bank Group: Deutsche Bank Group Code of Conduct and Code of Ethics for Senior Financial Officers” in the Annual Report 2018.

Item 16C: Principal accountant fees and services

Please see “Management Report: Corporate Governance Statement/Corporate Governance Report: Auditing and Controlling: Principal Accountant Fees and Services” in the Annual Report 2018.

Item 16D: Exemptions from the Listing Standards for Audit Committees

Our common shares are listed on the New York Stock Exchange, the corporate governance rules of which require a foreign private issuer such as us to have an audit committee that satisfies the requirements of Rule 10A-3 under the U.S. Securities Exchange Act of 1934. These requirements include a requirement that the audit committee be composed of members that are “independent” of the issuer, as defined in the Rule, subject to certain exemptions, including an exemption for employees who are not executive officers of the issuer if the employees are elected or named to the board of directors or audit committee pursuant to the issuer’s governing law or documents, an employee collective bargaining or similar agreement or other home country legal or listing requirements. The German Co-Determination Act of 1976 (Mitbestimmungsgesetz) requires that the shareholders elect half of the members of the supervisory board of large German companies, such as us, and that employees in Germany elect the other half. Employee-elected members are typically themselves employees or representatives of labor unions representing employees. Pursuant to law and practice, committees of the Supervisory Board are typically composed of both

shareholder- and employee-elected members. Of the current members of our Audit Committee, four – Henriette Mark, Gabriele Platscher, Detlef Polaschek and Bernd Rose – are current employees of Deutsche Bank who have been elected as Supervisory Board members by the employees. None of them is an executive officer. Accordingly, their service on the Audit Committee is permissible pursuant to the exemption from the independence requirements provided for by paragraph (b)(1)(iv)(C) of the Rule. We do not believe the reliance on such exemption would materially adversely affect the ability of the Audit Committee to act independently and to satisfy the other requirements of the Rule.

Item 16E: Purchases of Equity Securities by the Issuer and Affiliated Purchasers

In 2018, we repurchased a total of 18,089,000 shares of which none via derivatives, for group purposes pursuant to share buybacks authorized by the General Meeting. During the period from January 1, 2018 until the 2018 Annual General Meeting on May 24, 2018, we repurchased 8,748,000 shares, of which none via derivatives, of our ordinary shares pursuant to the authorization granted by the Annual General Meeting on May 18, 2017, at an average price of € 13.56 and for a total consideration of € 119 million. This authorization was replaced by a new authorization to buy back shares approved by the Annual General Meeting on May 24, 2018. Under the new authorization, up to 206,677,313 shares may be repurchased through April 30, 2023. Of these, 103,338,656 shares may be purchased by using derivatives. During the period from the 2018 Annual General Meeting until December 31, 2018, we repurchased 9,341,000 shares at an average price of € 9.60 and for a total consideration of € 90 million (excluding option premium). At December 31, 2018, the number of shares held in Treasury from buybacks totaled one thousand shares. This figure stems from 103,000 shares at the beginning of the year, plus 18.1 million shares from buybacks in 2018, less 18.1 million shares which were used to fulfill delivery obligations in the course of share-based compensation of employees. We did not cancel any shares in 2018.

In addition to these share buybacks for group purposes, pursuant to a shareholder authorization approved at our 2018 Annual General Meeting, we are authorized to buy and sell, for the purpose of securities trading, our ordinary shares through April 30, 2023, provided that number of shares held for this purpose may not at any time exceed 10 % of the company's share capital. The shares may be bought through the stock exchange or by means of a public purchase offer to all shareholders. The gross volume of these securities trading transactions is often large, and even the net amount of such repurchases or sales may, in a given month, be large, though over longer periods of time such transactions tend to offset and are in any event constrained by the 10 % of share capital limit. These securities trading transactions consist predominantly of transactions on major non-US securities exchanges. We also enter into derivative contracts with respect to our shares and limited to shares in a maximum volume of 5 % of the actual share capital.

The following table sets forth, for each month in 2018 and for the year as a whole, the total gross number of our shares repurchased by us and our affiliated purchasers (pursuant to both activities described above), the total gross number of shares sold, the net number of shares purchased or sold, the average price paid per share (based on the gross shares repurchased), the number of shares that were purchased for group purposes mentioned above and the maximum number of shares that at that date remained eligible for purchase under such programs.

Issuer Purchases of Equity Securities in 2018

Month	Total number of shares purchased	Total number of shares sold	Net number of shares purchased or (sold)	Average price paid per share (in €)	Number of shares purchased for group purposes	Maximum number of shares that may yet be purchased under plans or programs
January	31,214,338	29,995,355	1,218,983	15.40	1,267,854	195,695,819

February	53,389,970	51,419,875	1,970,095	13.29	6,513,163	189,182,656
March	57,891,253	60,007,344	(2,116,091)	12.57	966,983	188,215,673
April	21,080,046	21,062,502	17,544	11.69	0	188,215,673
May	54,150,047	54,125,678	24,369	10.34	0	206,677,313
June	29,630,586	24,229,187	5,401,399	9.51	5,400,000	201,277,313
July	11,680,598	11,645,482	35,116	10.01	0	201,277,313
August	11,100,499	14,513,704	(3,413,205)	10.19	981,000	200,296,313
September	31,099,776	32,745,067	(1,645,291)	10.18	2,960,000	197,336,313
October	12,726,224	12,900,223	(173,999)	9.34	0	197,336,313
November	13,216,751	13,371,245	(154,494)	8.62	0	197,336,313
December	44,999,662	45,191,034	(191,372)	7.40	0	197,336,313
Total 2018	372,179,750	371,206,696	973,054	11.07	18,089,000	197,336,313

At December 31, 2018, the number of shares held by us in treasury totaled 1,344,144. This figure stems from 371,090 shares at the beginning of the year, plus 973,054 net shares purchased in 2018. At December 31, 2018, our issued share capital consisted of 2,066,773,131 ordinary shares, of which 2,065,428,987 were outstanding.

Item 16F: Change in Registrant's Certifying Accountant

Our current external auditor, KPMG AG Wirtschaftsprüfungsgesellschaft, is again to be proposed as our auditor for the 2019 financial year at our 2019 Annual General Meeting.

New European and national regulations, however, require a rotation of the external auditor at regular intervals. The tender process for a new external auditor was announced in February 2018. An extensive and rigorous evaluation process held over seven months was run independently by the Audit Committee of the Supervisory Board.

The Bank's Supervisory Board has decided to recommend the appointment of Ernst & Young GmbH Wirtschaftsprüfungs- gesellschaft as external auditor. This recommendation will be put to shareholders at the 2019 Annual General Meeting.

Deutsche Bank anticipates that following the appointment, the new external auditor will review the presentation of financial results for the first quarter of 2020 and will be recommended at the 2020 Annual General Meeting as external auditor for the full financial year 2020. The auditor's mandate will cover both Deutsche Bank AG and the Deutsche Bank Group.

Item 16G: Corporate Governance

Our common shares are listed on the New York Stock Exchange, as well as on all seven German stock exchanges. Set forth below is a description of the significant ways in which our corporate governance practices differ from those applicable to US domestic companies under the New York Stock Exchange's listing standards as set forth in its Listed Company Manual (the "NYSE Manual").

The Legal Framework. Corporate governance principles for German stock corporations (Aktiengesellschaften) are set forth in the German Stock Corporation Act (Aktiengesetz), the German Co-Determination Act of 1976 (Mitbestimmungsgesetz) and the German Corporate Governance Code (Deutscher Corporate Governance Kodex, referred to as the Code).

The Two-Tier Board System of a German Stock Corporation. The German Stock Corporation Act provides for a clear separation of management and oversight functions. It therefore requires German stock corporations to have both a supervisory board (Aufsichtsrat) and a management board (Vorstand). These boards are separate; no individual may be a member of both. Both the members of the management board and the members of the supervisory board must exercise the standard of care of a diligent business person to the company. In complying with this standard of care they are required to take into account a broad range of considerations, including the interests of the company and those of its shareholders, employees and creditors.

The management board is responsible for managing the company and representing the company in its dealings with third parties. The management board is also required to ensure appropriate risk management within the corporation and to establish an internal monitoring system. The members of the management board, including its chairperson or speaker, are regarded as peers and share a collective responsibility for all management decisions.

The supervisory board appoints and removes the members of the management board. It also may appoint a chairman (CEO) and one or more deputy chairmen ("Presidents") of the management board. Although it is not permitted to make management decisions, the supervisory board has comprehensive monitoring functions with respect to the activities of the management board, including advising the management board and participating in decisions of fundamental importance to the company. To ensure that these monitoring functions are carried out properly, the management board must, among other things, regularly report to the supervisory board with regard to current business operations and business planning, including any deviation of actual developments from concrete and material targets previously presented to the supervisory board. The supervisory board may also request special reports from the management board at any time. Transactions of fundamental importance to the company, such as major strategic decisions or other actions that may have a fundamental impact on the company's assets and liabilities, financial condition or results of operations, may be subject to the consent of the supervisory board. Pursuant to our Articles of Association (Satzung), such transactions include the granting of powers of attorney without limitation to the affairs of a specific office, major acquisitions or disposals of real estate or participations in companies and granting of loans, including the acquisition of participations in other companies if the German Banking Act (Kreditwesengesetz) requires approval by the Supervisory Board.

Pursuant to the German Co-Determination Act, our Supervisory Board consists of representatives elected by the shareholders and representatives elected by the employees in Germany. Based on the total number of Deutsche Bank employees in Germany these employees have the right to elect one-half of the total of twenty Supervisory Board members. The chairperson of the Supervisory Board of Deutsche Bank is a shareholder representative who has the deciding vote in the event of a tie.

This two-tier board system contrasts with the unitary board of directors envisaged by the relevant laws of all US states and the New York Stock Exchange listing standards for US companies.

German companies which have their shares listed on a stock exchange must report each year on the company's corporate governance in their annual report to shareholders.

The Recommendations of the Code. The Code was issued in 2002 by a commission composed of German corporate governance experts appointed by the German Federal Ministry of Justice in 2001. The Code was last amended in February 2017 and, as a general rule, will be reviewed annually and amended if necessary to reflect international

corporate governance developments. The Code describes and summarizes the basic mandatory statutory corporate governance principles found in the provisions of German law. In addition, it contains supplemental recommendations and suggestions for standards on responsible corporate governance intended to reflect generally accepted best practice.

The Code addresses six core areas of corporate governance. These are (1) shareholders and the general meeting, (2) the cooperation between the management board and the supervisory board, (3) the management board, (4) the supervisory board, (5) transparency and (6) financial reporting and auditing.

The Code contains three types of provisions. First, the Code describes and summarizes the existing statutory, i.e., legally binding, corporate governance framework set forth in the German Stock Corporation Act and in other German laws. Those laws – and not the incomplete and abbreviated summaries of them reflected in the Code – must be complied with. The second type of provisions is recommendations. While these are not legally binding, Section 161 of the German Stock Corporation Act requires that any German exchange-listed company declare annually that the company complies with the recommendations of the Code or, if not, which recommendations the company does not comply with ("comply or explain"). The third type of Code provisions comprises suggestions which companies may choose not to comply with without disclosure. The Code contains a significant number of such suggestions, covering almost all of the core areas of corporate governance it addresses.

In their last Declaration of Conformity of October 25, 2018, the Management Board and the Supervisory Board of Deutsche Bank stated that, since the last Declaration of Conformity issued on October 26, 2017, they have acted and will act in the future in conformity with the recommendations of the Code, with certain specified exceptions. The Declaration of Conformity is available on Deutsche Bank's internet website at www.db.com/ir/en/documents.htm.

Supervisory Board Committees. The supervisory board may form committees. The German Co-Determination Act requires that the supervisory board form a mediation committee to propose candidates for the management board in the event that the two-thirds majority of the members of the supervisory board needed to appoint members of the management board is not met.

The German Stock Corporation Act specifically mentions the possibility to establish an "audit committee" to deal with the supervision of accounting processes, the efficiency of the internal control system the risk management system and the internal revision system as well as with the annual auditing, in particular with the auditor independence, the engagement and compensation of outside auditors appointed by the shareholders' meeting and the determination of auditing focal points. The Code recommends establishing such an "audit committee". The Code also recommends establishing a "nomination committee" comprised only of shareholder-elected supervisory board members to prepare the supervisory board's proposals for the election or appointment of new shareholder representatives to the supervisory board. The Code also includes suggestions on the subjects that may be handled by supervisory board committees, including corporate strategy, compensation of the members of the management board, investments and financing. Under the German Stock Corporation Act, any supervisory board committee must regularly report to the supervisory board. Sections 25d (7) to (12) of the German Banking Act require, depending on size and complexity of the respective credit institution, the establishment of supervisory board committees with specific tasks to be performed as follows: risk committee, audit committee, nomination committee (with different tasks and composition requirements than under the Code) and compensation control committee.

The Supervisory Board of Deutsche Bank has established a Chairman's Committee (Präsidialausschuss) which is responsible for conclusion, amendment and termination of employment and pension contracts in consideration of the plenary Supervisory Board's sole authority to decide on the remuneration of the members of the Management Board, a Nomination Committee (Nominierungsausschuss), an Audit Committee (Prüfungsausschuss), a Risk Committee

(Risikoausschuss), an Integrity Committee (Integritätsausschuss), a Compensation Control Committee (Vergütungskontrollausschuss), Strategy Committee (Strategieausschuss), Technology, Data and Innovation Committee (Technologie-, Daten- und Innovationsausschuss) and the legally required Mediation Committee (Vermittlungsausschuss). The functions of a nominating/corporate governance committee and of a compensation committee required by the NYSE Manual for US companies listed on the NYSE are therefore performed by the Supervisory Board or one of its committees, in particular the Chairman's Committee, the Compensation Control Committee and the Mediation Committee.

Independent Board Members. The NYSE Manual requires that a majority of the members of the board of directors of a NYSE listed US company and each member of its nominating/corporate governance, compensation and audit committees be "independent" according to strict criteria and that the board of directors determines that such member has no material direct or indirect relationship with the company.

As a foreign private issuer, Deutsche Bank is not subject to these requirements. However, its audit committee must meet the more lenient independence requirement of Rule 10A-3 under the Securities Exchange Act of 1934. German corporate law does not require an affirmative independence determination, meaning that the Supervisory Board need not make affirmative findings that audit committee members are independent. However, the Code contains several rules, recommendations and suggestions to ensure the supervisory board's independent advice to, and supervision of, the management board. As noted above, no member of the management board may serve on the supervisory board (and vice versa). Supervisory board members will not be bound by directions or instructions from third parties. Any advisory, service or similar contract between a member of the supervisory board and the company is subject to the supervisory board's approval. A similar requirement applies to loans granted by the company to a supervisory board member or other persons, such as certain members of a supervisory board member's family. In addition, the German Stock Corporation Act prohibits a person who within the last two years was a member of the management board from becoming a member of the supervisory board of the same company unless he or she is elected upon the proposal of shareholders holding more than 25 % of the voting rights of the company.

The Code also recommends that each member of the supervisory board inform the supervisory board of any conflicts of interest which may result from a consulting or directorship function with clients, suppliers, lenders or other business partners of the stock corporation. In the case of material conflicts of interest or ongoing conflicts, the Code recommends that the mandate of the Supervisory Board member be removed by the shareholders' meeting. The Code further recommends that any conflicts of interest that have occurred be reported by the supervisory board at the annual general meeting, together with the action taken, and that potential conflicts of interest also be taken into account in the nomination process for the election of supervisory board members.

Audit Committee Procedures. Pursuant to the NYSE Manual the audit committee of a US company listed on the NYSE must have a written charter addressing its purpose, an annual performance evaluation, and the review of an auditor's report describing internal quality control issues and procedures and all relationships between the auditor and the company. The Audit Committee of Deutsche Bank operates under written terms of reference and reviews the efficiency of its activities regularly.

Disclosure of Corporate Governance Guidelines. Deutsche Bank discloses its Articles of Association, the Terms of Reference of its Management Board, its Supervisory Board, the Chairman's Committee, the Audit Committee, the Risk Committee, the Integrity Committee, the Compensation Control Committee, the Nomination Committee, the Strategy Committee and the Technology, Data and Innovation Committee, its Declaration of Conformity under the Code and other documents pertaining to its corporate governance on its internet website at www.db.com/ir/en/documents.htm.

Item 16H: Mine Safety Disclosure

Not applicable.

Disclosures Under Iran Threat Reduction and Syria Human Rights Act of 2012

Under Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, which added Section 13(r) of the US Securities Exchange Act of 1934, as amended, an issuer of securities registered under the Securities Exchange Act of 1934 is required to disclose in its periodic reports filed under the Securities Exchange Act of 1934 certain of its activities and those of its affiliates relating to Iran and to other persons sanctioned by the US under programs relating to terrorism and proliferation of weapons of mass destruction that occurred during the period covered by the report. We describe below a number of potentially disclosable activities of Deutsche Bank AG and its affiliates. Disclosure is generally required regardless of whether the activities, transactions or dealings were conducted in compliance with applicable law.

The Joint Comprehensive Plan of Action (JCPoA) was concluded on July 14, 2015 between the permanent members of the UN Security Council and Germany on the one hand and Iran on the other and implemented on January 16, 2016. Under the JCPoA, Iran was to receive relief from US, European Union, and United Nations Security Council nuclear-related sanctions. The United States withdrew from the JCPoA, effective on November 5, 2018. The changes resulting from the implementation of the JCPoA and from the United States' withdrawal from it have no consequences for the reporting obligations that apply to Deutsche Bank. Deutsche Bank also reports transactions in which other Iranian persons or entities listed on OFAC sanctions lists were involved, whether or not they are directly or indirectly owned or controlled by the Iranian government.

Legacy Financing Arrangements. Despite having ceased entering into new business in or with Iran in 2007, we continued to be engaged as lender, sponsoring bank and/or facility agent or arranger in several long-term financing agreements relating to the construction or acquisition of plant or equipment for the petroleum and petrochemical industries, under which Iranian entities were the direct or indirect borrowers. Before 2007, as part of banking consortia, we entered into a number of financing arrangements with the National Petrochemical Company (NPC), the last one of which was fully repaid in 2018. To effect such repayment, NPC paid approximately € 2.8 million to us, in our role as agent under the facility. We distributed to the participants in the banking consortia this amount, retaining the portion owed to us, totaling approximately € 0.7 million. For one of the previously repaid commitments, we had an undrawn commitment of approximately € 1.3 million for which a required approval for cancellation was received in November 2018 from the German government, after which the commitment was effectively cancelled.

We generated revenues in 2018 of approximately € 5,000 in respect of these financing arrangements, of which approximately € 6,000 consisted of loan interest revenues and € 1,000 consisted of fee revenues; these positive revenues were reduced by approximately € 2,000 negative escrow account revenues. The net profits were less than these amounts.

In one additional financing arrangement, we were not ourselves a lender but acted rather as agent for a lender, a state-owned development bank. In this capacity, we received fees from the Iranian borrower of approximately € 2,800. The remainder of this loan was fully repaid in 2018.

Legacy Contractual Obligations Related to Guarantees and Letters of Credit. Prior to 2007, we provided guarantees to a number of Iranian entities. In almost all of these cases, we issued counter-indemnities in support of guarantees issued by Iranian banks because the Iranian beneficiaries of the guarantees required that they be backed directly by Iranian banks. In 2007, we made a decision to discontinue issuing new guarantees to Iranian or Iran-related beneficiaries. The pre-existing guarantees stipulate that they must be either extended or honored if we receive such a demand and we are legally not able to terminate these guarantees. In 2018, in order not to pay under the guarantees,

we extended two guarantees for a total amount of approximately € 3.8 million for which we paid guarantee commission amounting to approximately € 38,000. Even though we had exited, where possible, many of these guarantees, guarantees with an aggregate face amount of approximately € 7.0 million are still outstanding as of year-end 2018. The gross revenues from this business in 2018 which we received from non-Iranian parties were approximately € 71,000 and the net profit we derived from these activities was less than this amount.

We also have outstanding legacy guarantees in relation to a Syrian bank sanctioned by the US under its non-proliferation program. The aggregate face amount of these legacy guarantees was approximately € 9.2 million as of December 31, 2018, the gross revenues received from non-Syrian parties for these guarantees were approximately € 67,000 in 2018 and the net profit we derived from these activities was less than this amount.

We still intend to exit these guarantee arrangements.

Payments Executed. After the Implementation Day of the JCPoA on January 16, 2016, Deutsche Bank reviewed its existing approach regarding the processing of payments related to Iran in particular with a view to the reconnection of certain Iranian banks in the EU to the European Payment System Target2 and the expectation expressed by the Bundesbank to allow the execution of payments. As a result, Deutsche Bank confirmed its overall restrictive policy on Iran but allowed limited exceptions, starting in April 2016. In order to execute transactions, the following provisions needed to be met simultaneously:

- Incoming and outgoing payments are on behalf of Deutsche Bank's own clients only (financial institutions are not included).
- Payments must be denominated in Euros.
- Clients need to submit to the bank a specific client declaration.
- Incoming payments need generally to come through Iranian banks not sanctioned by the EU.
- Outgoing payments need to go through Iranian banks connected to Target2 and not sanctioned by the EU.
- All relevant transactions will be subject to enhanced due diligence.

In light of the regulatory and reputational risks following the re-positioning of the United States in relation to the JCPoA, which became fully effective on November 5, 2018, Deutsche Bank has again severely restricted its policy on Iran and consequently the execution of such payments.

Incoming Payments. In 2018, we received less than 1,100 payments adding up to approximately € 220 million in favor of non-Iranian clients of which some payments ultimately originated from Iranian persons and entities and others were merely channeled through Iranian intermediary banks not subject to EU sanctions or US secondary sanctions after Implementation Day of the JCPoA and before the Bank's readjustment of its Iran policy in early November 2018. Revenues for these incoming payments were less than € 7,200. These figures include relevant transactions by order of Iranian Embassy-related offices not included in the section on Iranian Consulates and Embassies below and in favor of our non-Iranian clients.

Outgoing Payments. In 2018, before the Bank readjusted its Iran policy in early November 2018, we executed less than 150 payments adding up to approximately € 1.1 billion; again, some payments were executed in favor of Iranian persons and entities and others were merely channeled through Iranian intermediary banks that are not subject to EU sanctions or US secondary sanctions. Revenues for these outgoing payments were less than € 1,200. These figures include relevant transactions in favor of Iranian Embassy-related offices not included in the section on Iranian Consulates and Embassies below.

Operations of Iranian Bank Branches and Subsidiaries in Germany. Several Iranian banks, including Bank Melli Iran, Bank Saderat, and Europäisch-Iranische Handelsbank, have branches or offices in Germany, even though their funds and other economic resources had been frozen earlier under European law. As part of the payment clearing system in Germany and other European countries, when these branches or offices needed to make payments in Germany or Europe to cover their day-to-day operations such as rent, taxes, insurance premia and salaries for their remaining staff, or for any other kind of banking-related operations, fund transfers from these Iranian banks had been accepted through Target2.

In 2018, we executed approximately € 4.4 million in transfers through Target2 across approximately 1,100 transactions and credited the relevant amounts to our non-Iranian clients. The gross revenues derived from these payments were approximately € 5,700.

We do not consider the execution of such transactions to be significant and we expect that we will continue to execute such transactions in the future.

Maintaining of Accounts for Iranian Consulates and Embassies. In 2018, Iranian embassies and consulates in Germany held accounts with us. The purpose of these accounts is the funding of day-to-day operational costs of the embassies and consulates, such as salaries, rent and electricity. In 2018, the total volume of outgoing payments from these accounts was approximately € 9.3 million. From these activities, we derived gross revenues of approximately € 29,000 and net profits which were less than this amount. The German government has requested that we provide these services to enable the government of Iran to conduct its diplomatic relations.

Activities of Entities in Which We Have Interests. Section 13(r) requires us to provide the specified disclosure with respect to ourselves and our “affiliates,” as defined in Exchange Act Rule 12b-2. Although we have minority equity interests in certain entities that could arguably result in these entities being deemed “affiliates,” we do not have the authority or the legal ability to acquire in every instance the information from these entities that would be necessary to determine whether they are engaged in any disclosable activities under Section 13(r). In some cases, legally independent entities are not permitted to disclose the details of their activities to us because of German privacy and data protection laws or the applicable banking laws and regulations. In such cases, voluntary disclosure of such details could violate such legal and/or regulatory requirements and subject the relevant entities to criminal prosecution or regulatory investigations.

PART III

Item 17: Financial Statements

Not applicable.

Item 18: Financial Statements

The Financial Statements of this Annual Report on Form 20-F consist of the Consolidated Financial Statements including Notes 1 to 45 thereto, which are set forth as Part 2 of the Annual Report 2018, and, as described in Note 1 “Significant Accounting Policies and Critical Accounting Estimates” thereto in the third paragraph under “Basis of Accounting”, certain parts of the Management Report set forth as Part 1 of the Annual Report 2018. Such Consolidated Financial Statements have been audited by KPMG AG Wirtschaftsprüfungsgesellschaft, as described in their “Report of Independent Registered Public Accounting Firm” included in the Annual Report 2018.

Item 19: Exhibits

We have filed the following documents as exhibits to this document.

Exhibit number	Description of Exhibit
1.1	English translation of the Articles of Association of Deutsche Bank AG, furnished as Exhibit 3.2 to our Report on Form 6-K dated December 1, 2017 and incorporated by reference herein.
2.1	The total amount of long-term debt securities of us or our subsidiaries authorized under any instrument does not exceed 10 percent of the total assets of our Group on a consolidated basis. We hereby agree to furnish to the Commission, upon its request, a copy of any instrument defining the rights of holders of long-term debt of us or of our subsidiaries for which consolidated or unconsolidated financial statements are required to be filed.
4.1	Equity Plan Rules 2015, furnished as Exhibit 4.5 to our 2014 Annual Report on Form 20-F and incorporated by reference herein.
4.2	Equity Plan Rules 2016, furnished as Exhibit 4.6 to our 2015 Annual Report on Form 20-F and incorporated by reference herein.
4.3	Equity Plan Rules 2017, furnished as Exhibit 4.6 to our 2016 Annual Report on Form 20-F and incorporated by reference herein.
4.4	Equity Plan Rules 2018, furnished as Exhibit 4.6 to our Registration Statement on Form S-8 No. 333-223301 and incorporated by reference herein.
4.5	Equity Plan Rules 2019.
4.6	Key Retention Plan Equity Plan Rules 2017, furnished as Exhibit 4.7 to our 2016 Annual Report on Form 20-F and incorporated by reference herein.
4.7	Restricted Share Plan Rules 2018, furnished as Exhibit 4.8 to our Registration Statement on Form S-8 No. 333-223301 and incorporated by reference herein.
4.8	Restricted Share Plan Rules 2019.
8.1	List of Subsidiaries.
12.1	Principal Executive Officer Certifications Required by 17 C.F.R. 240.13a-14(a).
12.2	Principal Financial Officer Certifications Required by 17 C.F.R. 240.13a-14(a).
13.1	Chief Executive Officer Certification Required by 18 U.S.C. Section 1350.
13.2	Chief Financial Officer Certification Required by 18 U.S.C. Section 1350.
14.1	Legal Opinion regarding confidentiality of related party customers.
15.1	Consent of KPMG AG Wirtschaftsprüfungsgesellschaft.
101.1	Interactive Data File

Signatures

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and has duly caused and authorized the undersigned to sign this annual report on its behalf.

Date: March 22, 2019

Deutsche Bank Aktiengesellschaft

/s/CHRISTIAN SEWING

Christian Sewing
Chairman of the Management Board
Chief Executive Officer

/s/JAMES VON MOLTKE

James von Moltke
Member of the Management Board
Chief Financial Officer

Annual Report

Deutsche Bank

The Group at a glance

	2018	2017
Key financial information		
Post-tax return on average shareholders' equity	0.4 %	(1.2) %
Post-tax return on average tangible shareholders' equity	0.5 %	(1.4) %
Cost/income ratio[1]	92.7 %	93.4 %
Compensation ratio[2]	46.7 %	46.3 %
Noncompensation ratio[3]	46.0 %	47.0 %
Total net revenues, in € m.	25,316	26,447
Provision for credit losses, in € m.	525	525
Total noninterest expenses, in € m.	23,461	24,695
Adjusted costs4	22,810	23,891
Income (loss) before income taxes, in € m.	1,330	1,228
Net income (loss), in € m.	341	(735)
Basic earnings per share	€ (0.01)	€ (0.53)
Diluted earnings per share	€ (0.01)	€ (0.53)
Share price at period end	€ 6.97	€ 15.88
Share price high	€ 16.46	€ 17.82
Share price low	€ 6.68	€ 13.11

	Dec 31, 2018	Dec 31, 2017

CRR/CRD 4 Leverage Ratio (fully loaded)	4.1 %	3.8 %
CRR/CRD 4 Leverage Ratio (phase in)	4.3 %	4.1 %
Fully loaded CRR/CRD 4 leverage exposure, in € bn.	1,273	1,395
Common Equity Tier 1 capital ratio (fully loaded)	13.6 %	14.0 %
Common Equity Tier 1 capital ratio (phase in)	13.6 %	14.8 %
Risk-weighted assets, in € bn.	350	344
Total assets, in € bn.	1,348	1,475
Shareholders' equity, in € bn.	62	63
Book value per basic share outstanding	€ 29.69	€ 30.16
Tangible book value per basic share outstanding	€ 25.71	€ 25.94
Other Information		
Branches	2,064	2,425
Thereof: in Germany	1,409	1,570
Employees (full-time equivalent)	91,737	97,535
Thereof: in Germany	41,669	42,526

1Total noninterest expenses as a percentage of net interest income before provision for credit losses, plus noninterest income.

2Compensation and benefits as a percentage of total net interest income before provision for credit losses, plus noninterest income.

3Noncompensation noninterest expenses, which is defined as total noninterest expenses less compensation and benefits, as a percentage of total net interest income before provision for credit losses, plus noninterest income.

4The reconciliation of adjusted costs to noninterest expenses is provided in section "Supplementary Information (Unaudited): Non-GAAP Financial Measures: Adjusted costs" of this document.

Due to rounding, numbers presented throughout this document may not sum precisely to the totals provided and percentages may not precisely reflect the absolute figures.

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Operating and Financial Review

The following discussion and analysis should be read in conjunction with the consolidated financial statements and the related notes to them. Our Operating and Financial Review includes qualitative and quantitative disclosures on Segmental Results of Operations and Entity Wide disclosures on Net Revenue Components as required by International Financial Reporting Standard (IFRS) 8, “Operating Segments”. This information, which forms part of and is incorporated by reference into the financial statements of this report, is marked by a bracket in the margins throughout this Operating and Financial Review. For additional Business Segment disclosure under IFRS 8 please refer to Note 4 “Business Segments and Related Information” of the Consolidated Financial Statements. Forward-looking statements are disclosed in our Outlook section.

Executive Summary

The Global Economy

Economic growth (in %)[1]	2018[2]	2017	Main driver

Global Economy	3.8	3.8	Robust global growth, with industrialized countries saw a peak in their economic cycle, while growth in emerging markets slowed towards the end of the year. Trade tensions reached a level that weighed on global trade. The strong US economy provided impetus to global growth.
Of which:			
Industrialized countries	2.2	2.3	The global momentum supported growth in industrialized countries but trade disputes began to have a negative impact on the global value chains of the industrialized countries.
Emerging markets	4.9	4.8	Emerging markets benefited from the extension of the global economic cycle. Growth peaked in Asia whereas some Latin American economies stabilized.
Eurozone Economy	1.8	2.5	The eurozone economy expanded more slowly than expected, reflecting temporary effects in some member states and a deteriorating external environment. Growth was supported by domestic demand underpinned by a solid income growth and improved financial conditions.
Of which: German economy	1.4	2.2	The German economy surprised to the downside. Delays in the certification of new vehicles hampered automobile production and thus impacted the overall economic value chain. A tight labor market led to strong wage agreements.
US Economy	2.9	2.2	Strong performance of the US economy was supported by tax cuts, fiscal spending as well as supportive financial conditions and consumer spending backed by wage growth and a tight labor market.
Japanese Economy	0.7	1.9	The Japanese economy slowed due to lower private consumption spending and lower employment growth as well as weaker external demand.
Asian Economy[3]	6.2	6.1	Asian economies continued to show strong growth, but may have passed their cyclical peak. Trade was a key driver of economic expansion.
Of which: Chinese Economy	6.6	6.9	Chinese growth slowed somewhat. The government has kept a tight policy stance in the property sector. Lower land sales impacted sliding fiscal revenues. Chinese exports were resilient despite growing trade tensions throughout 2018.

[1] Annual Real GDP Growth (% YoY). Sources: National Authorities unless stated otherwise.

2Sources: Deutsche Bank Research.

3Including China, India, Indonesia, Republic of Korea, and Taiwan, ex Japan.

The Banking Industry

In the Eurozone, 2018 saw banks record their first noteworthy growth in corporate lending since the financial crisis, with volumes up 2 % year on year. By contrast, the dynamics in real estate lending to households and in consumer lending were stable at 3 %. Interest rates remained close to historical lows and weighed on the banks' net interest margin. Growth in corporate deposits slowed quite significantly to 3 % year on year while growth in retail deposits increased to over 4.5 %. European banks likely saw revenues and overhead expenses decline slightly, with a significant drop in risk provisions (from an already low level).

In Germany, lending to corporates and the self-employed continued to gain considerable pace last year, an increase of 5.5 % year on year. The figure was the highest since the dot-com bubble in the early 2000s and coincided with a sharp decline in corporate bond issuance. Retail lending also continued to expand at 3.5 %, driven by a 5 % increase in mortgage volumes. On the funding side, household deposits grew roughly at 5 % while corporate deposits expanded at a considerably slower pace of 2.5 %. Despite excellent asset quality, there is no change expected in the structurally low profitability of Germany's banks, a situation mainly caused by the intense competition and low interest rate

environment.

2

The US banking industry is almost certain to have set a new profit record. The first nine months saw the banks already generate higher net profit than in any prior full-year period. This was due to a wide range of factors including healthy credit business, the benefit of higher interest rates on net interest margin and on liquid funds, tax cuts, and market share gained in the global capital markets business. Lending to households increased by 2.2 % year on year a decline from its 2017 rate reflecting slower growth in mortgage lending to 3 % and a 9 % decline in home equity loans, while growth in consumer loans was stable at 5 %. In contrast, the growth rate in lending to businesses doubled to 7.5 % over the course of the year, driven by double-digit growth in corporate lending, where outstanding volumes have doubled since 2010. Commercial real estate lending grew at a somewhat lower rate than in the previous year at 5 %. Private sector deposits continued to expand by 4 %.

In China, the credit growth further slowed in 2018. Lending to businesses grew by just 8 % year on year, while the figure for retail customers was 18 %. Private sector deposits grew at a 7 % rate, stable versus the prior period. In Japan, too, growth rates remained largely stable overall at 2.5 % for lending and 3.5 % for deposits.

Investment banking recorded a solid result in the M&A advisory business in 2018, while transaction volumes in equity and debt issuance saw year-on-year declines. Securities trading posted largely positive growth. Equities trading in the United States and the derivatives business delivered an excellent performance and there was also robust growth in bonds. The only contraction was in European equities trading.

Deutsche Bank Performance

In 2018, Deutsche Bank achieved its first full year net profit since 2014 and delivered on its adjusted cost and headcount targets. The bank also announced and executed against a series of strategic repositioning measures, mainly within the Corporate & Investment Bank, and made good progress while further strengthening its controls and processes. In 2018, the bank successfully completed the legal merger of Deutsche Bank Privat- und Geschäftskunden AG and Postbank, the partial sale of the retail business in Poland, the integration of Sal. Oppenheim and the Initial Public Offering (“IPO”) of DWS Group GmbH & Co. KGaA (“DWS”). The bank is focused on redeploying resources and investing in areas of core strength which the management believes will drive growth.

Group Key Performance Indicators

Near-term operating performance	Status end of 2018	Status end of 2017
Post-tax return on average tangible shareholders’ equity [1]	0.5 %	(1.4) %
Adjusted costs[2]	€ 22.8 bn	€ 23.9 bn
Employees3	91,737	97,535
Capital performance		
CRR/CRD 4 fully loaded Common Equity Tier 1 ratio4	13.6 %	14.0 %
CRR/CRD 4 leverage ratio (phase-in)4	4.3 %	4.1 %

1Based on Net Income attributable to Deutsche Bank shareholders and additional equity components. For further information, please refer to “Supplementary Information: Non-GAAP Financial Measures” of this report.

2Adjusted costs are noninterest expenses excluding impairment of goodwill and other intangible assets, litigation and

restructuring and severance. For further information, please refer to “Supplementary Information: Non-GAAP Financial Measures” of this report.

3Internal full-time equivalents.

4Further detail on the calculation of this ratio is provided in the Risk Report.

Net revenues in 2018 were € 25.3 billion, a decline of € 1.1 billion, or 4 % from 2017. Revenues in the Corporate & Investment Bank (CIB) were impacted by the strategic repositioning, specifically the reduction in headcount and leverage exposure, challenging market conditions, lower client activity, which was in part driven by adverse developments with respect to the bank, negative interest rates and margin compression. Revenues in Private & Commercial Bank (PCB) were essentially flat as growth in revenues from loans was offset by ongoing interest rate headwinds on deposit products. Revenues in Asset Management (AM) were impacted by net outflows, margin compression, lower performance fees and the absence of specific revenue items recorded in 2017. Revenues in Corporate and Other (C&O) improved mainly driven by the absence of the realization of a negative currency translation adjustment related to the sale of a non-strategic subsidiary in Argentina in 2017 and higher positive impacts from valuation and timing differences in 2018 compared to prior year.

Provision for credit losses was € 525 million in 2018, unchanged compared to 2017.

Noninterest expenses in 2018 were € 23.5 billion, a decrease of € 1.2 billion or 5 %, from 2017 as management executed on its cost reduction targets. The decrease was driven by reductions across most of the cost categories including lower compensation and benefits expense, reduced cost for professional service fees and for occupancy, as well as lower litigation and restructuring charges.

Income before income taxes was € 1.3 billion in 2018 compared to € 1.2 billion in 2017, an increase of € 103 million or 8 % mainly driven by lower noninterest expenses partly offset by lower revenues.

Income tax expense was € 989 million in 2018, compared to € 2.0 billion in 2017 which included a one-time tax charge of € 1.4 billion attributable to the remeasurement of US deferred tax assets as a result of the US tax reform. The effective tax rate of 74 % in 2018 was mainly impacted by changes in the recognition and measurement of deferred tax assets and share-based payment-related tax effects.

The bank reported a net income of € 341 million in 2018, compared to a net loss of € 735 million in 2017. The improvement was primarily driven by the absence of the prior year’s one-time tax charge and lower noninterest expenses.

The bank’s CRR/CRD 4 fully loaded Common Equity Tier 1 (CET 1) ratio was 13.6 % at the end of 2018 compared to 14.0 % at the end of 2017, primarily driven by an increase in Risk weighted assets.

Deutsche Bank Group

Deutsche Bank: Our Organization

Headquartered in Frankfurt am Main, Germany, we are the largest bank in Germany and one of the largest financial institutions in Europe and the world, as measured by total assets of € 1,348 billion as of December 31, 2018. As of that

date, we employed 91,737 full-time equivalent internal employees and operated in 59 countries out of 2,064 branches worldwide, of which 68 % were in Germany. We offer a wide variety of investment, financial and related products and services to private individuals, corporate entities and institutional clients around the world.

As of December 31, 2018, we were organized into the following three corporate divisions:

- Corporate & Investment Bank (CIB)
- Private & Commercial Bank (PCB)
- Asset Management (AM)

The three corporate divisions are supported by infrastructure functions. In addition, Deutsche Bank has a local and regional organizational layer to facilitate a consistent implementation of global strategies.

We have operations or dealings with existing or potential customers in most countries in the world. These operations and dealings include working through:

- subsidiaries and branches in many countries;
- representative offices in many other countries; and
- one or more representatives assigned to serve customers in a large number of additional countries.

We have made the following significant capital expenditures or divestitures since January 1, 2016, that are not allocated to the capital expenditures or divestitures of corporate divisions described below:

In August 2016, Deutsche Bank Group entered into an agreement to sell Deutsche Bank S.A., its subsidiary in Argentina, to Banco Comafi S.A. The transaction is part of the Group's plan to rationalize its global footprint. In June 2017, the transaction was successfully completed.

On October 26, 2016, Deutsche Bank entered into an agreement to sell its Mexican bank and broker dealer subsidiaries to Investa Bank S.A., Institución de Banca Múltiple. Investa Bank S.A. has since been renamed to Accendo Banco. Closing of the transaction was originally expected in the first half of 2018, but remains subject to regulatory approvals and other customary conditions. During the fourth quarter of 2018, Deutsche Bank notified Accendo Banco that the Group is exercising its right to terminate the purchase agreement.

Capital expenditures or divestitures related to the divisions are included in the respective Corporate Division Overview.

Management Structure

The Management Board has structured the Group as a matrix organization, comprising (i) Corporate Divisions, (ii) Infrastructure Functions and (iii) Regions.

Pursuant to the German Stock Corporation Act, the Management Board is responsible for the executive management of Deutsche Bank. Its members are appointed and removed by the Supervisory Board, which is a separate corporate body. Our Management Board focuses on, among other topics, strategic management, corporate governance, financial accounting and reporting, resource allocation, control and risk management, and is assisted by functional committees.

Within each corporate division and region, coordination and management functions are handled by operating committees and executive committees, which help ensure that the implementation of the strategy of individual

business divisions and the plans for the development of infrastructure areas are aligned to our global business objectives.

Corporate & Investment Bank (CIB)

Corporate Division Overview

CIB comprises our Global Transaction Banking, Origination & Advisory, Sales & Trading (FIC) and Sales & Trading (Equity) businesses. The division brings together wholesale banking expertise across, coverage, risk management, sales and trading, Investment Banking and infrastructure across Deutsche Bank. This enables CIB to align resourcing and capital across our client and product perimeter to effectively serve the Bank's clients.

In CIB, we made the following significant capital divestiture since January 1, 2016 and no significant capital expenditures:

In early October 2017, Deutsche Bank Group signed a binding agreement to sell its Alternative Fund Services business, a unit of the Global Transaction Banking division, to Apex Group Limited. The transaction supported the Group's announced strategic priorities and was completed in the second quarter of 2018.

Products and Services

Global Transaction Banking (GTB) is a global provider of cash management, trade finance and securities services, delivering the full range of commercial banking products and services for both corporate clients and financial institutions worldwide.

Origination and Advisory is responsible for mergers and acquisitions (M&A) as well as debt and equity advisory and origination. Regional and industry-focused coverage teams ensure the delivery of the entire range of financial products and services to our corporate and institutional clients.

Sales & Trading (FIC) and Sales & Trading (Equity) combine sales, trading and structuring of a wide range of financial market products, including bonds, equities and equity-linked products, exchange-traded and over-the-counter derivatives, foreign exchange, money market instruments, and structured products, while Research provides analysis of markets, products and trading strategies for clients.

All our trading activities are covered by our risk management procedures and controls which are described in detail in the Risk Report.

Distribution Channels and Marketing

As part of our strategy, we are re-focusing and optimizing our client coverage model to the benefit of our core clients. We are exiting client relationships where we consider returns to be too low or risks to be too high while also strengthening our client on-boarding and know-your-client (KYC) procedures.

Coverage of our clients is provided by the Institutional and Treasury Coverage group, which combines our Equity and Debt sales teams, Financial Solutions Group and Corporate Banking Coverage. This new consolidated group is intended to benefit the division through closer cooperation and enhanced synergies leading to increased cross selling of products/solutions to our clients, while working closely with the Investment Banking Coverage team within Corporate Finance.

Private & Commercial Bank (PCB)

Corporate Division Overview

In PCB, we serve personal and private clients, small and medium-sized enterprises as well as wealthy private clients. We are organized along three core business divisions: Private and Commercial Business (Germany), Private and Commercial Business (International) and Wealth Management (Global). Our product range includes payment and account services, credit and deposit products as well as investment advice and selected digital offerings. In these products, we offer our customers both the coverage of all basic financial needs and individual, tailor-made solutions.

PCB made the following significant capital expenditures or divestitures since January 1, 2016:

In March 2018, Deutsche Bank Group entered into an agreement to sell the retail banking business in Portugal to ABANCA Corporación Bancaria S.A. The parties are aiming to close the transaction in the first half of 2019, subject to regulatory approvals and the finalization of separation measures.

In December 2017, Deutsche Bank Group entered into an agreement for the partial sale of its retail banking business in Poland to Santander Bank Polska (formerly Bank Zachodni WBK). The transaction was completed in November 2018.

In March 2017, Deutsche Bank Group signed a definitive agreement to sell its share in Concardis GmbH, a leading German payment service provider established in form of a joint venture of the German banking sector, to a consortium of Advent International and Bain Capital Private Equity. In July 2017, the transaction was successfully completed.

On December 28, 2015, we agreed to sell our entire 19.99 % stake in Hua Xia Bank Company Limited to PICC Property and Casualty Company Limited. The share transfer was completed in the fourth quarter 2016 and all remaining closing formalities were completed in the first quarter of 2017.

In the fourth quarter 2015, we announced that we had entered into a definitive asset purchase agreement to sell our U.S. Private Client Services (PCS) unit to Raymond James Financial, Inc. In September 2016 the transaction was completed successfully.

In November 2015, Visa Inc. announced a definitive agreement to acquire Visa Europe Limited. As part of this acquisition Visa Europe Limited requested all its shareholders, which included several Deutsche Bank Group entities, to return their shares against consideration. We returned our shares in Visa Europe Limited in January 2016 and received the cash and preferred shares consideration at closing on June 21, 2016 as well as an entitlement to a deferred cash payment including interest upon the third anniversary of the closing date.

Products and Services

In our Private and Commercial Business (Germany) division, we pursue a differentiated, customer-focused approach with two brands – “Deutsche Bank” and “Postbank”. With our “Deutsche Bank” brand we focus on providing our private customers with banking and financial products and services that include sophisticated and individual advisory solutions. For small and medium-sized corporate clients, we provide an integrated commercial banking coverage model in collaboration with the Corporate & Investment Bank. The focus of our “Postbank” brand remains on providing our retail and corporate customers with standard products and daily retail banking services. In cooperation with Deutsche Post DHL AG, we also offer postal and parcel services in the Postbank branches.

Our Private and Commercial Business (International) division provide banking and other financial services to private and commercial clients in Belgium, India, Italy and Spain with some variations in the product offering among countries that are driven by local market, regulatory and customer requirements.

The Wealth Management (Global) division serves wealthy, high-net-worth (HNW) and ultra-high-net-worth (UHNW) individuals and families. We support our clients in planning, managing and investing their wealth, financing their personal and business interests and servicing their institutional and corporate needs. We also provide institutional-like services for sophisticated clients and complement our offerings by closely collaborating with the Corporate & Investment Bank and Asset Management.

We also have consolidated activities, which are no longer part of our core businesses, into a separate unit (called "Exited Businesses") and have established a Digital Ventures unit to holistically steer PCB's digital agenda across businesses and brands, focusing on new platform-based digital business models, venture capital investments as well as end-to-end process digitalization and appropriate data architecture as a basis for structured data analysis and application of Artificial Intelligence.

Distribution Channels and Marketing

We pursue an omni-channel approach and our customers can flexibly choose between different possibilities to access our services and products (branches, advisory centers, mobile networks of independent consultants and online/mobile banking).

In our Private and Commercial Business (Germany) and Private and Commercial Business (International) we have similar distribution channels. Those include our branch network, supported by customer call centers and self-service terminals; advisory centers of Deutsche Bank brand in Germany, which connect our branch network with our digital offerings; online and mobile banking including our Digital Platform, through which we provide a transaction platform for banking, brokerage and self-services, combined with a multi-mobile offering for smartphones and tablets; and lastly, financial advisors, as an additional service channel in collaboration with self-employed financial advisors as well as sales and cooperation partners.

Wealth Management (Global) has a distinct client coverage. Relationship managers and senior advisor teams manage client relationships, advice and assist clients in accessing wealth management services and open-architecture products. Institutional Wealth Partners (IWP) provide institutional access with market views and trade ideas from our Global Markets platform, as well as non-recourse lending solutions. Deutsche Oppenheim Family Offices AG (DOAG) offers services that include discretionary portfolio management, strategic asset allocation, "Family Office Strategy" funds, consulting, third-party manager selection, reporting & controlling as well as real estate and private equity investments.

Asset Management (AM)

Corporate Division Overview

With over € 660 billion of assets under management as of December 31, 2018, AM is one of the world's leading investment management organizations, bringing access to the world's financial markets and delivering solutions to clients around the globe. AM aims to provide sustainable financial solutions for all its clients: individual investors and the institutions that serve them.

The corporate division "Deutsche Asset Management" was renamed "Asset Management" during the first quarter of 2018. In March 2018, Deutsche Bank completed the partial initial public offering (IPO) of DWS Group GmbH & Co. KGaA ("DWS"), the holding company for AM. Since March 23, 2018, shares of DWS are listed on the Frankfurt stock exchange. We retain an 80 % ownership interest in DWS and AM remains a core business for Deutsche Bank.

We have made the following significant capital divestitures since January 1, 2016:

In December 2016, Deutsche Bank completed the sale of the Abbey Life business (Abbey Life Assurance Company Limited, Abbey Life Trustee Services Limited and Abbey Life Trust Securities Limited) to a subsidiary of Phoenix Group Holdings.

Products and Services

AM's investment capabilities span both active and passive strategies across a diverse array of asset classes and liquidity spectrum including equities, fixed income, liquidity, real estate, infrastructure, private equity and sustainable investments. We offer these capabilities through a variety of wrappers including Exchange Traded Funds, Mutual Funds, and Separately Managed Accounts. AM delivers alpha and beta solutions to address the longevity, liability and liquidity needs of clients, leveraging artificial intelligence and digital technology.

Distribution Channels and Marketing

Coverage/Advisory teams manage client relationships, provide advice and assist clients to access AM's products and services. AM also markets and distributes its offerings through other business divisions of Deutsche Bank Group, notably PCB for retail customers, as well as through third-party distributors. To ensure effective service and advice, all clients have a single point of access to AM, with dedicated teams serving specific client groups.

Non-Core Operations Unit Corporate Division (NCOU)

In the second half of 2012, the Non-Core Operations Unit (NCOU) was established with the aim to help the Bank reduce risks associated with capital-intensive assets that are not core to the strategy, thereby reducing capital demand. As set out in our previous strategy announcements, our objectives in setting up the NCOU were to improve external transparency of our non-core positions; to increase management focus on the core operating businesses by separating the non-core activities; and to facilitate targeted accelerated de-risking.

NCOU successfully executed its de-risking target and reduced the portfolio to less than € 10 billion RWA by the year-end 2016. As a result, the NCOU ceased to exist as a standalone division from 2017 onwards.

The remaining legacy assets with balance sheet value of approximately € 6 billion as of December 31, 2016 were transferred to the corresponding core operating segments, predominately Corporate & Investment Bank and Private & Commercial Bank.

The NCOU division made the following significant divestitures since January 1, 2016:

In November 2016, Deutsche Bank sold its remaining 16.9 % stake in Red Rock Resorts after an IPO in April 2016 where Deutsche Bank sold around 3 %.

In April 2016, Deutsche Bank reached an agreement to sell 100 % of Maher Terminals USA LLC in Port Elizabeth, New Jersey to Macquarie Infrastructure Partners III, a fund managed by Macquarie Infrastructure and Real Assets. Following receipt of all regulatory approvals, we completed the sale in November 2016 for U.S.$ 739 million.

Infrastructure

The infrastructure functions perform control and service functions and, in particular, tasks relating to Group-wide, supra-divisional resource-planning, steering and control, as well as tasks relating to risk, liquidity and capital

management.

The infrastructure functions are organized into the following areas of responsibility of our senior management:

- Chief Executive Officer: Communications & Corporate Social Responsibility, Group Audit, Art, Culture & Sports
- Chief Financial Officer: Group and Regional Finance, Chief Accounting Officer, Group Tax and Treasury, Planning & Performance Management, Business and Infrastructure Finance (CFOs), Infrastructure Transformation, Investor Relations, Corporate Investments, Corporate Merger and Acquisitions
- Chief Risk Officer: Business Aligned Risk Management, Regional Risk Management, Enterprise Risk Management and Model Risk, Credit Risk Management, Market Risk Management & Risk Methodology, Non-Financial Risk Management, Treasury & Liquidity Risk Management and Corporate Insurance
- Chief Regulatory Officer: Government and Regulatory Affairs, Anti Financial Crime, Compliance, Business Selection and Conflict Office
- Chief Administrative Officer: Legal and Group Governance incl. Data Privacy, Human Resources including Corporate Executive Matters
- Chief Operating Officer: Chief Information Office, Chief Security Office, Chief Data Office, Digital Strategy & Innovation, Corporate Services, Operations CIB and Client Data Services

For the financial years until 2017, all expenses and revenues incurred within the infrastructure functions and areas are fully allocated to Corporate & Investment Bank, Private & Commercial Bank and Deutsche Asset Management. From 2018 onwards, Infrastructure expenses associated with shareholder activities as defined in the OECD Transfer Pricing Guidelines are no longer allocated to corporate divisions, but are held centrally and reported under Corporate & Other.

To increase overall effectiveness and collaboration, the bank decided in 2017 to move certain infrastructure employees to the divisions for which they provide service. This has helped to increase the business divisions' responsibility and autonomy with respect to their organizational and process-related decisions and led to a significant increase of the number of employees associated with the business divisions compared to 2016 – in particular in the Corporate & Investment Bank as well as in Deutsche Asset Management. Independent Control Functions generally remained in central areas.

Significant Capital Expenditures and Divestitures

Information on each Corporate Division's significant capital expenditures and divestitures for the last three financial years has been included in the above descriptions of the Corporate Divisions.

Since January 1, 2018, there have been no public takeover offers by third parties with respect to our shares and we have not made any public takeover offers for our own account in respect of any other company's shares.

Results of Operations

Consolidated Results of Operations

On January 1, 2018, the Group adopted IFRS 9 "Financial Instruments", which replaces IAS 39, "Financial Instruments: Recognition and Measurement".

The adoption resulted in changes with regards to impairment as well as classification and measurement, leading to changes to the financial statements presentation. Changes to the financial statements presentation include the introduction of specific line items in the consolidated balance sheet and consolidated income statement, respectively, for Financial Assets at Fair Value through Other Comprehensive Income and the discontinuation of specific line items for Financial Assets Available for Sale and Securities Held to Maturity for financial years commencing January 1, 2018.

For further information regarding the adoption of IFRS 9, please refer to Note 2 “Recently Adopted and New Accounting Pronouncements” of this document.

You should read the following discussion and analysis in conjunction with the consolidated financial statements.

Condensed Consolidated Statement of Income

in € m.				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
(unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net interest income	13,192	12,378	14,707	814	7	(2,329)	(16)
Provision for credit losses	525	525	1,383	(0)	(0)	(857)	(62)
Net interest income after provision for credit losses	12,667	11,853	13,324	815	7	(1,472)	(11)
Commissions and fee income[1]	10,039	11,002	11,744	(963)	(9)	(742)	(6)
Net gains (losses) on financial assets/liabilities at fair value through profit or loss[1]	1,332	2,926	1,401	(1,593)	(54)	1,524	109
Net gains (losses) on financial assets at amortized cost	2	N/A	N/A	2	N/M	0	N/M
Net gains (losses) on financial assets at fair value through other comprehensive income	317	N/A	N/A	317	N/M	0	N/M
Net gains (losses) on financial assets available for sale	N/A	479	653	(479)	N/M	(174)	(27)
Net income (loss) from equity method investments	219	137	455	82	60	(318)	(70)
Other income (loss)	215	(475)	1,053	689	N/M	(1,528)	N/M
Total noninterest income	12,124	14,070	15,307	(1,945)	(14)	(1,238)	(8)
Total net revenues[2]	24,791	25,922	28,632	(1,131)	(4)	(2,709)	(9)
Compensation and benefits	11,814	12,253	11,874	(439)	(4)	380	3
General and administrative expenses	11,286	11,973	15,454	(687)	(6)	(3,481)	(23)
Policyholder benefits and claims	0	0	374	(0)	N/M	(374)	(100)
Impairment of goodwill and other intangible assets	0	21	1,256	(21)	N/M	(1,235)	(98)
Restructuring activities	360	447	484	(86)	(19)	(37)	(8)
Total noninterest expenses	23,461	24,695	29,442	(1,234)	(5)	(4,747)	(16)
Income (loss) before income taxes	1,330	1,228	(810)	103	8	2,038	N/M
Income tax expense (benefit)	989	1,963	546	(974)	(50)	1,417	N/M
Net income (loss)	341	(735)	(1,356)	1,077	N/M	621	(46)
Net income attributable to noncontrolling interests	75	15	45	59	N/M	(30)	(66)
	267	(751)	(1,402)	1,017	N/M	651	(46)

Net income (loss) attributable to Deutsche Bank shareholders and additional equity components

N/M – Not meaningful

1For further detail please refer to Note 1 “Significant Accounting Policies and Critical Accounting Estimates” of this report.

2After provision for credit losses.

Net Interest Income

in € m.				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
(unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Total interest and similar income	24,793	23,542	25,143	1,251	5	(1,601)	(6)
Total interest expenses	11,601	11,164	10,436	437	4	728	7
Net interest income	13,192	12,378	14,707	814	7	(2,329)	(16)
Average interest-earning assets1	990,670	1,021,697	1,033,172	(31,028)	(3)	(11,475)	(1)
Average interest-bearing liabilities1	745,904	790,488	812,578	(44,584)	(6)	(22,090)	(3)
Gross interest yield2	2.39 %	2.18 %	2.34 %	0.21 ppt	10	(0.16) ppt	(7)
Gross interest rate paid3	1.41 %	1.25 %	1.17 %	0.16 ppt	13	0.08 ppt	7
Net interest spread4	0.98 %	0.93 %	1.17 %	0.05 ppt	5	(0.24) ppt	(21)
Net interest margin5	1.33 %	1.21 %	1.42 %	0.12 ppt	10	(0.21) ppt	(15)

ppt – Percentage points

1Average balances for each year are calculated in general based upon month-end balances.

2Gross interest yield is the average interest rate earned on our average interest-earning assets.

3Gross interest rate paid is the average interest rate paid on our average interest-bearing liabilities.

4Net interest spread is the difference between the average interest rate earned on average interest-earning assets and the average interest rate paid on average interest-bearing liabilities.

5Net interest margin is net interest income expressed as a percentage of average interest-earning assets.

2018

Net interest income was € 13.2 billion in 2018 compared to € 12.4 billion in 2017, an increase of € 814 million, or 7 %. The increase in Net interest income was primarily driven by higher average rates, resulting in an improved net interest spread compared to 2017. Interest income increased primarily due to higher average rates on loans and deposits with banks, mainly in the US and Asia, while total interest expenses also increased, but to a lesser extent. Also contributing to the increase in Net interest income was a more pronounced reduction of average interest-bearing liabilities than average interest-earning assets. The decline in balance sheet volume occurred mostly in CIB reflecting the division’s strategic repositioning. Interest income included € 93 million related to EU government grants under the Targeted

Longer-Term Refinancing Operations II (TLTRO II) program, compared to € 116 million in 2017. Overall, the bank's net interest margin improved by 12 basis points compared to the prior year to 1.33 %, in 2018.

2017

Net interest income was € 12.4 billion in 2017 compared to € 14.7 billion in 2016, a decrease of € 2.3 billion, or 16 %. The decline in net interest income was mainly driven by perimeter changes including the sale of Abbey Life, PCS and the disposal of assets within the Non-Core Operations Unit (NCOU) in 2016, as well as higher funding costs and overall portfolio effects resulting in a shift towards lower interest yielding asset classes, mainly euro deposits with central banks. These effects were partially offset by interest income of € 116 million related to EU government grants under the TLTRO II program. Overall, our net interest margin declined by 21 basis points in 2017 as compared to the prior year.

Net Gains (Losses) on Financial Assets/Liabilities at Fair Value through Profit or Loss

in € m.				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
(unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Trading income	52	3,374	547	(3,322)	(98)	2,827	N/M
Net gains (losses) on non-trading financial assets mandatory at fair value through profit or loss	212	N/A	N/A	212	N/M	0	N/M
Net gains (losses) on financial assets/liabilities designated at fair value through profit or loss	1,069	(448)	854	1,517	N/M	(1,302)	N/M
Total net gains (losses) on financial assets/liabilities at fair value through profit or loss	1,332	2,926	1,401	(1,593)	(54)	1,524	109

2018

Net gains on financial assets/liabilities at fair value through profit or loss were € 1.3 billion in 2018, compared to € 2.9 billion in 2017. The decrease of € 1.6 billion, or 54 %, was primarily driven by mark-to-market losses due to higher US interest rates. These losses were partly offset by related positive effects in Net interest income. Net gains on financial assets/liabilities at fair value through profit or loss in 2018 were also impacted by lower deal volumes resulting from challenging market conditions and adverse developments.

2017

Net gains on financial assets/liabilities at fair value through profit or loss were € 2.9 billion in 2017 compared to € 1.4 billion in 2016, an increase of € 1.5 billion or 109 %. The increase was primarily driven by trading income, which improved by € 2.8 billion, mainly due to the non-recurrence of de-risking losses within the NCOU in 2016. Mark-to-market losses on issuances designated at fair value through profit or loss were the main contributor to a loss of € 448 million on financial assets/liabilities designated at fair value through profit or loss in 2017 compared to a gain of € 854 million in 2016. This loss was largely offset by mark-to-market gains in trading income related to financial instruments used as hedges for those issuances.

Net Interest Income and Net Gains (Losses) on Financial Assets/Liabilities at Fair Value through Profit or Loss

Our trading and risk management businesses include significant activities in interest rate instruments and related derivatives. Under IFRS, interest and similar income earned from trading instruments and financial instruments designated at fair value through profit or loss (i.e., coupon and dividend income) and the costs of funding net trading positions are part of net interest income. Our trading activities can periodically shift income between net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss depending on a variety of factors, including risk management strategies.

In order to provide a more business-focused discussion, the following table presents net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss by corporate division.

in € m.				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
(unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net interest income	13,192	12,378	14,707	814	7	(2,329)	(16)
Total net gains (losses) on financial assets/liabilities at fair value through profit or loss	1,332	2,926	1,401	(1,593)	(54)	1,524	109
Total net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss	14,524	15,304	16,108	(779)	(5)	(805)	(5)
Breakdown by Corporate Division:1							
Corporate & Investment Bank	7,905	8,651	10,774	(746)	(9)	(2,122)	(20)
Private & Commercial Bank	6,283	6,158	6,420	125	2	(262)	(4)
Asset Management	(89)	30	365	(119)	N/M	(335)	(92)
Non-Core Operations Unit	N/A	N/A	(1,307)	0	N/M	1,307	N/M
Corporate & Other	425	464	(144)	(39)	(8)	608	N/M
Total net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss	14,524	15,304	16,108	(779)	(5)	(805)	(5)

N/M – Not meaningful

1This breakdown reflects net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss only. For a discussion of the corporate divisions' total revenues by product please refer to Note 4 "Business Segments and Related Information".

2018

Total net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss were € 14.5 billion in 2018, compared to € 15.3 billion in 2017, a decrease of € 779 million, or 5 %. The decrease was primarily driven by CIB mainly reflecting the strategic repositioning, muted client activity, geo-political uncertainty across a number of regions, and adverse developments. In addition, total net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss in AM decreased versus the prior year mainly driven by a change in valuation of guaranteed funds which has a related offset in Other Income. The decreases were partly offset by an increase in PCB primarily due to growth in loan revenues, positive valuation effects from home savings liabilities, a positive year-on-year impact from mortgage loans previously measured at fair value and measured at amortized cost basis since the adoption of IFRS 9, partly offset by the negative impact from a low interest rate environment on deposits and lower income from interest rate risk hedges.

2017

Total net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss were € 15.3 billion in 2017, compared to € 16.1 billion in 2016, a decrease of € 805 million, or 5 %. The decrease was primarily driven by CIB, mainly due to lower client volumes from a low volatility environment as well as margin pressure. The decline also included a loss of € 348 million in debt valuation adjustments (DVA) from the tightening of credit spreads and a decrease in derivative liability exposures. In addition, Total net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss decreased also in AM, mainly due to nonrecurring revenues from Abbey Life which was sold at the end of 2016 and the absence of a write-up of our exposure to HETA; and in PCB, mainly impacted by the persistent low interest rate environment and loan book reductions. Partly offsetting these decreases was NCOU, which ceased to exist from 2017 onwards and reported negative € 1.3 billion of Total net interest income and net gains (losses) on financial assets/ liabilities at fair value through profit or loss in 2016, including the aforementioned de-risking losses.

Provision for Credit Losses

2018

Provision for credit losses was € 525 million in 2018, unchanged as compared to 2017. Provisions in CIB decreased by € 94 million driven by de-risking activities in the shipping portfolio, offset by an increase of € 93 million in PCB, mainly driven by Postbank reflecting the non-recurrence of prior year's release of provisions related to a single credit exposure. The low level of provisions for credit losses reflects our strong underwriting standards, the low risk nature of our portfolios and the benign operating environment.

2017

Provision for credit losses was € 525 million in 2017, a decrease of € 857 million, or 62 %, compared to 2016, as a result of significantly lower charges and higher releases in all divisions. In CIB, the improvement reflected better performance of all portfolios including shipping. Despite the year-over-year reduction, shipping continued to be the main driver of provision for credit losses in 2017, in part related to the re-evaluation of the respective impairment method during the year. In PCB, provision for credit losses improved, reflecting the good portfolio quality and the continued benign environment along with a significant release in Postbank.

Remaining Noninterest Income

in € m.				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
(unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Commissions and fee income1	10,039	11,002	11,744	(963)	(9)	(742)	(6)
Net gains (losses) on financial assets at fair value through other comprehensive income	317	N/A	N/A	317	N/M	0	N/M
Net gains (losses) on financial assets at amortized cost	2	N/A	N/A	2	N/M	0	N/M
Net gains (losses) on financial assets available for sale	N/A	479	653	(479)	N/M	(174)	(27)
Net income (loss) from equity method investments	219	137	455	82	60	(318)	(70)
Other income (loss)	215	(475)	1,053	689	N/M	(1,528)	N/M
Total remaining noninterest income	10,792	11,144	13,906	(352)	(3)	(2,762)	(20)

1 includes:							
Commissions and fees from fiduciary activities:							
Commissions for administration	303	338	401	(35)	(10)	(63)	(16)
Commissions for assets under management	3,130	3,603	3,507	(473)	(13)	96	3
Commissions for other securities business	290	379	380	(88)	(23)	(1)	(0)
Total	3,724	4,320	4,287	(596)	(14)	33	1
Commissions, broker's fees, mark-ups on securities underwriting and other securities activities:							
Underwriting and advisory fees	1,629	1,825	1,871	(196)	(11)	(46)	(2)
Brokerage fees	936	1,160	1,434	(224)	(19)	(274)	(19)
Total	2,565	2,985	3,305	(420)	(14)	(320)	(10)
Fees for other customer services	3,751	3,698	4,152	53	1	(454)	(11)
Total commissions and fee income	10,039	11,002	11,744	(963)	(9)	(742)	(6)

N/M – Not meaningful

Commissions and fee income

2018

Total Commissions and fee income was € 10.0 billion in 2018, a decrease of € 963 million, or 9 %, as compared to 2017. The decrease included € 473 million lower commissions for assets under management, primarily in AM due to lower fees from actively managed funds partly offset by higher fees from passively managed funds. Underwriting and advisory fees and brokerage fees declined by € 420 million primarily driven by lower market volumes and lower level of client activities in CIB as well as lower revenues from investment products in PCB following the implementation of MiFID II regulations.

2017

Total Commissions and fee income was € 11.0 billion in 2017, a decrease of € 742 million, or 6 %, compared to 2016. Underwriting and advisory fees and brokerage fees declined by € 320 million and fees from other customer services declined by € 454 million driven by reduced perimeter and lower volumes in Global Transaction Banking as well as reduced volumes in Sales & Trading (Equity). Fee income in PCB declined primarily reflecting the sale of the PCS business. Fund management fees increased by € 96 million primarily driven by favorable market conditions in AM.

Net gains (losses) on financial assets at fair value through other comprehensive income

2018

Total Net gains (losses) on financial assets at fair value through other comprehensive income was € 317 million in 2018 primarily related to a realized gain on sales of municipal bonds in the US, government bonds and securities from our Strategic Liquidity Reserve.

2017

Total Net gains (losses) on financial assets at fair value through other comprehensive income was introduced as new income category in 2018, following the adoption of IFRS 9.

Net gains (losses) on financial assets at amortized cost

2018

Net gains (losses) on financial assets at amortized cost were € 2 million in 2018, primarily reflecting the impact of an early redemption of certain bonds.

2017

Net gains (losses) on financial assets at amortized cost was introduced as new income category in 2018, following the adoption of IFRS 9.

Net gains (losses) on financial assets available for sale

2018

Net gains (losses) on financial assets available for sale ceased to exist in 2018, following the adoption of IFRS 9.

2017

Net gains on financial assets available for sale were € 479 million in 2017 compared to € 653 million in 2016, a decrease of € 174 million or 27 %. The decrease was primarily due to the nonrecurrence of gains related to de-risking activities in NCOU and a gain on sale of stake in Visa Europe Limited, both in 2016. This was partly offset by a gain on sale of shares in Concardis GmbH in 2017.

Net income (loss) from equity method investments

2018

Net gains from equity method investments were € 219 million in 2018 compared to € 137 million in 2017, an increase of € 82 million, or 60 %, primarily due to change in valuation of an investment.

2017

Net gains from equity investments were € 137 million in 2017 compared to € 455 million in 2016, a decrease of € 318 million, or 70 %, primarily due to the non-recurrence of a gain from the IPO of Red Rock Resorts in NCOU.

Other income (loss)

2018

Other income (loss) was € 215 million in 2018 compared to a loss of € 475 million in 2017. The increase was primarily driven by de-designation in fair value hedge accounting, gains from property sales in PCB, interest rate hedges and the termination of certain swaps. Additionally other income includes a positive impact from the valuation of guaranteed funds in AM, which has a related offset in net gains (losses) on financial assets/liabilities at fair value through profit or loss. Other income also benefitted from the absence of negative prior year effects related to the termination of a legacy trust preferred security and the realization of a currency translation adjustment associated with the sale of our non-strategic subsidiary in Argentina as well as a lower negative impacts from the sales transactions in Poland and Portugal compared to the prior year. These effects were partly offset by a lower income from workout activities related to legacy positions in Sal. Oppenheim in 2018.

2017

Other income (loss) was negative € 475 million in 2017 compared to positive € 1.1 billion in 2016. The decline was primarily driven by the absence of a positive realization in Other comprehensive income from the sale of stake in Hua Xia Bank Co. Limited. The decline also included a negative impact from the agreement to sell a significant portion of the retail business in Poland, a one-off loss due to termination of a legacy trust preferred security as well as the realization of a negative currency translation adjustment associated with the sale of our non-strategic subsidiary in Argentina.

Noninterest Expenses

in € m.				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
(unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Compensation and benefits	11,814	12,253	11,874	(439)	(4)	380	3
General and administrative expenses[1]	11,286	11,973	15,454	(687)	(6)	(3,481)	(23)
Policyholder benefits and claims	0	0	374	(0)	N/M	(374)	(100)
Impairment of goodwill and other intangible assets	0	21	1,256	(21)	N/M	(1,235)	(98)
Restructuring activities	360	447	484	(86)	(19)	(37)	(8)
Total noninterest expenses	23,461	24,695	29,442	(1,234)	(5)	(4,747)	(16)
N/M – Not meaningful							
[1] includes:							
IT costs	3,822	3,816	3,872	6	0	(56)	(1)
Regulatory, tax & insurance2,3	1,545	1,489	1,421	57	4	67	5
Occupancy, furniture and equipment expenses	1,723	1,849	1,972	(126)	(7)	(123)	(6)
Professional service fees	1,530	1,750	2,305	(220)	(13)	(555)	(24)
Communication and data services	636	686	761	(50)	(7)	(75)	(10)
Travel and representation expenses	347	405	450	(58)	(14)	(45)	(10)
Banking and transaction charges	753	744	664	9	1	80	12
Marketing expenses	278	309	285	(30)	(10)	24	8
Consolidated investments	0	0	334	0	N/M	(334)	N/M
Other expenses4	652	925	3,390	(274)	(30)	(2,465)	(73)
Total general and administrative expenses	11,286	11,973	15,454	(687)	(6)	(3,481)	(23)

2Regulatory, tax & insurance which comprises bank levy and insurance and deposit protection has been presented separately in order to provide further transparency. In the Annual Report for the year ended December 31, 2017, these expenses were included within Other expenses.

3Includes bank levy of € 690 million in 2018, € 596 million in 2017 and € 547 million in 2016.

4Includes litigation related expenses of € 88 million in 2018, € 213 million in 2017 and € 2.4 billion in 2016.

Compensation and benefits

2018

Compensation and benefits decreased by € 439 million, or 4 %, to € 11.8 billion in 2018 compared to € 12.3 billion in 2017. The decrease was primarily driven by lower salary expenses reflecting headcount reductions and lower variable compensation.

2017

Compensation and benefits increased by € 380 million, or 3 %, to € 12.3 billion in 2017 compared to € 11.9 billion in 2016. The increase was primarily driven by higher variable compensation, reflecting the return to normal compensation programs in 2017. This increase was partly offset by a decrease in salaries, due to lower headcount and favorable foreign exchange movements, and by lower amortization of prior years' deferrals as well as by lower severance expense.

General and administrative expenses

2018

General and administrative expenses decreased by € 687 million, or 6 %, to € 11.3 billion in 2018 compared to € 12.0 billion in 2017. The decrease was across most expense categories primarily reflecting management actions to optimize spending.

2017

General and administrative expenses decreased by € 3.5 billion, or 23 %, to € 12.0 billion in 2017 compared to € 15.5 billion in 2016. The decrease was mainly due to a € 2.2 billion reduction in litigation charges compared to 2016. Professional service fees declined by € 555 million driven by lower legal fees and lower business consulting cost.

Impairment of goodwill and other intangible assets

2018

No impairment charges were reported for 2018.

2017

Impairment charges on goodwill and other intangible assets decreased to € 21 million in 2017 from € 1.3 billion in 2016. The 2016 charge reflected an impairment of € 1.0 billion in AM, triggered by the sale of Abbey Life and an impairment of € 285 million in CIB following the transfer of certain businesses from AM.

Restructuring

2018

Restructuring expenses amounted to € 360 million in 2018 compared to € 447 million in 2017. The decrease was mainly driven by lower charges in PCB partially offset by higher expenses in CIB reflecting the higher spend from strategic repositioning.

2017

Restructuring expenses amounted to € 447 million in 2017 compared to € 484 million in 2016. Restructuring charges for 2017 were primarily related to the planned merger of Deutsche Bank Privat- und Geschäftskunden AG and Postbank.

Income Tax Expense

2018

Income tax expense in 2018 was € 989 million compared to € 2.0 billion in 2017. The effective tax rate of 74 % (2017: 160 %) was mainly impacted by changes in the recognition and measurement of deferred tax assets and share based payment related tax effects.

2017

Income tax expense in 2017 was € 2.0 billion compared to € 546 million in 2016. The effective tax rate of 160 % (2016: negative 67 %) was mainly impacted by a one-time charge of € 1.4 billion resulting from the U.S. tax reform and other changes in the recognition and measurement of deferred tax assets.

Net income (loss)

2018

The net income of € 341 million in 2018, compared to a net loss of € 735 million in 2017, was primarily driven by the non-recurrence of the aforementioned one-time tax charge and lower noninterest expenses.

2017

The 2017 result was a net loss of € 735 million, driven by the aforementioned one-time tax charge attributable to the re-measurement of US deferred tax assets as a result of the U.S. tax reform, compared to a net loss of € 1.4 billion in 2016.

Segment Results of Operations

The following is a discussion of the results of our business segments. See Note 4 “Business Segments and Related Information” to the consolidated financial statements for information regarding:

- changes in the format of our segment disclosure and
- the framework of our management reporting systems.

The criterion for segmentation into divisions is our organizational structure as it existed at December 31, 2018. Prior period comparables were restated due to changes in the divisional structure. Segment results were prepared in accordance with our management reporting systems.

	2018					
in € m. (unless stated otherwise)	Corporate & Investment	Private & Commercial	Asset Management	Non-Core Operations	Corporate & Other	Total Consolidated

	Bank	Bank		Unit		
Net revenues1	13,046	10,158	2,186	–	(73)	25,316
Provision for credit losses	120	406	(1)	–	0	525
Noninterest expenses						
Compensation and benefits	3,970	4,001	787	–	3,055	11,814
General and administrative expenses	8,115	4,867	929	–	(2,624)	11,286
Policyholder benefits and claims	0	0	0	–	0	0
Impairment of goodwill and other intangible assets	0	0	0	–	0	0
Restructuring activities	287	55	19	–	0	360
Total noninterest expenses	12,372	8,923	1,735	–	431	23,461
Noncontrolling interests	24	(0)	85	–	(109)	0
Income (loss) before income taxes	530	829	367	–	(396)	1,330
Cost/income ratio	95 %	88 %	79 %	–	N/M	93 %
Assets2	988,531	343,704	10,030	–	5,872	1,348,137
Additions to non-current assets	514	516	43	–	575	1,647
Risk-weighted assets3	236,306	87,709	10,365	–	16,053	350,432
CRD 4 leverage exposure measure (spot value at reporting date)	892,653	354,584	5,044	–	20,644	1,272,926
Average shareholders' equity	43,427	14,514	4,669	–	0	62,610
Post-tax return on average tangible shareholders' equity4	1 %`	5 %	18 %	–	N/M	1 %
Post-tax return on average shareholders' equity4	1 %	4 %	6 %	–	N/M	0 %
1 includes:						
Net interest income	3,574	6,077	(52)	–	3,592	13,192
Net income (loss) from equity method investments	170	2	41	–	6	219

2 includes:						
Equity method investments	556	78	240	–	5	879

N/M – Not meaningful

3Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

4The post-tax return on average tangible shareholders' equity and average shareholders' equity at the Group level reflects the reported effective tax rate for the Group, which was 74 % for the year ended December 31, 2018. For the post-tax return on average tangible shareholders' equity and average shareholders' equity of the segments, the Group effective tax rate was adjusted to exclude the impact of permanent differences not attributed to the segments, so that the segment tax rates were 28 % for the year ended December 31, 2018.

	2017					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total Consolidated
Net revenues1	14,227	10,178	2,532	–	(489)	26,447
Provision for credit losses	213	313	(1)	–	(0)	525
Noninterest expenses						
Compensation and benefits	4,364	4,027	812	–	3,050	12,253
General and administrative expenses	8,441	5,012	978	–	(2,458)	11,973
Policyholder benefits and claims	0	0	0	–	0	0
Impairment of goodwill and other intangible assets	6	12	3	–	0	21
Restructuring activities	81	360	6	–	0	447
Total noninterest expenses	12,892	9,411	1,799	–	593	24,695
Noncontrolling interests	26	(12)	1	–	(16)	0
Income (loss) before income taxes	1,096	465	732	–	(1,066)	1,228
Cost/income ratio	91 %	93 %	71 %	–	N/M	93 %
Assets2	1,127,028	333,069	8,050	–	6,586	1,474,732
Additions to non-current assets	125	551	60	–	1,067	1,803
Risk-weighted assets3	231,574	87,472	8,432	–	16,734	344,212

CRD 4 leverage exposure measure (spot value at reporting date)	1,029,946	344,087	2,870	–	17,983	1,394,886
Average shareholders' equity	44,197	14,943	4,687	–	99	63,926
Post-tax return on average tangible shareholders' equity4	2 %	2 %	56 %	–	N/M	(1) %
Post-tax return on average shareholders' equity4	2 %	2 %	10 %	–	N/M	(1) %
1 includes:						
Net interest income	4,104	5,875	(19)	–	2,418	12,378
Net income (loss) from equity method investments	81	3	44	–	9	137
2 includes:						
Equity method investments	553	91	211	–	10	866

N/M – Not meaningful

3Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

4The post-tax return on average tangible shareholders' equity and average shareholders' equity at the Group level reflects the reported effective tax rate for the Group, which was 160 % for the year ended December 31, 2017. For the post-tax return on average tangible shareholders' equity and average shareholders' equity of the segments, the Group effective tax rate was adjusted to exclude the impact of permanent differences not attributed to the segments, so that the segment tax rates were 33 % for the year ended December 31, 2017.

	2016					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total Consolidated
Net revenues1	16,764	11,090	3,015	(382)	(473)	30,014
Provision for credit losses	816	439	1	128	(0)	1,383
Noninterest expenses						
Compensation and benefits	4,062	4,075	737	68	2,931	11,874
General and administrative expenses	9,280	4,888	1,026	2,659	(2,398)	15,454
Policyholder benefits and claims	0	0	374	0	0	374
	285	0	1,021	(49)	(0)	1,256

Impairment of goodwill and other intangible assets						
Restructuring activities	299	142	47	4	(7)	484
Total noninterest expenses	13,926	9,104	3,205	2,682	525	29,442
Noncontrolling interests	49	0	0	(4)	(46)	0
Income (loss) before income taxes	1,973	1,547	(190)	(3,187)	(952)	(810)
Cost/income ratio	83 %	82 %	106 %	N/M	N/M	98 %
Assets2	1,201,894	329,869	12,300	5,523	40,959	1,590,546
Additions to non-current assets	22	480	1	0	1,517	2,019
Risk-weighted assets3	237,596	86,082	8,960	9,174	15,706	357,518
CRD 4 leverage exposure measure (spot value at reporting date)	954,203	342,424	3,126	7,882	40,018	1,347,653
Average shareholders' equity	40,312	14,371	4,460	690	2,249	62,082
Post-tax return on average tangible shareholders’ equity4	3 %	8 %	71 %	N/M	N/M	(3) %
Post-tax return on average shareholders’ equity4	3 %	7 %	(3) %	N/M	N/M	(2) %
1 includes:						
Net interest income	6,314	6,201	326	142	1,724	14,707
Net income (loss) from equity method investments	138	5	44	269	(1)	455
2 includes:						
Equity method investments	698	23	203	98	4	1,027

N/M – Not meaningful

3Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

4The post-tax return on average tangible shareholders’ equity and average shareholders’ equity at the Group level reflects the reported effective tax rate for the Group, which was (67) % for the year ended December 31, 2016. For the post-tax return on average tangible shareholders’ equity and average shareholders’ equity of the segments, the Group effective tax rate was adjusted to exclude the impact of permanent differences not attributed to the segments, so that the segment tax rates were 35 % for the year ended December 31, 2016.

Corporate & Investment Bank

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues							
Global Transaction Banking	3,834	3,917	4,419	(83)	(2)	(502)	(11)
Equity Origination	362	396	405	(34)	(9)	(9)	(2)
Debt Origination	1,081	1,327	1,393	(247)	(19)	(66)	(5)
Advisory	493	508	495	(16)	(3)	13	3
Origination and Advisory	1,935	2,232	2,292	(296)	(13)	(60)	(3)
Sales & Trading (Equity)	1,957	2,233	2,751	(276)	(12)	(518)	(19)
Sales & Trading (FIC)	5,361	6,447	7,066	(1,087)	(17)	(619)	(9)
Sales & Trading	7,317	8,680	9,817	(1,363)	(16)	(1,137)	(12)
Other	(40)	(601)	235	561	(93)	(836)	N/M
Total net revenues	13,046	14,227	16,764	(1,181)	(8)	(2,537)	(15)
Provision for credit losses	120	213	816	(94)	(44)	(603)	(74)
Noninterest expenses							
Compensation and benefits	3,970	4,364	4,062	(393)	(9)	302	7
General and administrative expenses	8,115	8,441	9,280	(326)	(4)	(839)	(9)
Impairment of goodwill and other intangible assets	0	6	285	(6)	N/M	(279)	(98)
Restructuring activities	287	81	299	205	N/M	(218)	(73)
Total noninterest expenses	12,372	12,892	13,926	(520)	(4)	(1,034)	(7)
Noncontrolling interests	24	26	49	(2)	(7)	(23)	(46)
Income (loss) before income taxes	530	1,096	1,973	(566)	(52)	(877)	(44)
Cost/income ratio	95 %	91 %	83 %	N/M	4 ppt	N/M	8 ppt
Assets[1]	988,531	1,127,028	1,201,894	(138,497)	(12)	(74,866)	(6)
Risk-weighted assets[2]	236,306	231,574	237,596	4,733	2	(6,022)	(3)
Average shareholders' equity[3]	43,427	44,197	40,312	(770)	(2)	3,885	10
Post-tax return on average tangible shareholders’ equity	1 %	2 %	3 %	N/M	(1) ppt	N/M	(2) ppt
Post-tax return on average shareholders' equity	1 %	2 %	3 %	N/M	(1) ppt	N/M	(2) ppt

N/M – Not meaningful

1Segment assets represent consolidated view, i.e., the amounts do not include intersegment balances.

2Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

3See Note 4 “Business Segments and Related Information” to the consolidated financial statements for a description of how average shareholders' equity is allocated to the divisions.

2018

In 2018, CIB announced, initiated and completed headcount and resource reductions as part of the division’s strategic reshaping. This reshaping had a negative near term impact on revenues, but allowed the division to reduce leverage exposure and refocus on areas of strength. CIB income before income taxes for the full year 2018 was € 530 million or 52 % lower than the prior year. The decrease year over year was mainly driven by lower revenues, and higher restructuring costs, partly offset by lower compensation and benefits, general and administrative expenses and provisions for credit losses.

CIB net revenues for the full year 2018 were € 13 billion, a decrease of € 1.2 billion or 8 % compared to the full year 2017.

Global Transaction Banking net revenues were € 3.8 billion, a decrease of € 83 million or 2 % compared to 2017. Cash Management revenues were slightly lower, as a result of client perimeter reductions in 2017 and continued negative interest rates in Europe. However the business saw sequential revenue growth quarter-on-quarter through 2018. Trade revenues were slightly lower, specifically in structured products due to ongoing margin compression, while the underlying flow business showed positive development. Trust, Agency and Securities Services revenues were higher driven by a gain on sale on an asset disposal in the second quarter of 2018 and benefitted from higher interest rates in the U.S.

Origination and Advisory net revenues were € 1.9 billion, a € 296 million or 13 % decrease compared to the prior year. Debt Origination revenues were € 247 million or 19 % lower in a significantly reduced fee pool environment, despite significant market share gains in leveraged loans. Equity Origination revenues were € 34 million or 9 % lower. Advisory revenues were essentially flat compared to 2017.

Sales & Trading (FIC) net revenues were € 5.4 billion, a decrease of € 1.1 billion or 17 %. Rates revenues were significantly lower compared to the prior year, in particular in Europe with lower levels of client activity and the impact of the strategic reshaping in the U.S. Credit revenues were lower compared to a strong prior year. Foreign Exchange revenues were essentially flat. Revenues in Emerging Markets were lower due to underperformance in Latin America, specifically in the flow business, partly offset by an improvement in Eastern Europe, Middle East and Africa. Foreign Exchange and Rates revenues in Asia Pacific were lower due to performance in Japan and Australia, partly offset by strong revenues in Asia.

Sales & Trading (Equity) net revenues were € 2.0 billion, a decrease of € 276 million, or 12 %. Revenues in Prime Finance were slightly lower. Equity Derivatives revenues were slightly lower due to reduced client flow across both Europe and Asia Pacific, partly offset by a solid performance in the U.S., which benefited from increased volatility in the first quarter of 2018. Cash Equity revenues were lower due to facilitation losses in the Americas and the non-recurrence of gains on asset sales in the previous year.

Other net revenues were negative € 40 million, compared to negative € 601 million in 2017. The year over year improvement was driven by a gain of € 126 million (2017: a loss of € 348 million) relating to the impact of DVA on certain derivative liabilities. The non-recurrence of negative revenue events relating to assets identified as not consistent with CIB’s strategy also impacted the year-on-year comparison. Investment grade lending revenues were essentially flat compared to 2017.

Provision for credit losses were € 120 million compared to € 213 million in the prior year. In the first half of 2018 de-risking on our shipping portfolio made further progress, while the benign macro-economic environment throughout the majority of the year supported the low level of net provisions. The fourth quarter of 2018 did see an increase mainly due to higher Stage 1 & 2 provisions. This was due to a weakening macro-economic outlook, which has an impact due to the forward looking information element of IFRS 9, in addition to a one-off adjustment to the calculation methodology on certain loans on which we hold insurance protection.

Non-interest expenses in 2018 were € 12.4 billion, a decrease of € 520 million or 4 % compared to the prior year. The decrease was driven by lower compensation and benefits costs across both fixed and variable compensation reflecting the strategic headcount actions. Non compensation costs were also lower across a number of line items due to continued cost discipline. The cost reductions were partially offset by increased restructuring costs.

2017

CIB Income before income taxes in 2017 of € 1.1 billion was € 877 million or 44 % lower than in the previous year. The period-over-period reduction in revenues was only partially offset by reduced noninterest expenses and lower credit loss provisions.

CIB net revenues for the full year 2017 were € 14.2 billion, a decrease of € 2.5 billion, or 15 % year-on-year.

Global Transaction Banking net revenues were € 3.9 billion, a decrease of € 502 million, or 11 %. Cash Management revenues were slightly lower, as interest rate increases in the U.S. partly offset the negative impact of client and product perimeter reductions initiated in 2016. Trade revenues were lower, driven by active balance sheet management efforts and continued margin pressure. Trust, Agency and Securities Services revenues were essentially flat, as lower transaction volumes due to client and country exits were offset by interest rate increases in the U.S. In addition, GTB revenues were negatively impacted by a change in funding charges allocation methodology in 2017.

Origination and Advisory revenues were € 2.2 billion, a € 60 million, or 3 % decrease compared to the prior year. Equity Origination revenues decreased by € 9 million or 2 %. Debt Origination revenues were € 66 million or 5 % lower, with a strong first quarter of 2017 supported by high inflows into the Leveraged Loan market, offset by slightly lower revenues during the remainder of 2017 amid lower client activity and Deutsche Bank's reduced risk appetite in the U.S. Advisory revenues were € 13 million or 3 % higher driven by a robust market and strong deal participation.

Sales & Trading (FIC) net revenues were € 6.4 billion, a decrease of € 619 million, or 9 %. Credit revenues were essentially flat supported by strong performance in distressed products in the first half of 2017, offset by less favorable trading conditions for flow businesses in the second half of 2017. Rates revenues were higher with solid performance in Europe, partly offset by a weaker performance in the U.S. Foreign Exchange revenues were significantly lower as a persistently low volatility environment impacted client flows. Asia Pacific Foreign Exchange and Rates revenues decreased with a strong first quarter of 2017 offset by lower client activity during the remainder of the year. Emerging Markets revenues were significantly lower due to subdued client flow and specific developments in Venezuela, South Africa and Turkey towards the end of the year.

Sales & Trading (Equity) net revenues were € 2.2 billion, a decrease of € 518 million, or 19 %. Revenues in Prime Finance were lower reflecting lower average balances during the year, reduced margins and higher funding cost. Equity Derivatives revenues were lower with a challenging trading environment particularly in the second half of 2017. Cash Equities revenues were essentially flat with volumes remaining challenged.

Other revenues were negative € 601 million, compared to a gain of € 235 million in 2016. 2017 included a loss of € 348 million (2016: a gain of € 27 million) relating to the impact of DVA on certain derivative liabilities. € 136 million of this loss was driven by a change in the creditor hierarchy in the event of a bank insolvency which was introduced by the German Resolution Mechanism Act (Abwicklungsmechanismusgesetz), effective January 1, 2017. This hierarchy change results in derivative counterparties receiving greater protection as they would be satisfied prior to senior unsecured debt holders in the creditor waterfall structure. This greater protection increases the value of the derivative assets for the counterparty, thereby increasing the value of derivative liabilities on our balance sheet, resulting in the loss. Revenues associated with assets identified as not consistent with CIB's strategy are reported under 'Other' as of the second quarter of 2017, including a negative impact related to the valuation of the legacy RMBS portfolio.

Provision for credit losses of € 213 million were down 74 % year-on-year. The decrease resulted primarily from reductions across all portfolios, including shipping. Despite the year-over-year reduction, shipping continued to be the main driver of provision for credit losses in 2017.

Noninterest expenses of € 12.9 billion, were € 1.0 billion, or 7 % lower than in 2016. Reduced litigation provisions, materially lower goodwill impairment and lower restructuring all positively impacted the comparison versus the prior year. Compensation costs increased due to the normalization of variable compensation payments in 2017, partially offset by lower non-compensation expenses. The year-on-year development of noninterest expenses also benefitted from foreign exchange rate movements.

Private & Commercial Bank

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues:							
Private and Commercial Business (Germany)	6,802	6,583	6,873	220	3	(290)	(4)
Private and Commercial Business (International)1	1,439	1,455	1,466	(16)	(1)	(11)	(1)
Wealth Management (Global)	1,746	2,021	1,720	(274)	(14)	301	18
Exited businesses2	170	119	1,031	51	42	(912)	(88)
Total net revenues	10,158	10,178	11,090	(20)	(0)	(912)	(8)
Of which:							
Net interest income	6,077	5,875	6,201	202	3	(326)	(5)
Commissions and fee income	3,143	3,367	3,395	(224)	(7)	(28)	(1)
Remaining income	937	935	1,494	2	0	(558)	(37)
Provision for credit losses	406	313	439	93	30	(126)	(29)
Noninterest expenses:							
Compensation and benefits	4,001	4,027	4,075	(26)	(1)	(47)	(1)
General and administrative expenses	4,867	5,012	4,888	(145)	(3)	124	3
Impairment of goodwill and other intangible assets	0	12	0	(12)	N/M	12	N/M
Restructuring activities	55	360	142	(305)	(85)	218	154
Total noninterest expenses	8,923	9,411	9,104	(488)	(5)	307	3

Noncontrolling interests	(0)	(12)	0	12	(100)	(12)	N/M
Income (loss) before income taxes	829	465	1,547	363	78	(1,081)	(70)
Cost/income ratio	88 %	92 %	82 %	N/M	(5) ppt	N/M	10 ppt
Assets3	343,704	333,069	329,869	10,635	3	3,200	1
Risk-weighted assets4	87,709	87,472	86,082	237	0	1,390	2
Average shareholders' equity5	14,514	14,943	14,371	(429)	(3)	572	4
Post-tax return on average tangible shareholders' equity	5 %	2 %	8 %	N/M	2 ppt	N/M	(6) ppt
Post-tax return on average shareholders' equity	4 %	2 %	7 %	N/M	2 ppt	N/M	(5) ppt

N/M – Not meaningful

1Covers operations in Belgium, India, Italy and Spain.

2 Covers operations in Poland and Portugal as well as Private Client Services (PCS) and Hua Xia in historical periods.

3 Segment assets represent consolidated view, i.e., the amounts do not include intersegment balances.

4Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

5 See Note 4 "Business Segments and Related Information" to the consolidated financial statements for a description of how average shareholders' equity is allocated to the divisions.

Additional information

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € bn. (unless stated otherwise)	2018	2017	2016	in € bn.	in %	in € bn.	in %
Assets under management[1]	474	506	501	(32)	(6)	5	1
Net flows	(2)	4	(42)	(6)	N/M	47	N/M

N/M – Not meaningful

1 We define assets under management as (a) assets we hold on behalf of customers for investment purposes and/or (b) client assets that are managed by us. We manage assets under management on a discretionary or advisory basis, or these assets are deposited with us. Deposits are considered assets under management if they serve investment purposes. In our Private and Commercial Business (Germany) and Private and Commercial Business (International), this includes all time deposits and savings deposits. In Wealth Management, we assume that all customer deposits are held with us primarily for investment purposes.

2018

In 2018, PCB successfully completed the legal merger of Deutsche Bank Privat- und Geschäftskunden AG and Postbank, the partial sale of the retail business in Poland, the integration of Sal. Oppenheim and further optimized its branch network. PCB generated income before income taxes of € 829 million in 2018, an increase of € 363 million, or 78 %, compared to the prior year, which was achieved while sustaining continued investment in our strategic

initiatives and despite the ongoing headwind from low interest rate environment. The increase was primarily driven by a decline in noninterest expenses, partly offset by higher provision for credit losses, reflecting a provision release in the prior year as well as loan growth in 2018.

PCB net revenues of € 10.2 billion remained essentially flat compared to the prior year period.

In the Private and Commercial Business (Germany) net revenues increased by € 220 million, or 3 %, compared to the prior year period. Net interest income increased slightly compared to 2017, driven by growth in loan revenues, positive valuation effects from home savings liabilities and a positive year-on-year impact from mortgage loans previously measured at fair value and measured at amortized cost basis since the adoption of the reporting standard IFRS 9. These effects more than offset the impact of the low interest rate environment on deposit margins. Deposit revenues also included a positive impact from the growth in volumes. Remaining income increased significantly mainly reflecting higher asset sales including a € 156 million gain from a property sale, partly offset by lower income from interest-rate-risk hedges. The prior year period included a negative impact of € 118 million from the termination of a legacy Trust Preferred Security, which largely offset the positive impact of € 108 million from the sale of shares in Concardis GmbH. Commission and fee income slightly decreased year-on-year. Lower revenues from postal services subsequent to a contract alignment as well as lower revenues from investment products, in part impacted by MiFID II implementation were partly offset by higher fee income from current accounts reflecting repricing actions.

In the Private and Commercial Business (International), net revenues decreased by € 16 million, or 1 %, compared to the prior year period. The decrease was mainly driven by positive effects related to an asset sale transaction in 2017, reported in Remaining income. Net interest income remained essentially flat compared to the prior year period, with negative impacts from the ongoing low interest rate environment on deposit revenues offset by higher loan revenues. Commission and fee income was essentially flat compared to the previous year as growth in commercial product revenues offset the decline in investment product revenues due to the challenging market environment.

Net revenues in Wealth Management (Global) declined by € 274 million, or 14 %, driven by a € 197 million lower impact from workout activities related to legacy positions in the Sal. Oppenheim franchise. Net revenues were also impacted by unfavorable foreign exchange rate movements. Excluding these effects, net revenues were essentially flat compared to the prior year period. Revenue growth in Asia-Pacific was offset by lower client revenues in EMEA and Germany partly impacted by MiFID II implementation and strategic business decisions as well as volatile capital markets and lower client activity.

In the exited businesses, net revenues increased by € 51 million, or 42 %, compared to the prior year period. The increase was driven by a lower negative impact from sales transactions in Poland and Portugal (2017 was impacted by € 157 million related to the agreement of the partial sale of the retail business in Poland compared to a € 57 million negative effect from the transactions in Portugal and Poland in 2018). This was partly offset by a lower client revenue contribution in Poland due to its sale in November 2018 and the non-recurrence of a positive impact of € 20 million related to the disposal of the PCS unit.

Provision for credit losses of € 406 million increased by € 93 million, or 30 %, compared to the prior year period. This increase reflected higher releases in the previous year period mainly related to a single provision in Postbank as well as loan growth. Both periods included positive impacts from portfolio sales.

Noninterest expenses of € 8.9 billion decreased by € 488 million, or 5 %, compared to 2017. The decline included € 305 million lower restructuring charges related to strategy execution including the reorganization and integration measures in Germany as well as lower litigation costs. In addition, the decline in noninterest expenses is attributable to savings reflecting strict cost discipline as well as executed reorganization measures. These positive impacts were partly offset by incremental investment spending of approximately € 220 million related to the merger of Deutsche Bank Privat- und Geschäftskunden AG and Postbank, investments in our businesses in Italy and Spain as well as costs related to the agreements to sell businesses in Portugal and Poland.

PCB's Assets under Management of € 474 billion decreased by € 32 billion compared to December 31, 2017. The decline was mainly attributable to € 30 billion market depreciation, a deconsolidation effect of € 4 billion subsequent to the disposal of the business in Poland and € 2 billion net outflows partly compensated by € 4 billion foreign exchange rate movements. Net inflows in the Private and Commercial Business (Germany) primarily in deposits were offset by net outflows in Wealth Management. In Wealth Management, net inflows in Germany and Asia Pacific region were more than offset by net outflows in EMEA and Americas.

2017

PCB's results in 2017 were significantly impacted by strategy-related items, which included restructuring provisions related to the merger of Deutsche Bank Privat- und Geschäftskunden AG and Postbank as well as a negative revenue impact subsequent to the agreement related to the partial sale of the retail business in Poland. In contrast, results in 2016 benefited from a gain related to the sale of the stake in Hua Xia Bank Co. Ltd. These specific factors as well as the challenging interest environment explain most of the year-on-year decline of € 1.1 billion in PCB's income before income taxes of € 465 million.

Total net revenues of € 10.2 billion decreased by € 912 million, or 8 %, compared to 2016.

In the Private and Commercial Business (Germany) net revenues declined by € 290 million, or 4 %, compared to the prior year. Remaining income was significantly lower as in 2016, which benefited from gains on certain asset sales including € 129 million related to the sale of shares in VISA Europe Limited. In 2017 Remaining income included a negative impact of € 118 million from the termination of a legacy trust preferred security, which was largely compensated by a gain of € 108 million from the sale of shares in Concardis GmbH. Net interest income declined slightly year-on-year as the ongoing impact of the low interest rate environment on deposit revenues was partly mitigated by higher loan revenues reflecting growth in lending volumes. Commission and fee income increased slightly reflecting higher fee income from current accounts subsequent to the introduction of a new pricing model for current accounts (in Postbank) and higher revenues from investment products.

Revenues in the Private and Commercial Business (International) declined year-on-year by € 11 million, or 1 %. Remaining income decreased compared to 2016, which also included € 73 million gains related to the sale of shares in VISA Europe Limited, while revenues in 2017 included a smaller positive impact from an asset sale transaction. Net interest income was essentially flat as the impact of the low interest rate environment on deposit revenues was partly offset by higher loan revenues. Commission and fee income increased slightly principally reflecting higher fees from cards and current accounts as well as improved revenues from investment products.

Revenues in the Wealth Management (Global) businesses increased by € 301 million, or 18 %, mainly driven by positive impacts of approximately € 400 million from workout activities in the Sal. Oppenheim franchise. Workout gains were primarily driven by favorable legal outcomes which positively impacted the valuation of loans, whose carrying values were reduced as part of the acquisition. Excluding these effects, net revenues decreased compared to 2016 reflecting foreign exchange rate movements as well as a decline in net interest revenues driven by loan book reductions mainly in the Americas. Commission and fee income was slightly below 2016, reflecting lower client activities and a lower asset base in the Americas and EMEA partly compensated by good growth in Asia Pacific.

In the exited businesses, net revenues declined by € 912 million, or 88 % year-on-year. 2016 included a € 618 million revenue contribution from Hua Xia Bank Co. Ltd. as well as a € 140 million higher revenue contribution from the Private Client Services (PCS) unit in the U.S. prior to its sale. Net revenues in 2017 were also negatively impacted by € 157 million related to the agreement of the partial sale of the retail business in Poland.

Provision for credit losses of € 313 million decreased by € 126 million, or 29 %, year-on-year benefiting from a provision release in Postbank as well as a good portfolio quality in a continued benign economic environment. Both periods included positive impacts from selective portfolio sales.

Noninterest expenses of € 9.4 billion increased by € 307 million, or 3 %, compared to 2016. Noninterest expenses in 2017 included net restructuring charges of € 360 million (€ 142 million in 2016) related to strategic items including the reorganization and integration measures in Germany. Noninterest expenses also increased due to higher variable compensation and higher investment spending. These effects were partially offset by savings from executed reorganization measures and a reduced cost base after the disposal of the PCS unit.

PCB's Assets under Management of € 506 billion increased by € 5 billion compared to December 31, 2016. Negative impacts from foreign exchange rate movements were more than offset by market appreciation and by net inflows of € 4 billion primarily in the Private and Commercial Business (Germany). Net inflows were mainly in deposit products, in part reflecting the successful win-back of mandates. In Wealth Management net inflows were partly impacted by strategic business decisions and continued de-risking.

Asset Management

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues							
Management Fees	2,115	2,247	2,190	(132)	(6)	57	3
Performance and transaction fees	91	199	220	(109)	(55)	(21)	(9)
Other revenues	(20)	86	209	(106)	N/M	(123)	(59)
Mark-to-market movements on policyholder positions in Abbey Life	0	0	396	0	N/M	(396)	N/M
Total net revenues	2,186	2,532	3,015	(346)	(14)	(483)	(16)
Provision for credit losses	(1)	(1)	1	(0)	67	(1)	N/M
Noninterest expenses							
Compensation and benefits	787	812	737	(25)	(3)	75	10
General and administrative expenses	929	978	1,026	(49)	(5)	(48)	(5)
Policyholder benefits and claims	0	0	374	(0)	N/M	(374)	(100)
Impairment of goodwill and other intangible assets	0	3	1,021	(3)	N/M	(1,018)	(100)
Restructuring activities	19	6	47	13	N/M	(41)	(88)
Total noninterest expenses	1,735	1,799	3,205	(64)	(4)	(1,405)	(44)
Noncontrolling interests	85	1	0	83	N/M	1	N/M
Income (loss) before income taxes	367	732	(190)	(364)	(50)	922	N/M
Cost/income ratio	79 %	71 %	106 %	N/M	8 ppt	N/M	(35) ppt
Assets[1]	10,030	8,050	12,300	1,980	25	(4,250)	(35)
Risk-weighted assets[2]	10,365	8,432	8,960	1,932	23	(528)	(6)
Average shareholders' equity[3]	4,669	4,687	4,460	(19)	(0)	227	5

Post-tax return on average tangible shareholders' equity	18 %	56 %	71 %	N/M	(38) ppt	N/M	(15) ppt
Post-tax return on average shareholders' equity	6 %	10 %	(3) %	N/M	(5) ppt	N/M	13 ppt

N/M – Not meaningful

1Segment assets represent consolidated view, i.e., the amounts do not include intersegment balances.

2Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

3See Note 4 "Business Segments and Related Information" to the consolidated financial statements for a description of how average shareholders' equity is allocated to the divisions.

2018

In Asset Management, the initial public offering of DWS was successfully completed during the first quarter of 2018. Market conditions were challenging in 2018 with US tax reform and lower demand for European retail funds posing challenges to AM and the asset management industry. AM is adapting to the market conditions by further accelerating cost reductions. In line with its communicated target, AM maintained a management fee margin of 30 basis points and above in 2018. In 2018 AM reported significantly lower income before income taxes of € 367 million, a € 364 million or 50 % decline compared to 2017. The decline was principally driven by lower revenues which were negatively impacted by unfavorable net flows and lower performance fees. Higher non-controlling interest attributable to minority shareholders for nine months following the initial public offering of DWS, which did not arise in the prior year, were partially offset by lower noninterest expenses.

Net revenues were € 2.2 billion, a decrease of € 346 million or 14 %.

Management fees were € 132 million, or 6 % lower, driven by net outflows of Assets under Management and fee margin compression in active managed products, lower Assets under Management driven fees in Alternatives and the absence of revenues from sold and discontinued businesses. The decline was partly compensated by the strong performance of Passive business from higher Assets under Management.

Performance and transaction fees were significantly lower by € 109 million or 55 %, due to the absence of fees for a specific Alternatives fund received in 2017 and lower performance fees from Active products.

Other revenues were significantly lower by € 106 million compared to the prior year. The decline was primarily due to the impact of sold and discontinued businesses in both 2017 and 2018 and the absence of a non-recurring recovery relating to a real-estate fund legal matter recorded in 2017.

Noninterest expenses of € 1.7 billion were € 64 million, or 4 % lower. Compensation and benefits were essentially flat with lower variable compensation costs offset by higher severance payments. General and administrative expenses were slightly lower driven by a significant decline in cost of services provided by Deutsche Bank Group to DWS, partially offset by litigation expenses relating to a sold legacy business, higher MiFID II driven external research costs and higher costs for DWS operating as a stand-alone company.

Assets under Management were € 664 billion, a decrease of € 37 billion, or 5 %, versus December 31, 2017. The decrease was driven by € 28 billion unfavorable market development and € 23 billion net outflows, partly offset by

€ 13 billion positive foreign exchange effects. The outflows were primarily driven by outsourced insurance assets and the impact of US companies repatriating assets following US tax reforms. The development in Assets under Management was also impacted by volatile markets and weaker investor sentiment together with underperformance in some flagship funds. Passive had strong inflows particularly in European Exchange Traded Products and mandates.

The following table provides the development of Assets under Management during 2018, broken down by product type as well as the respective management fee margins:

in € bn.	Active Equity	Active Fixed Income	Active Multi Asset	Active SQI	Active Cash	Passive	Alternatives	Assets under Management
Balance as of December 31, 2017	95	238	57	65	59	115	73	702
Inflows	14	58	10	16	490	56	10	655
Outflows	(21)	(75)	(14)	(17)	(493)	(48)	(9)	(678)
Net Flows	(7)	(17)	(3)	(0)	(3)	8	1	(23)
FX impact	1	6	0	0	1	3	1	13
Performance	(10)	(2)	(3)	(3)	0	(11)	0	(28)
Other	0	1	0	(0)	(0)	(0)	1	1
Balance as of December 31, 2018	78	226	51	61	58	115	76	664
Management fee margin (in bps)	76	14	39	26	7	25	53	31

1Inflows and Outflows as reported include the AuM shifts between asset classes.

2017

In 2017, AM reported significantly higher income before income taxes of € 732 million, a € 922 million increase compared to 2016, driven by the absence of the impairment of goodwill and other intangible assets related to Abbey Life recorded in 2016. Excluding Abbey Life, which was disposed in the fourth quarter of 2016, AM income before income taxes in 2017 was broadly flat compared to 2016, as higher revenues were offset by higher noninterest expenses and several non-recurring items.

Net revenues were € 2.5 billion, a decrease of € 483 million or 16 %. Excluding Abbey Life in 2016, net revenues increased by € 54 million, or 2 %, compared to the prior year.

Management fees increased slightly by € 57 million, or 3 %, mainly in Active driven by favorable market movements.

Performance and transaction fees were € 21 million or 9 % lower, primarily driven by lower fund performance fees from one of the Active funds compared to the prior year.

Other revenues were significantly lower by € 123 million or 59 % compared to the prior year. The decline was primarily due to non-recurring revenues from Abbey Life excluding mark-to-market revenues and proceeds on sale of Asset Management India as well as a write-up relating to HETA exposure which was exited in 2016 - these impacts were partly offset by a recovery relating to a real-estate fund legal matter in the current year and the loss on sale of the Luxembourg-based Sal. Oppenheim asset servicing business and negative fair value related to guaranteed products in

prior year. Following the sale of Abbey Life in 2016, no mark-to-market movements on policyholder positions were recorded in 2017, compared to € 396 million reported in the prior year.

Noninterest expenses of € 1.8 billion decreased significantly by € 1.4 billion, or 44 %, due to the non-recurrence of costs relating to Abbey Life and lower restructuring expenses. Compensation and benefits were higher due to increased variable compensation costs. General and administrative expenses were slightly lower compared to prior year, driven by the non-recurrence of costs relating to Abbey Life, partly offset by an operational loss provision taken in 2015 and released in 2016, coupled with 2017 costs relating to the DWS IPO.

Assets under Management were € 702 billion, a decrease of € 4 billion versus December 31, 2016, driven by € 36 billion unfavorable foreign exchange rate movements and € 13 billion divestments mainly relating to disposals of the Luxembourg-based Sal. Oppenheim asset servicing business and U.S. Private Clients business, partly offset by € 30 billion favorable market performance and € 16 billion net inflows led by European Exchange Traded Funds, multi asset and liquidity product net inflows, partly offset by insurance asset net outflows.

The following table provides the development of Assets under Management during 2017, broken down by product type as well as the respective management fee margins:

in € bn.	Active Equity	Active Fixed Income	Active Multi Asset	Active SQI	Active Cash	Passive	Alternatives	Assets under Management
Balance as of December 31, 2016	91	255	51	66	63	98	82	706
Inflows	19	70	21	16	410	36	16	589
Outflows	(21)	(72)	(10)	(20)	(409)	(25)	(15)	(573)
Net Flows	(2)	(2)	11	(4)	1	11	0	16
FX impact	(3)	(17)	(1)	(0)	(3)	(7)	(5)	(36)
Performance	9	5	1	2	(1)	11	3	30
Other	(1)	(3)	(6)	2	0	1	(6)	(13)
Balance as of December 31, 2017	95	238	57	65	59	115	73	702
Management fee margin (in bps)	76	14	42	24	9	24	58	32

1Inflows and Outflows as reported include the AuM shifts between asset classes.

Non-Core Operations Unit

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %

Net revenues	–	–	(382)	0	N/M	382	N/M
thereof:							
Net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss	–	–	(1,307)	0	N/M	1,307	N/M
Provision for credit losses	–	–	128	0	N/M	(128)	N/M
Noninterest expenses							
Compensation and benefits	–	–	68	0	N/M	(68)	N/M
General and administrative expenses	–	–	2,659	0	N/M	(2,659)	N/M
Policyholder benefits and claims	–	–	0	0	N/M	0	N/M
Impairment of goodwill and other intangible assets	–	–	(49)	0	N/M	49	N/M
Restructuring activities	–	–	4	0	N/M	(4)	N/M
Total noninterest expenses	–	–	2,682	0	N/M	(2,682)	N/M
Noncontrolling interests	–	–	(4)	0	N/M	4	N/M
Income (loss) before income taxes	–	–	(3,187)	0	N/M	3,187	N/M
Assets[1]	–	–	5,523	0	N/M	(5,523)	N/M
Risk-weighted assets[2]	–	–	9,174	0	N/M	(9,174)	N/M
Average shareholders' equity[3]	–	–	690	0	N/M	(690)	N/M

N/M – Not meaningful

1Segment assets represent consolidated view, i.e., the amounts do not include intersegment balances.

2Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

3See Note 4 “Business Segments and Related Information” to the consolidated financial statements for a description of how average shareholders’ equity is allocated to the divisions.

From 2017 onwards, Non-Core Operations Unit (NCOU) ceased to exist as a standalone division. The remaining legacy assets as of December 31, 2016 are now managed by the corresponding operating segments, predominately Corporate & Investment Bank and Private & Commercial Bank.

Corporate & Other (C&O)

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues	(73)	(489)	(473)	416	(85)	(17)	4
Provision for credit losses	0	(0)	(0)	1	N/M	0	(19)
Noninterest expenses							

Compensation and benefits	3,055	3,050	2,931	5	0	119	4
General and administrative expenses	(2,624)	(2,458)	(2,398)	(166)	7	(59)	2
Policyholder benefits and claims	0	0	0	0	N/M	0	N/M
Impairment of goodwill and other intangible assets	0	0	(0)	0	N/M	0	N/M
Restructuring activities	0	0	(7)	(0)	(85)	7	N/M
Total noninterest expenses	431	593	525	(161)	(27)	67	13
Noncontrolling interests	(109)	(16)	(46)	(93)	N/M	30	(65)
Income (loss) before income taxes	(396)	(1,066)	(952)	670	(63)	(114)	12
Assets1	5,872	6,586	40,959	(714)	(11)	(34,373)	(84)
Risk-weighted assets2	16,053	16,734	15,706	(681)	(4)	1,028	7
Average shareholders' equity	0	99	2,249	(99)	N/M	(2,150)	(96)

N/M – Not meaningful

[1] Assets in C&O reflect residual Treasury assets not allocated to the business segments as well as Corporate assets, such as deferred tax assets and central clearing accounts, outside the management responsibility of the business segments.

[2] Risk weighted assets are based upon CRR/CRD 4 fully loaded. Risk-weighted assets in C&O reflect Treasury and Corporate assets outside the management responsibility of the business segments, primarily the Group's deferred tax assets.

2018

C&O reported a loss before income taxes of € 396 million in 2018, an improvement of € 670 million, or 63 %, mainly driven by the realization of a negative currency translation adjustment in 2017, lower noninterest expenses as well as higher reversals of noncontrolling interests in 2018 primarily resulting from the initial public offering of DWS Group GmbH & Co. KGaA ("DWS").

Net revenues were negative € 73 million in 2018, compared to negative € 489 million in 2017. Net revenues in 2017 were impacted by the realization of a currency translation adjustment of negative € 164 million associated with the disposal of a non-strategic subsidiary in Argentina. Revenues related to maintaining funding and liquidity buffers in excess of business-based liquidity requirements amounted to negative € 73 million in 2018, compared to negative € 93 million in the prior year. Valuation and timing differences contributed revenues of € 107 million in 2018, compared to € 51 million in 2017.

Noninterest expenses were € 431 million in 2018, a decrease of € 161 million, or 27 %, compared to prior year, driven by lower-than-planned Infrastructure expenses in 2018. From 2018 onwards, Infrastructure expenses are allocated to the corporate divisions based on the planned allocations. Any difference between planned and actual allocations is captured within C&O. This was partly offset by expenses associated with shareholder activities as defined in the OECD Transfer Pricing Guidelines not allocated to the business divisions of € 422 million in 2018, compared to € 371 million in the prior year.

Noncontrolling interests are deducted from income before income taxes of the divisions and reversed in C&O. The increase from € 16 million in 2017 to € 109 million in 2018 was primarily a result of the aforementioned IPO of DWS.

2017

C&O reported a loss before income taxes of € 1.1 billion in 2017, compared to a loss of € 952 million in 2016, an increase of € 114 million, or 12 %, primarily driven by the realization of a negative currency translation adjustment and higher litigation costs in 2017, partly compensated by a positive valuation and timing impact.

Net revenues were negative € 489 million in 2017, compared to negative € 473 million in the prior year, a decline of € 17 million or 4 %. Net revenues in 2017 were impacted by the realization of a currency translation adjustment of negative € 164 million associated with the disposal of a non-strategic subsidiary in Argentina. Revenues related to maintaining funding and liquidity buffers in excess of business-based liquidity requirements were negative € 93 million in 2017, compared to negative € 12 million in 2016. Foreign exchange revaluation of proceeds from GBP denominated AT1 issuance was negative € 26 million in 2017, compared to negative € 127 million in the prior year. Valuation and timing differences contributed revenues of € 51 million in 2017, compared to negative € 148 million in 2016.

Noninterest expenses were € 593 million in 2017, an increase of € 67 million, or 13 %, compared to prior year. Litigation costs of € 112 million in 2017 increased by of € 130 million, compared to prior year. 2016 litigation costs benefitted from a € 73 million insurance recovery. This was partly offset by expenses associated with shareholder activities as defined in the OECD Transfer Pricing Guidelines not allocated to the business divisions of € 371 million in 2017, compared to € 411 million in 2016.

Noncontrolling interests are deducted from income before income taxes of the divisions and reversed in C&O. The decrease from € 46 million in 2016 to € 16 million in 2017 primarily related to CIB and PCB.

Financial Position

Assets

			2018 increase (decrease) from 2017	
in € m.	Dec 31, 2018	Dec 31, 2017	in € m.	in %
Cash and central bank balances	188,731	225,655	(36,924)	(16)
Interbank balances (w/o central banks)	8,881	9,265	(384)	(4)
Central bank funds sold and securities purchased under resale agreements	8,222	9,971	(1,749)	(18)
Securities borrowed	3,396	16,732	(13,336)	(80)
Financial assets at fair value through profit or loss				
Trading assets	152,738	184,661	(31,924)	(17)
Positive market values from derivative financial instruments	320,058	361,032	(40,974)	(11)
Non-trading financial assets mandatory at fair value through profit and loss	100,444	N/M	100,444	N/M
Financial assets designated at fair value through profit or loss	104	91,276	(91,172)	(100)
Total financial assets at fair value through profit or loss	573,344	636,970	(63,626)	(10)
Financial assets at fair value through other comprehensive income	51,182	N/M	51,182	N/M

Financial assets available for sale	N/M	49,397	(49,397)	N/M
Equity method investments	879	866	13	1
Loans at amortized cost	400,297	401,699	(1,403)	(0)
Securities held to maturity	N/M	3,170	(3,170)	N/M
Property and equipment	2,421	2,663	(241)	(9)
Goodwill and other intangible assets	9,141	8,839	302	3
Other assets	93,444	101,491	(8,047)	(8)
Of which: Brokerage and securities related receivables	66,675	83,015	(16,340)	(20)
Assets for current tax / Deferred tax assets	8,200	8,014	186	2
Total assets	1,348,137	1,474,732	(126,595)	(9)
Of which: Total central bank funds sold, securities purchased under resale agreements and securities loaned across all applicable measurement categories	81,467	104,800	(23,333)	(22)
at amortized cost	11,618	26,703	(15,085)	(56)
mandatory at fair value through profit and loss	68,752	N/M	68,752	N/M
designated at fair value through profit and loss	0	78,097	(78,097)	N/M
at fair value through other comprehensive income	1,097	N/M	1,097	N/M
Of which: Total loans across all applicable measurement categories	429,591	420,063	9,528	2
at amortized cost	400,297	401,699	(1,403)	(0)
at fair value through profit and loss (trading)	11,462	10,876	586	5
mandatory at fair value through profit and loss	12,741	N/M	12,741	N/M
designated at fair value through profit and loss	0	4,802	(4,802)	N/M
at fair value through other comprehensive income	5,092	N/M	5,092	N/M
available for sale at fair value	N/M	2,685	(2,685)	N/M

Liabilities and Equity

			2018 increase (decrease) from 2017	
in € m.	Dec 31, 2018	Dec 31, 2017	in € m.	in %
Deposits	564,405	581,873	(17,468)	(3)
Central bank funds purchased and securities sold under repurchase agreements	4,867	18,105	(13,239)	(73)
Securities loaned	3,359	6,688	(3,330)	(50)
Financial liabilities at fair value through profit or loss	415,680	478,636	(62,957)	(13)
Trading liabilities	59,924	71,462	(11,539)	(16)
Negative market values from derivative financial instruments	301,487	342,726	(41,239)	(12)
Financial liabilities designated at fair value through profit or loss	53,757	63,874	(10,117)	(16)
Investment contract liabilities	512	574	(62)	(11)
Other short-term borrowings	14,158	18,411	(4,253)	(23)
Other liabilities	117,513	132,208	(14,695)	(11)

Of which: Brokerage and securities related payables	90,708	106,742	(16,035)	(15)
Provisions	2,711	4,158	(1,447)	(35)
Liabilities for current tax / Deferred tax liabilities	1,456	1,346	110	8
Long-term debt	152,083	159,715	(7,632)	(5)
Trust preferred securities	3,168	5,491	(2,323)	(42)
Obligation to purchase common shares	0	0	0	N/M
Total liabilities	1,279,400	1,406,633	(127,234)	(9)
Of which: Total central bank funds purchased, securities sold under resale agreements and securities loaned across all applicable measurement categories	54,529	79,673	(25,144)	(32)
at amortized cost	8,226	24,794	(16,568)	(67)
designated at fair value through profit and loss	46,304	54,880	(8,576)	(16)
Total equity	68,737	68,099	639	1

Movements in Assets

As of December 31, 2018, total assets decreased by € 126.6 billion (or 9 %) compared to year-end 2017.

Positive market value from derivative financial instruments decreased by € 41.0 billion, mainly attributable to interest rate products driven by increased swap rates which are inversely correlated with mark-to-market values as well as foreign exchange rate products as a result of fluctuating foreign exchange rates. Reduced trading volumes also contributed to the decrease. This decrease went along with a corresponding decrease in negative market values from derivative financial instruments.

Cash and central bank balances decreased by € 36.9 billion, primarily driven by reductions in deposits and short-term borrowings as well as initiatives to utilize excess cash to fund securities positions.

Trading assets decreased by € 31.9 billion, mainly driven by strategic reshaping in CIB along with de-risking activities as well as reduced client positions in the Equities business. The weakening of global indices also contributed to the decrease.

Central bank funds sold, securities purchased under resale agreements and securities borrowed, across all applicable balance sheet categories, decreased by € 23.3 billion, primarily driven by managed reductions as a result of our balance sheet optimization initiatives, lower short coverage requirements and increased netting.

Brokerage and securities related receivables decreased by € 16.3 billion, primarily due to the majority of receivables from Prime Brokerage being moved to non-trading financial assets mandatory at fair value through profit and loss under IFRS 9. Cash/margin receivables also decreased, reflecting the reduction in negative market values from derivative financial instruments.

These decreases were partly offset by a € 8.3 billion increase in other assets excluding brokerage and securities related receivables, mainly driven by reclassifications of exposures to debt securities hold-to-collect following the implementation of IFRS 9 and reclassifications to assets held for sale subsequent to the agreement to sell our retail operations in Portugal.

Loan classifications have been significantly impacted by the adoption of IFRS 9. Loans previously classified at amortized cost under IAS 39 are now reported in several different categories, not only in loans at amortized cost, but also in non-trading financial assets mandatory at fair value through profit and loss and financial assets designated at fair value through other comprehensive income. Across all of these categories, the actual business movement for net loans was an increase of € 9.5 billion, or € 16.6 billion excluding the impact of exited business in PCB, mainly driven by new deals and increased drawdowns from the existing facilities during the period.

The overall movement of the balance sheet included an increase of € 24.0 billion due to foreign exchange rate movements, mainly driven by strengthening of the U.S. Dollar versus the Euro. The effects from foreign exchange rate movements are embedded in the movement of the balance sheet line items discussed in this section.

Movements in Liabilities

As of December 31, 2018, total liabilities decreased by € 127.2 billion (or 9 %) compared to year-end 2017.

Negative market values from derivative financial instruments decreased by € 41.2 billion, primarily due to the same factors as the movements in positive market values from derivative financial instruments discussed above.

Central bank funds purchased, securities sold under repurchase agreements and securities loaned, across all applicable balance sheet categories, decreased by € 25.1 billion, primarily driven by managed reductions as a result of our balance sheet optimization initiatives and increased netting.

Deposits decreased by € 17.5 billion, primarily driven by management actions to lower volumes with financial institutions as well as matured trades during the period. Maturing Certificates of Deposits held by other wholesale customers also contributed to the decrease. This decrease was partly offset by an increase in our retail business.

Brokerage and securities related payables decreased by € 16.0 billion, primarily due to strategic actions to reduce Prime Brokerage payables as part of our balance sheet optimization initiatives and lower cash/margin payables being in line with the observed reduction in positive market values from derivative financial instruments.

Trading liabilities decreased by € 11.5 billion, mainly driven by managed reductions in short positions to reduce short coverage requirements supporting our deleveraging activities along with our strategic reshaping in CIB.

Long term debt decreased by € 7.6 billion, primarily driven by matured deals including Targeted Longer-Term Refinancing Operations II (TLTRO II) during the period and managed reductions as a result of our balance sheet optimization initiatives.

Similar to total assets, the impact of foreign exchange rate movements during the period is embedded in the overall movements in liabilities as discussed in this section.

Liquidity

Liquidity reserves amounted to € 259 billion as of December 31, 2018 (compared to € 280 billion as of December 31, 2017). We maintained a positive liquidity stress result as of December 31, 2018 (under the combined scenario).

Equity

Total equity as of December 31, 2018, increased by € 1.3 billion compared to pro-forma total equity after the adoption of IFRS 9 as of January 1, 2018, which considers a one-time transition effect of € (671) million to the Total shareholders' equity of € 63.2 billion as of December 31, 2017 (please refer to chapter "IFRS 9 Transition Impact Analysis" in this report).

The increase of € 1.3 billion was mainly driven by an increase of non-controlling interests of € 1.3 billion as a result of the IPO and partial sale of Deutsche Bank's subsidiary DWS Group GmbH & Co. KGaA, the net income attributable to Deutsche Bank shareholders and additional equity components of € 267 million as well as net gains from exchange rate changes of € 500 million, relating especially to the US dollar. These factors were partly offset by a reduction in unrealized gains on financial assets at fair value through other comprehensive income of € 428 million, mainly due to asset sales, coupons paid on additional equity components of € 292 million net of tax as well as cash dividends paid to Deutsche Bank shareholders of € 227 million.

Regulatory Capital

With effect from January 1, 2018, the CRR/CRD 4 "transitional" (or "phase-in") rules under which Common Equity Tier 1 (CET 1) regulatory adjustments were phased in have reached a rate of 100 %, together with the 100 % phase-out rate of minority interest only recognizable under the transitional rules. For Risk-weighted assets (RWA) the grandfathering of equity investments at a risk-weight of 100 % expired by the end of 2017. Instead a risk weight between 190 % and 370 % determined based on Article 155 CRR under the CRR/CRD 4 is applied. Hence, starting 2018 onwards, the CET 1 capital and RWA figures show no difference between CRR/CRD 4 and fully loaded CRR/CRD 4.

Our CET 1 capital according to CRR/CRD 4 as of December 31, 2018 (fully loaded rules applicable) decreased by € 3.3 billion to € 47.5 billion, compared to € 50.8 billion as of December 31, 2017 (based on transitional arrangements). RWA according to CRR/CRD 4 increased by € 7.1 billion to € 350.4 billion as of December 31, 2018, compared to € 343.3 billion as of December 31, 2017. Due to the decrease in CRR/CRD 4 CET 1 capital and increase in RWA, the CRR/CRD 4 CET 1 capital ratio as of December 31, 2018 decreased to 13.6 % compared to 14.8 % as of December 31, 2017.

Our fully loaded CRR/CRD 4 CET 1 capital as of December 31, 2018 (now equal to CRR/CRD 4 CET 1 capital) amounted to € 47.5 billion, € 0.8 billion lower compared to € 48.3 billion as of December 31, 2017. RWA according to CRR/CRD 4 fully loaded increased by € 6.2 billion to € 350.4 billion as of December 31, 2018 compared to € 344.2 billion as of December 31, 2017. This resulted in the fully loaded CRR/CRD 4 CET 1 capital ratio as of December 31, 2018 decreasing to 13.6 % compared to 14.0 % as of December 31, 2017.

Liquidity and Capital Resources

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Tabular Disclosure of Contractual Obligations

Cash payment requirements outstanding as of December 31, 2018.

Contractual obligations					Payment due by period
in € m.	Total	Less than 1 year	1–3 years	3–5 years	More than 5 years
Long-term debt obligations[1]	165,756	50,193	51,079	25,886	38,598
Trust preferred securities1,2	3,342	3,342	0	0	0
Long-term financial liabilities designated at fair value through profit or loss3	5,856	1,332	572	880	3,073
Finance lease obligations	118	19	24	10	65
Operating lease obligations	6,264	707	1,139	938	3,480
Purchase obligations	2,015	239	728	255	793
Long-term deposits[1]	33,727	0	15,656	6,028	12,043
Other long-term liabilities	1,922	1,111	316	189	306
Total	219,000	56,943	69,515	34,184	58,358

1Includes interest payments.

2Contractual payment date or first call date.

3 Long-term debt and long-term deposits designated at fair value through profit or loss.

Figures above do not include the future revenues of non-cancellable sublease rentals of € 20 million on operating leases. Purchase obligations for goods and services include future payments for, among other things, information technology services and facility management. Some figures above for purchase obligations represent minimum contractual payments and actual future payments may be higher. Long-term deposits exclude contracts with a remaining maturity of less than one year. Under certain conditions future payments for some long-term financial liabilities designated at fair value through profit or loss may occur earlier. See the following notes to the consolidated financial statements for further information: Note 5 “Net Interest Income and Net Gains (Losses) on Financial Assets/Liabilities at Fair Value through Profit or Loss”, Note 24 “Leases”, Note 28 “Deposits” and Note 32 “Long-Term Debt and Trust Preferred Securities”.

Outlook

The Global Economy

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The Banking Industry

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The Deutsche Bank Group

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Our Business Segments

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Risks and Opportunities

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Risks

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Introduction

Disclosures in line with IFRS 7 and IAS 1

The following Risk Report provides qualitative and quantitative disclosures about credit, market and other risks in line with the requirements of International Financial Reporting Standard 7 (IFRS 7) Financial Instruments: Disclosures, and capital disclosures required by International Accounting Standard 1 (IAS 1) Presentation of Financial Statements. It also considers the changes following the adoption of IFRS 9 with regards to classification and measurement and impairment and includes the related impacts on key ratios, like regulatory capital and risk-weighted assets (RWA) at Deutsche Bank. Further details specific to IFRS 9 can be found further below in this report, specifically in the Credit Risk Management and Model section, in the Credit Risk Mitigation section, in the Asset Quality section and in Note 1 “Significant accounting policies and critical accounting estimates” as well as Note 2 “Recently adopted and new accounting pronouncements” to the consolidated financial statements. Information which forms part of and is incorporated by reference into the financial statements of this report is marked by a bracket in the margins throughout this Risk Report.

Disclosures according to Pillar 3 of the Basel 3 Capital Framework

Most disclosures according to Pillar 3 of the Basel 3 Capital Framework, which are implemented in the European Union by the Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms (Capital Requirements Regulation or CRR) and supported by EBA Implementing Technical Standards or the "Final Report on the Guidelines on Disclosure Requirements under Part Eight of Regulation (EU) No 575/2013" ("EBA Guideline", EBA/GL/2016/11, version 2*) are published in our additional Pillar 3 report, which can be found on our website. In cases where disclosures in this Risk Report also support Pillar 3 disclosure requirements these are highlighted by references from the Pillar 3 Report into the Risk Report.

Disclosures according to principles and recommendations of the Enhanced Disclosure Task Force (EDTF)

In 2012 the Enhanced Disclosure Task Force ("EDTF") was established as a private sector initiative under the auspices of the Financial Stability Board ("FSB"), with the primary objective to develop fundamental principles for enhanced risk disclosures and to recommend improvements to existing risk disclosures. As a member of the EDTF we adhere to the disclosure recommendations in this Risk Report and also in our additional Pillar 3 Report.

Risk and capital overview

Key risk metrics

The following selected key risk ratios and corresponding metrics form part of our holistic risk management across individual risk types. The Common Equity Tier 1 Ratio (CET 1), Internal Capital Adequacy Ratio (ICA), Leverage Ratio (LR), Minimum Requirement for Own Funds and Eligible Liabilities (MREL), Liquidity Coverage Ratio (LCR), and Stressed Net Liquidity Position (sNLP) serve as high level metrics and are fully integrated across strategic planning, risk appetite framework, stress testing (except LCR and MREL), and recovery and resolution planning practices, which are reviewed and approved by our Management Board at least annually. The CET 1, LR, Leverage Exposure, MREL, LCR and Risk-Weighted-Assets ratios and metrics, which are regulatory defined, are based on the fully loaded rules under the Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms (Capital Requirements Regulation or "CRR") and the directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (Capital Requirements Directive 4 or "CRD 4"). MREL is based on the Single Resolution Mechanism (SRM) regulation as well as respective communication by the Single Resolution Board (SRB). ICA, Economic Capital and SNLP are Deutsche Bank specific internal risk metrics in addition to the above described regulatory metrics.

Common Equity Tier 1 Ratio	
31.12.2018	13.6 %
31.12.2017	14.0 %
Internal Capital Adequacy Ratio[1]	
31.12.2018	196 %
31.12.2017	192 %
Leverage Ratio	
31.12.2018	4.1 %
31.12.2017	3.8 %

Minimum requirement for own funds and eligible liabilities (MREL)	
31.12.2018	11.1 %
Liquidity Coverage Ratio	
31.12.2018	140 %
31.12.2017	140 %
Total Risk-Weighted Assets	
31.12.2018	€ 350.4 bn
31.12.2017	€ 344.2 bn
Total Economic Capital[2]	
31.12.2018	€ 26.1 bn
31.12.2017	€ 27.1 bn
Leverage Exposure	
31.12.2018	€ 1,273 bn
31.12.2017	€ 1,395 bn
Stressed Net Liquidity Position (sNLP)	
31.12.2018	€ 48.1 bn
31.12.2017	€ 32.6 bn

[1] The definition of capital supply for the purpose of calculating the internal capital adequacy ratio has been changed to take a perspective that aims at maintaining the viability of Deutsche Bank on an ongoing basis. More information is provided in section “Internal Capital Adequacy”.

2The quantile used to measure the economic capital demand has been changed from 99.98 % to 99.9 % to take a perspective that aims at maintaining the viability of Deutsche Bank on an ongoing basis in alignment with the change of the definition of capital supply. More information is provided in section “Internal Capital Adequacy”. An overview of the quantitative impact of the quantile change on the economic capital is provided in section “Risk Profile”.

For further details please refer to sections “Risk profile”, “Risk appetite and capacity”, “Risk and capital plan”, “Stress testing”, “Recovery and resolution planning”, “Risk and capital management”, “Capital, leverage ratio and MREL” (for phase-in and fully loaded figures), “Liquidity coverage ratio”, and “Stress testing and scenario analysis”.

Overall risk assessment

Key risk types include credit risk (including default, migration, transaction, settlement, exposure, country, mitigation and concentration risks), market risk (including interest rate, foreign exchange, equity, credit spread, commodity and cross-asset & other risks), liquidity risk, business risk (including tax and strategic risk), cross risk, reputational risk and operational risk (with important sub-categories like compliance, legal, model, information security, fraud, and money laundering risks). We manage the identification, assessment and mitigation of top and emerging risks through an internal governance process and the use of risk management tools and processes. Our approach to identification and impact assessment aims to ensure that we mitigate the impact of these risks on our financial results, long-term strategic goals and reputation. Please refer to the section "Risk and capital management" for detailed information on

the management of our material risks.

As part of our regular analysis, sensitivities of the key portfolio risks are reviewed using a bottom-up risk assessment, complemented by a top-down macro-economic and political scenario analysis. This two-pronged approach allows us to capture risk drivers that have an impact across our risk portfolios and business divisions as well as those relevant to specific portfolios.

Global growth concerns fueled a sharp deterioration in risk sentiment coming into the end of 2018, with equities falling sharply and credit spreads widening. The global economic outlook has softened but in a baseline growth is expected to remain solid. In developed markets, the US economy is expected to continue growing at a strong and above-trend rate while Europe is expected to see a further slowdown in 2019. The picture in emerging markets is mixed with growth in China expected to moderate further.

Key downside risks include Brexit, where the risks of the UK leaving the EU without a withdrawal agreement are rising following the defeat of Prime Minister May's Brexit deal and the UK parliament's decision to seek a renegotiation of the backstop. A disorderly Brexit could aggravate the already softer economic outlook in the UK and Europe. Tensions between Italy and Brussels and an escalation of the yellow vest movement in France are potential additional sources of political risk in Europe. The potential for an escalation in global trade conflict also remains a key source of global downside risk.

The assessment of the potential impacts of these risks is made through, inter alia, portfolio reviews and group-wide stress tests which assess our ability to absorb events should they occur. The results of these tests showed that the currently available capital and liquidity reserves, in combination with available mitigation measures, would allow us to absorb the impact of these risks if they were to materialize in line with the tests' parameters. Information about risk and capital positions for our portfolios can be found in the "Risk and capital performance" section.

The overall focus of risk and capital management is on maintaining our risk profile in line with our risk strategy and supporting our strategic management initiatives with a focus on-balance sheet optimization.

Risk profile

The table below shows our overall risk position as measured by the economic capital usage calculated for credit, market, operational and business risk for the dates specified. To determine our overall (economic capital) risk position, we generally consider diversification benefits across risk types.

Overall risk position as measured by economic capital usage by risk type

			2018 increase (decrease) from 2017	
in € m. (unless stated otherwise)	Dec 31, 2018	Dec 31, 2017	in € m.	in %
Credit risk	10,610	10,769	(159)	(1)
Market risk	10,341	10,428	(87)	(1)
Trading market risk	4,046	3,800	246	6
Nontrading market risk	6,295	6,628	(333)	(5)
Operational risk	7,359	7,329	30	0

Business risk	4,758	5,677	(918)	(16)
Diversification benefit[1]	(6,960)	(7,074)	114	(2)
Total economic capital usage	26,108	27,129	(1,020)	(4)

1Diversification benefit across credit, market, operational and strategic risk (largest part of business risk).

As of December 31, 2018, our economic capital usage amounted to € 26.1 billion, which was € 1.0 billion or 4 % lower than € 27.1 billion economic capital usage as of December 31, 2017.

The economic capital usage for credit risk as of December 31, 2018 was € 0.2 billion or 1 % lower compared to year-end 2017 mainly due to a lower counterparty credit risk component and smaller increases in settlement and transfer risk components. The change in counterparty credit risk is mainly due to reductions in exposures from derivatives and securities financing transactions, partly offset by increases in lending, whereas the increases for settlement and transfer risk are largely driven by model overlays related to changes in methodology.

The economic capital usage for trading market risk increased to € 4.0 billion as of December 31, 2018, compared to € 3.8 billion at year-end 2017. The increase was primarily driven by a model enhancement to better capture the tail risk in the stressed period, which was partly offset by a reduction in the traded default risk component due to reductions in inventory. The nontrading market risk economic capital usage decreased by € 0.3 billion or 5 % compared to December 31, 2017. The decrease was mainly driven by an accounting methodology change due to IFRS 9 becoming effective and diversification effects.

The operational risk economic capital usage totaled € 7.4 billion as of December 31, 2018, which was € 30 million or 0.4 % higher than the € 7.3 billion economic capital usage as of December 31, 2017. In line with the development of our RWA for operational risk, the increase was driven by several, largely offsetting effects. A lighter loss profile feeding into our capital model and a number of model improvements, mostly from recalibrations of data weights, reduced our capital demand for operational risk. The decrease has been compensated by our reduced budgeted expected losses for operational risk. For a detailed description see the section “Operational Risk Management”.

Our business risk economic capital methodology captures strategic risk, which also implicitly includes elements of non-standard risks including refinancing and reputational risk, a tax risk component and a capital charge for IFRS deferred tax assets on temporary differences. The business risk decreased to € 4.8 billion as of December 31, 2018 which was € 0.9 billion or 16 % lower compared to € 5.7 billion as of December 31, 2017. The decrease is due to a lower economic capital usage for the strategic risk component of € 1.1 billion driven by a better earnings outlook in our plan for 2019 compared to the one for 2018 in the previous year which was partially offset by higher economic capital usage from IFRS deferred tax assets on temporary differences of € 0.1 billion.

The inter-risk diversification benefit of the economic capital usage across credit, market, operational and strategic risk decreased by € 0.1 billion mainly due to a lower economic capital usage for the strategic risk component.

Our mix of business activities results in diverse risk taking by our business divisions. We also measure the key risks inherent in their respective business models through the total economic capital metric, which mirrors each business division’s risk profile and takes into account cross-risk effects at group level.

Risk profile of our business divisions as measured by economic capital

Dec 31, 2018

Total

in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Corporate & Other		Total (in %)
Credit Risk	6,340	3,537	52	681	10,610	41
Market Risk	4,760	1,124	370	4,088	10,341	40
Operational Risk	6,092	866	401	0	7,359	28
Business Risk	3,521	29	0	1,208	4,758	18
Diversification Benefit[1]	(5,371)	(933)	(231)	(424)	(6,960)	(27)
Total EC	15,341	4,623	592	5,552	26,108	100
Total EC in %	59	18	2	21	100	N/M

N/M – Not meaningful

1Diversification benefit across credit, market, operational and strategic risk (largest part of business risk).

	Dec 31, 2017[1]					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Corporate & Other	Total	Total (in %)
Credit Risk	6,519	3,596	62	591	10,769	40
Market Risk	4,679	1,386	310	4,054	10,428	38
Operational Risk	5,995	932	402	0	7,329	27
Business Risk	4,435	10	99	1,133	5,677	21
Diversification Benefit[2]	(5,450)	(950)	(264)	(410)	(7,074)	(26)
Total EC	16,178	4,974	609	5,368	27,129	100
Total EC in %	60	18	2	20	100	N/M

N/M – Not meaningful

1Amounts allocated to the business segments have been restated to reflect comparatives according to the structure as of December 31, 2018.

2Diversification benefit across credit, market, operational and strategic risk (largest part of business risk).

Corporate & Investment Bank's (CIB) risk profile is dominated by its trading activities to support origination, structuring and market making activities, which gives rise to all major risk types. Credit risk is broadly distributed across business units but most prominent in Global Credit Trading, Rates, Trade Finance, and Leveraged Debt Capital Markets. The share of operational risk in CIB's risk profile reflects a high loss profile in the industry combined with internal losses and has only slightly increased compared to the year-end 2017. Market risk arises mainly from its trading and market making activities. The remainder of CIB's risk profile is derived from business risk reflecting earnings volatility risk. The economic capital usage for CIB decreased compared to the year-end 2017, mainly due to lower economic capital usage for the strategic risk component, primarily due to an updated strategic plan which reflected moderate improvement in planned operating income.

Private & Commercial Bank's (PCB) risk profile comprises credit risk from retail, small and medium-sized enterprises lending and wealth management activities as well as nontrading market risk from investment risk, interest rate risk, including risk arising from modelling of client deposits and credit spread risk. There was no significant change for economic capital usage across credit, operational and strategic risk compared to the year-end 2017 and lower

economic capital usage for market risk related to reductions in exposure to investment risk and interest rate risk.

Asset Management (AM), as a fiduciary asset manager, invests money on behalf of clients. As such, risk are primarily of a fiduciary nature and hence operationally driven. Nontrading market risk, however, does arise on guarantee products and co-investments in our funds. There was no significant change for economic capital usage compared to the year-end 2017.

Corporate & Other (C&O) mainly comprises nontrading market risk for structural foreign exchange risk, pension risk and equity compensation risk. The economic capital usage for credit and business risk increased compared to the year-end 2017 mainly due to a higher economic capital usage for transfer risk and IFRS deferred tax assets from temporary differences.

Risk and capital framework

Risk management principles

The diversity of our business model requires us to identify, assess, measure, aggregate and manage our risks, and to allocate our capital among our businesses. Our aim is to help reinforce our resilience by encouraging a holistic approach to the management of risk and return throughout our organization as well as the effective management of our risk, capital and reputational profile. We actively take risks in connection with our business. The following principles underpin our risk management framework:

- Risk is taken within a defined risk appetite;
- Every risk taken needs to be approved within the risk management framework;
- Risk taken needs to be adequately compensated; and
- Risk should be continuously monitored and managed.

Risk and capital are managed via a framework of principles, organizational structures and measurement and monitoring processes that are closely aligned with the activities of the divisions and business units:

- Core risk management responsibilities are embedded in the Management Board and delegated to senior risk managers and senior risk management committees responsible for execution and oversight.
- We operate a Three Lines of Defense (“3LoD”) risk management model, in which risk, control and reporting responsibilities are defined.
- The 1st Line of Defense (“1st LoD”) refers to those roles in the Bank whose activities generate risks, whether financial or non-financial, and who own the risks that are generated in their respective organizations. The 1st LoD manages these risks within the defined risk appetite and ensures that organization, governance and structures are in place to identify, monitor, assess and accept or mitigate the risks they generate or are exposed to.
- The 2nd Line of Defense (“2nd LoD”) refers to the risk type controller roles in the Bank who facilitate the implementation of a sound risk management framework throughout the organization. The 2nd LoD defines the risk appetite and risk management and control standards for their risk type, and independently oversees and challenges the risk taking and risk management activities of the 1st LoD.
- The 3rd Line of Defense (“3rd LoD”) is Group Audit, which is accountable for providing independent and objective assurance on the adequacy of the design and effectiveness of the systems of internal control and risk management.
- The risk strategy is approved by the Management Board on an annual basis and is defined based on the Group

Risk Appetite and the Strategic and Capital Plan in order to align risk, capital and performance targets.

- Cross-risk analysis reviews are conducted across the Group to validate that sound risk management practices and a holistic awareness of risk exist.
- All material risk types, including credit risk, market risk, operational risk, liquidity risk, business risk and reputational risk, are managed via risk management processes. Modeling and measurement approaches for quantifying risk and capital demand are implemented across the material risk types. For more details, refer to section “Risk and Capital Management” for the management processes of our material risks.
- Monitoring, stress testing tools and escalation processes are in place for key capital and liquidity thresholds and metrics.
- Systems, processes and policies are critical components of our risk management capability.
- Recovery and contingency planning provides the escalation path for crisis management and supplies senior management with a set of actions designed to improve the capital and liquidity positions in a stress event.
- Resolution planning is the responsibility of our resolution authority, the Single Resolution Board. It provides a strategy to manage Deutsche Bank in case of default. It is designed to prevent major disruptions to the financial system or the wider economy through maintaining critical services.
- We apply an integrated risk management approach that aims at Group-wide consistency in risk management standards, while allowing for adaptation to local or legal entity specific requirements.

We promote a strong risk culture where employees at all levels are responsible for the management and escalation of risks and are empowered and encouraged to act as risk managers. We expect employees to exhibit behaviors that support a strong risk culture in line with our Code of Conduct. To promote this, our policies require that risk-related behavior is taken into account during our performance assessment and compensation processes. This expectation continues to be reinforced through communications campaigns and mandatory training courses for all DB employees. In addition, our Management Board members and senior management frequently communicate the importance of a strong risk culture to support a consistent tone from the top.

A standards-based assessment of risk culture, in particular focusing on risk awareness, risk ownership and management of risk within risk appetite has been undertaken. Assessment results are incorporated into existing risk reporting, reinforcing the message that risk culture is an integral part of effective day-to-day risk management.

Risk governance

Our operations throughout the world are regulated and supervised by relevant authorities in each of the jurisdictions in which we conduct business. Such regulation focuses on licensing, capital adequacy, liquidity, risk concentration, conduct of business as well as organizational and reporting requirements. The European Central Bank (the “ECB”) in connection with the competent authorities of EU countries which joined the Single Supervisory Mechanism via the Joint Supervisory Team act in cooperation as our primary supervisors to monitor our compliance with the German Banking Act and other applicable laws and regulations as well as the CRR/CRD 4 framework and respective implementations into German law.

European banking regulators assess our capacity to assume risk in several ways, which are described in more detail in the section “Regulatory Capital” of this report.

Several layers of management provide cohesive risk governance:

- The Supervisory Board is informed regularly on our risk situation, risk management and risk controlling, as well as on our reputation and material litigation cases. It has formed various committees to handle specific tasks (for a detailed description of these committees, please see the “Corporate Governance Report” under “Management Board and Supervisory Board”, “Standing Committees”).
- At the meetings of the Risk Committee, the Management Board reports on key risk portfolios, on risk strategy and on matters of special importance due to the risks they entail. It also reports on loans requiring a Supervisory Board resolution pursuant to law or the Articles of Association. The Risk Committee deliberates with the Management Board on issues of the overall risk appetite, aggregate risk position and the risk strategy and supports the Supervisory Board in monitoring the implementation of this strategy.
- The Integrity Committee, among other responsibilities, monitors the Management Board’s measures that promote the company’s compliance with legal requirements, authorities’ regulations and the company’s own in-house policies. It also reviews the Bank’s Code of Business Conduct and Ethics, and, upon request, supports the Risk Committee in monitoring and analyzing the Bank’s legal and reputational risks.
- The Audit Committee, among other matters, monitors the effectiveness of the risk management system, particularly the internal control system and the internal audit system.
- The Management Board is responsible for managing Deutsche Bank Group in accordance with the law, the Articles of Association and its Terms of Reference with the objective of creating sustainable value in the interest of the company, thus taking into consideration the interests of the shareholders, employees and other stakeholders. The Management Board is responsible for establishing a proper business organization, encompassing appropriate and effective risk management. The Management Board established the Group Risk Committee (“GRC”) as the central forum for review and decision on material risk and capital-related topics. The GRC generally meets once a week. It has delegated some of its duties to individuals and sub-committees. The GRC and its sub-committees are described in more detail below.

Risk management governance structure of the Deutsche Bank Group

The following functional committees are central to the management of risk at Deutsche Bank:

- The Group Risk Committee (GRC) has various duties and dedicated authority, including approval of new or materially changed risk and capital models, review of high-level risk portfolios, risk exposure developments, and internal and regulatory Group-wide stress testing results, and monitoring of risk culture across the Group. The GRC sets risk appetite targets, for example in the form of limits or thresholds. In addition, the GRC reviews and recommends items for Management Board approval, such as key risk management principles, the Group Recovery Plan and the Contingency Funding Plan, over-arching risk appetite parameters, and recovery and escalation indicators. The GRC also supports the Management Board during Group-wide risk and capital planning processes.
- The Non-Financial Risk Committee (NFRC) oversees, governs and coordinates the management of non-financial risks in Deutsche Bank Group and establishes a cross-risk and holistic perspective of the key non-financial risks of the Group, including conduct and financial crime risk. It is tasked to define the non-financial risk appetite tolerance framework, to monitor and control the effectiveness of the non-financial risk operating model (including interdependencies between business divisions and control functions), and to monitor the development of emerging non-financial risks relevant for the Group.
- The Group Reputational Risk Committee (GRRC) is responsible for the oversight, governance and coordination of reputational risk management and provides for a look-back and a lessons learnt process. It reviews and decides all reputational risk issues escalated by the Regional Reputational Risk Committees (“RRRCs”) and RRRC decisions which have been appealed by the business divisions, infrastructure functions or regional management. It provides guidance on Group-wide reputational risk matters, including communication of sensitive topics, to the appropriate levels of Deutsche Bank Group. The RRRCs which are

sub-committees of the GRRC, are responsible for the oversight, governance and coordination of the management of reputational risk in the respective regions on behalf of the Management Board.

- The Enterprise Risk Committee (ERC) has been established with a mandate to focus on enterprise-wide risk trends, events and cross-risk portfolios, bringing together risk experts from various risk disciplines. As part of its mandate, the ERC approves the enterprise risk inventory, certain country and industry threshold increases, and scenario design outlines for more severe group-wide stress tests as well as reverse stress tests. It reviews group-wide stress test results in accordance with risk appetite, reviews the risk outlook, emerging risks and topics with enterprise-wide risk implications like risk culture.

- The Financial Resource Management Council (FRMC) is an ad-hoc governance body, chaired by the Chief Financial Officer and Chief Risk Officer with delegated authority from the Management Board, to oversee financial crisis management at the bank. The FRMC provides a single forum to oversee execution of both the Contingency Funding Plan and the Group Recovery Plan. The council recommends upon mitigating actions to be taken in a time of anticipated or actual capital or liquidity stress. Specifically, the FRMC is tasked with analyzing the bank's capital and liquidity position, in anticipation of a stress scenario recommending proposals for capital and liquidity related matters, and ensure execution of decisions.
- The Group Asset & Liability Committee has been established by the Management Board in 2018. Its mandate is to optimize the sourcing and deployment of the bank's balance sheet and financial resources within the overarching risk appetite set by the Management Board.

Our Chief Risk Officer (CRO), who is a member of the Management Board, has Group-wide, supra-divisional responsibility for the management of all credit, market, liquidity and operational risks as well as for the continuing development and enhancement of methods for risk measurement. In addition, the CRO is responsible for monitoring, analyzing and reporting risk on a comprehensive basis.

The CRO has direct management responsibility for the Risk function. Risk management & control duties in the Risk function are generally assigned to specialized risk management units focusing on the management of

- Specific risk types
- Risks within a specific business
- Risks in a specific region.

These specialized risk management units generally handle the following core tasks:

- Foster consistency with the risk appetite set by the GRC within a framework established by the Management Board and applied to Business Divisions;
- Determine and implement risk and capital management policies, procedures and methodologies that are appropriate to the businesses within each division;
- Establish and approve risk limits;
- Conduct periodic portfolio reviews to keep the portfolio of risks within acceptable parameters; and
- Develop and implement risk and capital management infrastructures and systems that are appropriate for each division.

Additionally, Business Aligned Risk Management (BRM) represents the Risk function vis-à-vis specific business areas. The CROs for each business division manage their respective risk portfolio, taking a holistic view of each division to challenge and influence the division's strategy and risk ownership and implement risk appetite.

The specialized risk management functions are complemented by our Enterprise Risk Management (ERM) function, which sets a bank-wide risk management framework seeking to ensure that all risks at the Group and Divisional level

are identified, owned and assessed for materiality. Material risks are owned and controlled by functional (usually 1st LoD) risk teams within the agreed risk appetite and risk management principles. ERM is responsible for aggregating and analyzing enterprise-wide risk information, including review of the risk/return profiles of portfolios to support informed strategic decision-making regarding the effective application of the Bank's resources. ERM has the mandate to:

- Manage enterprise risk appetite at Group level, including the framework and methodology as to how appetite is applied across risk types, divisions, businesses and legal entities;
- Integrate and aggregate risks to provide greater enterprise risk transparency to support decision making;
- Commission forward-looking stress tests and manage Group recovery and resolution plans; and
- Govern and improve the effectiveness of the risk management framework.

The specialized risk management functions and ERM have a reporting line to the CRO.

While operating independently from each other and the business divisions, our Finance and Risk functions have the joint responsibility to quantify and verify the risk that we assume.

In May 2018, we fully merged our subsidiary Deutsche Postbank AG into the subsidiary DB PGK AG, to form "DB Privat- und Firmenkundenbank AG" (DB PFK AG). As a result, the existing joint risk management for the previously individual subsidiaries has been adjusted to reflect the new setup and size of the entity. The joint risk management of our enlarged subsidiary DB PFK AG is promoted through harmonized processes for identifying, assessing, managing, monitoring, and communicating risk, the strategies and procedures for determining and safeguarding risk-bearing capacity, and corresponding internal control procedures as well as joint governance.

Key features of the adjusted setup are:

- Established DB PFK AG Risk Management structure which continues to have additional functional reporting lines into Deutsche Bank AG Risk
- Involvement of the central DB PFK AG Risk Committee in the Group Risk Committee through mutual memberships
- Extension of selected risk committees of DB PFK AG to include voting members of relevant risk functions of Deutsche Bank AG, and vice versa
- Alignment to key Group risk policies
- Joint DB PFK AG reporting across the merged portfolios for all risk types and inclusion of DB PFK AG in the Group Risk and Capital Profile
- Independent DB PFK AG business and risk strategy aligned with and embedded in the Group Risk Appetite Framework, Strategy and Policies

Risk appetite and capacity

Risk appetite expresses the aggregate level of risk that we are willing to assume to achieve our strategic objectives, as defined by a set of quantitative metrics and qualitative statements. Risk capacity is defined as the maximum level of risk we can assume given our capital and liquidity base, risk management and control capabilities, and our regulatory constraints.

Risk appetite is an integral element in our business planning processes via our risk strategy and plan, to promote the appropriate alignment of risk, capital and performance targets, while at the same time considering risk capacity and appetite constraints from both financial and non-financial risks. Compliance of the plan with our risk appetite and capacity is also tested under stressed market conditions. Top-down risk appetite serves as the limit for risk-taking for the bottom-up planning from the business functions.

The Management Board reviews and approves our risk appetite and capacity on an annual basis, or more frequently in the event of unexpected changes to the risk environment, with the aim of ensuring that they are consistent with our Group's strategy, business and regulatory environment and stakeholders' requirements.

In order to determine our risk appetite and capacity, we set different group level triggers and thresholds on a forward looking basis and define the escalation requirements for further action. We assign risk metrics that are sensitive to the material risks to which we are exposed and which are able to function as key indicators of financial health. In addition to that, we link our risk and recovery management governance framework with the risk appetite framework.

Reports relating to our risk profile as compared to our risk appetite and strategy and our monitoring thereof are presented regularly up to the Management Board. In the event that our desired risk appetite is breached, a predefined escalation governance matrix is applied so these breaches are highlighted to the respective committees.

Risk and capital plan

Strategic and capital plan

We conduct annually an integrated strategic planning process which lays out the development of our future strategic direction for us as a Group and for our business areas. The strategic plan aims to create a holistic perspective on capital, funding and risk under risk-return considerations. This process translates our long-term strategic targets into measurable short- to medium-term financial targets and enables intra-year performance monitoring and management. Thereby we aim to identify growth options by considering the risks involved and the allocation of available capital resources to drive sustainable performance. Risk-specific portfolio strategies complement this framework and allow for an in-depth implementation of the risk strategy on portfolio level, addressing risk specifics including risk concentrations.

The strategic planning process consists of two phases: a top-down target setting and a bottom-up substantiation.

In a first phase – the top-down target setting – our key targets for profit and loss (including revenues and costs), capital supply, capital demand as well as leverage, funding and liquidity are discussed for the group and the key business areas. In this process, the targets for the next five years are based on our global macro-economic outlook and the expected regulatory framework. Subsequently, the targets are approved by the Management Board.

In a second phase, the top-down objectives are substantiated bottom-up by detailed business unit plans, which consist of a month by month operative plan; years two and three are planned per quarter and years four and five are annual plans. The proposed bottom-up plans are reviewed and challenged by Finance and Risk and are discussed individually with the business heads. Thereby, the specifics of the business are considered and concrete targets decided in line with our strategic direction. The bottom-up plans include targets for key legal entities to review local risk and capitalization levels. Stress tests complement the strategic plan to also consider stressed market conditions.

The resulting Strategic and Capital Plan is presented to the Management Board for discussion and approval. The final plan is presented to the Supervisory Board.

The Strategic and Capital Plan is designed to support our vision of being a leading European bank with a global reach supported by a strong home base in Germany and aims to ensure:

- Balanced risk adjusted performance across business areas and units;
- High risk management standards with focus on risk concentrations;
- Compliance with regulatory requirements;
- Strong capital and liquidity position; and
- Stable funding and liquidity strategy allowing for business planning within the liquidity risk appetite and regulatory requirements.

The Strategic and Capital Planning process allows us to:

- Set earnings and key risk and capital adequacy targets considering the bank's strategic focus and business plans;
- Assess our risk-bearing capacity with regard to internal and external requirements (i.e., economic capital and regulatory capital); and
- Apply an appropriate stress test to assess the impact on capital demand, capital supply and liquidity.

All externally communicated financial targets are monitored on an ongoing basis in appropriate management committees. Any projected shortfall versus targets is discussed together with potential mitigating strategies with the aim to ensure that we remain on track to achieve our targets. Amendments to the strategic and capital plan must be approved by the Management Board. Achieving our externally communicated solvency targets ensures that we also comply with the Group Supervisory Review and Evaluation Process (SREP) requirements as articulated by our home supervisor. Deutsche Bank was informed by the ECB of its decision regarding prudential minimum capital requirements for 2019 that apply from March 1, 2019 onwards, following the results of the 2018 SREP. The decision requires Deutsche Bank to maintain a CET 1 ratio of at least 11.82 % on a consolidated basis. This CET 1 capital requirement comprises the Pillar 1 minimum capital requirement of 4.50 %, the Pillar 2 requirement (SREP add-on) of 2.75 %, the capital conservation buffer of 2.50 %, the countercyclical buffer (currently 0.07 %) and the G-SII buffer of 2.00 %. The new CET 1 capital requirement of 11.82 % for 2019 is higher than the CET 1 capital requirement of 10.69 %, which was applicable to Deutsche Bank in 2018, reflecting the now fully phase-in capital conservation buffer and the G-SII buffer. Correspondingly, 2019 requirements for Deutsche Bank's Tier 1 capital ratio are at 13.32 % and for its total capital ratio at 15.32 %. Also, the ECB communicated to us an individual expectation to hold a further "Pillar 2" CET 1 capital add-on, commonly referred to as the '"Pillar 2" guidance'. The capital add-on pursuant to the "Pillar 2" guidance is separate from and in addition to the Pillar 2 requirement. The ECB has stated that it expects banks to meet the "Pillar 2" guidance although it is not legally binding, and failure to meet the "Pillar 2" guidance does not lead to automatic restrictions of capital distributions.

Internal Capital Adequacy Assessment Process

Deutsche Bank's internal capital adequacy assessment process (ICAAP) consists of several well-established components which ensure that Deutsche Bank maintains sufficient capital to cover the risks to which the bank is exposed on an ongoing basis:

- Risk identification and assessment: The risk identification process forms the basis of the ICAAP and results in an inventory of risks for the Group. All risks identified are assessed for their materiality. Further details can be found in section "Risk identification and assessment".
- Capital demand/risk measurement: Risk measurement methodologies and models are applied to quantify the

capital demand which is required to cover all material risks except for those which cannot be adequately limited by capital e.g. liquidity risk. Further details can be found in sections “Risk profile” and “Capital, Leverage Ratio and MREL”.

- Capital supply: Capital supply quantification refers to the definition of available capital resources to absorb unexpected losses. Further details can be found in section “Capital, Leverage Ratio and MREL”
- Risk appetite: Deutsche Bank has established Group risk appetite thresholds which express the level of risk that we are willing to assume to achieve our strategic objectives. Threshold breaches are subject to a dedicated governance framework triggering management actions aimed to safeguard capital adequacy. Further details can be found in sections “Risk appetite and capacity” and “Key risk metrics”.

- Capital planning: The risk appetite thresholds for capital adequacy metrics constitute boundaries which have to be met to safeguard capital adequacy on a forward-looking basis. Further details can be found in section “Strategic and capital plan”.
- Stress testing: Capital plan figures are also considered under various stress test scenarios to prove resilience and overall viability of the bank. Capital adequacy metrics are also subject to regular stress tests throughout the year to constantly evaluate Deutsche Bank’s capital position in hypothetical stress scenarios and to detect vulnerabilities under stress. Further details can be found in section “Stress testing”.
- Capital adequacy assessment: Although capital adequacy is constantly monitored throughout the year, the ICAAP concludes with a dedicated annual capital adequacy assessment (CAS). The assessment consists of a Management Board statement about Deutsche Bank’s capital adequacy, which is linked to specific conclusions and management actions to be taken to safeguard capital adequacy on a forward-looking basis.

As part of its ICAAP, Deutsche Bank distinguishes between a normative and economic internal perspective. The normative internal perspective refers to the internal process aimed at the fulfilment of all capital-related legal requirements and supervisory demands on an ongoing basis. The economic internal perspective refers to an internal process aimed at capital adequacy using internal economic capital demand models and an internal economic capital supply definition. Both perspectives focus on maintaining the viability of Deutsche Bank on an ongoing basis.

Stress testing

Deutsche Bank is subject to stress test exercises to satisfy both internal as well as externally imposed stress test requirements. The internal stress tests are based on in-house developed methods and inform a variety of risk management use cases such as our risk appetite framework or capital allocation. The regulatory stress tests, e.g. the EBA stress test and the US-based CCAR (Comprehensive Capital Analysis and Review) stress tests are strictly following the processes and methodologies as prescribed by the regulatory authorities.

Our internal stress tests are performed on a regular basis in order to assess the impact of a severe economic downturn on our risk profile and financial position. These exercises complement traditional risk measures and represent an integral part of our strategic and capital planning process. Our stress testing framework comprises regular Group-wide stress tests based on internally defined scenarios of different severities and localizations. We include all material risk types into our stress testing exercises. The time-horizon of internal stress tests is generally one year and can be extended to multi-year, if required by the scenario assumptions. Our methodologies undergo regular scrutiny from Deutsche Bank’s internal validation team (Model Risk Management) whether they correctly capture the impact of a given stress scenario. These analyses are complemented by portfolio- and country-specific stress tests as well as regulatory requirements, such as annual reverse stress tests and additional stress tests requested by our regulators on group or legal entity level. Moreover, capital plan stress testing is performed to assess the viability of our capital plan in adverse circumstances and to demonstrate a clear link between risk appetite, business strategy, capital plan and stress testing. An integrated procedure allows us to assess the impact of ad-hoc scenarios that simulate potential

imminent financial or geopolitical shocks.

The initial phase of our internal stress tests consists of defining a macroeconomic downturn scenario by ERM Risk Research in cooperation with business specialists. ERM Risk Research monitors the political and economic development around the world and maintains a macro-economic heat map that identifies potentially harmful scenarios. Based on quantitative models and expert judgments, economic parameters such as foreign exchange rates, interest rates, GDP growth or unemployment rates are set accordingly to reflect the impact on our business. The scenario parameters are translated into specific risk drivers by subject matter experts in the risk units. Based on our internal models framework for stress testing, the following major metrics are calculated under stress: risk-weighted assets, impacts on profit and loss and economic capital by risk type. These results are aggregated at the Group level, and key metrics such as the CET 1 ratio, ECA ratio and Leverage Ratio under stress are derived. Stress impacts on the Liquidity Coverage Ratio (LCR) and the Liquidity Reserve are also considered. Prior to the impact assessment the more severe scenarios are discussed and approved by the Enterprise Risk Committee (ERC) which also reviews the final stress results. After comparing these results against our defined risk appetite, the ERC also discusses specific mitigation actions to remediate the stress impact in alignment with the overall strategic and capital plan if certain limits are breached. The results also feed into the recovery planning which is crucial for the recoverability of the Bank in times of crisis. The outcome is presented to senior management up to the Management Board to raise awareness on the highest level as it provides key insights into specific business vulnerabilities and contributes to the overall risk profile assessment of the bank. The group wide stress tests performed in 2018 indicated that the bank's capitalization together with available mitigation measures allow it to reach the internally set stress exit level, the latter being above regulatory early intervention levels. A reverse stress test is performed annually in order to challenge our business model by determining scenarios which would cause us to become unviable. Such a reverse stress test is based on a hypothetical macroeconomic scenario enriched by idiosyncratic events based on the top risks monitored by each risk type. Comparing the hypothetical scenario resulting in the Bank's non-viability to the current economic environment, we consider the probability of occurrence of such a hypothetical stress scenario as extremely low. Given this, we do not believe that our business continuity is at risk.

Deutsche Bank also took part in two major regulatory stress tests performed in 2018, i.e. the biannual European EBA stress test as well as the US-based CCAR stress test. In the US, DB USA Corporation received no Federal Reserve (FRB) objections to its quantitative capital plan given its ample capital and liquidity under the stressed scenario. The entity, however, received a qualitative objection to the CCAR 2018 capital plan for weaknesses in governance, model methodology, validation, data and infrastructure.

The EBA stress test exercise 2018 was based on the newly introduced IFRS 9 accounting framework and did not prescribe any pass/fail threshold for the projected CET 1 and Leverage ratios under the macroeconomic base and adverse scenario.

Stress testing framework of Deutsche Bank Group

Risk reporting and measurement systems

Our risk measurement systems support regulatory reporting and external disclosures, as well as internal management reporting across credit, market, liquidity, cross, business, operational and reputational risks. The risk infrastructure incorporates the relevant legal entities and business divisions and provides the basis for reporting on risk positions, capital adequacy and limit, threshold or target utilization to the relevant functions on a regular and ad-hoc basis. Established units within Finance and Risk assume responsibility for measurement, analysis and reporting of risk while promoting sufficient quality and integrity of risk-related data. Our risk management systems are reviewed by Group

Audit following a risk-based audit approach.

Deutsche Bank's reporting is an integral part of Deutsche Bank's risk management approach and as such aligns with the organizational setup delivering consistent information on Group level and for material legal entities as well as breakdowns by risk types, business division and material business units.

The following principles guide Deutsche Bank's "risk reporting and monitoring" practices:

- Deutsche Bank monitors risks taken against risk appetite and risk-reward considerations on various levels across the Group, e.g. Group, business divisions, material business units, material legal entities, risk types, portfolio and counterparty levels.
- Risk reporting is required to be accurate, clear, useful and complete and must convey reconciled and validated risk data to communicate information in a concise manner to ensure, across material Financial and Non-Financial Risks, the bank's risk profile is easily and well understood.
- Senior risk committees, such as the Enterprise Risk Committee (ERC) and the Group Risk Committee (GRC), as well as the Management Board who are responsible for risk and capital management receive regular reporting (as well as ad-hoc reporting as required).
- Dedicated teams within Deutsche Bank proactively manage material Financial- and Non-Financial Risks and must ensure that required management information is in place to enable proactive identification and management of risks and avoid undue concentrations within a specific Risk Type and across Risks (Cross-Risk view).

In applying the previously mentioned principles, Deutsche Bank maintains a common basis for all risk reports and aims to minimize individual separate reporting efforts to allow Deutsche Bank to provide consistent information, which only differentiates by granularity and audience focus.

The Bank identifies a large number of metrics within our risk measurement systems which support regulatory reporting and external disclosures, as well as internal management reporting across risks and for material risk types. Deutsche Bank designates a subset of those as "Key Risk Metrics" that represent the most critical ones for which the Bank places an appetite, limit, threshold or target at Group level and / or are reported routinely to senior management for discussion or decision making. The identified Key Risk Metrics include Capital Adequacy and Liquidity metrics; further details can be found in the section "Key risk metrics" .

While a large number of reports are used across the Bank, Deutsche Bank designates a subset of these as "Key Risk Reports" that are critical to support Deutsche Bank's Risk Management Framework through the provision of risk information to senior management and therefore enable the relevant governing bodies to monitor, steer and control the Bank's risk taking activities effectively.

The main reports on risk and capital management that are used to provide the central governance bodies with information relating to the Group risk profile are the following:

- The monthly Risk and Capital Profile (RCP) report is a Cross-Risk report, provides a comprehensive view of Deutsche Bank's risk profile and is used to inform the ERC, the GRC as well as the Management Board and subsequently the Risk Committee of the Supervisory Board. The RCP includes Risk Type specific and Business-Aligned overviews and Enterprise-wide risk topics. It also includes updates on Key Group Risk Appetite Metrics and other Key Portfolio Risk Type Control Metrics as well as updates on Key Risk Developments, highlighting areas of particular interest with updates on corresponding risk management strategies.

- An overview of our liquidity and solvency/leverage position is presented to the GRC and the Asset & Liability Committee (ALCO) by Group Capital Management and the Group Treasurer on a monthly basis. It comprises information on key metrics including CRR/CRD 4 Common Equity Tier 1 ratio, the CRR/CRD 4 Leverage Ratio, and MREL as well as an overview of our current funding and liquidity status, the liquidity stress test results and contingency measures.
- Group-wide macroeconomic stress tests are typically performed twice per quarter (or more frequently if required). They are reported to and discussed in the ERC and escalated to the GRC if deemed necessary. The stressed key performance indicators are benchmarked against the Group Risk Appetite thresholds.

While the above reports are used at a Group level to monitor and review the risk profile of Deutsche Bank holistically, there are other, supplementing standard and ad-hoc management reports that Risk Type or Business Aligned Risk Management functions use to monitor and control the risk profile.

Recovery and resolution planning

A number of jurisdictions such as the member states of the European Union, including Germany and the United Kingdom, as well as the United States, have enacted regulations requiring banks or competent regulatory authorities to develop recovery and resolution plans in order to be prepared for the management of a severe crisis up to a potential failure of a bank.

For the purpose of recovery planning, we maintain a Group recovery plan (Recovery Plan) which is updated and submitted to the European Central Bank (ECB) at least annually to reflect changes in the business and the regulatory requirements. The Recovery Plan prepares us to restore our financial strength and viability during an extreme stress situation, laying out a set of defined actions aimed to protect us, our customers and the markets and prevent a potential resolution event. In line with regulatory guidance, the Recovery Plan includes a wide range of countermeasures that are designed to mitigate different types of stress scenarios, originating from both idiosyncratic and market-wide events, that would threaten Deutsche Bank’s capital and liquidity position. In addition, the Recovery Plan also outlines clear predefined governance and processes set up to support timely, efficient and effective monitoring, escalation, decision-making and implementation of recovery options if a crisis event occurs.

The Management Board oversees the development of the Recovery Plan and has set up a dedicated contingent governance process to manage financial stress events.

As set out in the Bank Recovery and Resolution Directive (BRRD), the German Recovery and Resolution Act (Sanierungs- und Abwicklungsgesetz, SAG) transforming the BRRD into German national legislation, and the Single Resolution Mechanism Regulation (the SRM Regulation), the Group resolution plan is prepared by the resolution authorities, rather than by the bank itself. We work closely with the Single Resolution Board (SRB) and the Bundesanstalt für Finanzdienstleistungsaufsicht (“BaFin”) who establish the Group resolution plan for Deutsche Bank, which is currently based on a single point of entry (SPE) bail-in as the preferred resolution strategy. Under the SPE bail-in strategy, the parent entity Deutsche Bank AG would be recapitalized through a write-down and/or conversion to equity of capital instruments (Common Equity Tier 1, Additional Tier 1, Tier 2) and other eligible liabilities in order to stabilize the Group. Within one month after the application of the bail-in tool to recapitalize an institution, the BRRD (as implemented in the SAG) requires such institution to establish a business reorganization plan addressing the causes of failure and aiming to restore the institution's long-term viability.

The BRRD requires banks in EU member states to maintain minimum requirements for own funds and eligible liabilities (MREL) to make resolution credible by establishing sufficient loss absorption and recapitalization capacity. Apart from MREL-requirements, Deutsche Bank, as a global systemically important bank, will be subject to global minimum standards for Total Loss-Absorbing Capacity (TLAC), which set out strict requirements for the amount and eligibility of instruments to be maintained for bail-in purposes. In particular, TLAC instruments must be subordinated (including so-called senior "non-preferred" debt, but also in the form of regulatory capital instruments) to other senior liabilities. This ensures that a bail-in would be applied first to equity and TLAC instruments, which must be exhausted before a bail-in may affect other senior ("preferred") liabilities such as deposits, derivatives, debt instruments that are "structured" and senior preferred plain vanilla bonds.

In the United States, Deutsche Bank AG is required under Title I of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), as amended, and the implementing regulations therefor, to prepare and submit periodically to the Federal Reserve Board and the Federal Deposit Insurance Corporation ("FDIC") a plan for the orderly resolution of subsidiaries and operations in the event of future material financial distress or failure (the "U.S. Resolution Plan"). For foreign-based companies subject to these resolution planning requirements such as Deutsche Bank AG, the U.S. Resolution Plan relates only to subsidiaries, branches, agencies and businesses that are domiciled in or whose activities are carried out in whole or in material part in the United States.

Deutsche Bank AG filed its most recent U.S. Resolution Plan in July 2018 and received written regulatory feedback in December 2018. The Federal Reserve and FDIC found that Deutsche Bank's U.S. Resolution Plan had no deficiencies but identified one shortcoming in the plan, associated with governance mechanisms and related escalation triggers. Deutsche Bank is required to submit a response to its December 2018 feedback letter by April 5, 2019. Deutsche Bank's response will discuss the remediation of the shortcoming as well as enhancements of its resolution capabilities. Both the remediation of the shortcoming and enhancements must be completed prior to the submission of our next U.S. Resolution Plan, which is currently expected to be due on July 1, 2020.

Risk and Capital Management

Capital management

Our Treasury function manages solvency, capital adequacy, leverage and bail-in capacity ratios at Group level and locally in each region, as applicable. Treasury implements our capital strategy, which itself is developed by the Group Risk Committee and approved by the Management Board. Treasury, directly or through the Group Asset and Liability Committee, which has been established in the first half of the year 2018, manages, among other things, issuance and repurchase of shares and capital instruments, hedging of capital ratios against foreign exchange swings, setting capacities for key financial resources, design of shareholders' equity allocation, and regional capital planning. We are fully committed to maintaining our sound capitalization both from an economic and regulatory perspective. We continuously monitor and adjust our overall capital demand and supply in an effort to achieve an appropriate balance of the economic and regulatory considerations at all times and from all perspectives. These perspectives include book equity based on IFRS accounting standards, regulatory and economic capital as well as specific capital requirements from rating agencies.

Treasury manages the issuance and repurchase of capital instruments, namely Common Equity Tier 1, Additional Tier 1 and Tier 2 capital instruments as well as TLAC/MREL eligible debt instruments. Treasury constantly monitors the market for liability management trades. Such trades represent a countercyclical opportunity to create Common

Equity Tier 1 capital by buying back our issuances below par.

Our core currencies are Euro, US Dollar, Chinese Renminbi and Pound Sterling. Treasury manages the sensitivity of our capital ratios against swings in core currencies. The capital invested into our foreign subsidiaries and branches in the other non-core currencies is largely hedged against foreign exchange swings. Treasury determines which currencies are to be hedged, develops suitable hedging strategies in close cooperation with Risk Management and finally executes these hedges.

Resource limit setting

Usage of key financial resources is influenced through the following governance processes and incentives.

Target resource capacities are reviewed in our annual strategic plan in line with our CET 1 and Leverage Ratio ambitions. In a quarterly process, the Group Asset and Liability Committee, which insofar as it replaced the Group Risk Committee as decision body, approves divisional resource limits for Total Capital Demand and leverage exposure that are based on the strategic plan but adjusted for market conditions and the short-term outlook. Limits are enforced through a close monitoring process and an excess charging mechanism.

Overall regulatory capital requirements are principally driven by either our CET 1 ratio (solvency) or leverage ratio (leverage) requirements, whichever is the more binding constraint. For the internal capital allocation, the combined contribution of each segment to the Group's Common Equity Tier 1 ratio, the Group's Leverage ratio and the Group's Capital Loss under Stress are weighted to reflect their relative importance and level of constraint to the Group. Contributions to the Common Equity Tier 1 ratio and the Leverage ratio are measured through Risk-Weighted Assets (RWA) and Leverage Ratio Exposure (LRE) assuming full implementation of CRR/CRD 4 rules. The Group's Capital Loss under Stress is a measure of the Group's overall economic risk exposure under a defined stress scenario. In our performance measurement, our methodology also applies different rates for the cost of equity for each of the business segments, reflecting in a more differentiated way the earnings volatility of the individual business models. This enables improved performance management and investment decisions.

Regional capital plans covering the capital needs of our branches and subsidiaries across the globe are prepared on an annual basis and presented to the Group Investment Committee. Most of our subsidiaries are subject to legal and regulatory capital requirements. In developing, implementing and testing our capital and liquidity, we fully take such legal and regulatory requirements into account.

Further, Treasury is represented on the Investment Committee of the largest Deutsche Bank pension fund which sets the investment guidelines for this fund. This representation is intended to ensure that pension assets are aligned with pension liabilities, thus protecting our capital base.

Risk Identification and Assessment

Our business activities generate credit risks, market risks, business risks, liquidity risks, cross risks, operational risks and reputational risks. We regularly identify risks to our business' and infrastructure's operations, also under stressed conditions, and assess the materiality of identified risks with respect to their severity and likelihood of materialization. The assessment of current risks is complemented by a view on emerging risks applying a forward-looking perspective. This risk identification and assessment process results in our risk inventory which captures the material risks across relevant businesses and entities. Regular updates to the risk inventory are reported to senior management together with the risk profile and inform our risk management processes.

Throughout 2018 we have strengthened the enterprise risk identification and assessment framework applicable to Deutsche Bank Group and key entities. The enhanced process involves both first line and second line input into risk identification and the assessment of the risks' materiality. This framework provides the basis, on which we can aggregate risks for the Group across businesses and entities. The resulting inventory of risks, after review and challenge by senior management, informs key risk management processes including the development of stress scenarios tailored to Deutsche Bank's risk profile, the calibration of risk appetite and the risk profile monitoring and reporting.

Credit Risk Management

Credit Risk framework

Credit Risk arises from all transactions where actual, contingent or potential claims against any counterparty, borrower, obligor or issuer (which we refer to collectively as "counterparties") exist, including those claims that we plan to distribute. These transactions are typically part of our non-trading lending activities (such as loans and contingent liabilities) as well as our direct trading activity with clients (such as OTC derivatives). These also include traded bonds and debt securities. Carrying values of equity investments are also disclosed in our Credit Risk section. We manage the respective positions within our market risk and credit risk frameworks.

Based on the annual risk identification and materiality assessment, Credit Risk is grouped into five categories, namely default/ migration risk, country risk, transaction/ settlement risk (exposure risk), mitigation (failure) risk and concentration risk.

- Default/Migration Risk is the risk that a counterparty defaults on its payment obligations or experiences material credit quality deterioration increasing the likelihood of a default.
- Country Risk is the risk that otherwise solvent and willing counterparties are unable to meet their obligations due to direct sovereign intervention or policies.
- Transaction/Settlement Risk (Exposure Risk) is the risk that arises from any existing, contingent or potential future positive exposure.
- Mitigation Risk is the risk of higher losses due to risk mitigation measures not performing as anticipated.
- Concentration Risk is the risk of an adverse development in a specific single counterparty, country, industry or product leading to a disproportionate deterioration in the risk profile of Deutsche Bank's credit exposures to that counterparty, country, industry or product.

We measure, manage/mitigate and report/monitor our credit risk using the following philosophy and principles:

- Our Credit Risk Management function is independent from our business divisions and in each of our divisions, credit decision standards, processes and principles are consistently applied.
- A key principle of credit risk management is client credit due diligence. Our client selection is achieved in collaboration with our business division counterparts who stand as a first line of defense.
- We aim to prevent undue concentration and tail-risks (large unexpected losses) by maintaining a diversified credit portfolio. Client, industry, country and product-specific concentrations are assessed and managed against our risk appetite.
- We maintain underwriting standards aiming to avoid large undue credit risk on a counterparty and portfolio level. In this regard we assume unsecured cash positions and actively use hedging for risk mitigation purposes. Additionally, we strive to secure our derivative portfolio through collateral agreements and may additionally hedge concentration risks to further mitigate credit risks from underlying market movements.
- Every new credit facility and every extension or material change of an existing credit facility (such as its tenor, collateral structure or major covenants) to any counterparty requires credit approval at the appropriate authority level. We assign credit approval authorities to individuals according to their qualifications,

experience and training, and we review these periodically.

- We measure and consolidate all our credit exposures to each obligor across our consolidated Group on a global basis, in line with regulatory requirements.
- We manage credit exposures on the basis of the “one obligor principle” (as required under CRR Article 4(1)(39)), under which all facilities to a group of borrowers which are linked to each other (for example by one entity holding a majority of the voting rights or capital of another) are consolidated under one group.
- We have established within Credit Risk Management – where appropriate – specialized teams for deriving internal client ratings, analyzing and approving transactions, monitoring the portfolio or covering workout clients.
- Where required, we have established processes to report credit exposures at legal entity level.

Measuring Credit Risk

Credit Risk is measured by credit rating, regulatory and internal capital demand and key credit metrics mentioned below.

The credit rating is an essential part of the Bank’s underwriting and credit process and builds the basis for risk appetite determination on a counterparty and portfolio level, credit decision and transaction pricing as well the determination of credit risk regulatory capital. Each counterparty must be rated and each rating has to be reviewed at least annually. Ongoing monitoring of counterparties helps keep ratings up-to-date. There must be no credit limit without a credit rating. For each credit rating the appropriate rating approach has to be applied and the derived credit rating has to be established in the relevant systems. Different rating approaches have been established to best reflect the specific characteristics of exposure classes, including central governments and central banks, institutions, corporates and retail.

Counterparties in our non-homogenous portfolios are rated by our independent Credit Risk Management function. Country risk related ratings are provided by ERM Risk Research.

Our rating analysis is based on a combination of qualitative and quantitative factors. When rating a counterparty we apply in-house assessment methodologies, scorecards and our 21-grade rating scale for evaluating the credit-worthiness of our counterparties.

Changes to existing credit models and introduction of new models are approved by the Regulatory Credit Risk Model Committee (RCRMC) chaired by the Head of CRM, as well as by the Head of Model Risk Management or delegate under a delegated authority, where appropriate, before the methodologies are used for credit decisions and capital calculation for the first time or before they are significantly changed. Proposals with high impact are recommended for approval to the Group Risk Committee. Regulatory approval may also be required. The methodology validation is performed independently of model development by Model Risk Management. The results of the regular validation processes as stipulated by internal policies have to be brought to the attention of the Regulatory Credit Risk Model Forum (RCRMF) and the RCRMC, even if the validation results do not lead to a change. The validation plan for rating methodologies is presented to RCRMF at the beginning of the calendar year.

For Postbank, and since May 2018 for DB PFK AG, responsibility for implementation, validation and monitoring of internal rating systems effectiveness is with Postbank’s/DB PFK AG’s Group Risk Controlling function and overseen by the model and validation committee, chaired by Postbank’s/ DB PFK AG’s Head of Group Risk Controlling. An independent model risk and validation function has been established in addition to the model risk development unit.

All rating systems are subject to approval by Postbank's/ DB PFK AG's Bank Risk Committee chaired by the Chief Risk Officer. In addition, DB Group's IRBA Governance is extended to all DB PFK AG models as part of the merger and the granted capital waiver. Effectiveness of rating systems and rating results are reported to the Postbank/ DB PFK AG Management Board on a regular basis. Joint governance is ensured via a cross committee membership of Deutsche Bank senior managers joining Postbank/ DB PFK AG committees and vice versa.

We measure risk-weighted assets to determine the regulatory capital demand for credit risk using "advanced", "foundation" and "standard" approaches of which advanced and foundation are approved by our regulator.

The advanced Internal Ratings Based Approach (IRBA) is the most sophisticated approach available under the regulatory framework for credit risk and allows us to make use of our internal credit rating methodologies as well as internal estimates of specific further risk parameters. These methods and parameters represent long-used key components of the internal risk measurement and management process supporting the credit approval process, the economic capital and expected loss calculation and the internal monitoring and reporting of credit risk. The relevant parameters include the probability of default (PD), the loss given default (LGD) and the maturity (M) driving the regulatory risk-weight and the credit conversion factor (CCF) as part of the regulatory exposure at default (EAD) estimation. For the majority of derivative counterparty exposures as well as securities financing transactions (SFT), we make use of the internal model method (IMM) in accordance with CRR and SolvV to calculate EAD. For most of our internal rating systems more than seven years of historical information is available to assess these parameters. Our internal rating methodologies aim at point-in-time rather than a through-the-cycle rating, but in line with regulatory solvency requirements, they are calibrated based on long-term averages of observed default rates.

We apply the foundation IRBA to the majority of our remaining foundation IRBA eligible credit portfolios at Postbank/ DB PFK AG. The foundation IRBA is an approach available under the regulatory framework for credit risk allowing institutions to make use of their internal rating methodologies while using pre-defined regulatory values for all other risk parameters. Parameters subject to internal estimates include the PD while the LGD and the CCF are defined in the regulatory framework.

We apply the standardized approach to a subset of our credit risk exposures. The standardized approach measures credit risk either pursuant to fixed risk weights, which are predefined by the regulator, or through the application of external ratings. We assign certain credit exposures permanently to the standardized approach in accordance with Article 150 CRR. These are predominantly exposures to the Federal Republic of Germany and other German public sector entities as well as exposures to central governments of other European Member States that meet the required conditions. These exposures make up the majority of the exposures carried in the standardized approach and receive predominantly a risk weight of zero percent. For internal purposes, however, these exposures are subject to an internal credit assessment and fully integrated in the risk management and economic capital processes.

In addition to the above described regulatory capital demand, we determine the internal capital demand for credit risk via an economic capital model.

We calculate economic capital for the default risk, country risk and settlement risk as elements of credit risk. In line with our economic capital framework, economic capital for credit risk is set at a level to absorb with a probability of 99.9 % very severe aggregate unexpected losses within one year. Our economic capital for credit risk is derived from the loss distribution of a portfolio via Monte Carlo Simulation of correlated rating migrations. The loss distribution is modeled in two steps. First, individual credit exposures are specified based on parameters for the probability of default, exposure at default and loss given default. In a second step, the probability of joint defaults is modeled through the introduction of economic factors, which correspond to geographic regions and industries. The simulation of portfolio losses is then performed by an internally developed model, which takes rating migration and maturity effects into account. Effects due to wrong-way derivatives risk (i.e., the credit exposure of a derivative in the default

case is higher than in non-default scenarios) are modeled by applying our own alpha factor when deriving the exposure at default for derivatives and securities financing transactions under the CRR. We allocate expected losses and economic capital derived from loss distributions down to transaction level to enable management on transaction, customer and business level.

Besides the credit rating which is the key credit risk metric we apply for managing our credit portfolio, including transaction approval and the setting of risk appetite, we establish internal limits and credit exposures under these limits. Credit limits set forth maximum credit exposures we are willing to assume over specified periods. In determining the credit limit for a counterparty, we consider the counterparty's credit quality by reference to our internal credit rating. Credit limits and credit exposures are both measured on a gross and net basis where net is derived by deducting hedges and certain collateral from respective gross figures. For derivatives, we look at current market values and the potential future exposure over the relevant time horizon which is based upon our legal agreements with the counterparty. We generally also take into consideration the risk-return characteristics of individual transactions and portfolios. Risk-Return metrics explain the development of client revenues as well as capital consumption. In this regard we also look at the client revenues in relation to the balance sheet consumption.

IFRS 9 impairment approach

We determine credit loss allowances in accordance with IFRS 9 as follows:

- Stage 1 reflects financial instruments where it is assumed that credit risk has not increased significantly after initial recognition.
- Stage 2 contains all financial assets, that are not defaulted, but have experienced a significant increase in credit risk since initial recognition.
- Stage 3 consists of financial assets of clients which are defaulted in accordance of Capital Requirements Regulation (CRR) under Art. 178. The Group defines these financial assets as impaired.
- Significant increase in Credit Risk is determined using quantitative and qualitative information based on the Group's historical experience, credit risk assessment and forward-looking information.
- POCI are Purchased or Originated Credit-Impaired financial assets in Stage 3 where at the time of initial recognition there is objective evidence of impairment.

The IFRS 9 impairment approach is an integral part of the Group's Credit Risk Management. The estimation of ECL (Expected Credit Loss) which is the basis for the Group's credit loss allowance is either done via the Group's ECL engine or by Credit Officers on a case-by-case basis. In both cases, the calculation takes place for each financial asset individually. The Group ECL engine is used to calculate the credit loss allowance for all financial assets in the homogeneous portfolio as well as for all financial assets in the non-homogenous portfolios in Stage 1 and Stage 2. The credit loss allowance for our financial assets in our non-homogeneous portfolio in Stage 3 is determined by Credit Officers on a case by case basis.

For a more detailed description of these expressions and the approach, please refer to Note 1 - Significant Accounting Policies and Critical Accounting Estimates of the Consolidated Financial Statements and in the following sections.

Stage Determination

At initial recognition, financial assets which are not POCI are reflected in Stage 1. If there is a significant increase in credit risk, the financial asset is transferred to Stage 2. Significant increase in credit risk is determined by using rating-related and process-related indicators. In contrast, the assignment of a financial instrument to Stage 3 is based on the status of the obligor being in default.

Rating-related indicators: Based on a dynamic change in counterparty PDs that is linked to all transactions with the counterparty, the Group compares lifetime PD at the reporting date, with expectations at the date of initial recognition. Based on historically observed migration behavior and available forward-looking information, an expected forward rating distribution is obtained. A quantile of this distribution, which is defined for each counterparty class, is chosen as the threshold. If the remaining lifetime PD of a transaction according to current expectations exceeds the PD of the relevant threshold rating, the financial asset is considered to be significantly increased. The thresholds used to determine Stage 2 indicators are determined using expert judgment and validated annually.

Process-related Indicators: Process-related indicators are derived via usage of existing risk management indicators, which allow the Group to identify whether the credit risk of financial assets has significantly increased. These include obligors being added mandatorily to a credit watchlist, being mandatorily transferred to workout status, payments being 30 days or more overdue or in forbearance.

On an ongoing basis, as long as the condition for one or more of the indicators is fulfilled and the financial asset is not recognized as defaulted, the asset will remain in Stage 2. If none of the indicator conditions is any longer fulfilled and the financial asset is not defaulted, the asset transfers back to Stage 1. In case of a default, the financial asset is allocated to Stage 3. In the case that a previously defaulted financial asset ceases to be classified as defaulted, it transfers back to Stage 1 or Stage 2.

Expected Lifetime

The expected lifetime of a financial asset is a key factor in determining the lifetime expected credit losses (LTECL). Lifetime expected credit losses represent default events over the expected life of a financial asset. The Group measures expected credit losses considering the risk of default over the maximum contractual period (including any borrower's extension options) over which it is exposed to credit risk.

Retail overdrafts, credit card facilities and certain corporate revolving facilities typically include both a loan and an undrawn commitment component. The expected lifetime of such on-demand facilities exceeds their contractual life as they are typically cancelled only when the Group becomes aware of an increase in credit risk. The expected lifetime is estimated by taking into consideration historical information and the Group's Credit Risk Management actions such as credit limit reductions and facility cancellation. Where such facilities are subject to an individual review by Credit Risk Management, the lifetime for calculating expected credit losses is 12 months. For facilities not subject to individual review by Credit Risk Management, Deutsche Bank applies a lifetime for calculating expected credit losses of 24 months.

Forward-looking information

Under IFRS 9, the allowance for credit losses is based on reasonable and supportable forward looking information obtainable without undue cost or effort, which takes into consideration past events, current conditions and forecasts of future economic conditions.

To incorporate forward-looking information into Deutsche Bank's allowance for credit losses, the Group uses two key elements:

- As its base scenario, the Group uses the macroeconomic forecasts provided by its research department dbResearch. These forecasts cover a number of macroeconomic variables (e.g., GDP, unemployment rates and interest rates) and reflect dbResearch's view as to the most likely development of those variables, typically over a two year period and updated quarterly.
- This base scenario is then translated into a multiple scenario analysis by leveraging the Group-wide stress test environment. This environment generates the impact of a multitude of economic scenarios and is used as basis for deriving multi-year PD curves for different rating and counterparty classes, which are applied in the

calculation of expected credit losses and in the identification of significant deterioration in credit quality of financial assets as described previously.

The general use of forward-looking information, including macro-economic factors, as well as adjustments taking into account extraordinary factors, are monitored by the Group's Risk and Finance Credit Loss Provision Forum. In certain situations Credit Risk officers and senior management may have additional information in relation to specific portfolios to indicate that the distribution used by the stress testing framework is not appropriate. In such situations the Group would apply a judgmental overlay.

Basis of inputs and assumptions and the estimation techniques

The Group calculates expected credit losses for each financial asset individually. Similarly, the determination of the need to transfer between stages is made on an individual asset basis.

The Group uses three main components to measure ECL. These are PD, Loss Given Default (LGD) and Exposure at Default (EAD). The Group has leveraged existing parameters used for determination of capital demand under the Basel Internal Ratings Based Approach and internal risk management practices as much as possible to calculate ECL. These parameters are adjusted where necessary to comply with IFRS 9 requirements (e.g. use of point in time ratings and removal of downturn elements in the regulatory parameters). Incorporating forecasts of future economic conditions into the measurement of expected credit losses influences the allowance for credit losses for each stage. In order to calculate lifetime expected credit losses, the Group’s calculation includes deriving the corresponding lifetime PDs from migration matrices that reflect economic forecasts.

The expected credit loss calculation for Stage 3 distinguishes between transactions in homogeneous and non-homogenous portfolios, and purchased or originated credit-impaired transactions. For transactions that are in Stage 3 and in a homogeneous portfolio, a similar approach as for Stage 1 and 2 transactions is taken. Since a Stage 3 transaction is defaulted, the probability of default is equal to 100 %. To incorporate the currently available information, the LGD parameters are modelled to be time-dependent, thus capture the time dependency of recovery expectation after default.

The estimation techniques for the input factors are described in more detail below.

The one-year PD for counterparties is derived from our internal rating systems. The Group assigns a PD to each relevant counterparty credit exposure based at the 21-grade master rating scale for all of our exposure.

The counterparty ratings assigned are derived based on internally developed rating models which specify consistent and distinct customer-relevant criteria and assign a rating grade based on a specific set of criteria as given for a certain customer. The set of criteria is generated from information sets relevant for the respective customer segments including general customer behavior, financial and external data. The methods in use range from statistical scoring models to expert-based models taking into account the relevant available quantitative and qualitative information. Expert-based models are usually applied for counterparties in the exposure classes “Central governments and central banks”, “Institutions” and “Corporates” with the exception of those “Corporates” segments for which sufficient data basis is available for statistical scoring models. For the latter as well as for the retail segment statistical scoring or hybrid models combining both approaches are commonly used. Quantitative rating methodologies are developed based on applicable statistical modelling techniques, such as logistic regression.

One-year PDs are extended to multi-year PD curves using through-the-cycle (TTC) matrices and macroeconomic forecasts provided by Deutsche Bank Research that define a macroeconomic base scenario. Based on these macroeconomic forecasts, TTC matrices are transformed into point-in-time (PIT) rating migration matrices, typically

for a two year period. The calculation of the PIT matrices is performed in the Group's stress testing environment, which provides a link between macroeconomic variables and the default and rating behavior of counterparties. The macroeconomic forecasts adjust the distribution of the respective macroeconomic factors and consequently, the rating migration matrices that define migration and default probabilities. The actual calculation is based on a Monte-Carlo simulation of multiple scenarios or on equivalent analytical techniques. Multi-year PDs and rating migration matrices are thus derived and applied to portfolios in scope for IFRS 9 which are categorized according to the following counterparty classes: retail Germany, retail Spain, retail Italy, financial institutions, midcaps, corporates, and sovereigns.

LGD is defined as the likely loss intensity in case of a counterparty default. It provides an estimation of the exposure that cannot be recovered in a default event and therefore captures the severity of a loss. Conceptually, LGD estimates are independent of a customer's probability of default. The LGD models ensure that the main drivers for losses (i.e., different levels and quality of collateralization and customer or product types or seniority of facility) are reflected in specific LGD factors. In our LGD models we assign collateral type specific LGD parameters to the collateralized exposure (collateral value after application of haircuts).

The EAD over the lifetime of a financial asset is modelled taking into account expected repayment profiles. We apply specific Credit Conversion Factors (CCFs) in order to calculate an EAD value. Conceptually, the EAD is defined as the expected amount of the credit exposure to a counterparty at the time of its default. In instances where a transaction involves an unused limit, a percentage share of this unused limit is added to the outstanding amount in order to appropriately reflect the expected outstanding amount in case of a counterparty default. This reflects the assumption that for commitments the utilization at the time of default might be higher than the utilization under IAS 39. When a transaction involves an additional contingent component (i.e., guarantees) a further percentage share is applied as part of the CCF model in order to estimate the amount of guarantees drawn in case of default. The calibrations of such parameters are based on statistical experience as well as internal historical data and consider counterparty and product type specifics.

Consideration of Collateralization in IFRS 9 Expected Credit Loss calculation

The LTECL engine projects the level of collateralization for each point in time in the life of a financial asset. For the reporting date, the engine uses the existing collateral distribution process applied for the DB's Economic Capital model. In this model, the liquidation value of each eligible collateral is allocated to relevant financial assets to distinguish between collateralized and uncollateralized parts of each exposure.

For personal collateral, the LTECL engine assumes that the relative level of collateralization remains stable over time. In that case the absolute exposure and collateral values decrease together over time. For impersonal collateral, the LTECL shall assume that the absolute collateral value remains constant. In that case, the collateralized part of the exposure increases over time and consequently the exposure will be fully collateralized at some point.

Certain financial guarantee contract are integral to the financial assets guaranteed. In such cases, the financial guarantee is considered as collateral for the financial asset and the benefit of the guarantee is used to mitigate the ECL of the guaranteed financial asset.

For further details on how we determine the liquidation value of our collaterals please refer to section "Managing and Mitigation of Credit Risk"

Model sensitivity

There are two main sources of ECL volatility for Stage 1 and 2 assets. Similarly to traditional risk measures like Risk Weighted Assets or Economic Capital, our ECL is sensitive to changes in the portfolio relevant for IFRS 9. Changes to the portfolio composition, the exposure profile or counterparty ratings, which are particularly important due to potential implications on stage determination, influence the level of ECL and thus the level of our Credit Loss Allowance.

In addition to portfolio changes, ECL is also impacted by macroeconomic forecasts. The selection process for the macroeconomic variables combines expert assessment and statistical tests and reflects the characteristics of the individual portfolios. As a consequence, ECL sensitivities to macroeconomic forecasts are portfolio-specific with GDP growth rates and unemployment rates in the Eurozone and the US as dominant factors.

Managing and mitigation of Credit Risk

Managing Credit Risk on counterparty level

Credit-related counterparties are principally allocated to credit officers within credit teams which are aligned to types of counterparty (such as financial institutions, corporates or private individuals) or economic area (e.g., emerging markets) and dedicated rating analyst teams. The individual credit officers have the relevant expertise and experience to manage the credit risks associated with these counterparties and their associated credit related transactions. For retail clients, credit decision making and credit monitoring is highly automated for efficiency reasons. Credit Risk Management has full oversight of the respective processes and tools used in the retail credit process. It is the responsibility of each credit officer to undertake ongoing credit monitoring for their allocated portfolio of counterparties. We also have procedures in place intended to identify at an early stage credit exposures for which there may be an increased risk of loss.

In instances where we have identified counterparties where there is a concern that the credit quality has deteriorated or appears likely to deteriorate to the point where they present a heightened risk of loss in default, the respective exposure is generally placed on a “watchlist”. We aim to identify counterparties that, on the basis of the application of our risk management tools, demonstrate the likelihood of problems well in advance in order to effectively manage the credit exposure and maximize the recovery. The objective of this early warning system is to address potential problems while adequate options for action are still available. This early risk detection is a tenet of our credit culture and is intended to ensure that greater attention is paid to such exposures.

Credit limits are established by the Credit Risk Management function via the execution of assigned credit authorities. This also applies to settlement risk that must fall within limits pre-approved by Credit Risk Management considering risk appetite and in a manner that reflects expected settlement patterns for the subject counterparty. Credit approvals are documented by the signing of the credit report by the respective credit authority holders and retained for future reference.

Credit authority is generally assigned to individuals as personal credit authority according to the individual’s professional qualification, experience and training. All assigned credit authorities are reviewed on a periodic basis to help ensure that they are commensurate with the individual performance of the authority holder.

Where an individual’s personal authority is insufficient to establish required credit limits, the transaction is referred to a higher credit authority holder or where necessary to an appropriate credit committee. Where personal and committee authorities are insufficient to establish appropriate limits, the case is referred to the Management Board for approval.

Mitigation of Credit Risk on counterparty level

In addition to determining counterparty credit quality and our risk appetite, we also use various credit risk mitigation techniques to optimize credit exposure and reduce potential credit losses. Credit risk mitigants are applied in the following forms:

- Comprehensive and enforceable credit documentation with adequate terms and conditions.
- Collateral held as security to reduce losses by increasing the recovery of obligations.
- Risk transfers, which shift the loss arising from the probability of default risk of an obligor to a third party including hedging executed by our Credit Portfolio Strategies Group.
- Netting and collateral arrangements which reduce the credit exposure from derivatives and securities financing transactions (e.g. repo transactions).
- Hedging of derivatives counterparty risk including CVA, using primarily CDS contracts via our Counterparty Portfolio Management desk.

Collateral

We regularly agree on collateral to be received from or to be provided to customers in contracts that are subject to credit risk. Collateral is security in the form of an asset or third-party obligation that serves to mitigate the inherent risk of credit loss in an exposure, by either substituting the counterparty default risk or improving recoveries in the event of a default. While collateral can be an alternative source of repayment, it does not replace the necessity of high quality underwriting standards and a thorough assessment of the debt service ability of the counterparty in line with CRR Article 194 (9).

We segregate collateral received into the following two types:

- Financial and other collateral, which enables us to recover all or part of the outstanding exposure by liquidating the collateral asset provided, in cases where the counterparty is unable or unwilling to fulfill its primary obligations. Cash collateral, securities (equity, bonds), collateral assignments of other claims or inventory, equipment (i.e., plant, machinery and aircraft) and real estate typically fall into this category. All financial collateral is regularly, mostly daily, revalued and measured against the respective credit exposure. The value of other collateral, including real estate, is monitored based upon established processes that includes regular revaluations by internal and/or external experts.
- Guarantee collateral, which complements the counterparty's ability to fulfill its obligation under the legal contract and as such is provided by third parties. Letters of credit, insurance contracts, export credit insurance, guarantees, credit derivatives and risk participations typically fall into this category. Guarantee collateral with a non-investment grade rating of the guarantor is limited.

Our processes seek to ensure that the collateral we accept for risk mitigation purposes is of high quality. This includes seeking to have in place legally effective and enforceable documentation for realizable and measureable collateral assets which are evaluated regularly by dedicated teams. The assessment of the suitability of collateral for a specific transaction is part of the credit decision and must be undertaken in a conservative way, including collateral haircuts that are applied. We have collateral type specific haircuts in place which are regularly reviewed and approved. In this regard, we strive to avoid "wrong-way" risk characteristics where the counterparty's risk is positively correlated with the risk of deterioration in the collateral value. For guarantee collateral, the process for the analysis of the guarantor's creditworthiness is aligned to the credit assessment process for counterparties.

The valuation of collateral is considered under a liquidation scenario. Liquidation value is equal to the expected proceeds of collateral monetization / realization in a base case scenario, wherein a fair price is achieved through careful preparation and orderly liquidation of the collateral. Collateral can either move in value over time (dynamic value) or not (static value). The dynamic liquidation value generally includes a safety margin or haircut over realizable

value to address liquidity and marketability aspects.

The Group assigns a liquidation value to eligible collateral, based on, among other things:

- the market value and / or lending value, notional amount or face value of a collateral as a starting point;
- the type of collateral; the currency mismatch, if any, between the secured exposure and the collateral; and a maturity mismatch, if any;
- the applicable legal environment or jurisdiction (onshore versus offshore collateral);
- the market liquidity and volatility in relation to agreed termination clauses;
- the correlation between the performance of the borrower and the value of the collateral, e.g., in the case of the pledge of a borrower's own shares or securities (in this case generally full correlation leads to no liquidation value);
- the quality of physical collateral and potential for litigation or environmental risks; and
- a determined collateral type specific haircut (0 – 100 %) reflecting collection risks (i.e. price risks over the average liquidation period and processing/utilization/sales cost) as specified in the respective policies.

Collateral haircut settings are typically based on available historic internal and/or external recovery data (expert opinions may also be used, where appropriate). They also incorporate a forward-looking component in the form of collection and valuation forecast provided by experts within Risk Management. When data is not sufficiently available or inconclusive, more conservative haircuts than otherwise used must be applied. Haircut settings are reviewed at least annually.

Risk transfers

Risk transfers to third parties form a key part of our overall risk management process and are executed in various forms, including outright sales, single name and portfolio hedging, and securitizations. Risk transfers are conducted by the respective business units and by our Credit Portfolio Strategies Group (CPSG), in accordance with specifically approved mandates.

CPSG manages the residual credit risk of loans and lending-related commitments of the institutional and corporate credit portfolio, the leveraged portfolio and the medium-sized German companies' portfolio within our CIB Division.

Acting as a central pricing reference, CPSG provides the businesses with an observed or derived capital market rate for loan applications; however, the decision of whether or not the business can enter into the credit risk remains exclusively with Credit Risk Management.

CPSG is concentrating on two primary objectives within the credit risk framework to enhance risk management discipline, improve returns and use capital more efficiently:

- to reduce single-name credit risk concentrations within the credit portfolio and
- to manage credit exposures by utilizing techniques including loan sales, securitization via collateralized loan obligations, sub-participations and single-name and portfolio credit default swaps.

Netting and collateral arrangements for derivatives and Securities Financing Transactions

Netting is applicable to both exchange traded derivatives and OTC derivatives. Netting is also applied to securities financing transactions (e.g. repurchase, securities lending and margin lending transactions) as far as documentation, structure and nature of the risk mitigation allow netting with the underlying credit risk.

All exchange traded derivatives are cleared through central counterparties (CCPs), which interpose themselves between the trading entities by becoming the counterparty to each of the entities. Where legally required or where available and to the extent agreed with our counterparties, we also use CCP clearing for our OTC derivative transactions.

The Dodd-Frank Act and related Commodity Futures Trading Commission (CFTC) rules introduced in 2013 mandatory CCP clearing in the United States for certain standardized OTC derivative transactions, including certain interest rate swaps and index credit default swaps. Additionally, the CFTC adopted final rules in 2016 that require additional interest rate swaps to be cleared on a phased implementation schedule that ended in October 2018. The European Regulation (EU) No 648/2012 on OTC Derivatives, Central Counterparties and Trade Repositories (EMIR) and the Commission Delegated Regulations (EU) 2015/2205, (EU) 2015/592 and (EU) 2016/1178 based thereupon introduced mandatory CCP clearing in the EU clearing for certain standardized OTC derivatives transactions. Mandatory CCP clearing in the EU began for certain interest rate derivatives on June 21, 2016 and for certain iTraxx-based credit derivatives and additional interest rate derivatives on February 9, 2017. Article 4 (2) of EMIR authorizes competent authorities to exempt intragroup transactions from mandatory CCP clearing, provided certain requirements, such as full consolidation of the intragroup transactions and the application of an appropriate centralized risk evaluation, measurement and control procedure are met. The Bank successfully applied for the clearing exemption for most of its regulatory-consolidated subsidiaries with intragroup derivatives, including e.g., Deutsche Bank Securities Inc. and Deutsche Bank Luxembourg S.A. As of December 31, 2018, the Bank is allowed to make use of has obtained intragroup exemptions from the EMIR clearing obligation for 68 bilateral intragroup relationships. The extent of the exemptions differs as not all entities enter into relevant transaction types subject to the clearing obligation. Of the 68 intragroup relationships, 17 are relationships where both entities are established in the Union (EU) for which a full exemption has been granted, and 51 are relationships where one is established in a third country (“Third Country Relationship”). Third Country Relationships required repeat applications for each new asset class being subject to the clearing obligation; the process took place in the course of 2017. Such repeat applications have been filed for 39 of the Third Country Relationships, with one of those entities having been liquidated in the meantime. Due to “Brexit”, the status of some group entities changes from an EU entity to a third country entity in March 2019. There are two affected UK group entities, but we have not applied for any EMIR clearing exemption for those entities.

The rules and regulations of CCPs typically provide for the bilateral set off of all amounts payable on the same day and in the same currency (“payment netting”) thereby reducing our settlement risk. Depending on the business model applied by the CCP, this payment netting applies either to all of our derivatives cleared by the CCP or at least to those that form part of the same class of derivatives. Many CCP rules and regulations also provide for the termination, close-out and netting of all cleared transactions upon the CCP’s default (“close-out netting”), which reduced our credit risk. In our risk measurement and risk assessment processes we apply close-out netting only to the extent we have satisfied ourselves of the legal validity and enforceability of the relevant CCP’s close-out netting provisions.

In order to reduce the credit risk resulting from OTC derivative transactions, where CCP clearing is not available, we regularly seek the execution of standard master agreements (such as master agreements for derivatives published by the International Swaps and Derivatives Association, Inc. (ISDA) or the German Master Agreement for Financial Derivative Transactions) with our counterparts. A master agreement allows for the close-out netting of rights and obligations arising under derivative transactions that have been entered into under such a master agreement upon the counterparty’s default, resulting in a single net claim owed by or to the counterparty. For parts of the derivatives business (e.g., foreign exchange transactions) we also enter into master agreements under which payment netting applies in respect to transactions covered by such master agreements, reducing our settlement risk. In our risk measurement and risk assessment processes we apply close-out netting only to the extent we have satisfied ourselves of the legal validity and enforceability of the master agreement in all relevant jurisdictions.

Also, we enter into credit support annexes (CSA) to master agreements in order to further reduce our derivatives-related credit risk. These annexes generally provide risk mitigation through periodic, usually daily, margining of the covered exposure. The CSAs also provide for the right to terminate the related derivative transactions upon the counterparty's failure to honor a margin call. As with netting, when we believe the annex is enforceable, we reflect this in our exposure measurement.

The Dodd-Frank Act and CFTC rules thereunder, including CFTC rule § 23.504, as well as EMIR and Commission Delegated Regulation based thereupon, namely Commission Delegated Regulation (EU) 2016/2251, introduced the mandatory use of master agreements and related CSAs, which must be executed prior to or contemporaneously with entering into an uncleared OTC derivative transaction. Similar documentation requirements can be found in the U.S. margin rules adopted by U.S. prudential regulators. Under those rules, we are required to post and collect initial margin and variation margin for our derivatives exposures with other derivatives dealers, as well as with our counterparties that (a) are "financial end users," as that term is defined in the U.S. margin rules, and (b) have an average daily aggregate notional amount of uncleared swaps, uncleared security-based swaps, foreign exchange forwards and foreign exchange swaps exceeding U.S.$ 8 billion in June, July and August of the previous calendar year. The U.S. margin rules additionally require us to post and collect variation margin for our derivatives with other financial end user counterparties. These margin requirements are subject to a U.S.$ 50 million threshold for initial margin and a zero threshold for variation margin, with a combined U.S.$ 500,000 minimum transfer amount. The U.S. margin requirements have been in effect for large banks since September 2016, with additional variation margin requirements having come into effect March 1, 2017 and additional initial margin requirements phased in on an annual basis from September 2017 through September 2020.

Under Commission Delegated Regulation (EU) 2016/2251, which implements the EMIR margin requirements, the CSA must provide for daily valuation and daily variation margining based on a zero threshold and a minimum transfer amount of not more than € 500,000. For large derivative exposures exceeding € 8 billion, initial margin has to be posted as well. The variation margin requirements under EMIR apply as of March 1, 2017; the initial margin requirements will be subject to a staged phase-in until September 1, 2020. Under Article 31 of Commission Delegated Regulation (EU) 2016/2251, an EU party may decide to not exchange margin with counterparties in certain non-netting jurisdictions provided certain requirements are met. Pursuant to Article 11 (5) to (10) of EMIR competent authorities are authorized to exempt intragroup transactions from the margining obligation, provided certain requirements are met. While some of those requirements are the same as for the EMIR clearing exemptions (see above), there are additional requirements such as the absence of any current or foreseen practical or legal impediment to the prompt transfer of funds or repayment of liabilities between intragroup counterparties. The Bank plans to make use of this exemption. The Bank has successfully applied for the collateral exemption for some of its regulatory-consolidated subsidiaries with intragroup derivatives, including, e.g., Deutsche Bank Securities Inc. and Deutsche Bank Luxembourg S.A. As of December 31, 2018, the Bank has obtained intragroup exemptions from the EMIR collateral obligation for 14 bilateral intragroup relationships which are published under https://www.db.com/company/en/intra-group-exemptions--margining.htm. For further 10 bilateral intragroup relationships, the EMIR margining exemption may be used based on Article 11 (5) of EMIR, i.e. without the need for any application, because both entities are established in the same EU Member State. Due to "Brexit", the status of two intragroup entities will change from an EU entity to that of a third country entity on March 29, 2019. This may trigger the need for a new application the process of which is currently under discussion with the national competent authority.

Certain CSAs to master agreements provide for rating-dependent triggers, where additional collateral must be pledged if a party's rating is downgraded. We also enter into master agreements that provide for an additional termination event upon a party's rating downgrade. These downgrade provisions in CSAs and master agreements usually apply to both parties but in some agreements may apply to us only. We analyze and monitor our potential contingent payment obligations resulting from a rating downgrade in our stress testing approach for liquidity risk on an ongoing basis. For an assessment of the quantitative impact of a downgrading of our credit rating please refer to table "Stress Testing Results" in the section "Liquidity Risk".

Concentrations within Credit Risk mitigation

Concentrations within credit risk mitigations taken may occur if a number of guarantors and credit derivative providers with similar economic characteristics are engaged in comparable activities with changes in economic or industry conditions affecting their ability to meet contractual obligations. We use a range of tools and metrics to monitor our credit risk mitigating activities.

For more qualitative and quantitative details in relation to the application of credit risk mitigation and potential concentration effects please refer to the section “Maximum Exposure to Credit Risk”.

Managing Credit Risk on portfolio level

On a portfolio level, significant concentrations of credit risk could result from having material exposures to a number of counterparties with similar economic characteristics, or who are engaged in comparable activities, where these similarities may cause their ability to meet contractual obligations to be affected in the same manner by changes in economic or industry conditions.

Our portfolio management framework supports a comprehensive assessment of concentrations within our credit risk portfolio in order to keep concentrations within acceptable levels.

Industry risk management

To manage industry risk, we have grouped our corporate and financial institutions counterparties into various industry sub-portfolios. Portfolios are regularly reviewed with the frequency of review according to portfolio size and risk profile as well as risk developments. Larger / riskier portfolios are reviewed at least on an annual basis. Reviews highlight industry developments and risks to our credit portfolio, review cross-risk concentration risks, analyze the risk/reward profile of the portfolio and incorporate the results of an economic downside stress test. Finally, this analysis is used to define the credit strategies for the portfolio in question.

In our Industry Limit framework, thresholds are established for aggregate credit limits to counterparties within each industry sub-portfolio. Regular overviews are prepared for the Enterprise Risk Committee to discuss recent developments and to agree on actions where necessary

Beyond credit risk, our Industry Risk Framework comprises of Market Risk thresholds for Traded Credit Positions while key non-financial risks are closely monitored.

Country risk management

Avoiding undue concentrations from a regional perspective is also an integral part of our credit risk management framework. In order to achieve this, country risk limits are applied to Emerging Markets as well as selected Developed Markets countries (based on internal country risk ratings). Similar to industry risk, country portfolios are regularly reviewed with the frequency of review according to portfolio size and risk profile as well as risk developments. Larger / riskier portfolios are reviewed at least on an annual basis. These reviews assess key macroeconomic developments and outlook, review portfolio composition and cross-risk concentration risks and analyze the risk/reward profile of the portfolio. Based on this, thresholds and strategies are set for countries and, where relevant, for the region as a whole.

In our Country Limit framework, thresholds are established for counterparty credit risk exposures in a given country to manage the aggregated credit risk subject to country-specific economic and political events. These thresholds include exposures to entities incorporated locally as well as subsidiaries of foreign multinational corporations. Also, gap risk thresholds are set to control the risk of loss due to intra-country wrong-way risk exposure.

Beyond credit risk, our Country Risk Framework comprises Market Risk thresholds for trading positions in emerging markets that are based on the P&L impact of potential stressed market events on these positions. Furthermore we take into consideration treasury risk comprising thresholds for capital positions and intra-group funding exposure of Deutsche Bank entities in above countries given the transfer risk inherent in these cross-border positions. Key non-financial risks are closely monitored.

Our country risk ratings represent a key tool in our management of country risk. They are established by the independent ERM Risk Research function within Deutsche Bank and include:

- Sovereign rating: A measure of the probability of the sovereign defaulting on its foreign or local currency obligations.
- Transfer risk rating: A measure of the probability of a “transfer risk event”, i.e., the risk that an otherwise solvent debtor is unable to meet its obligations due to inability to obtain foreign currency or to transfer assets as a result of direct sovereign intervention.
- Event risk rating: A measure of the probability of major disruptions in the market risk factors relating to a country (interest rates, credit spreads, etc.). Event risks are measured as part of our event risk scenarios, as described in the section “Market Risk Measurement” of this report.

All sovereign and transfer risk ratings are reviewed, at least on an annual basis.

Product/Asset class specific risk management

Complementary to our counterparty, industry and country risk approach, we focus on product/asset class specific risk concentrations and selectively set limits, thresholds or indicators where required for risk management purposes. Specific risk limits are set in particular if a concentration of transactions of a specific type might lead to significant losses under certain conditions. In this respect, correlated losses might result from disruptions of the functioning of financial markets, significant moves in market parameters to which the respective product is sensitive, macroeconomic default scenarios or other factors. Specific focus is put on concentrations of transactions with underwriting risks where we underwrite commitments with the intention to sell down or distribute part of the risk to third parties. These commitments include the undertaking to fund bank loans and to provide bridge loans for the issuance of public bonds. The risk is that we may not be successful in the distribution of the facilities, meaning that we would have to hold more of the underlying risk for longer periods of time than originally intended. These underwriting commitments are additionally exposed to market risk in the form of widening credit spreads. We dynamically hedge this credit spread risk to be within the approved market risk limit framework.

A major asset class, in which DB is active in underwriting, is leverage lending, which we mainly execute through our Leveraged Debt Capital Markets (LDCM) business unit. The business model is a fee-based ‚originate to distribute‘ approach based on the distribution of largely unfunded underwriting commitments into the capital market. The aforementioned risks regarding distribution and credit spread movement apply to this business unit, however, are managed under a range of specific notional as well as market risk limits. The latter require the business to also hedge its underwriting pipeline against market dislocations. The fee-based model of our LDCM business unit includes a restrictive approach to related credit exposures retained on DB‘s balance sheet, which results in low hold levels for

individual clients leading to a diversified overall portfolio without any material concentration risks. The resulting longer-term on-balance sheet portfolio is also subject to a credit limit and hedging framework.

In addition to underwriting risk, we also focus on concentration of transactions with specific risk dynamics (including risk to commercial real estate and risk from securitization positions).

Furthermore, in our PCC businesses, we apply product-specific strategies setting our risk appetite for sufficiently homogeneous portfolios, such as the retail portfolios of mortgages and business and consumer finance products. In Wealth Management, target levels are set for global concentrations along products as well as based on type and liquidity of collateral.

Market Risk Management

Market Risk framework

The vast majority of our businesses are subject to market risk, defined as the potential for change in the market value of our trading and invested positions. Risk can arise from changes in interest rates, credit spreads, foreign exchange rates, equity prices, commodity prices and other relevant parameters, such as market volatility and market implied default probabilities.

One of the primary objectives of Market Risk Management, a part of our independent Risk function, is to ensure that our business units' risk exposure is within the approved appetite commensurate with its defined strategy. To achieve this objective, Market Risk Management works closely together with risk takers ("the business units") and other control and support groups.

We distinguish between three substantially different types of market risk:

- Trading market risk arises primarily through the market-making and client facilitation activities of the Corporate & Investment Bank Corporate Division. This involves taking positions in debt, equity, foreign exchange, other securities and commodities as well as in equivalent derivatives.
- Traded default risk arising from defaults and rating migrations relating to trading instruments.
- Nontrading market risk arises from market movements, primarily outside the activities of our trading units, in our banking book and from off-balance sheet items. This includes interest rate risk, credit spread risk, investment risk and foreign exchange risk as well as market risk arising from our pension schemes, guaranteed funds and equity compensation. Nontrading market risk also includes risk from the modeling of client deposits as well as savings and loan products.

Market Risk Management governance is designed and established to promote oversight of all market risks, effective decision-making and timely escalation to senior management.

Market Risk Management defines and implements a framework to systematically identify, assess, monitor and report our market risk. Market risk managers identify market risks through active portfolio analysis and engagement with the business units.

Market Risk measurement

We aim to accurately measure all types of market risks by a comprehensive set of risk metrics embedding accounting, economic and regulatory considerations.

We measure market risks by several internally developed key risk metrics and regulatory defined market risk approaches.

Trading Market Risk

Our primary mechanism to manage trading market risk is the application of our risk appetite framework of which the limit framework is a key component. Our Management Board, supported by Market Risk Management, sets group-wide value-at-risk, economic capital and portfolio stress testing limits for market risk in the trading book. Market Risk Management allocates this overall appetite to our Corporate Divisions and individual business units within them based on established and agreed business plans. We also have business aligned heads within Market Risk Management who establish business limits, by allocating the limit down to individual portfolios, geographical regions and types of market risks.

Value-at-risk, economic capital and portfolio stress testing limits are used for managing all types of market risk at an overall portfolio level. As an additional and important complementary tool for managing certain portfolios or risk types, Market Risk Management performs risk analysis and business specific stress testing. Limits are also set on sensitivity and concentration/liquidity, exposure, business-level stress testing and event risk scenarios, taking into consideration business plans and the risk vs return assessment.

Business units are responsible for adhering to the limits against which exposures are monitored and reported. The market risk limits set by Market Risk Management are monitored on a daily, weekly and monthly basis, dependent on the risk management tool being used.

Internally developed Market Risk Models

Value-at-Risk (VaR)

VaR is a quantitative measure of the potential loss (in value) of Fair Value positions due to market movements that should not be exceeded in a defined period of time and with a defined confidence level.

Our value-at-risk for the trading businesses is based on our own internal model. In October 1998, the German Banking Supervisory Authority (now the BaFin) approved our internal model for calculating the regulatory market risk capital for our general and specific market risks. Since then the model has been continually refined and approval has been maintained.

We calculate VaR using a 99 % confidence level and a one day holding period. This means we estimate there is a 1 in 100 chance that a mark-to-market loss from our trading positions will be at least as large as the reported VaR. For regulatory purposes, which include the calculation of our risk-weighted assets, the holding period is ten days.

We use one year of historical market data as input to calculate VaR. The calculation employs a Monte Carlo Simulation technique, and we assume that changes in risk factors follow a well-defined distribution, e.g. normal or non-normal (t, skew-t, Skew-Normal). To determine our aggregated VaR, we use observed correlations between the risk factors during this one year period.

Our VaR model is designed to take into account a comprehensive set of risk factors across all asset classes. Key risk factors are swap/government curves, index and issuer-specific credit curves, funding spreads, single equity and index prices, foreign exchange rates, commodity prices as well as their implied volatilities. To help ensure completeness in the risk coverage, second order risk factors, e.g. CDS index vs. constituent basis, money market basis, implied

dividends, option-adjusted spreads and precious metals lease rates are considered in the VaR calculation.

For each business unit a separate VaR is calculated for each risk type, e.g. interest rate risk, credit spread risk, equity risk, foreign exchange risk and commodity risk. For each risk type this is achieved by deriving the sensitivities to the relevant risk type and then simulating changes in the associated risk drivers. “Diversification effect” reflects the fact that the total VaR on a given day will be lower than the sum of the VaR relating to the individual risk types. Simply adding the VaR figures of the individual risk types to arrive at an aggregate VaR would imply the assumption that the losses in all risk types occur simultaneously.

The model incorporates both linear and, especially for derivatives, nonlinear effects through a combination of sensitivity-based and revaluation approaches.

The VaR measure enables us to apply a consistent measure across all of our fair value businesses and products. It allows a comparison of risk in different businesses, and also provides a means of aggregating and netting positions within a portfolio to reflect correlations and offsets between different asset classes. Furthermore, it facilitates comparisons of our market risk both over time and against our daily trading results.

When using VaR estimates a number of considerations should be taken into account. These include:

- The use of historical market data may not be a good indicator of potential future events, particularly those that are extreme in nature. This “backward-looking” limitation can cause VaR to understate future potential losses (as in 2008), but can also cause it to be overstated.
- Assumptions concerning the distribution of changes in risk factors, and the correlation between different risk factors, may not hold true, particularly during market events that are extreme in nature. The one day holding period does not fully capture the market risk arising during periods of illiquidity, when positions cannot be closed out or hedged within one day.
- VaR does not indicate the potential loss beyond the 99th quantile.
- Intra-day risk is not reflected in the end of day VaR calculation.
- There may be risks in the trading or banking book that are partially or not captured by the VaR model.

We are committed to the ongoing development of our internal risk models, and we allocate substantial resources to reviewing, validating and improving them. Additionally, we have further developed and improved our process of systematically capturing and evaluating risks currently not captured in our value-at-risk model. An assessment is made to determine the level of materiality of these risks and material risks are prioritized for inclusion in our internal model. Risks not in value-at-risk are monitored and assessed on a regular basis through our Risk Not In VaR (RNIV) framework.

Stressed Value-at-Risk

Stressed Value-at-Risk (SVaR) calculates a stressed value-at-risk measure based on a one year period of significant market stress. We calculate a stressed value-at-risk measure using a 99 % confidence level. The holding period is one day for internal purposes and ten days for regulatory purposes. Our SVaR calculation utilizes the same systems, trade information and processes as those used for the calculation of value-at-risk. The only difference is that historical market data and observed correlations from a period of significant financial stress (i.e., characterized by high volatilities) is used as an input for the Monte Carlo Simulation.

The time window selection process for the stressed value-at-risk calculation is based on the identification of a time window characterized by high levels of volatility in the top value-at-risk contributors. The identified window is then further validated by comparing the SVaR results to neighboring windows using the complete Group portfolio.

Incremental Risk Charge

Incremental Risk Charge captures default and credit rating migration risks for credit-sensitive positions in the trading book. It applies to credit products over a one-year capital horizon at a 99.9 % confidence level, employing a constant position approach. We use a Monte Carlo Simulation for calculating incremental risk charge as the 99.9 % quantile of the portfolio loss distribution and for allocating contributory incremental risk charge to individual positions.

The model captures the default and migration risk in an accurate and consistent quantitative approach for all portfolios. Important parameters for the incremental risk charge calculation are exposures, recovery rates, maturity ratings with corresponding default and migration probabilities and parameters specifying issuer correlations.

Comprehensive Risk Measure

Comprehensive Risk Measure captures incremental risk for the corporate correlation trading portfolio calculated using an internal model subject to qualitative minimum requirements as well as stress testing requirements. The comprehensive risk measure for the correlation trading portfolio is based on our own internal model.

We calculate the comprehensive risk measure based on a Monte Carlo Simulation technique to a 99.9 % confidence level and a capital horizon of one year. Our model is applied to the eligible corporate correlation trading positions where typical products include collateralized debt obligations, nth-to-default credit default swaps, and commonly traded index- and single-name credit default swaps used to risk manage these corporate correlation products.

Trades subject to the comprehensive risk measure have to meet minimum liquidity standards to be eligible. The model incorporates concentrations of the portfolio and nonlinear effects via a full revaluation approach.

For regulatory reporting purposes, the comprehensive risk measure represents the higher of the internal model spot value at the reporting dates, their preceding 12-week average calculation, and the floor, where the floor is equal to 8 % of the equivalent capital charge under the standardized approach securitization framework. Since the first quarter of 2016, the CRM RWA calculations include two regulatory-prescribed add-ons which cater for (a) stressing the implied correlation within nth-to-default baskets and (b) any stress test loss in excess of the internal model spot value.

The internal model comprehensive risk measure was decommissioned in the fourth quarter of 2018 following regulatory approval. The small remaining exposures captured by this model are now covered by the incremental risk charge and the market risk standardized approach.

Market Risk Standardized Approach

Market Risk Management monitors exposures and concentrations for certain exposures under the specific Market Risk Standardized Approach (“MRSA”). We use the MRSA to determine the regulatory capital charge for the specific market risk of trading book securitizations.

We also use the MRSA to determine the regulatory capital charge for longevity risk as set out in CRR/CRD 4 regulations. Longevity risk is the risk of adverse changes in life expectancies resulting in a loss in value on longevity linked policies and transactions. For risk management purposes, stress testing and economic capital allocations are also used to monitor and manage longevity risk. Furthermore, certain types of investment funds require a capital charge under the MRSA. For risk management purposes, these positions are also included in our internal reporting framework.

Market Risk Stress Testing

Stress testing is a key risk management technique, which evaluates the potential effects of extreme market events and movements in individual risk factors. It is one of the core quantitative tools used to assess the market risk of Deutsche Bank's positions and complements VaR and Economic Capital. Market Risk Management performs several types of stress testing to capture the variety of risks (Portfolio Stress Testing, individual specific stress tests and Event Risk Scenarios) and also contributes to Group-wide stress testing. These stress tests cover a wide range of severities designed to test the earnings stability and capital adequacy of the bank.

Trading Market Risk Economic Capital (TMR EC)

Our trading market risk economic capital model-scaled Stressed VaR based EC (SVaR based EC) - comprises two core components, the "common risk" component covering risk drivers across all businesses and the "business-specific risk" component, which enriches the Common Risk via a suite of Business Specific Stress Tests (BSSTs). Both components are calibrated to historically observed severe market shocks. Common risk is calculated using a scaled version of the Regulatory SVaR framework while BSSTs are designed to capture more product/business-related bespoke risks (e.g. complex basis risks) as well as higher order risks not captured in the common risk component.

Traded Default Risk Economic Capital (TDR EC)

TDR EC captures the relevant credit exposures across our trading and fair value banking books. Trading book exposures are monitored by MRM via single name concentration and portfolio thresholds which are set based upon rating, size and liquidity. Single name concentration risk thresholds are set for two key metrics: Default Exposure, i.e., the P&L impact of an instantaneous default at the current recovery rate (RR), and bond equivalent Market Value (MV), i.e. default exposure at 0 % recovery. In order to capture diversification and concentration effects we perform a joint calculation for traded default risk economic capital and credit risk economic capital. Important parameters for the calculation of traded default risk are exposures, recovery rates and default probabilities as well as maturities. The probability of joint rating downgrades and defaults is determined by the default and rating correlations of the portfolio model. These correlations are specified through systematic factors that represent countries, geographical regions and industries.

Trading Market Risk Reporting

Market Risk Management reporting creates transparency on the risk profile and facilitates the understanding of core market risk drivers to all levels of the organization. The Management Board and Senior Governance Committees receive regular reporting, as well as ad hoc reporting as required, on market risk, regulatory capital and stress testing. Senior Risk Committees receive risk information at a number of frequencies, including weekly or monthly.

Additionally, Market Risk Management produces daily and weekly Market Risk specific reports and daily limit utilization reports for each business owner.

Regulatory prudent valuation of assets carried at fair value

Pursuant to Article 34 CRR institutions shall apply the prudent valuation requirements of Article 105 CRR to all assets measured at fair value and shall deduct from CET 1 capital the amount of any additional value adjustments necessary.

We determined the amount of the additional value adjustments based on the methodology defined in the Commission Delegated Regulation (EU) 2016/101.

As of December 31, 2018 the amount of the additional value adjustments was € 1.5 billion. The December 31, 2017 amount was € 1.2 billion. The increase was largely driven by methodology enhancements throughout the year, with remaining impacts from changes in underlying risk exposures and market data moves.

As of December 31, 2018 the reduction of the expected loss from subtracting the additional value adjustments was € 45 million, which partly mitigated the negative impact of the additional value adjustments on our CET 1 capital.

Nontrading Market Risk

Nontrading market risk arises primarily from outside the activities of our trading units, in our banking book and from certain off-balance sheet items. Significant market risk factors the Group is exposed to and are overseen by risk management groups in that area are:

- Interest rate risk (including risk from embedded optionality and changes in behavioral patterns for certain product types), credit spread risk, foreign exchange risk, equity risk (including investments in public and private equity as well as real estate, infrastructure and fund assets).
- Market risks from off-balance sheet items, such as pension schemes and guarantees, as well as structural foreign exchange risk and equity compensation risk.

Interest Rate Risk in the Banking Book

Interest rate risk in the banking book (IRRBB) is the current or prospective risk, to both the Group's capital and earnings, arising from movements in interest rates, which affect the Group's banking book exposures. This includes gap risk, which arises from the term structure of banking book instruments, basis risk, which describes the impact of relative changes in interest rates for financial instruments that are priced using different interest rate curves, as well as option risk, which arises from option derivative positions or from optional elements embedded in financial instruments.

The Group manages its IRRBB exposures using economic value as well as earnings based measures. Our Group Treasury division is mandated to manage the interest rate risk centrally, with Market Risk Management acting as an independent oversight function.

Economic value based measures look at the change in economic value of banking book assets, liabilities and off-balance sheet exposures resulting from interest rate movements, independent of the accounting treatment. Thereby the Group measures the change in Economic Value of Equity (ΔEVE) as the maximum decrease of the banking book economic value under the six standard scenarios defined by Basel Committee on Banking Supervision (BCBS) in addition to internal stress scenarios for risk steering purposes.

Earnings-based measures look at the expected change in Net Interest Income (NII), compared to a defined benchmark scenario, over a defined time horizon resulting from interest rate movements. Thereby the Group measures ΔNII as the maximum reduction in NII under the six standard scenarios defined by Basel Committee on Banking Supervision (BCBS) in addition to internal stress scenarios for risk steering purposes, compared to the Group’s official capital planning, over a period of 12 months.

The Group employs mitigation techniques to immunize the interest rate risk arising from nontrading positions. The interest rate risk arising from nontrading asset and liability positions is managed through Treasury Pool Management,

with the most notable exception of DB Privat- und Firmenkundenbank AG, where the interest rate risk is managed by a dedicated risk management function. The residual interest rate risk positions are hedged with Deutsche Bank's trading books within the CIB division. The treatment of interest rate risk in our trading portfolios and the application of the value-at-risk model is discussed in the "Trading Market Risk" section of this document.

Positions in our banking books as well as the hedges described in the aforementioned paragraph follow the accounting principles as detailed in the "Notes to the Consolidated Financial Statements" section of this document.

The Model Risk Management group performs independent validation of models used for IRRBB measurement in line with Deutsche Bank's group-wide risk governance framework.

The calculation of VaR and sensitivities of interest rate risk is performed daily, whereas the measurement and reporting of economic value interest rate and earnings risk is performed on a monthly basis. The Group generally uses the same metrics in its internal management systems as it applies for the disclosure in this report. This is applicable to both the methodology as well as the modelling assumptions used when calculating the metrics. The only notable exception is the usage of a steady (i.e. unchanged) rates scenario as benchmark for the ΔNII calculation in the public disclosures, whereas the internal quantitative risk appetite metric will use the Group's official capital planning curve.

Deutsche Bank's key modelling assumptions are applied to the positions in our PCB division and parts of our CIB Division. Those positions are subject to risk of changes in our client's behavior with regard to their deposits as well as loan products.

The Group manages the interest rate risk exposure of its Non-Maturity Deposits (NMDs) through a replicating portfolio approach to determine the average repricing maturity of the portfolio. For the purpose of constructing the replicating portfolio, the portfolio of NMDs is clustered by dimensions such as Business Unit, Currency, Product and Geographical Location. The main dimensions influencing the repricing maturity are elasticity of deposit rates to market interest rates, volatility of deposit balances and observable client behavior. For the reporting period the average repricing maturity assigned across all such replicating portfolio is 1.8 years and Deutsche Bank uses 15 years as the longest repricing maturity.

In the Loan and some of the Term deposit products Deutsche Bank considers early prepayment/withdrawal behavior of its customers. The parameters are based on historical observations, statistical analyses and expert assessments.

Furthermore, the Group generally calculates IRRBB related metrics in contractual currencies and aggregates the resulting metrics for reporting purposes. When calculating economic value based metrics the commercial margin is excluded to material parts.

Credit Spread Risk in the Banking Book

Deutsche Bank is exposed to credit spread risk of bonds held in the banking book, mainly as part of the Treasury Liquidity Reserves portfolio and in DB Privat- und Firmenkundenbank AG. This risk category is closely associated with interest rate risk in the banking book as changes in the perceived credit quality of individual instruments may result in fluctuations in spreads relative to underlying interest rates.

Foreign exchange risk

Foreign exchange risk arises from our nontrading asset and liability positions that are denominated in currencies other than the functional currency of the respective entity. The majority of this foreign exchange risk is transferred through internal hedges to trading books within Corporate & Investment Bank and is therefore reflected and managed via the value-at-risk figures in the trading books. The remaining foreign exchange risks that have not been transferred are mitigated through match funding the investment in the same currency, so that only residual risk remains in the portfolios. Small exceptions to above approach follow the general Market Risk Management monitoring and reporting process, as outlined for the trading portfolio.

The bulk of nontrading foreign exchange risk is related to unhedged structural foreign exchange exposure, mainly in our U.S., U.K. and China entities. Structural foreign exchange exposure arises from local capital (including retained earnings) held in the Group's consolidated subsidiaries and branches and from investments accounted for at equity. Change in foreign exchange rates of the underlying functional currencies are booked as Currency Translation Adjustments (CTA).

The primary objective for managing our structural foreign exchange exposure is to stabilize consolidated capital ratios from the effects of fluctuations in exchange rates. Therefore the exposure remains unhedged for a number of core currencies with considerable amounts of risk-weighted assets denominated in that currency in order to avoid volatility in the capital ratio for the specific entity and the Group as a whole.

Equity and investment risk

Nontrading equity risk arising predominantly from our non-consolidated investment holdings in the banking book and from our equity compensation plans.

Our non-consolidated investment holdings in the banking book are categorized into strategic and alternative investment assets. Strategic investments typically relate to acquisitions made to support our business franchise and are undertaken with a medium to long-term investment horizon. Alternative assets are comprised of principal investments and other non-strategic investment assets. Principal investments are direct investments in private equity (including leveraged buy-out fund commitments and equity bridge commitments), real estate (including mezzanine debt) and venture capital, undertaken for capital appreciation. In addition, principal investments are made in hedge funds and mutual funds in order to establish a track record for sale to external clients. Other non-strategic investment assets comprise assets recovered in the workout of distressed positions or other legacy investment assets in private equity and real estate of a non-strategic nature.

Pension risk

We are exposed to market risk from a number of defined benefit pension schemes for past and current employees. The ability of the pension schemes to meet the projected pension payments is maintained through investments and ongoing plan contributions. Market risk materializes due to a potential decline in the market value of the assets or an increase in the liability of each of the pension plans. Market Risk Management monitors and reports all market risks both on the asset and liability side of our defined benefit pension plans including interest rate risk, inflation risk, credit spread risk, equity risk and longevity risk. Overall, the Group seeks to minimize the impact of adverse market movements to key financial metric, with the primary objective on protecting the overall IFRS funded status, however in selected markets with the aim to balance competing key financial metrics. The investment managers manage the pension assets in line with investment mandates or guidelines as agreed with the pension plans' trustees and investment committees.

For key defined benefit plans for which the Bank aims to protect the IFRS funded status, the Group applies a liability driven investment (LDI) approach. Risks from mismatches between fluctuations in the present value of the defined benefit obligations and plan assets due to capital market movements are minimized, subject to balancing relevant trade-offs. For pension plans where the LDI approach may impact other key financial metrics adversely, the Group deviates from this primary investment strategy, most notably for the German main plan where the investment strategy for assets has been adjusted since 2015 by reducing the interest rate & credit spread hedges. The development of the impact of this investment strategy is being closely monitored and regularly reviewed.

For details on our defined benefit pension obligation see Note 35 “Employee Benefits” to the consolidated financial statements.

Other risks

Market risks in our Asset Management business primarily result from principal guaranteed funds or accounts, but also from co-investments in our funds.

Nontrading Market Risk Economic Capital

Nontrading market risk economic capital is calculated either by applying the standard traded market risk EC methodology or through the use of non-traded market risk models that are specific to each risk class and which consider, among other factors, historically observed market moves, the liquidity of each asset class, and changes in client’s behavior in relation to products with behavioral optionalities.

Operational risk management

Operational risk management framework

Operational risk means the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk. Operational risk excludes business and reputational risk. It forms a subset of the bank’s non-financial risks, as does reputational risk.

The governance of our operational risks follows the bank’s Three Lines of Defence (3LoD) approach to manage all of its risks, financial and non-financial. The 3LoD approach aims to protect the bank, its customers and shareholders against risk losses and resulting reputational damages. It seeks to ensure that all our operational risks are identified and covered, that accountabilities regarding the management of operational risks are clearly assigned and risks are taken on and managed in the best and long term interest of the bank. The 3LoD approach and its underlying principles, i.e., the full accountability of the First Line of Defence (1st LoD) to manage its own risks and the existence of an independent Second Line of Defence (2nd LoD) to oversee and challenge risk taking and risk management within the bank’s defined risk appetite, apply to all levels of the organization including the Group-level, regions, countries, and legal entities.

Deutsche Bank’s operational risk appetite sets out the amount of operational risk we are willing to accept as a consequence of doing business. We take on operational risks consciously, both strategically as well as in day-to-day business. While the bank may have no appetite for certain types of operational risk failures (such as serious violations of laws or regulations and misconduct), in other cases a certain amount of operational risk must be accepted if the bank is to achieve its business objectives. In case a residual risk is assessed to be outside our risk appetite, further risk reducing actions must be undertaken, including to further remediate risks, insure risks or cease business.

Non-Financial Risk Management (NFRM) is the risk function for the non-financial risk types of the bank, including operational risk, and owns the overarching Operational Risk Management Framework (ORMF).

The ORMF is a set of interrelated tools and processes that are used to identify, assess, measure, monitor and remediate operational risks. Its components have been designed to operate together to provide a comprehensive approach to managing the bank's most material operational risks. ORMF components include the setup of the 1st and 2nd LoD as well as roles and responsibilities for the operational risk management process and appropriate independent challenge, the Group's approach to setting operational risk appetite and adhering to it, the operational risk type and control taxonomies, the minimum standards for operational risk management processes including tools, independent governance, and the bank's operational risk capital model.

The bank established and follows three OR governance standards including core roles and their respective mandates for the management of operational risks:

Operational risk governance standard I: NFRM owns the ORMF and determines the sufficient level of operational risk capital.

- As the 2nd LoD control function, NFRM defines the bank's approach to operational risk appetite and monitors its adherence, breaches and consequences. It is the independent reviewer and challenger of the 1st LoD's risk and control assessments and risk management activities. NFRM provides the oversight of risk and control mitigation plans to return the bank's operational risk to its risk appetite where required. It also establishes and regularly reports the bank's operational risk profile and top risks.
- As the subject matter expert for operational risk, NFRM provides independent risk views to facilitate forward looking management of operational risks, actively engages with risk owners and facilitates the implementation of risk management and control standards across the bank.
- NFRM is to ensure that sufficient capital is held to underpin the bank's operational risks. NFRM is accountable for the design, implementation and maintenance of the approach to determine the adequate level of capital required for operational risk for recommendation to the Management Board. This includes the calculation and allocation of operational risk capital demand and expected loss under the Advanced Measurement Approach (AMA).

Operational risk governance standard II: Risk owners as the 1st LoD have full accountability for their operational risks and manage these against a defined risk specific appetite.

Risk owners are those roles in the bank that generate risks, whether financial or non-financial. As heads of business divisions and infrastructure functions they must determine the appropriate organizational structure to identify their organizations' operational risk profile, implement risk management and control standards within their organization, take business decisions on the mitigation or acceptance of operational risks within the risk appetite and establish and maintain primary controls.

Operational risk governance standard III : Risk Type Controllers ("RTCs") act as the 2nd LoD control functions for operational risks.

RTCs establish the framework and define risk appetite statements for the specific operational risk type they control. They monitor the risk type's profile against risk appetite and exercise a veto on risk appetite breaches. RTCs define the risk management and control standards and independently oversee and challenge risk owners' implementation of these standards as well as their risk-taking and management activities. RTCs establish independent operational risk governance and prepare aggregated risk type profile reporting. As risk type experts, RTCs define the risk type and its taxonomy and support and facilitate the implementation of risk management standards and processes in the 1st LoD.

To maintain their independence, RTC roles are located only in infrastructure functions. Giving advice does not impact the independence of the RTC.

Organizational & governance structure

While the day-to-day management of operational risk is the primary responsibility of our business divisions and infrastructure functions as risk owners, NFRM oversees the Group-wide management of operational risks, identifies and reports risk concentrations, and promotes a consistent application of the ORMF across the bank. NFRM is part of the Group risk function which is headed by the Chief Risk Officer.

The Chief Risk Officer appoints the Head of NFRM who is accountable for the design, implementation and maintenance of an effective, efficient and regulatory compliant ORMF, including the operational risk capital model. The Head of NFRM monitors and challenges the ORMF's implementation and monitors overall risk levels against risk appetite.

The Non-Financial Risk Committee (NFRC), which is co-chaired by the Chief Risk Officer and the Chief Regulatory Officer, is responsible for the oversight, governance and coordination of the management of operational risk in the Group on behalf of the Management Board by establishing a cross-risk and holistic perspective of the key operational risks of the Group. Its decision-making and policy related authorities include the review, advice and management of all operational risk issues which may impact the risk profile of our business divisions and infrastructure functions. Several sub-fora with attendees from both, the 1st and 2nd LoDs support the NFRC to effectively fulfil its mandate. In addition to the Group level NFRC, business divisions have established 1st LoD governance fora for the oversight and management of operational risks on various levels of the organization.

Managing our operational risk

In order to manage the broad range of risk types underlying operational risk, our ORMF provides a set of tools and processes (as described below, e.g. for loss data collection or the risk & control assessment) that apply to all operational risk types. These enable us to determine our operational risk profile in comparison to our risk appetite for operational risk, to systematically identify operational risk themes and concentrations, and to define risk mitigating measures and priorities.

In 2018, we enhanced the ORMF and the management of operational risks by focusing on the further simplification of our risk management processes, and by promoting an active and continuous dialogue between the 1st and 2nd LoDs with the objective to make the management of operational risks more transparent, meaningful and embedded in day-to-day business decisions:

Loss data collection: In a timely manner, we collect, categorize and analyze data on internal (with a P&L impact ≥ €10.000) and relevant external operational risk events. Material events trigger clearly defined lessons learned and read-across analyses, which are performed in close collaboration between business partners, risk and infrastructure functions. Lessons learned reviews analyze the causes of significant operational risk events, identify their root causes, and document appropriate remediation actions to reduce the likelihood of their reoccurrence. Read across reviews take the conclusions of the lessons learned process and seek to analyze whether similar risks and control weaknesses identified in a lessons learned review exist in other areas of the bank, even if they have not yet resulted in problems. This allows preventative actions to be undertaken. The intensity of lessons learned and read across activities, the degree of embeddedness and collaboration between various functions working on these analyses has considerably

increased through 2018.

We complement our operational risk profile by using a set of scenarios including relevant external cases provided by a public database and additional internal scenarios. We thereby systematically utilize information on external loss events occurring in the banking industry to prevent similar incidents from happening to us, for example through particular deep dive analyses or risk profile reviews.

The Risk & Control Assessment process (RCA) comprises of a series of bottom-up assessments of the risks generated by businesses and infrastructure functions (1st LoDs), the effectiveness of the controls in place to manage them, and the remediation actions required to bring the outsized risks back into risk appetite. This enables both the 1st and 2nd LoDs to have a clear view of the bank's material operational risks. Through 2018, we finalized the implementation of a workshop based approach that fosters close interaction between various relevant parties and started a pilot to integrate various existing assessment processes in NFRM, Compliance and AFC to simplify the process and enhance efficiency. We further enhanced the bank's control inventory and introduced a NFR consequence management framework with a clear workflow and consequence types. The non-financial risk type taxonomy was updated with clearer definitions and supporting guidance.

We regularly report and perform analyses on our top risks. Top risks are rated in terms of both the likelihood that they could occur and the impact on the bank should they do so. The reporting provides a forward-looking perspective on the impact of planned remediation and control enhancements. It also contains emerging risks and themes that have the potential to evolve as a top risk in future. Top risk reduction programs comprise the most significant risk reduction activities that are key to bringing our operational top risk themes back within risk appetite. In 2018, the reporting of top risks has been enhanced using a strategic reporting tool.

NFR appetite metrics are used to monitor the operational risk profile, including against the bank's defined risk appetite, and to alert the organization to impending problems in a timely fashion. In 2018, a new NFR appetite approach was introduced, comprising enhanced metrics, an updated Group risk appetite monitor and a deeper embedding at divisional and business unit level.

Operational risk type frameworks

The ORMF, which provides the overarching set of standards, tools and processes that apply to the management of all risk types underlying operational risk, is complemented by the operational risk type frameworks, risk management and control standards and tools set up by the respective risk type controllers for the operational risk types they control. These include the following with respect to the following risk types:

- The Compliance department performs an independent 2nd level control function that protects the bank's license to operate by promoting and enforcing compliance with the law and driving a culture of compliance and ethical conduct in the bank. The Compliance department assists the businesses and working with other infrastructure functions and regulators to establish and maintain a risk-based approach to the management of the bank's compliance risks in accordance with the bank's risk appetite and to help the bank detect, mitigate and prevent breaches of laws and regulations. The Compliance department performs the following principal activities: regulatory engagement and management collaborating with government & regulatory affairs; acting as a trusted advisor; and identifying, assessing, mitigating, monitoring and reporting on compliance risk. The results of these assessments are regularly reported to the Management Board and Supervisory Board.
- Financial crime risks are managed by our AFC function via maintenance and development of a dedicated

program. The AFC program is based on regulatory and supervisory requirements. AFC has defined roles and responsibilities and established dedicated functions for the identification and management of financial crime risks resulting from money laundering, terrorism financing, non-compliance with sanctions and embargoes as well as other criminal activities including fraud, bribery and corruption and other crimes. AFC assures further update of its strategy on financial crime prevention via regular development of internal policies processes and controls, institution-specific risk assessment and staff training.

- Legal (incl. group governance) is an infrastructure function, mandated to provide legal advice both to the Management Board as well as to the business divisions and infrastructure functions and to support the Management Board in setting up and guarding DB's governance framework and manage the bank's legal and governance risk. This includes in particular but without limitation:
- Advising the Management Board and Supervisory Board on legal aspects of their activities
- Advising all Deutsche Bank units on adherence to legal and regulatory requirements in relation to all activities
- Managing Deutsche Bank Group's legal relations with third parties, or between Group entities
- Supporting other units in managing Deutsche Bank Group's interactions with regulatory authorities
- Engaging and managing external lawyers used by Deutsche Bank Group
- Managing Deutsche Bank Group's litigation and contentious regulatory matters, (incl. contentious HR matters), and managing Deutsche Bank Group's response to external regulatory investigations
- Advising on legal aspects of internal investigations
- Setting the global governance framework for Deutsche Bank, facilitate its cross-unit application and assess the implementation
- Developing and safeguarding efficient corporate governance structures suitable to support efficient decision-making, to align risk and accountability on the basis of clear and consistent roles and responsibilities
- Maintaining Deutsche Bank Group's framework for policies and procedures and serve as guardian for Group policies and procedures
- Ensuring appropriate quality assurance around all of the above

- NFRM RTC is risk type controller for a number of operational risks. Its mandate includes controls over transaction processing activities, as well as infrastructure risks to prevent technology or process disruption, maintain the confidentiality, integrity and availability of data, records and information security, and ensure businesses have robust plans in place to recover critical business processes and functions in the event of disruption from technical or building outage, or the effects of cyber-attack or natural disaster as well as any physical security or safety risk. NFRM RTC also manages the risks arising from the bank's internal and external vendor engagements via the provision of a comprehensive vendor risk management framework.

Measuring our operational risks

We calculate and measure the regulatory and economic capital requirements for operational risk using the AMA methodology. Our AMA capital calculation is based upon the loss distribution approach. Gross losses from historical internal and external loss data (Operational Riskdata eXchange Association consortium data) and external scenarios from a public database (IBM OpData) complemented by internal scenario data are used to estimate the risk profile (i.e., a loss frequency and a loss severity distribution). Our loss distribution approach model includes conservatism by recognizing losses on events that arise over multiple years as single events in our historical loss profile.

Within the loss distribution approach model, the frequency and severity distributions are combined in a Monte Carlo simulation to generate potential losses over a one year time horizon. Finally, the risk mitigating benefits of insurance are applied to each loss generated in the Monte Carlo simulation. Correlation and diversification benefits are applied to the net losses in a manner compatible with regulatory requirements to arrive at a net loss distribution at Group level,

covering expected and unexpected losses. Capital is then allocated to each of the business divisions after considering qualitative adjustments and expected loss.

The regulatory capital requirement for operational risk is derived from the 99.9 % percentile. Since Q4 2017, the economic capital is also set at 99.9 % percentile, see the section “Internal Capital Adequacy”. Both regulatory and economic capital requirements are calculated for a time horizon of one year.

The regulatory and economic capital demand calculations are performed on a quarterly basis. NFRM aims to ensure that for the approach for capital demand quantification appropriate development, validation and change governance processes are in place, whereby the validation is performed by an independent validation function and in line with the Group’s model risk management process.

Drivers for operational risk capital development

In 2018, our total operational risk losses further decreased but continued to be predominantly driven by losses and provisions arising from civil litigation and regulatory enforcement. Such losses still make up 67 % of operational risk losses and account for the majority of operational risk regulatory and economic capital demand, which is more heavily reliant on our long-term loss history. For a description of our current legal and regulatory proceedings, please see section “Current Individual Proceedings” in Note 29 “Provisions” to the consolidated financial statements. The operational risk losses from civil litigation and regulatory enforcement decreased by € 380 million or 67 % while our non-legal operational risk losses were € 86 million or 48 % lower compared to 2017.

In view of the relevance of legal risks within our operational risk profile, we dedicate specific attention to the management and measurement of our open civil litigation and regulatory enforcement matters where the bank relies both on information from internal as well as external data sources to consider developments in legal matters that affect the bank specifically but also the banking industry as a whole. Reflecting the multi-year nature of legal proceedings the measurement of these risks furthermore takes into account changing levels of certainty by capturing the risks at various stages throughout the lifecycle of a legal matter.

Conceptually, the bank measures operational risk including legal risk by determining the maximum loss that will not be exceeded with a given probability. This maximum loss amount includes a component that due to the IFRS criteria is reflected in our financial statements and a component that is expressed as regulatory or economic capital demand beyond the amount reflected as provisions within our financial statements.

The legal losses which the bank expects with a likelihood of more than 50 % are already reflected in our IFRS group financial statements. These losses include net changes in provisions for existing and new cases in a specific period where the loss is deemed probable and is reliably measurable in accordance with IAS 37. The development of our legal provisions for civil litigations and regulatory enforcement is outlined in detail in Note 29 “Provisions” to the consolidated financial statements.

Uncertain legal losses which are not reflected in our financial statements as provisions because they do not meet the recognition criteria under IAS 37 are expressed as “regulatory or economic capital demand”.

To quantify the litigation losses in the AMA model the bank takes into account historic losses, provisions, contingent liabilities and legal forecasts. Legal forecasts are generally comprised of ranges of potential losses from legal matters that are not deemed probable but are reasonably possible. Reasonably possible losses may result from ongoing and new legal matters which are reviewed at least quarterly by the attorneys handling the legal matters.

We include the legal forecasts in the “relevant loss data” used in our AMA model. Hereby the projection range of the legal forecasts is not restricted to the one year capital time horizon but goes beyond and conservatively assumes early

settlement of the underlying losses in the reporting period - thus considering the multi-year nature of legal matters.

Liquidity Risk Management

Liquidity risk is the risk arising from our potential inability to meet all payment obligations when they come due or only being able to meet these obligations at excessive costs. The objective of the Group's liquidity risk management framework is to ensure that the Group can fulfill its payment obligations at all times and can manage liquidity and funding risks within its risk appetite. The framework considers relevant and significant drivers of liquidity risk, whether on-balance sheet or off-balance sheet.

Liquidity Risk Management framework

In accordance with the ECB's Supervisory Review and Evaluation Process (SREP), Deutsche Bank has implemented an annual Internal Liquidity Adequacy Assessment Process (ILAAP), which is reviewed and approved by the Management Board. The ILAAP provides comprehensive documentation of the Bank's Liquidity Risk Management framework, including: identifying the key liquidity and funding risks to which the Group is exposed; describing how these risks are identified, monitored and measured and describing the techniques and resources used to manage and mitigate these risks.

The Management Board defines the liquidity and funding risk strategy for the Bank, as well as the risk appetite, based on recommendations made by the Group Risk Committee (GRC). At least annually the Management Board reviews and approves the risk appetite which is applied to the Group to measure and control liquidity risk as well as our long-term funding and issuance plan.

Treasury is mandated to manage the overall liquidity and funding position of the Bank, with Liquidity Risk Management (LRM) acting as an independent control function, responsible for reviewing the liquidity risk framework, proposing the risk appetite to GRC and the validation of Liquidity Risk models which are developed by Treasury, to measure and manage the Group's liquidity risk profile.

Treasury manages liquidity and funding, in accordance with the Management Board-approved risk appetite across a range of relevant metrics, and implements a number of tools to monitor these and ensure compliance. In addition, Treasury works closely in conjunction with LRM and the business, to analyze and understand the underlying liquidity characteristics of the business portfolios. These parties are engaged in regular and frequent dialogue to understand changes in the Bank's position arising from business activities and market circumstances. Dedicated business targets are allocated to ensure the Group operates within its overall liquidity and funding appetite.

The Management Board is informed of performance against the risk appetite metrics, via a weekly Liquidity Dashboard. As part of the annual strategic planning process, we project the development of the key liquidity and funding metrics based on the underlying business plans to ensure that the plan is in compliance with our risk appetite.

Capital Markets Issuance

Deutsche Bank has a wide range of funding sources, including retail and institutional deposits, unsecured and secured wholesale funding and debt issuance in the capital markets. Debt issuance, encompassing senior unsecured bonds, covered bonds as well as capital securities, is a key source of term funding for the Bank and is managed directly by Treasury. At least once a year Treasury submits an annual long-term Funding Plan to the GRC for recommendation and then to the Management Board for approval. This plan is driven by global and local funding and liquidity requirements based on expected business development. Our capital markets issuance portfolio is dynamically

managed through our yearly issuance plans to avoid excessive maturity concentrations.

Short-term liquidity and wholesale funding

Deutsche Bank tracks all contractual cash flows from wholesale funding sources, on a daily basis, over a 12-month horizon. For this purpose, we consider wholesale funding to include unsecured liabilities raised primarily by Treasury Pool Management, as well as secured liabilities raised by our Corporate & Investment Bank Division. Our wholesale funding counterparties typically include corporates, banks and other financial institutions, governments and sovereigns.

The Group has implemented a set of Management Board-approved limits to restrict the Bank's exposure to wholesale counterparties, which have historically shown to be the most susceptible to market stress. The wholesale funding limits are monitored daily, and apply to the total combined currency amount of all wholesale funding currently outstanding, both secured and unsecured with specific tenor limits covering the first 8 weeks. Our Liquidity Reserves are the primary mitigant against potential stress in the short-term.

The tables in section "Liquidity Risk Exposure: Funding Diversification" show the contractual maturity of our short-term wholesale funding and capital markets issuance.

Liquidity stress testing and scenario analysis

Global liquidity stress testing and scenario analysis is one of the key tools for measuring liquidity risk and evaluating the Group's short-term liquidity position within the liquidity framework. It complements the daily operational cash management process. The long-term liquidity strategy based on contractual and behavioral modelled cash flow information is represented by the Funding Matrix.

Our global liquidity stress testing process is managed by Treasury in accordance with the Management Board approved risk appetite. Treasury is responsible for the design of the overall methodology, the choice of liquidity risk drivers and the determination of appropriate assumptions (parameters) to translate input data into model results. Liquidity Risk Management is responsible for the definition of the stress scenarios and the independent validation of liquidity risk models. Liquidity and Treasury Reporting & Analysis (LTRA) is responsible for implementing these methodologies in conjunction with Treasury, LRM and IT as well as for the stress test calculation.

We use stress testing and scenario analysis to evaluate the impact of sudden and severe stress events on our liquidity position. The scenarios we apply are based on systemic historic events, such as the 2008 financial markets crisis as well as idiosyncratic events.

Deutsche Bank has selected four scenarios to calculate the Group's stressed Net Liquidity Position ("sNLP"). These scenarios capture the historical experience of Deutsche Bank during periods of idiosyncratic and/or market-wide stress and are assumed to be both plausible and sufficiently severe as to materially impact the Group's liquidity position. A global market crisis, for example, is covered by a specific stress scenario (systemic market risk) that models the potential consequences observed during the financial crisis of 2008. Additionally, we have introduced regional market stress scenarios. Under each of the scenarios we assume a high degree of maturing loans to non-wholesale customers is rolled-over, to support our business franchise. Wholesale funding, from the most risk sensitive counterparties (including banks and money-market mutual funds) is assumed to roll-off at contractual maturity or even be bought back, in the acute phase of the stress.

In addition, we include the potential funding requirements from contingent liquidity risks which might arise, including credit facilities, increased collateral requirements under derivative agreements, and outflows from deposits with a contractual rating linked trigger.

We then model the actions we would take to counterbalance the outflows incurred. Countermeasures include utilizing the Liquidity Reserve and generating liquidity from unencumbered, marketable assets.

Stress testing is conducted at a global level and for defined individual legal entities. In addition to the consolidated currency stress test, stress tests for material currencies (EUR, USD and GBP) are performed. We review our stress-testing assumptions on a regular basis and have made further enhancements to the methodology and severity of certain parameters through the course of 2018.

On a daily basis, we run the liquidity stress test over an eight-week horizon, which we consider the most critical time span in a liquidity crisis, and apply the relevant stress assumptions to risk drivers from on-balance sheet and off-balance sheet products. Beyond the eight week time horizon, we analyze the impact of a more prolonged stress period, extending to twelve months. This stress testing analysis is performed on a daily basis.

The risk appetite to maintain a surplus of at least € 10 billion throughout the 8 week stress horizon under all scenarios for our daily consolidated currency stress test remained at this level also for 2018.

The tables in section “Liquidity Risk Exposure: Stress Testing and Scenario Analysis” show the results of our internal global liquidity stress test under the various different scenarios.

Liquidity Coverage Ratio

In addition to our internal stress test result, the Group has a Management Board-approved risk appetite for the Liquidity Coverage Ratio (LCR). The LCR is intended to promote the short-term resilience of a bank’s liquidity risk profile over a 30 day stress scenario. The ratio is defined as the amount of High Quality Liquid Assets (HQLA) that could be used to raise liquidity in a stressed scenario, measured against the total volume of net cash outflows, arising from both contractual and modelled exposures.

This requirement has been implemented into European law, via the Commission Delegated Regulation (EU) 2015/61, adopted in October 2014. Compliance with the LCR was required in the EU from October 1, 2015.

The LCR complements the internal stress testing framework. By maintaining a ratio in excess of minimum regulatory requirements, the LCR seeks to ensure that the Group holds adequate liquidity resources to mitigate a short-term liquidity stress.

In November 2018, the Bank has set its internal risk appetite more conservative by 3% in order to maintain a LCR ratio of at least 113%, effective from 1st of January 2019 onwards.

Key differences between the internal liquidity stress test and LCR include the time horizon (eight weeks versus 30 days), classification and haircut differences between Liquidity Reserves and the LCR HQLA, outflow rates for various categories of funding, and inflow assumption for various assets (for example, loan repayments). Our liquidity stress test also includes outflows related to intraday liquidity assumptions, which are not explicitly captured in the LCR.

Funding Risk Management

Structural funding

Deutsche Bank's primary tool for monitoring and managing longer term funding risk is the Funding Matrix. The Funding Matrix assesses the Group's structural funding profile for the greater than one year time horizon. To produce the Funding Matrix, all funding-relevant assets and liabilities are mapped into time buckets corresponding to their contractual or modeled maturities. This allows the Group to identify expected excesses and shortfalls in term liabilities over assets in each time bucket, facilitating the management of potential liquidity exposures.

The liquidity profile is based on contractual cash flow information. If the contractual maturity profile of a product does not adequately reflect the liquidity profile, it is replaced by modeling assumptions. Short-term balance sheet items (<1yr) or matched funded structures (asset and liabilities directly matched with no liquidity risk) can be excluded from the term analysis.

The bottom-up assessment by individual business line is combined with a top-down reconciliation against the Group's IFRS balance sheet. From the cumulative term profile of assets and liabilities beyond 1 year, long-funded surpluses or short-funded gaps in the Group's maturity structure can be identified. The cumulative profile is thereby built up starting from the greater than 10 year bucket down to the greater than 1 year bucket.

The strategic liquidity planning process, which incorporates the development of funding supply and demand across business units, together with the bank's targeted key liquidity and funding metrics, provides the key input parameter for our annual capital markets issuance plan. Upon approval by the Management Board the capital markets issuance plan establishes issuance targets for securities by tenor, volume, currency and instrument. We also maintain a stand-alone U.S. dollar and GBP funding matrix which limits the maximum short position in any time bucket (more than 1 year to more than 10 years) to € 10 billion and € 5 billion respectively. This supplements the risk appetite for our global funding matrix which requires us to maintain a positive funding position in any time bucket (more than 1 year to more than 10 years).

Net Stable Funding Ratio

The Net Stable Funding Ratio (NSFR) was proposed as part of Basel 3, as the regulatory metric for assessing a bank's structural funding profile. The NSFR is intended to reduce medium to long-term funding risks by requiring banks to maintain a stable funding profile in relation to their on- and off-balance sheet activities. The ratio is defined as the amount of Available Stable Funding (the portion of capital and liabilities expected to be a stable source of funding), relative to the amount of Required Stable Funding (a function of the liquidity characteristics of various assets held).

In the EU, the Commission published a legislative proposal to amend the CRR. The proposal defines, inter alia, a mandatory quantitative NSFR requirement which would apply two years after the proposal comes into force. The proposal remains subject to change in the EU legislative process. Therefore, for banks domiciled in the EU, the final definition of the ratio and associated implementation timeframe has not yet been confirmed.

We are currently in the process of assessing the impacts of the NSFR, and would expect to formally embed this metric within our overall liquidity risk management framework, once the relevant rules and timing within the EU have been finally determined.

Funding Diversification

Diversification of our funding profile in terms of investor types, regions, products and instruments is an important element of our liquidity risk management framework. Our most stable funding sources come from capital markets and equity, retail, and transaction banking clients. Other customer deposits and secured funding and short positions are additional sources of funding. Unsecured wholesale funding represents unsecured wholesale liabilities sourced primarily by our Treasury Pool Management. Given the relatively short-term nature of these liabilities, they are primarily used to fund liquid trading assets.

To promote the additional diversification of our refinancing activities, we hold a license allowing us to issue mortgage Pfandbriefe. In addition, we have established a program for the purpose of issuing Covered Bonds under Spanish law (Cedulas).

Unsecured wholesale funding comprises a range of unsecured products, such as Certificates of Deposit (CDs), Commercial Papers (CPs) as well as term, call and overnight deposits across tenors primarily up to one year.

To avoid any unwanted reliance on these short-term funding sources, and to promote a sound funding profile, which complies with the defined risk appetite, we have implemented limits (across tenors) on these funding sources, which are derived from our daily stress testing analysis. In addition, we limit the total volume of unsecured wholesale funding to manage the reliance on this funding source as part of the overall funding diversification.

The chart “Liquidity Risk Exposure: Funding Diversification” shows the composition of our external funding sources that contribute to the liquidity risk position, both in EUR billion and as a percentage of our total external funding sources.

Funds Transfer Pricing

The funds transfer pricing framework applies to all businesses/regions and promotes pricing of (i) assets in accordance with their underlying liquidity risk, (ii) liabilities in accordance with their liquidity value and funding maturity and (iii) contingent liquidity exposures in accordance with the cost of providing for commensurate liquidity reserves to fund unexpected cash requirements.

Within this framework all funding and liquidity risk costs and benefits are allocated to the firm’s business units based on market rates. Those market rates reflect the economic costs of liquidity for Deutsche Bank. Treasury might set further financial incentives in line with the Bank’s liquidity risk guidelines. While the framework promotes a diligent group-wide allocation of the Bank's funding costs to the liquidity users, it also provides an incentive-based framework for businesses generating stable long-term and stress compliant funding. Funding relevant transactions are subject to liquidity (term) premiums and/or other funds transfer pricing mechanisms depending on market conditions. Liquidity premiums are set by Treasury and reflected in a segregated Treasury liquidity account which is the aggregator of liquidity costs and benefits. The management and allocation of the liquidity account cost base is the key variable for funds transfer pricing within Deutsche Bank.

Liquidity reserves

Liquidity reserves comprise available cash and cash equivalents, highly liquid securities (includes government, agency and government guaranteed) as well as other unencumbered central bank eligible assets.

The volume of our liquidity reserves is a function of our expected daily stress result, both at an aggregate level as well as at an individual currency level. To the extent we receive incremental short-term wholesale liabilities which attract a high stress roll-off, we will largely keep the proceeds of such liabilities in cash or highly liquid securities as a stress mitigant. Accordingly, the total volume of our liquidity reserves will fluctuate as a function of the level of short-term wholesale liabilities held, although this has no material impact on our overall liquidity position under stress. Our liquidity reserves include only assets that are freely transferable or that can be utilized after taking into consideration local liquidity demands within the Group, including local limits on free transferability within the Group, or that can be applied against local entity stress outflows. As a result our liquidity reserves exclude surplus liquidity held in DBTCA due to requirements pursuant to Section 23A of the U.S. Federal Reserve Act. Certain intraday requirements are directly deducted in the calculation of the Liquidity Reserves while others are represented as outflows in our internal liquidity model. We hold the vast majority of our liquidity reserves centrally across the major currencies, at our parent and our foreign branches with further reserves held at key locations in which we are active.

Asset Encumbrance

Encumbered assets primarily comprise those on- and off-balance sheet assets that are pledged as collateral against secured funding, collateral swaps, and other collateralized obligations. We generally encumber loans to support long-term capital markets secured issuance such as covered bonds or other self-securitization structures, while financing debt and equity inventory on a secured basis is a regular activity for our Corporate & Investment Bank business. Additionally, in line with the EBA technical standards on regulatory asset encumbrance reporting, we consider as encumbered assets pledged with settlement systems, including default funds and initial margins, as well as other assets pledged which cannot be freely withdrawn such as mandatory minimum reserves at central banks. We also include derivative margin receivable assets as encumbered under these EBA guidelines.

Business (Strategic) Risk Management

Strategic Risk is the risk of suffering an operating income shortfall due to lower than expected performance in revenues not compensated by a reduction in costs. Strategic Risk may arise from changes to the competitive landscape or regulatory framework or ineffective positioning in the macroeconomic environment. Strategic Risk could also arise due to a failure to execute strategy and/ or failure to effectively take actions to address underperformance.

A Strategic and Capital plan is developed annually and presented to the Management Board for discussion and approval. The final plan is then presented to the Supervisory Board. During the year, execution of business strategies is regularly monitored to assess the performance against strategic objectives and to seek to ensure we remain on track to achieve targets. A more comprehensive description of this process is detailed in the section ‘Strategic and Capital Plan’.

Model Risk Management

Model risk is the potential for adverse consequences from incorrect or misused model outputs and reports using these outputs. Model risk can lead to financial loss, poor business or strategic decision making, or damage our reputation. The term ‘model’ refers to a quantitative method, system, or approach that applies statistical, economic, financial, or mathematical theories, techniques, and assumptions to process input data into quantitative estimates.

Model risk is managed across Pricing models, Risk & Capital models, and Other models:

- Pricing models are used to generate asset and liability fair value measurements reported in official books and records and/or risk sensitivities which feed Market Risk Management (MRM) processes;
- Risk & Capital models are related to risks used for regulatory or internal capital requirements, e.g. VaR, IMM, Stress tests etc.;
- Other models are those outside of the Bank's Pricing and Risk & Capital models.

Model risk appetite is aligned to the Group's qualitative statements, ensuring that model risk management is embedded in a strong risk culture and that risks are minimized to the extent possible.

The management of model risk includes:

- Performing robust independent model validation that provides effective challenge to the model development process and includes identification of conditions for use, methodological limitations that may require adjustments or overlays, and validation findings that require remediation;
- Establishing a strong model risk management and governance framework, including senior forums for monitoring and escalation of model risk related topics;
- Creating Bank-wide model risk related policies, aligned to regulatory requirements with clear roles and responsibilities for key stakeholders across the model life cycle; and
- Providing an assessment of the model risk control environment and reporting to the Management Board on a periodic basis.

We have been implementing improvements in our model risk management framework, and significant progress has been achieved in 2018 across the three underlying model categories, including:

- Continued progress in improving the control environment for Pricing Models over 2018, as reflected in significant reductions in model usage exceptions and control of trades on non-strategic platforms within tolerance
- Identification and inclusion of 'Other Models' within a Model Inventory that completed a transparent baseline of all Model categories, from which model risk can be measured, managed and monitored at Group level in 2019 and beyond
- Key controls continue to operate across Risk & Capital Models, with introduction of compensating control framework for validation issues and prioritized focus on remediation of certain issues.

Management has determined to instil a robust and consistent model risk management framework in order to ensure that the framework effectively identifies, monitors and measures risk. The effort focuses on board oversight, model identification and model inventory, single coherent policy and governance framework, model development practices, and effective and rigorous model validation.

Reputational Risk Management

Within our risk management process, we define reputational risk as the risk of possible damage to our brand and reputation, and the associated risk to earnings, capital or liquidity, arising from any association, action or inaction which could be perceived by stakeholders to be inappropriate, unethical or inconsistent with Deutsche Bank's values and beliefs.

The Reputational Risk Framework (the Framework) is in place to manage primary reputational risk. It covers the process through which active decisions are taken on matters which may pose a reputational risk, ex ante, and, in doing so, prevent damage to Deutsche Bank's reputation wherever possible. Reputational risks which may arise from a

failure with another risk type, control or process (secondary reputational risk) are addressed separately via the associated risk type framework. The Framework is established to provide consistent standards for the identification, assessment and management of reputational risk issues. While every employee has a responsibility to protect our reputation, the primary responsibility for the identification, assessment, management, monitoring and, if necessary, referring or reporting, of reputational risk matters lies with our business divisions. Each employee is under an obligation, within the scope of his or her activities, to be alert to any potential causes of reputational risk and to address them according to the Framework. Reputational Risk Management has designed and implemented a look back and lessons learned process in order to assess and control the effectiveness of the Framework, including in relation to reputational risk identification and referral.

If a matter is identified that is considered to pose, at a minimum, a moderate reputational risk then it is required to be referred for further consideration within the business division through its Unit Reputational Risk Assessment Process (Unit RRAP). In the event that a matter is deemed to pose a material reputational risk then it must be referred through to one of the four Regional Reputational Risk Committees (RRRCs) for further review. In addition to the materiality assessment, there are also certain criteria, known as mandatory referral criteria, which are considered inherently higher risk from a reputational perspective and therefore require mandatory referral to defined Subject Matter Experts (SMEs), e.g. Industry Reputational Risk or Group Sustainability, and/or referral to a Unit RRAP or RRRC.

The RRRCs are sub-committees of the Group Reputational Risk Committee (GRRC), which is itself a sub-committee of the Group Risk Committee (GRC), and are responsible for the oversight, governance and coordination of the management of reputational risk in their respective regions of Deutsche Bank on behalf of the Management Board. In exceptional circumstances, matters can also be referred by the RRRCs to the GRRC.

The modelling and quantitative measurement of reputational risk internal capital is implicitly covered in our economic capital framework primarily within operational and strategic risk.

Risk Concentration and Risk Diversification

Risk Concentrations

Risk concentrations refer to clusters of the same or similar risk drivers within specific risk types (intra-risk concentrations in credit, market, operational, liquidity and business risks) as well as across different risk types (inter-risk concentrations). They occur within and across counterparties, businesses, regions/countries, industries and products. The management and monitoring of risk concentrations is achieved through a quantitative and qualitative approach, as follows:

- Intra-risk concentrations are assessed, monitored and mitigated by the individual risk functions (credit, market, operational, liquidity and strategic risk management). This is supported by limit setting on different levels and/or management according to risk type.
- Inter-risk concentrations are managed through quantitative top-down stress-testing and qualitative bottom-up reviews, identifying and assessing risk themes independent of any risk type and providing a holistic view across the bank.

The most senior governance body for the oversight of risk concentrations throughout 2018 was the Enterprise Risk Committee (ERC), which is a subcommittee of the Group Risk Committee (GRC).

Risk Type Diversification Benefit

The risk type diversification benefit quantifies diversification effects between credit, market, operational and strategic risk in the economic capital calculation. To the extent correlations between these risk types fall below 1.0, a risk type

diversification benefit results. The calculation of the risk type diversification benefit is intended to ensure that the standalone economic capital figures for the individual risk types are aggregated in an economically meaningful way.

Risk and capital performance

Capital, Leverage Ratio and MREL

Regulatory capital

The calculation of our regulatory capital incorporates the capital requirements following the "Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms" (Capital Requirements Regulation or "CRR") and the "Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms" (Capital Requirements Directive 4 or "CRD 4") as implemented into German law. The information in this section as well as in the section "Development of risk-weighted Assets" is based on the regulatory principles of consolidation.

This section refers to the capital adequacy of the group of entities consolidated for banking regulatory purposes pursuant to the CRR and the German Banking Act ("Kreditwesengesetz" or "KWG"). Therein not included are insurance companies or companies outside the finance sector.

The total regulatory capital pursuant to the effective regulations as of year-end 2018 comprises Tier 1 and Tier 2 (T2) capital. Tier 1 capital is subdivided into Common Equity Tier 1 (CET 1) capital and Additional Tier 1 (AT1) capital.

Common Equity Tier 1 (CET 1) capital consists primarily of common share capital (reduced by own holdings) including related share premium accounts, retained earnings (including losses for the financial year, if any) and accumulated other comprehensive income, subject to regulatory adjustments (i.e. prudential filters and deductions). Prudential filters for CET 1 capital, according to Articles 32 to 35 CRR, include (i) securitization gains on sale, (ii) cash flow hedges and changes in the value of own liabilities, and (iii) additional value adjustments. CET 1 capital deductions comprise (i) intangible assets, (ii) deferred tax assets that rely on future profitability, (iii) negative amounts resulting from the calculation of expected loss amounts, (iv) net defined benefit pension fund assets, (v) reciprocal cross holdings in the capital of financial sector entities and, (vi) significant and non-significant investments in the capital (CET 1, AT1, T2) of financial sector entities above certain thresholds. All items not deducted (i.e., amounts below the threshold) are subject to risk-weighting.

Additional Tier 1 (AT1) capital consists of AT1 capital instruments and related share premium accounts as well as noncontrolling interests qualifying for inclusion in consolidated AT1 capital, and during the transitional period grandfathered instruments eligible under earlier frameworks. To qualify as AT1 capital under CRR/CRD 4, instruments must have principal loss absorption through a conversion to common shares or a write-down mechanism allocating losses at a trigger point and must also meet further requirements (perpetual with no incentive to redeem; institution must have full dividend/coupon discretion at all times, etc.).

Tier 2 (T2) capital comprises eligible capital instruments, the related share premium accounts and subordinated long-term debt, certain loan loss provisions and noncontrolling interests that qualify for inclusion in consolidated T2 capital. To qualify as T2 capital, capital instruments or subordinated debt must have an original maturity of at least five years. Moreover, eligible capital instruments may inter alia not contain an incentive to redeem, a right of investors to accelerate repayment, or a credit sensitive dividend feature.

Capital instruments that no longer qualify as AT1 or T2 capital under the CRR/CRD 4 fully loaded rules are subject to grandfathering rules during the transitional period and are phased out from 2013 to 2022 with their recognition capped at 40 % in 2018 and the cap decreasing by 10 % every year.

Capital instruments

Our Management Board received approval from the 2017 Annual General Meeting to buy back up to 206.7 million shares before the end of April 2022. Thereof 103.3 million shares can be purchased by using derivatives, this includes 41.3 million derivatives with a maturity exceeding 18 months. During the period from the 2017 Annual General Meeting until the 2018 Annual General Meeting (May 24, 2018), 22.8 million shares have been purchased, of which 4.4 million shares through exercise of call options. The shares purchased were used for equity compensation purposes in the same period or are to be used in the upcoming period so that the number of shares held in Treasury from buybacks was 1.3 million as of the 2018 Annual General Meeting.

The 2018 Annual General Meeting granted our Management Board the approval to buy back up to 206.7 million shares before the end of April 2023. Thereof 103.3 million shares can be purchased by using derivatives, this includes 41.3 million derivatives with a maturity exceeding 18 months. These authorizations substitute the authorizations of the previous year. During the period from the 2018 Annual General Meeting until December 31, 2018, 9.3 million shares were purchased. The shares purchased are to be used in the upcoming period so that the number of shares held in Treasury from buybacks was 1.2 million as of December 31, 2018.

Since the 2017 Annual General Meeting, and as of December 31, 2018, authorized capital available to the Management Board is € 2,560 million (1,000 million shares). As of December 31, 2018, the conditional capital against cash stands at € 512 million (200 million shares). Additional conditional capital for equity compensation amounts to € 51.2 million (20 million shares). Further the 2018 Annual General Meeting authorized the issuance of participatory notes and other Hybrid Debt Securities that fulfill the regulatory requirements to qualify as Additional Tier 1 capital with an equivalent value of € 8.0 billion.

Our legacy Hybrid Tier 1 capital instruments (substantially all noncumulative trust preferred securities) are not recognized under fully loaded CRR/CRD 4 rules as Additional Tier 1 capital, mainly because they have no write-down or equity conversion feature. However, they are recognized as Additional Tier 1 capital under CRR/CRD 4 transitional provisions and can still be recognized as Tier 2 capital under the fully loaded CRR/CRD 4 rules. During the transitional phase-out period the maximum recognizable amount of Additional Tier 1 instruments from Basel 2.5 compliant issuances as of December 31, 2012 will be reduced at the beginning of each financial year by 10 % or € 1.3 billion, through 2022. For December 31, 2018, this resulted in eligible Additional Tier 1 instruments of € 7.6 billion (i.e. € 4.6 billion newly issued AT1 Notes plus € 3.0 billion of legacy Hybrid Tier 1 instruments recognizable during the transition period). € 3.0 billion of the legacy Hybrid Tier 1 instruments can still be recognized as Tier 2 capital under the fully loaded CRR/CRD 4 rules. Additional Tier 1 instruments recognized under fully loaded CRR/CRD 4 rules amounted to € 4.6 billion as of December 31, 2018. In 2018, the bank has redeemed one legacy Hybrid Tier 1 instrument with a notional of U.S. $ 2.0 billion and an eligible equivalent amount of € 1.6 billion and another legacy Hybrid Tier 1 instrument with a notional of € 1.0 billion and an eligible equivalent amount of € 1.0 billion. The first redemption was already derecognized from regulatory Additional Tier 1 capital in 2017 with the effective date of the call-permission by the ECB.

The total of our Tier 2 capital instruments as of December 31, 2018 recognized during the transition period under CRR/CRD 4 was € 6.2 billion. As of December 31, 2018, there were no legacy Hybrid Tier 1 instruments that are counted as Tier 2 capital under transitional rules. The gross notional value of the Tier 2 capital instruments was € 7.5 billion. Tier 2 instruments recognized under fully loaded CRR/CRD 4 rules amounted to € 9.2 billion as of

December 31, 2018 (including the € 3.0 billion legacy Hybrid Tier 1 capital instruments only recognizable as Additional Tier 1 capital during the transitional period). In 2018, the bank has redeemed one Tier 2 capital instrument with a notional of JPY 21.0 billion and an eligible equivalent amount of € 0.1 billion and another Tier 2 capital instrument with a notional of JPY 3.0 billion and an eligible equivalent amount of € 0.0 billion. These redemptions were already derecognized from regulatory Tier 2 capital in 2017 with the effective date of the call-permission by the ECB.

Minimum capital requirements and additional capital buffers

The Pillar 1 CET 1 minimum capital requirement applicable to the Group is 4.50 % of risk-weighted assets (RWA). The Pillar 1 total capital requirement of 8.00 % demands further resources that may be met with up to 1.50 % Additional Tier 1 capital and up to 2.00 % Tier 2 capital.

Failure to meet minimum capital requirements can result in supervisory measures such as restrictions of profit distributions or limitations on certain businesses such as lending. We complied with the regulatory capital adequacy requirements in 2018.

In addition to these minimum capital requirements, the following combined capital buffer requirements have been phased in since 2016 (other than the systemic risk buffer, if any, which is not subject to any phase-in) and will become fully effective from 2019 onwards. The buffer requirements must be met in addition to the Pillar 1 minimum capital requirements, but can be drawn down in times of economic stress.

Deutsche Bank continues to be designated as a global systemically important institution (G-SII) by the German Federal Financial Supervisory Authority (BaFin) in agreement with the Deutsche Bundesbank, resulting in a G-SII buffer requirement of 2.00 % CET 1 capital of RWA in 2019 and was phased in with 0.5 % in 2016, 1.00 % in 2017 and 1.50 % in 2018. This is in line with the FSB assessment of systemic importance based on the indicators as published in 2018. We will continue to publish our indicators on our website.

The capital conservation buffer is implemented in Section 10c German Banking Act based on Article 129 CRD 4 and equals a requirement of 2.50 % CET 1 capital of RWA in 2019 and was phased in with 0.625 % in 2016, 1.25 % in 2017 and 1.875 % in 2018.

The countercyclical capital buffer is deployed in a jurisdiction when excess credit growth is associated with an increase in system-wide risk. It may vary between 0 % and 2.50 % CET 1 capital of RWA by 2019. In exceptional cases, it could also be higher than 2.50 %. The institution specific countercyclical buffer that applies to Deutsche Bank is the weighted average of the countercyclical capital buffers that apply in the jurisdictions where our relevant credit exposures are located. As per December 31, 2018, the institution-specific countercyclical capital buffer was at 0.07 %.

In addition to the aforementioned buffers, national authorities, such as the BaFin, may require a systemic risk buffer to prevent and mitigate long-term non-cyclical systemic or macro-prudential risks that are not covered by the CRR. They can require an additional buffer of up to 5.00 % CET 1 capital of RWA. As of the year-end 2018, no systemic risk buffer applied to Deutsche Bank.

Additionally, Deutsche Bank AG has been classified by BaFin as an other systemically important institution (O-SII) with an additional buffer requirement of 2.00 % that has to be met on a consolidated level. For Deutsche Bank, the O-SII buffer was introduced in first steps of 0.66 % in 2017, 1.32 % in 2018 and 2.00 % in 2019. Unless certain exceptions apply, only the higher of the systemic risk buffer (as of December 31, 2018, not applicable), G-SII buffer and O-SII buffer must be applied. Accordingly, the O-SII buffer is not applicable as of December 31, 2018.

In addition, pursuant to the Pillar 2 Supervisory Review and Evaluation Process (SREP), the European Central Bank (ECB) may impose capital requirements on individual banks which are more stringent than statutory requirements (so-called Pillar 2 requirement). On December 19, 2017, Deutsche Bank was informed by the ECB of its decision regarding prudential minimum capital requirements for 2018, following the results of the 2017 SREP. Beginning from January 1, 2018, the decision requires Deutsche Bank to maintain a phase-in CET 1 ratio, which as of December 31, 2018 is at least 10.69 % on a consolidated basis. This requirement on CET 1 capital comprises the Pillar 1 minimum capital requirement of 4.50 %, the Pillar 2 requirement (SREP Add-on) of 2.75 %, the phase-in capital conservation buffer of 1.875 %, the countercyclical buffer of 0.07 % (as per December 31, 2018) and the phase-in G-SII capital buffer of 1.50 %. Correspondingly the requirements for Deutsche Bank's Tier 1 capital ratio were at 12.19 % and total capital ratio at 14.19 % as of December 31, 2018.

Beginning from January 1, 2019, Deutsche Bank must maintain a CET 1 ratio of at least 11.82 % on a consolidated basis as the transition period for the capital conservation buffer and the G-SII capital buffer requirements ended and the full buffer levels of 2.50 % and 2.00 %, respectively, need to be covered with CET 1 capital. To summarize, the CET 1 capital requirement comprises the Pillar 1 minimum capital requirement of 4.50 %, the unchanged Pillar 2 requirement (SREP Add-on) of 2.75 %, the capital conservation buffer of 2.50 %, the countercyclical buffer (0.07 % per year end 2018) and the G-SII buffer of 2.00 %. Correspondingly, 2019 requirements for Deutsche Bank's Tier 1 capital ratio are at 13.32 % and for its total capital ratio at 15.32 %. On February 8, 2019, Deutsche Bank was informed by the ECB of its decision regarding prudential minimum capital requirements for 2019, following the results of the 2018 SREP. The decision left Deutsche Bank’s Pillar 2 requirement and thus the CET 1 capital requirements unchanged at 2.75 % beginning from March 1, 2019. Also, the ECB communicated to us an individual expectation to hold a further Pillar 2 CET 1 capital add-on, commonly referred to as the Pillar 2 guidance. The capital add-on pursuant to the Pillar 2 guidance is separate from and in addition to the Pillar 2 requirement. The ECB has stated that it expects banks to meet the Pillar 2 guidance although it is not legally binding, and failure to meet the Pillar 2 guidance does not lead to automatic restrictions of capital distributions.

The following table gives an overview of the different Pillar 1 and Pillar 2 minimum capital requirements (but excluding the Pillar 2 guidance) as well as capital buffer requirements applicable to Deutsche Bank in the years 2018 and 2019 (articulated on a phase-in basis):

Overview total capital requirements and capital buffers

	2018	2019
Pillar 1		
Minimum CET 1 requirement	4.50 %	4.50 %
Combined buffer requirement	3.44 %	4.57 %
Capital Conservation Buffer	1.875 %	2.50 %
Countercyclical Buffer	0.07 %1	0.07 %1
Maximum of:	1.50 %	2.00 %
G-SII Buffer	1.50 %	2.00 %
O-SII Buffer	1.32 %	2.00 %
Systemic Risk Buffer	0.00 %	0.00 %2
Pillar 2		
Pillar 2 SREP Add-on of CET 1 capital (excluding the "Pillar 2" guidance)	2.75 %	2.75 %
Total CET 1 requirement from Pillar 1 and 2³	10.69 %	11.82 %

Total Tier 1 requirement from Pillar 1 and 2	12.19 %	13.32 %
Total capital requirement from Pillar 1 and 2	14.19 %	15.32 %

1Deutsche Bank's countercyclical buffer requirement is subject to country-specific buffer rates decreed by EBA and the Basel Committee of Banking Supervision (BCBS) as well as Deutsche Bank's relevant credit exposures as per respective reporting date. The countercyclical buffer rate for 2018 is as of December 31, 2018. The countercyclical buffer rate for 2019 has been assumed to be 0.07 % due to unavailability of 2019 data.

2The systemic risk buffer has been assumed to remain at 0 % for the projected year 2019, subject to changes based on further directives.

3 The total Pillar 1 and Pillar 2 CET 1 requirement (excluding the "Pillar 2" guidance) is calculated as the sum of the SREP requirement, the higher of the G-SII, O-SII and systemic risk buffer requirement as well as the countercyclical buffer requirement.

Development of regulatory capital

Our CRR/CRD 4 Tier 1 capital amounted to € 55.1 billion as of December 31, 2018, consisting of CET 1 capital of € 47.5 billion and AT1 capital of € 7.6 billion. The CRR/CRD 4 Tier 1 capital was € 2.5 billion lower than at the end of 2017, primarily driven by a decrease in CET 1 capital of € 3.3 billion since year end 2017 while AT1 capital increased by € 0.8 billion in the same period.

The € 3.3 billion decrease of CRR/CRD 4 CET 1 capital was largely the result of increased regulatory adjustments due to a phase-in rate of 100 % in 2018 compared to a phase-in rate of 80 % in 2017. Based on ECB guidance and following the EBA Guidelines on payment commitments, effective January 1, 2018, Deutsche Bank treats irrevocable payment commitments related to the Single Resolution Fund and the Deposit Guarantee Scheme as an additional CET 1 capital deduction instead of risk-weighting them. This capital deduction as of December 31, 2018 was at € 0.6 billion. The adoption of IFRS 9, effective January 1, 2018, decreased capital by € 0.4 billion. Furthermore our CET 1 capital was reduced by € 0.5 billion in the second quarter of 2018 due to the payment of our common share dividends for the financial year 2017 (11 cts/share following the Annual General Meeting) and the yearly AT1 coupon payment which was not accrued in CET 1 capital as a consequence of the negative net income for the financial year 2017 following Article 26(2) of Regulation (EU) No 575/2013 (ECB/2015/4). As of December 31, 2018 our positive net income of € 0.3 billion was completely offset by our common share dividend and AT1 coupon accrual of € 0.3 billion for the year-end 2018 which is in line with the ECB Decision (EU) (2015/656) on the recognition of interim or year-end profits in CET 1 capital in accordance with the Article 26(2) of Regulation (EU) No 575/2013 (ECB/2015/4). The negative effects on CET 1 capital were partially offset by a positive impact of € 0.9 billion from our Initial Public Offering (IPO) of DWS Group GmbH & Co. KGaA (DWS).

The € 0.8 billion increase in CRR/CRD 4 AT1 capital was the result of positive effects from reduced regulatory adjustments of € 1.7 billion that were phased out from AT1 capital and a negative counter-effect from the call and redemption of one legacy Hybrid AT1 instrument with a notional amount of € 1 billion in the second quarter of 2018. The regulatory adjustments from AT1 capital reflect the residual amount of certain CET 1 deductions that are subtracted from CET 1 capital under fully loaded rules, but are allowed to reduce AT1 capital during the transitional period. The phase-in rate for these deductions on the level of CET 1 capital increased to 100 % in 2018 (80 % in 2017) and decreased correspondingly on the level of AT1 capital to 0 % in 2018 (20 % in 2017).

Our fully loaded CRR/CRD 4 Tier 1 capital as of December 31, 2018 was € 52.1 billion, compared to € 52.9 billion at the end of 2017. Our fully loaded CRR/CRD 4 CET 1 capital amounted to € 47.5 billion as of December 31, 2018, compared to € 48.3 billion as of December 31, 2017. Our fully loaded CRR/CRD 4 Additional Tier 1 capital amounted to € 4.6 billion as per end of December 2018, unchanged compared to year end 2017.

The decrease of our fully loaded CET 1 capital of € 0.8 billion compared to year end 2017 capital was mainly the result of the deduction of irrevocable payment commitments to the Single Resolution Fund and the Deposit Guarantee Schemes amounting to € 0.6 billion, the IFRS 9 adoption impact of € 0.4 billion, the payment of 11 cts/share common share dividend totaling to € 0.2 billion and the AT1 coupons of € 0.3 billion in the second quarter of 2018 and negative effects of € 0.3 billion from regulatory adjustments from prudential filters (Additional valuation adjustments). These negative effects were reduced by a positive CET 1 contribution of € 0.9 billion from our IPO of DWS.

Own Funds Template (incl. RWA and capital ratios)

	Dec 31, 2018		Dec 31, 2017	
in € m.	CRR/CRD 4 fully loaded	CRR/CRD 41	CRR/CRD 4 fully loaded	CRR/CRD 4
Common Equity Tier 1 (CET 1) capital: instruments and reserves				
Capital instruments, related share premium accounts and other reserves2	45,515	45,515	45,195	45,195
Retained earnings	16,297	16,297	17,977	17,977
Accumulated other comprehensive income (loss), net of tax	382	382	696	660
Independently reviewed interim profits net of any foreseeable charge or dividend3	0	0	(751)	(751)
Other2	846	846	0	33
Common Equity Tier 1 (CET 1) capital before regulatory adjustments	63,041	63,041	63,116	63,114
Common Equity Tier 1 (CET 1) capital: regulatory adjustments				
Additional value adjustments (negative amount)	(1,504)	(1,504)	(1,204)	(1,204)
Other prudential filters (other than additional value adjustments)	(329)	(329)	(102)	(74)
Goodwill and other intangible assets (net of related tax liabilities) (negative amount)	(8,566)	(8,566)	(8,394)	(6,715)
Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liabilities where the conditions in Art. 38 (3) CRR are met) (negative amount)	(2,758)	(2,758)	(3,004)	(2,403)
Negative amounts resulting from the calculation of expected loss amounts4	(367)	(367)	(502)	(408)
Defined benefit pension fund assets (negative amount)	(1,111)	(1,111)	(1,125)	(900)
Direct, indirect and synthetic holdings by an institution of own CET 1 instruments (negative amount)	(25)	(25)	(144)	(117)
Direct, indirect and synthetic holdings by the institution of the CET 1 instruments of financial sector entities where the institution has a significant investment in those entities	0	0	0	0

(amount above the 10 % / 15 % thresholds and net of eligible short positions) (negative amount)				
Deferred tax assets arising from temporary differences (net of related tax liabilities where the conditions in Art. 38 (3) CRR are met) (amount above the 10 % / 15 % thresholds) (negative amount)	0	0	0	0
Other regulatory adjustments5	(895)	(895)	(341)	(485)
Total regulatory adjustments to Common Equity Tier 1 (CET 1) capital	(15,555)	(15,555)	(14,816)	(12,306)
Common Equity Tier 1 (CET 1) capital	47,486	47,486	48,300	50,808
Additional Tier 1 (AT1) capital: instruments				
Capital instruments and the related share premium accounts	4,676	4,676	4,676	4,676
Amount of qualifying items referred to in Art. 484 (4) CRR and the related share premium accounts subject to phase out from AT1	N/M	3,009	N/M	3,904
Additional Tier 1 (AT1) capital before regulatory adjustments	4,676	7,685	4,676	8,579
Additional Tier 1 (AT1) capital: regulatory adjustments				
Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)	(80)	(80)	(55)	(26)
Residual amounts deducted from AT1 capital with regard to deduction from CET 1 capital during the transitional period pursuant to Art. 472 CRR	N/M	N/M	N/M	(1,730)
Other regulatory adjustments	0	0	0	0
Total regulatory adjustments to Additional Tier 1 (AT1) capital	(80)	(80)	(55)	(1,756)
Additional Tier 1 (AT1) capital	4,595	7,604	4,621	6,823
Tier 1 capital (T1 = CET 1 + AT1)	52,082	55,091	52,921	57,631
Tier 2 (T2) capital	9,211	6,202	10,329	6,384
Total capital (TC = T1 + T2)	61,292	61,292	63,250	64,016
Total risk-weighted assets	350,432	350,432	344,212	343,316
Capital ratios				
Common Equity Tier 1 capital ratio (as a percentage of risk-weighted assets)	13.6	13.6	14.0	14.8
Tier 1 capital ratio (as a percentage of risk-weighted assets)	14.9	15.7	15.4	16.8
Total capital ratio (as a percentage of risk-weighted assets)	17.5	17.5	18.4	18.6

N/M – Not meaningful

[1] With effect from January 1, 2018, the CRR/CRD 4 “transitional” (or “phase-in”) rules under which CET 1 regulatory adjustments were phased in have reached a rate of 100 %, together with the 100 % phase-out rate of minority interest only recognizable under the transitional rules.

2Our IPO of DWS led to a € 0.9 billion CET 1 contribution which is reflected in ‘Capital instruments, related share premium accounts and other reserves’ at € 0.1 billion and minority interest in ‘Other’ at € 0.8 billion.

3 No interim profits to be recognized as per ECB Decision (EU) 2015/656 in accordance with the Article 26(2) of Regulation (EU) No 575/2013 (ECB/2015/4).

4 Based on Article 159 CRR and recent guidance provided by EBA (Q&A 2017_3426) published on January 18, 2019 only unearned credit spread additional value adjustments are used as specific credit risk adjustments.

5 Includes € 0.6 billion capital deduction effective from January 2018 onwards, based on ECB guidance and following the EBA Guidelines on irrevocable payment commitments related to the Single Resolution Fund and the Deposit Guarantee Scheme. Further includes capital deduction of € 0.3 billion that was imposed on Deutsche Bank effective from October 2016 onwards based on a notification by the ECB pursuant to Article 16(1)(c) and 16(2)(d) of Regulation (EU) No 1024/2013.

Reconciliation of shareholders' equity to regulatory capital

	CRR/CRD 4	
in € m.	Dec 31, 2018	Dec 31, 2017
Total shareholders' equity per accounting balance sheet1	62,495	63,174
Deconsolidation/Consolidation of entities	(33)	(58)
Of which:		
Additional paid-in capital	(12)	(6)
Retained earnings	(150)	(228)
Accumulated other comprehensive income (loss), net of tax	130	176
Total shareholders' equity per regulatory balance sheet	62,462	63,116
Minority Interests (amount allowed in consolidated CET 1)1	846	33
Accrual for dividend and AT1 coupons2	(267)	0
Reversal of deconsolidation/consolidation of the position Accumulated other comprehensive income (loss), net of tax, during transitional period	0	(35)
Common Equity Tier 1 (CET 1) capital before regulatory adjustments	63,041	63,114
Additional value adjustments	(1,504)	(1,204)
Other prudential filters (other than additional value adjustments)	(329)	(74)
Regulatory adjustments relating to unrealized gains and losses pursuant to Art. 467 and 468 CRR	0	(144)
Goodwill and other intangible assets (net of related tax liabilities)	(8,566)	(6,715)
Deferred tax assets that rely on future profitability	(2,758)	(2,403)
Defined benefit pension fund assets	(1,111)	(900)
Direct, indirect and synthetic holdings by the institution of the CET 1 instruments of financial sector entities where the institution has a significant investment in those entities	0	0
Other regulatory adjustments	(1,287)	(866)
Common Equity Tier 1 capital	47,486	50,808

[1] Our IPO of DWS led to a € 0.9 billion CET 1 contribution which is reflected in the 'Total shareholders' equity per accounting balance sheet' at € 0.1 billion and 'Minority interests' at € 0.8 billion.

[2] No interim profits to be recognized as per ECB Decision (EU) 2015/656 in accordance with the Article 26(2) of Regulation (EU) No 575/2013 (ECB/2015/4).

Development of regulatory capital

in € m.	CRR/CRD 4 twelve months ended Dec 31, 2018	twelve months ended Dec 31, 2017
Common Equity Tier 1 (CET 1) capital - opening amount	50,808	47,782
Common shares, net effect	0	1,760
Additional paid-in capital	327	6,153
Retained earnings	(662)	(795)
Common shares in treasury, net effect/(+) sales (–) purchase	(6)	(9)
Movements in accumulated other comprehensive income	(134)	(2,748)
Accrual for dividend and Additional Tier 1 (AT1) coupons [1]	(267)	0
Additional value adjustments	(299)	194
Goodwill and other intangible assets (net of related tax liabilities)	(1,850)	(1,653)
Deferred tax assets that rely on future profitability (excluding those arising from temporary differences)	(355)	(91)
Negative amounts resulting from the calculation of expected loss amounts	41	(219)
Defined benefit pension fund assets	(211)	(333)
Direct, indirect and synthetic holdings by the institution of the CET 1 instruments of financial sector entities where the institution has a significant investment in those entities	0	0
Securitization positions not included in risk-weighted assets	0	0
Deferred tax assets arising from temporary differences (amount above 10 % and 15 % threshold, net of related tax liabilities where the conditions in Art. 38 (3) CRR are met)	0	354
Other, including regulatory adjustments	95	413
Common Equity Tier 1 (CET 1) capital - closing amount	47,486	50,808
Additional Tier 1 (AT1) Capital – opening amount	6,823	7,703
New Additional Tier 1 eligible capital issues	0	0
Matured and called instruments	(1,008)	(2,376)
Transitional arrangements	1,730	1,708
Of which:		
Goodwill and other intangible assets (net of related tax liabilities)	1,679	1,696
Other, including regulatory adjustments	59	(212)
Additional Tier 1 (AT1) Capital – closing amount	7,604	6,823
Tier 1 capital	55,091	57,631
Tier 2 (T2) capital – closing amount	6,202	6,384
Total regulatory capital	61,292	64,016

[1] No interim profits to be recognized as per ECB Decision (EU) 2015/656 in accordance with the Article 26(2) of

Regulation (EU) No 575/2013 (ECB/2015/4).

Development of risk-weighted assets

The table below provides an overview of RWA broken down by risk type and business division. They include the aggregated effects of the segmental reallocation of infrastructure related positions, if applicable, as well as reallocations between the segments.

Risk-weighted assets by risk type and business division according to transitional rules

	Dec 31, 2018				
in € m.	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Corporate & Other	Total
Credit Risk	115,035	76,592	5,236	15,964	212,827
Settlement Risk	39	0	0	47	86
Credit Valuation Adjustment (CVA)	7,642	202	112	42	7,997
Market Risk	37,446	89	0	0	37,535
Operational Risk	76,145	10,827	5,017	0	91,989
Total	236,307	87,709	10,365	16,053	350,432

	Dec 31, 2017				
in € m.	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Corporate & Other	Total
Credit Risk	118,940	75,377	3,273	16,552	214,142
Settlement Risk	142	0	0	5	147
Credit Valuation Adjustment (CVA)	6,189	171	84	7	6,451
Market Risk	30,896	70	0	0	30,966
Operational Risk	74,936	11,654	5,020	0	91,610
Total	231,103	87,272	8,378	16,564	343,316

The RWA according to CRR/CRD 4 were € 350.4 billion as of December 31, 2018, compared to € 343.3 billion at the end of 2017, which were still subject to transitional arrangements. The increase by € 7.1 billion was primarily driven by Market Risk and CVA RWA. The latter is driven by several methodology and policy-related changes. The Market Risk RWA increase of € 6.6 billion is driven by higher Stressed VaR and temporary increases in concentration risk. Credit Risk RWA decreased by € 1.3 billion mainly resulting from parameter recalibrations as well as model and methodology changes in addition to lower RWA due to the improved capturing of pending settlements for syndicated loans, which was partly offset by higher RWA due to business growth in our CIB and PCB segments.

Since January 1, 2018 the RWA under transitional rules is equal to the fully loaded measure as all transitional arrangements expired. For December 31, 2017 the RWA on transitional rules still recognized a small subset of equity positions according to grandfathering rules resulting in transitional RWA of € 343.3 billion, slightly below the fully loaded RWA of € 344.2 billion.

The tables below provide an analysis of key drivers for risk-weighted asset movements observed for credit risk, credit valuation adjustments as well as market and operational risk in the reporting period. They also show the corresponding movements in capital requirements, derived from the RWA by an 8% capital ratio.

Development of risk-weighted assets for Credit Risk including Counterparty Credit Risk

	Dec 31, 2018		Dec 31, 2017	
in € m.	Credit risk RWA	Capital requirements	Credit risk RWA	Capital requirements
Credit risk RWA balance, beginning of year	214,142	17,131	220,345	17,628
Book size	4,086	327	3,523	282
Book quality	(3,314)	(265)	506	40
Model updates	(1,357)	(109)	1,272	102
Methodology and policy	(976)	(78)	0	0
Acquisition and disposals	(1,653)	(132)	0	0
Foreign exchange movements	2,536	203	(10,162)	(813)
Other	(637)	(51)	(1,342)	(107)
Credit risk RWA balance, end of year	212,827	17,026	214,142	17,131

Of which: Development of risk-weighted assets for Counterparty Credit Risk

	Dec 31, 2018		Dec 31, 2017	
in € m.	Counterparty credit risk RWA	Capital requirements	Counterparty credit risk RWA	Capital requirements
Counterparty credit risk RWA balance, beginning of year	33,924	2,714	35,614	2,849
Book size	(8,235)	(659)	(4,628)	(370)
Book quality	104	8	3,715	297
Model updates	(850)	(68)	1,272	102
Methodology and policy	0	0	0	0
Acquisition and disposals	0	0	0	0
Foreign exchange movements	339	27	(2,048)	(164)
Other	0	0	0	0
Counterparty credit risk RWA balance, end of year	25,282	2,023	33,924	2,714

The classifications of key drivers for the RWA credit risk development table are fully aligned with the recommendations of the Enhanced Disclosure Task Force (EDTF). Organic changes in our portfolio size and composition are considered in the category “Book size”. The category “Book quality” mainly represents the effects from portfolio rating migrations, loss given default, model parameter recalibrations as well as collateral and netting coverage activities. “Model updates” include model refinements and advanced model roll out. RWA movements resulting from externally, regulatory-driven changes, e.g. applying new regulations, are considered in the

“Methodology and policy” section. “Acquisition and disposals” is reserved to show significant exposure movements which can be clearly assigned to new businesses or disposal-related activities. Changes that cannot be attributed to the above categories are reflected in the category “Other”.

The decrease in RWA for credit risk by 0.6 % or € 1.3 billion since December 31, 2017 is driven by book quality and model- and methodology-related changes. The category “Book quality” includes reductions resulting from parameter recalibrations and data enhancements. The category “Model updates” provides further reductions mainly stemming from refinements in our internal model method for derivatives. Furthermore the category “Methodology and policy” reflects the derecognition of irrevocable payment commitments to the Single Resolution Fund and the Deposit Guarantee Scheme which are deducted from CET 1 since the beginning of the year. “Other” principally reflects the net impact from lower RWA due to the improved capturing of pending settlements for syndicated loans and higher RWA for equity positions following the phase-out of the respective grandfathering provision under CRR/CRD 4 transitional rules. “Acquisition and disposals” provides the reduction in credit risk RWA, which is related to the partial sale of our Poland retail business. These reductions were partly offset by increase in the category “Book size” representing business growth in our CIB and PCB segments in addition to an increase resulting from foreign exchange movements.

The decrease in counterparty credit risk is mainly driven by trade terminations as well as data and collateral enhancements across the businesses. In addition the category “Model updates” contributed to the overall decrease which includes the impact from refinements in our internal model method for derivatives.

Based on the CRR/CRD 4 regulatory framework, we are required to calculate RWA using the CVA which takes into account the credit quality of our counterparties. RWA for CVA covers the risk of mark-to-market losses on the expected counterparty risk in connection with OTC derivative exposures. We calculate the majority of the CVA based on our own internal model as approved by the BaFin.

Development of risk-weighted assets for Credit Valuation Adjustment

	Dec 31, 2018		Dec 31, 2017	
in € m.	CVA RWA	Capital requirements	CVA RWA	Capital requirements
CVA RWA balance, beginning of year	6,451	516	9,416	753
Movement in risk levels	(770)	(62)	(3,228)	(258)
Market data changes and recalibrations	0	0	0	0
Model updates	0	0	0	0
Methodology and policy	2,028	162	870	70
Acquisitions and disposals	0	0	0	0
Foreign exchange movements	288	23	(607)	(49)
CVA RWA balance, end of year	7,997	640	6,451	516

The development of CVA RWA is broken down into a number of categories: “Movement in risk levels”, which includes changes to the portfolio size and composition; “Market data changes and calibrations”, which includes changes in market data levels and volatilities as well as recalibrations; “Model updates” refers to changes to either the IMM credit exposure models or the value-at-risk models that are used for CVA RWA; “Methodology and policy” relates to changes to the regulation. Any significant business acquisitions or disposals would be presented in the category with that name.

As of December 31, 2018, the RWA for CVA amounted to € 8.0 billion, representing an increase of € 1.5 billion (19 %) compared with € 6.5 billion for December 31, 2017. The overall increase was driven by "Methodology and policy" changes, with some offset from de-risking of the portfolio and currency effects; the most notable policy change was the inclusion of securities financing transactions following a change of regulatory guidance.

Development of risk-weighted assets for Market Risk

	Dec 31, 2018						
in € m.	VaR	SVaR	IRC	CRM	Other	Total RWA	Total capital requirements
Market risk RWA balance, beginning of year	4,380	10,896	9,871	56	5,763	30,966	2,477
Movement in risk levels	799	4,562	1,174	(3)	903	7,435	595
Market data changes and recalibrations	(51)	0	0	0	(165)	(215)	(17)
Model updates/changes	108	431	80	0	(200)	420	34
Methodology and policy	131	537	(1,057)	(53)	(500)	(941)	(75)
Acquisitions and disposals	0	0	0	0	(223)	(223)	(18)
Foreign exchange movements	0	0	0	0	94	94	8
Other	0	0	0	0	0	0	0
Market risk RWA balance, end of year	5,368	16,426	10,068	0	5,673	37,535	3,003

	Dec 31, 2017						
in € m.	VaR	SVaR	IRC	CRM	Other	Total RWA	Total capital requirements
Market risk RWA balance, beginning of year	5,957	14,271	8,662	273	4,599	33,762	2,701
Movement in risk levels	(1,658)	(3,375)	2,598	(217)	922	(1,729)	(138)
Market data changes and recalibrations	81	0	0	0	581	661	53
Model updates/changes	0	0	(1,390)	0	(38)	(1,428)	(114)
Methodology and policy	0	0	0	0	0	0	0
Acquisitions and disposals	0	0	0	0	0	0	0
Foreign exchange movements	0	0	0	0	(301)	(301)	(24)
Other	0	0	0	0	0	0	0
Market risk RWA balance, end of year	4,380	10,896	9,871	56	5,763	30,966	2,477

The analysis for market risk covers movements in our internal models for value-at-risk (VaR), stressed value-at-risk (SvaR), incremental risk charge (IRC) and comprehensive risk measure (CRM) as well as results from the market risk standardized approach, which are captured in the table under the category "Other". The market risk standardized approach covers trading securitizations and nth-to-default derivatives, longevity exposures, relevant Collective Investment Undertakings and market risk RWA from Postbank.

The market risk RWA movements due to changes in market data levels, volatilities, correlations, liquidity and ratings are included under the “Market data changes and recalibrations” category. Changes to our market risk RWA internal models, such as methodology enhancements or risk scope extensions, are included in the category of “Model updates”. In the “Methodology and policy” category we reflect regulatory driven changes to our market risk RWA models and calculations. Significant new businesses and disposals would be assigned to the line item “Acquisition and disposals”. The impacts of “Foreign exchange movements” are only calculated for the CRM and Standardized approach methods.

As of December 31, 2018 the RWA for market risk was € 37.5 billion which has increased by € 6.6 billion (21 %) since December 31, 2017. The increase was primarily driven by stressed value-at-risk coming from the "Movement in risk levels" category from a reduction in diversification benefit due to changes in the composition of interest rate and equity related exposures.

Development of risk-weighted assets for operational risk

	Dec 31, 2018		Dec 31, 2017	
in € m.	Operational risk RWA	Capital requirements	Operational risk RWA	Capital requirements
Operational risk RWA balance, beginning of year	91,610	7,329	92,675	7,414
Loss profile changes (internal and external)	(2,847)	(228)	(2,815)	(225)
Expected loss development	5,407	433	1,104	88
Forward looking risk component	484	39	(3,265)	(261)
Model updates	(2,666)	(213)	3,912	313
Methodology and policy	0	0	0	0
Acquisitions and disposals	0	0	0	0
Operational risk RWA balance, end of year	91,989	7,359	91,610	7,329

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Changes of internal and external loss events are reflected in the category “Loss profile changes”. The category “Expected loss development” is based on divisional business plans as well as historical losses and is deducted from the AMA capital figure within certain constraints. The category “Forward looking risk component” reflects qualitative adjustments and as such the effectiveness and performance of the day-to-day operational risk management activities via NFR appetite metrics and RCA scores, focusing on the business environment and internal control factors. The category “Model updates” covers model refinements such as the implementation of model changes. The category “Methodology and policy” represents externally driven changes such as regulatory add-ons. The category “Acquisition and disposals” represents significant exposure movements which can be clearly assigned to new or disposed businesses.

The overall RWA increase of € 0.4 billion was driven by several, largely offsetting effects. A reduced litigation intensity throughout the industry as well as decreasing provision and legal forecast levels for Deutsche Bank led to a lighter loss profile feeding into our capital model. These loss profile changes (internal and external) reduced our RWA for Operational Risk by € 2.8 billion. Moreover, a number of model updates resulted in an overall RWA decrease of € 2.7 billion. These improvements mostly related to the alignment of weights for internal and external loss data, but also to the implementation of our enhanced RCA process. The resulting decrease has been partly compensated by changes

in the forward looking risk component, where weaker risk appetite metrics and RCA results led to an RWA increase of € 0.5 billion. The most prominent impact, however, originated from the development of our expected loss deductible. We derive our capital requirements as the difference between the total losses simulated in our AMA model and an expected loss deductible. The deductible is given by the minimum of the average total loss projected by the model and our operational risk loss forecasts. In 2018, the expected loss deductible was dominated by the latter, which declined strongly due to our positive outlook on the development of our operational risk profile. Our simulated total loss estimate, which predominantly relies on historical information, was less reactive to this trend, so that the difference between the two quantities caused an RWA increase of € 5.4 billion.

Economic Capital

Internal Capital Adequacy

Our internal capital adequacy assessment process (ICAAP) is aimed at maintaining the viability of Deutsche Bank on an ongoing basis. We assess our internal capital adequacy from an economic perspective as the ratio of our internal capital supply divided by our internal economic capital demand as shown in the table below.

Total capital supply and demand

in € m. (unless stated otherwise)	Dec 31, 2018	Dec 31, 2017
Capital supply		
Shareholders' equity	62,495	63,174
Noncontrolling interests[1]	900	0
AT1 coupons accruals	(218)	(213)
Gain on sale of securitizations, cash flow hedges	(26)	(29)
Fair value gains on own debt and debt valuation adjustments, subject to own credit risk	(304)	(73)
Additional valuation adjustments	(1,504)	(1,204)
Intangible assets	(9,141)	(8,839)
IFRS deferred tax assets excl. temporary differences	(3,090)	(3,341)
Expected loss shortfall	(367)	(502)
Defined benefit pension fund assets2	(1,111)	(1,125)
Holdings of own common equity tier 1 capital instruments	(11)	(131)
Home loans and savings protection ("Fonds zur bauspartechnischen Absicherung")	0	(19)
Other adjustments3	(1,122)	(322)
Additional tier 1 equity instruments	4,675	4,675
Capital supply	51,176	52,051
Total economic capital requirement		
Credit risk	10,610	10,769
Market risk	10,341	10,428
Operational risk	7,359	7,329
Business risk	4,758	5,677
Diversification benefit	(6,960)	(7,074)
Capital demand	26,108	27,129

Internal capital adequacy ratio	196 %	192 %

1Includes noncontrolling interest up to the economic capital requirement for each subsidiary.

2Reported as net assets (assets minus liabilities) of a defined pension fund, i.e. applicable for overfunded pension plans.

3Includes € 0.6 billion capital deduction of irrevocable payment commitments related to the Single Resolution Fund and Deposit Guarantee Scheme, since January 1, 2018.

A ratio of more than 100 % signifies that the total capital supply is sufficient to cover the capital demand determined by the risk positions. This ratio was 196 % as of December 31, 2018, compared with 192 % as of December 31, 2017. The change of the ratio was mainly due to a decrease in capital demand partially offset by decrease in capital supply. The capital supply decreased by € 0.9 billion mainly driven by negative effects from deduction of irrevocable payment commitments to the Single Resolution Fund and the Deposit Guarantee Schemes of € 0.6 billion, IFRS 9 adoption of € 0.4 billion, unrealized losses of € 0.3 billion from interest rate changes, additional value adjustment deduction of € 0.3 billion and payment of common share dividend of € 0.2 billion. These negative effects were partially reduced by a positive contribution of € 1.0 billion from our initial public offering (IPO) of DWS Group GmbH & Co. KGaA (“DWS”). The decrease in capital demand was driven by lower economic capital usage as explained in the section “Risk Profile”.

The above capital adequacy measures apply to the consolidated Deutsche Bank Group as a whole and form an integral part of our risk and capital management framework.

Leverage Ratio

We manage our balance sheet on a Group level and, where applicable, locally in each region. In the allocation of financial resources we favor business portfolios with the highest positive impact on our profitability and shareholder value. We monitor and analyze balance sheet developments and track certain market-observed balance sheet ratios. Based on this we trigger discussion and management action by the Group Risk Committee (GRC). Following the publication of the CRR/CRD 4 framework, we established a leverage ratio calculation according to that framework.

Leverage Ratio according to revised CRR/CRD 4 framework

The CRR/CRD 4 framework introduced a non-risk based leverage ratio that is intended to act as a supplementary measure to the risk based capital requirements. Its objectives are to constrain the build-up of leverage in the banking sector, helping avoid destabilizing deleveraging processes which can damage the broader financial system and the economy, and to reinforce the risk based requirements with a simple, non-risk based “backstop” measure. While the CRR/CRD 4 framework currently does not provide for a mandatory minimum leverage ratio to be complied with, the legislative proposals as part of the European Trilogue include a 3 % minimum requirement but the proposed implementation dates are different. The final Basel rules that have been published in December 2017 also include an additional leverage ratio buffer requirement for banks identified as global systemically important institutions (“G-SII”) of 50 % of the G-SII buffer. Details of the implementation and the timing of the application of this additional leverage ratio buffer remain subject to finalization of the legislative process.

We calculate our leverage ratio exposure on a fully loaded basis in accordance with Article 429 of the CRR as per Delegated Regulation (EU) 2015/62 of October 10, 2014 published in the Official Journal of the European Union on January 17, 2015 amending Regulation (EU) No 575/2013. In addition, we provide the leverage ratio on a phase-in

basis as displayed below in the tables.

Our total leverage ratio exposure includes derivatives, securities financing transactions (SFTs), off-balance sheet exposure and other on-balance sheet exposure (excluding derivatives and SFTs).

The leverage exposure for derivatives is calculated by using the regulatory mark-to-market method for derivatives comprising the current replacement cost plus a regulatory defined add-on for the potential future exposure. Variation margin received in cash from counterparties is deducted from the current replacement cost portion of the leverage ratio exposure measure and variation margin paid to counterparties is deducted from the leverage ratio exposure measure related to receivables recognized as an asset on the balance sheet, provided certain conditions are met. Deductions of receivables for cash variation margin provided in derivatives transactions are shown under derivative exposure in the table “Leverage ratio common disclosure” below. The effective notional amount of written credit derivatives, i.e., the notional reduced by any negative fair value changes that have been incorporated in Tier 1 capital is included in the leverage ratio exposure measure; the resulting exposure measure is further reduced by the effective notional amount of purchased credit derivative protection on the same reference name provided certain conditions are met.

The securities financing transaction (SFT) component includes the gross receivables for SFTs, which are netted with SFT payables if specific conditions are met. In addition to the gross exposure a regulatory add-on for the counterparty credit risk is included.

The off-balance sheet exposure component follows the credit risk conversion factors (CCF) of the standardized approach for credit risk (0 %, 20 %, 50 %, or 100 %), which depend on the risk category subject to a floor of 10 %.

The other on-balance sheet exposure component (excluding derivatives and SFTs) reflects the accounting values of the assets (excluding derivatives and SFTs) as well as regulatory adjustments for asset amounts deducted in determining Tier 1 capital.

The following tables show the leverage ratio exposure and the leverage ratio, both on a fully loaded basis, in accordance with the disclosure tables of the implementing technical standards (ITS) which were adopted by the European Commission via Commission Implementing Regulation (EU) 2016/200 published in the Official Journal of the European Union on February 16, 2016. For additional information, they also contain the phase-in figures.

Summary reconciliation of accounting assets and leverage ratio exposures

in € bn.	Dec 31, 2018	Dec 31, 2017
Total assets as per published financial statements	1,348	1,475
Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	0	5
Adjustments for derivative financial instruments	(140)	(172)
Adjustment for securities financing transactions (SFTs)	14	41
Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	99	95
Other adjustments	(49)	(50)

Leverage ratio total exposure measure (fully loaded)	1,273	1,395
Leverage ratio total exposure measure (phase-in)	1,273	1,396

Leverage ratio common disclosure

in € bn. (unless stated otherwise)	Dec 31, 2018	Dec 31, 2017
Total derivative exposures	159	166
Total securities financing transaction exposures	103	158
Total off-balance sheet exposures	99	95
Other Assets	925	990
Asset amounts deducted in determining Tier 1 capital[1]	(13)	(14)
Tier 1 capital (fully loaded)	52.1	52.9
Leverage ratio total exposure measure (fully loaded)	1,273	1,395
Leverage ratio (fully loaded, in %)	4.1	3.8
Tier 1 capital (phase-in)	55.1	57.6
Leverage ratio total exposure measure (phase-in)	1,273	1,396
Leverage ratio (phase-in, in %)	4.3	4.1

1Using a fully loaded definition of Tier 1 capital. The amount using a transitional definition of Tier 1 capital is € (13) billion and € (13) billion as of December 31, 2018 and December 31, 2017, respectively.

Description of the factors that had an impact on the leverage ratio in 2018

As of December 31, 2018, our fully loaded CRR/CRD 4 leverage ratio was 4.1 % compared to 3.8 % as of December 31, 2017, taking into account as of December 31, 2018 a fully loaded Tier 1 capital of € 52.1 billion over an applicable exposure measure of € 1,273 billion (€ 52.9 billion and € 1,395 billion as of December 31, 2017, respectively).

Our CRR/CRD 4 leverage ratio according to transitional provisions was 4.3 % as of December 31, 2018 (4.1 % as of December 31, 2017), calculated as Tier 1 capital according to transitional rules of € 55.1 billion over an applicable exposure measure of € 1,273 billion (€ 57.6 billion and € 1,396 billion as of December 31, 2017, respectively). Starting with January 1, 2018, the exposure measure under transitional rules is equal to the fully loaded exposure measure while it was € 1 billion higher as of December 31, 2017 as the asset amounts deducted in determining Tier 1 capital were lower under transitional rules.

Over the year 2018, our leverage ratio exposure decreased by € 122 billion to € 1,273 billion. This is primarily driven by the reduction of € 55 billion in SFT exposures reflecting a decrease on the balance sheet in the SFT related items (securities purchased under resale agreements, securities borrowed and receivables from prime brokerage) and lower add-ons for counterparty credit risk due to extended collateral recognition. The € 65 billion reduction in Other Assets reflects the development on our balance sheet, in particular for cash and central bank / interbank balances which decreased by € 37 billion and non-derivative trading assets which decreased by € 33 billion. Derivatives decreased by € 7 billion from lower add-ons for the potential future exposure. Off-balance sheet exposures slightly increased by € 4 billion corresponding to higher notional amounts for irrevocable lending commitments.

The decrease of the leverage ratio exposure in 2018 includes a positive foreign exchange impact of € 26 billion mainly due to the depreciation of the Euro against the U.S. dollar.

Our leverage ratio calculated as the ratio of total assets under IFRS to total equity under IFRS was 20 as of December 31, 2018 compared to 22 as of December 31, 2017.

For main drivers of the Tier 1 capital development please refer to section “Regulatory Capital” in this report.

Minimum Requirement of Own Funds and Eligible Liabilities (“MREL”)

MREL Requirements

The minimum requirement for own funds and eligible liabilities (“MREL”) requirement was introduced by the European Union’s regulation establishing uniform rules and a uniform procedure for the resolution of credit institutions (Single Resolution Mechanism Regulation or “SRM Regulation”) and the European Union’s Directive establishing a framework for the recovery and resolution of credit institutions (Bank Recovery and Resolution Directive or “BRRD”) as implemented into German law by the German Recovery and Resolution Act.

The currently required level of MREL is determined by the competent resolution authorities for each supervised bank individually on a case-by-case basis, depending on the respective preferred resolution strategy. In the case of Deutsche Bank AG, MREL is determined by the Single Resolution Board (“SRB”). While there is no statutory minimum level of MREL, the BRRD and a delegated regulation set out criteria which the resolution authority must consider when determining the relevant required level of MREL. Guidance is provided through a policy published annually by the SRB.

In the second quarter of 2018, the SRB has set a binding MREL ratio for Deutsche Bank which was communicated via the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, “BaFin”). The MREL ratio on a consolidated basis has been set at 9.14 % of Total Liabilities and Own Funds (“TLOF”) and applied immediately. TLOF principally consists of IFRS total liabilities, reflecting the regulatory scope of consolidation, after consideration of derivatives netting and of own funds, i.e. regulatory capital. MREL will be reviewed annually by the SRB.

Deutsche Bank AG, as a global systemically important bank, will also become subject to global minimum standards for its Total Loss-Absorbing Capacity (“TLAC”). The TLAC requirement will be implemented by the November 2016 banking reform package, on which the European Parliament and the Council of the European Union reached a provisional political agreement in December 2018. We expect that the TLAC requirements will be effective immediately when the provisions of the banking reform package enter into force, which is currently expected to occur in the first half of 2019.

The banking reform package implements TLAC by introducing a new “Pillar 1” MREL requirement for global systemically important institutions, such as Deutsche Bank. This new requirement is based on both risk-based and non-risk-based denominators and is expected to be set at the higher of 18 % of total risk exposure and 6.75 % of the leverage ratio exposure measure following a transition period. In addition, the competent authorities will have the ability to impose an MREL add-on requirement on global systemically important institutions. TLAC and MREL requirements are specifically designed to require banks to maintain a sufficient amount of instruments which are eligible to absorb losses in resolution with the aim of ensuring that failing banks can be resolved without recourse to taxpayers’ money.

MREL ratio development

As of December 31, 2018 TLOF were € 1,058 billion and available MREL were € 118 billion, corresponding to a ratio of 11.14 %. This means that Deutsche Bank has a comfortable buffer of own funds and eligible liabilities which is € 21 billion above our MREL of € 97 billion (i.e. 9.14 % of TLOF).

MREL disclosure

in € m. (unless stated otherwise)	Dec 31, 2018
Regulatory capital elements of MREL	
Common Equity Tier 1 capital (CET 1)	47,486
Additional Tier 1 (AT1) capital instruments eligible under MREL	7,604
Tier 2 (T2) capital instruments eligible under MREL	
Tier 2 (T2) capital instruments before MREL adjustments	6,202
Tier 2 (T2) capital instruments adjustments for MREL	745
Tier 2 (T2) capital instruments eligible under MREL	6,947
Total regulatory capital elements of MREL	62,037
Other elements of MREL	
Senior non-preferred plain vanilla	54,852
Senior preferred plain vanilla	1,020
Total other elements of MREL	55,872
Total liabilities and own funds after prudential netting (TLOF)	1,058,484
MREL ratio	
MREL ratio (as percentage of TLOF)	11.14%

Own Funds and Eligible Liabilities

In order to meet the MREL requirement, Deutsche Bank needs to ensure that a sufficient amount of eligible instruments is maintained. Instruments eligible for MREL are regulatory capital instruments (“own funds”) and liabilities that meet certain criteria, which are referred to as eligible liabilities.

Own funds used for MREL excludes Tier 2 capital instruments with a remaining maturity of less than 1 year and includes the full amount of T2 capital instruments with a remaining maturity of greater than 1 year and less than 5 years which are excluded from regulatory capital

Eligible liabilities are liabilities that meet eligibility criteria which are supposed to ensure that they are structurally suited as loss-absorbing capital. As a result, eligible liabilities exclude deposits which are covered by an insurance deposit protection scheme or which are preferred under German insolvency law (e.g., deposits from private clients as well as small and medium-size enterprises). Among other things, secured liabilities, derivatives liabilities and structured notes are generally excluded as well. In addition, eligible liabilities must have a remaining time to maturity of at least one year and must either be issued under the law of a Member State of the European Union or must include a bail-in clause in their contractual terms to make write-down or conversion effective.

The banking reform package will introduce additional eligibility criteria that global systemically important institutions will have to meet with respect to TLAC and any MREL-add on requirement, most notably a subordination requirement. Effective January 1, 2017, the German Banking Act provided for a new class of statutorily subordinated debt securities that rank as “senior non-preferred” below the bank’s other senior liabilities (but in priority to the bank’s contractually subordinated liabilities, such as those qualifying as Tier 2 instruments). Following a harmonization effort by the European Union implemented in Germany effective July 21, 2018, banks are permitted to decide if a specific issuance of eligible senior debt will be in the non-preferred or in the preferred category. Any such “senior non-preferred” debt instruments issued by Deutsche Bank AG under such new rules rank on parity with its then outstanding debt instruments that were classified as “senior non-preferred” under the prior rules. Deutsche Bank predominantly relies on Deutsche Bank AG’s “senior non-preferred” debt instruments as eligible liabilities for MREL.

Credit Risk Exposure

For 2018, we provide information following the IFRS 9 accounting standard, while 2017 numbers are based on the IAS 39 accounting rules and are presented in the old format. Since the accounting requirements have changed significantly, numbers are not comparable. For further information please refer to chapter “IFRS 9 Transition Impact Analysis” in Note 2 “Recently Adopted and New Accounting Pronouncements” to the consolidated financial statement.

Counterparty credit exposure arises from our traditional non-trading lending activities which include elements such as loans and contingent liabilities, as well as from our direct trading activity with clients in certain instruments including OTC derivatives like foreign exchange forwards and Forward Rate Agreements. Default risk also arises from our positions in equity products and traded credit products such as bonds.

We define our credit exposure by taking into account all transactions where losses might occur due to the fact that counterparties may not fulfill their contractual payment obligations.

Maximum Exposure to Credit Risk

The maximum exposure to credit risk table shows the direct exposure before consideration of associated collateral held and other credit enhancements (netting and hedges) that do not qualify for offset in our financial statements for the periods specified. The table also presents exposures which are subject to impairment in accordance with IFRS 9. The netting credit enhancement component includes the effects of legally enforceable netting agreements as well as the offset of negative mark-to-markets from derivatives against pledged cash collateral. The collateral credit enhancement component mainly includes real estate, collateral in the form of cash as well as securities-related collateral. In relation to collateral we apply internally determined haircuts and additionally cap all collateral values at the level of the respective collateralized exposure.

Maximum Exposure to Credit Risk

	Dec 31, 2018					
			Credit Enhancements			
in € m.	Maximum exposure to	Subject to impairment	Netting	Collateral	Guarantees and Credit	Total credit enhancements

	credit risk1				derivatives2	
Financial assets at amortized cost3						
Cash and central bank balances	188,736	188,736	–	0	–	0
Interbank balances (w/o central banks)	8,885	8,885	–	4	0	4
Central bank funds sold and securities purchased under resale agreements	8,222	8,222	–	7,734	–	7,734
Securities borrowed	3,396	3,396	–	0	–	0
Loans	404,537	404,537	–	224,353	16,582	240,934
Other assets subject to credit risk4,5	71,899	65,010	29,073	3,199	79	32,352
Securities held to maturity	N/M	N/M	N/M	N/M	N/M	N/M
Total financial assets at amortized cost3	685,676	678,787	29,073	235,290	16,661	281,024
Financial assets at fair value through profit or loss6						
Trading assets	96,966	–	–	677	155	831
Positive market values from derivative financial instruments	320,058	–	250,231	48,548	82	298,861
Non-trading financial assets mandatory at fair value through profit or loss	97,771	–	245	67,385	0	67,630
Of which:						
Securities purchased under resale agreement	44,543	–	245	43,258	0	43,503
Securities borrowed	24,210	–	–	24,003	0	24,003
Loans	12,741	–	–	125	0	125
Financial assets designated at fair value through profit or loss	104	–	–	0	0	0
Financial assets available for sale	N/M	N/M	N/M	N/M	N/M	N/M
Total financial assets at fair value through profit or loss	514,899	–	250,476	116,610	237	367,323
Financial assets at fair value through OCI	51,182	51,182	0	1,488	520	2,008
Of which:						

Securities purchased under resale agreement	1,097	1,097	–	621	0	621
Securities borrowed	0	0	–	0	0	0
Loans	5,092	5,092	–	450	104	554
Total financial assets at fair value through OCI	51,182	51,182	–	1,488	520	2,008
Financial guarantees and other credit related contingent liabilities7	51,605	51,605	–	3,375	5,291	8,666
Revocable and irrevocable lending commitments and other credit related commitments7	212,049	211,055	–	16,418	4,734	21,152
Total off-balance sheet	263,654	262,659	–	19,793	10,025	29,818
Maximum exposure to credit risk	1,515,410	992,628	279,550	373,181	27,443	680,173

[1] Does not include credit derivative notional sold (€ 415,967 million) and credit derivative notional bought protection.

2Bought Credit protection is reflected with the notional of the underlying.

3All amounts at gross value before deductions of allowance for credit losses.

4All amounts at amortized cost (gross) except for qualifying hedge derivatives, which are reflected at Fair value through P&L.

5Includes Asset Held for Sale regardless of accounting classification.

6Excludes equities, other equity interests and commodities.

7Figures are reflected at notional amounts.

	Dec 31, 2017				
		Credit Enhancements			
in € m.[1]	Maximum exposure to credit risk2	Netting	Collateral	Guarantees and Credit derivatives3	Total credit enhancements
Cash and central bank balances	225,655	–	0	–	0
Interbank balances (w/o central banks)	9,265	–	0	7	7
Central bank funds sold and securities purchased under resale agreements	9,971	–	9,914	–	9,914
Securities borrowed	16,732	–	15,755	–	15,755
Financial assets at fair value through profit or loss4	550,313	286,149	136,650	265	423,065

Trading assets	98,730	–	2,635	146	2,781
Positive market values from derivative financial instruments	361,032	285,421	52,797	119	338,338
Financial assets designated at fair value through profit or loss	90,551	728	81,218	0	81,946
Of which:					
Securities purchased under resale agreement	57,843	728	56,566	0	57,294
Securities borrowed	20,254	–	20,034	0	20,034
Financial assets available for sale4	47,766	–	559	0	559
Loans5	405,621	–	211,578	20,063	231,641
Securities held to maturity	3,170	–	–	–	–
Other assets subject to credit risk	66,900	29,854	1,514	56	31,424
Financial guarantees and other credit related contingent liabilities6	48,212	–	4,024	6,579	10,604
Irrevocable lending commitments and other credit related commitments6	158,253	–	7,544	1,759	9,303
Maximum exposure to credit risk	1,541,858	316,003	387,538	28,730	732,271

1 All amounts at carrying value unless otherwise indicated.

2Does not include credit derivative notional sold (€ 828,804 million) and credit derivative notional bought protection.

3Bought credit protection is reflected with the notional of the underlying.

4Excludes equities, other equity interests and commodities.

5Gross loans less deferred expense/unearned income before deductions of allowance for loan losses.

6Figures are reflected at notional amounts. Revocable commitments not included in the year were € 45.1 billion.

The overall decrease in maximum exposure to credit risk for December 31, 2018 is € 26.4 billion, mainly driven by a € 41.0 billion decrease in positive market values from derivative financial instruments and Cash and central bank balances decreased by € 36.9 billion, offset by an increase due to first time inclusion of revocable lending commitments of € 44.3 billion.

Included in the category of trading assets as of December 31, 2018, were traded bonds of € 85.2 billion (€ 87.3 billion as of December 31, 2017) of which over 79 % were investment-grade (over 82 % as of December 31, 2017).

Credit Enhancements are split into three categories: netting, collateral and guarantees / credit derivatives. Haircuts, parameter setting for regular margin calls as well as expert judgments for collateral valuation are employed to prevent market developments from leading to a build-up of uncollateralized exposures. All categories are monitored and reviewed regularly. Overall credit enhancements received are diversified and of adequate quality being largely cash, highly rated government bonds and third-party guarantees mostly from well rated banks and insurance companies. These financial institutions are domiciled mainly in European countries and the United States. Furthermore we have

collateral pools of highly liquid assets and mortgages (principally consisting of residential properties mainly in Germany) for the homogeneous retail portfolio.

Main Credit Exposure Categories

The tables in this section show details about several of our main credit exposure categories, namely loans, revocable and irrevocable lending commitments, contingent liabilities over-the-counter ("OTC") derivatives, debt securities and repo and repo-style transactions:

- "Loans" are gross loans as reported on our balance sheet at amortized cost and loans at fair value through other comprehensive income before deduction of allowance for credit losses, it also includes loans at fair value through profit and loss. This includes "Traded loans" that are bought and held for the purpose of selling them in the near term, or the material risks of which have all been hedged or sold. From a regulatory perspective the latter category principally covers trading book positions.
- "Revocable and irrevocable lending commitments" consist of the undrawn portion of revocable and irrevocable lending-related commitments.
- "Contingent liabilities" consist of financial and performance guarantees, standby letters of credit and other similar arrangements (mainly indemnity agreements).
- "OTC derivatives" are our credit exposures from over-the-counter derivative transactions that we have entered into, after netting and cash collateral received. On our balance sheet, these are included in financial assets at fair value through profit or loss or, for derivatives qualifying for hedge accounting, in other assets, in either case, before netting and cash collateral received.

- "Debt securities" include debentures, bonds, deposits, notes or commercial paper, which are issued for a fixed term and redeemable by the issuer, as reported on our balance sheet within accounting categories at amortized cost and at fair value through other comprehensive income before deduction of allowance for credit losses, it also includes category at fair value through profit and loss. This includes "Traded bonds", which are bonds, deposits, notes or commercial paper that are bought and held for the purpose of selling them in the near term. From a regulatory perspective the latter category principally covers trading book positions.
- "Repo and repo-style transactions" consist of reverse repurchase transactions, as well as securities or commodities borrowing transactions before application of netting and collateral received.

Although considered in the monitoring of maximum credit exposures, the following are not included in the details of our main credit exposure: brokerage and securities related receivables, cash and central bank balances, interbank balances (without central banks), assets held for sale, accrued interest receivables, traditional securitization positions.

Main Credit Exposure Categories by Business Divisions

	Dec 31, 2018						
	Loans				Off-balance sheet		OTC derivatives
in € m.	at amortized cost1	trading - at fair value through P&L	Designated / mandatory at fair value through P&L	at fair value through OCI2	Revocable and irrevocable lending commitments3	Contingent liabilities	at fair value through P&L4
Corporate & Investment Bank	135,078	11,462	12,532	5,092	168,332	48,871	27,028

Private & Commercial Bank	269,175	0	209	0	43,331	2,638	353
Asset Management	68	0	0	0	117	14	0
Corporate & Other	216	0	0	0	269	81	37
Total	404,537	11,462	12,741	5,092	212,049	51,605	27,417

	Dec 31, 2018						
	Debt Securities			Repo and repo-style transactions7			Total
in € m.	at amortized cost5	at fair value through P&L	at fair value through OCI6	at amortized cost8	at fair value through P&L	at fair value through OCI9	
Corporate & Investment Bank	579	88,451	1,032	11,348	64,684	0	574,488
Private & Commercial Bank	4,569	19	7,799	260	0	0	328,353
Asset Management	0	419	0	0	0	0	618
Corporate & Other	51	3,776	36,162	11	4,068	1,097	45,768
Total	5,199	92,664	44,993	11,618	68,752	1,097	949,227

1 Includes stage 3 and stage 3 POCI loans at amortized cost amounting to € 9.1 billion as of December 31, 2018.

2Includes stage 3 and stage 3 POCI loans at fair value through OCI amounting to € 1 million as of December 31, 2018

3 Includes stage 3 and stage 3 POCI off-balance sheet exposure amounting to € 599 million as of December 31, 2018.

4Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.

5 Includes stage 3 and stage 3 POCI debt securities at amortized cost amounting to € 73 million as of December 31, 2018.

6Includes stage 3 and stage 3 POCI debt securities at fair value through OCI amounting to € 2 million as of December 31, 2018.

7Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

8Includes stage 3 and stage 3 POCI repo and repo-style transactions at amortized cost amounting to € 0 as of December 31, 2018.

9Includes stage 3 and stage 3 POCI repo and repo-style transactions at fair value through OCI amounting to € 0 as of December 31, 2018.

Dec 31, 2017

	Loans		Off-balance sheet		OTC derivatives[3]	Debt securities		Repo and repo-style transactions	Total
in € m.	Loans[1]	Traded Loans	Irrevocable lending commit-ments[2]	Contingent liabilities	OTC derivatives[3]	Debt securities	Traded Bonds	Repo and repo-style transactions	Total
Corporate & Investment Bank	137,954	10,875	141,892	45,342	30,993	2,667	83,067	99,335	552,125
Private & Commercial Bank	267,554	1	16,201	2,802	422	14,421	0	835	302,235
Asset Management	87	0	53	16	0	39	67	0	262
Corporate & Other	26	0	107	52	15	31,124	4,130	4,630	40,084
Total	405,621	10,876	158,253	48,212	31,430	48,251	87,264	104,800	894,707

1Includes impaired loans amounting to € 6.2 billion as of December 31, 2017.

2Includes irrevocable lending commitments related to consumer credit exposure of € 10.1 billion as of December 31, 2017.

3Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.

4 I ncludes debt securities on financial assets available for sale and securities held to maturity.

5 Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

For 2018, we provide information following the IFRS 9 accounting standard, while 2017 numbers are based on the IAS 39 accounting rules and are presented in the old format. Since the accounting requirements have changed significantly, numbers are not comparable. For further information please refer to chapter “IFRS 9 Transition Impact Analysis” in Note 2 “Recently Adopted and New Accounting Pronouncements” to the consolidated financial statement.

Our main credit exposure increased by € 54.5 billion.

- From a divisional perspective, increases in exposure are observed across all divisions. Details in respect of Corporate & Investment Bank and Private & Commercial Bank credit exposures are provided in subsequent sections. Corporate & Other primarily comprises of Treasury exposures.
- From a product perspective, significant increases in exposure have been observed on account of first time inclusion of Revocable commitments and inclusion of all Loan categories both part of the IFRS 9 introduction. This Increase has been partially offset by decrease on repos due to managed reduction.

Main Credit Exposure Categories by Industry Sectors

	Dec 31, 2018						
	Loans				Off-balance sheet		OTC derivatives
in € m.	at amortized cost1	trading - at fair value through P&L	Designated / mandatory at fair value through P&L	at fair value through OCI2	Revocable and irrevocable lending commitments3	Contingent liabilities	at fair value through P&L4
Agriculture, forestry and fishing	640	15	0	0	541	40	5
Mining and quarrying	2,995	563	0	141	6,094	1,505	210
Manufacturing	28,342	786	7	1,831	45,296	11,985	1,378
Electricity, gas, steam and air conditioning supply	3,210	284	57	3	4,908	1,563	452
Water supply, sewerage, waste management and remediation activities	867	28	0	0	399	155	181
Construction	3,902	495	0	25	3,638	2,089	338
Wholesale and retail trade, repair of motor vehicles and motorcycles	20,293	488	215	875	14,380	5,058	317
Transport and storage	5,774	647	48	79	5,059	920	1,017
Accommodation and food service activities	2,026	40	0	28	1,761	195	158
Information and communication	4,372	505	29	374	17,277	2,061	793
Financial and insurance activities	77,628	3,530	11,845	882	62,739	22,191	17,415
Real estate activities	33,432	1,538	88	95	5,375	221	1,084
Professional, scientific and technical activities	6,590	239	0	190	4,172	1,708	47
Administrative and support service activities	7,381	338	169	34	4,835	451	628
Public administration and defense, compulsory social security	8,917	1,160	203	472	978	48	2,088
Education	698	1	0	0	76	18	362
Human health services and social work activities	3,483	104	0	31	1,862	124	239
	859	71	0	21	873	38	13

Arts, entertainment and recreation							
Other service activities	4,720	520	77	10	2,406	708	157
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	188,407	85	2	0	29,372	522	347
Activities of extraterritorial organizations and bodies	1	25	0	0	7	6	188
Total	404,537	11,462	12,741	5,092	212,049	51,605	27,417

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	Dec 31, 2018						
	Debt Securities			Repo and repo-style transactions7			Total
in € m.	at amortized cost5	at fair value through P&L	at fair value through OCI6	at amortized cost8	at fair value through P&L	at fair value through OCI9	
Agriculture, forestry and fishing	0	9	0	0	0	0	1,251
Mining and quarrying	119	481	5	0	0	0	12,113
Manufacturing	472	1,245	47	0	0	0	91,389
Electricity, gas, steam and air conditioning supply	374	631	45	0	0	0	11,527
Water supply, sewerage, waste management and remediation activities	5	36	0	0	0	0	1,670
Construction	35	585	59	0	0	0	11,165
Wholesale and retail trade, repair of motor vehicles and motorcycles	87	224	1	0	0	0	41,938
Transport and storage	100	608	55	0	0	0	14,308
Accommodation and food service activities	21	25	0	0	0	0	4,254
Information and communication	168	724	505	0	0	0	26,810
Financial and insurance activities	2,771	18,102	16,219	10,668	66,949	1,097	312,035
Real estate activities	84	1,928	23	6	28	0	43,903
	23	306	0	0	0	0	13,275

Professional, scientific and technical activities							
Administrative and support service activities	38	160	0	434	131	0	14,599
Public administration and defense, compulsory social security	797	63,468	27,892	510	1,631	0	108,165
Education	0	121	0	0	0	0	1,275
Human health services and social work activities	0	474	63	0	0	0	6,381
Arts, entertainment and recreation	0	398	0	0	0	0	2,273
Other service activities	43	2,691	26	0	13	0	11,371
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	0	0	0	0	0	0	218,735
Activities of extraterritorial organizations and bodies	62	448	54	0	0	0	790
Total	5,199	92,664	44,993	11,618	68,752	1,097	949,227

[1] Includes stage 3 and stage 3 POCI loans at amortized cost amounting to € 9.1 billion as of December 31, 2018.

2Includes stage 3 and stage 3 POCI loans at fair value through OCI amounting to € 1 million as of December 31, 2018

[3] Includes stage 3 and stage 3 POCI off-balance sheet exposure amounting to € 599 million as of December 31, 2018.

4Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.

[5] Includes stage 3 and stage 3 POCI debt securities at amortized cost amounting to € 73 million as of December 31, 2018.

6Includes stage 3 and stage 3 POCI debt securities at fair value through OCI amounting to € 2 million as of December 31, 2018.

7Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

8Includes stage 3 and stage 3 POCI repo and repo-style transactions at amortized cost amounting to € 0 as of December 31, 2018.

9Includes stage 3 and stage 3 POCI repo and repo-style transactions at fair value through OCI amounting to € 0 as of December 31, 2018.

Dec 31, 2017			
Loans	Off-balance sheet	Debt securities	Total

					OTC derivatives[3]			Repo and repo-style transactions	
in € m.	Loans[1]	Traded Loans	Irrevocable lending commit-ments[2]	Contingent liabilities	OTC derivatives[3]	Debt securities4	Traded Bonds	Repo and repo-style transactions5	Total
Financial intermediation	52,087	1,635	31,839	9,407	17,991	15,590	16,982	100,006	245,536
Fund management activities	18,668	306	6,213	173	1,232	53	737	44	27,426
Manufacturing	27,569	628	38,450	14,893	1,347	294	1,991	0	85,172
Wholesale and retail trade	19,246	388	10,684	5,623	413	50	501	0	36,905
Households	186,687	74	9,975	671	398	0	0	0	197,805
Commercial real estate activities	29,180	2,080	4,343	508	1,185	1	1,468	41	38,806
Public sector	13,510	611	844	138	3,510	30,301	54,989	4,694	108,597
Other6	58,674	5,154	55,904	16,799	5,353	1,963	10,596	16	154,459
Total	405,621	10,876	158,253	48,212	31,430	48,251	87,264	104,800	894,707

1Includes impaired loans amounting to € 6.2 billion as of December 31, 2017.

2Includes irrevocable lending commitments related to consumer credit exposure of € 10.1 billion as of December 31, 2017.

3Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.

4Includes debt securities on financial assets available for sale and securities held to maturity.

5Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

6Major industries within Other were: Real estate other than commercial (€ 63.4 billion), Transport; storage and communication (€ 28.2 billion), Other community and personal social services (€ 14.1 billion), Electricity; gas and water supply (€ 12.8 billion), Construction (€ 11.7 billion) and Mining and quarrying (€ 10.0 billion).

The above tables give an overview of our credit exposure by industry, allocated based on the NACE code of the counterparty. NACE (Nomenclature des Activités Économiques dans la Communauté Européenne) is a standard European industry classification system. The 2018 table provides further breakdown on industry to increase the transparency.

The portfolio is subject to the same credit underwriting requirements stipulated in our “Principles for Managing Credit Risk”, including various controls according to single name, country, industry and product-specific concentration.

Material transactions, such as loans underwritten with the intention to syndicate, are subject to review by senior credit risk management professionals and (depending upon size) an underwriting credit committee and/or the Management

Board. High emphasis is placed on structuring such transactions so that de-risking is achieved in a timely and cost-effective manner. Exposures within these categories are mostly to good quality borrowers and also subject to further risk mitigation as outlined in the description of our Credit Portfolio Strategies Group's activities.

Our household loans exposure is principally associated with our Private & Commercial Bank portfolios.

Our commercial real estate loans, primarily in the U.S. and Europe, are generally secured by first mortgages on the underlying real estate property. Credit underwriting policy guidelines provide that LTV ratios of generally less than 75 % are maintained. Additionally, given the significance of the underlying collateral independent external appraisals are commissioned for all secured loans by a valuation team (part of the independent Credit Risk Management function) which is also responsible for reviewing and challenging the reported real estate values regularly.

The Commercial Real Estate Group only in exceptional cases retains mezzanine or other junior tranches of debt (although we do underwrite mezzanine loans). Loans originated for distribution are carefully monitored under a pipeline limit. Securitized loan positions are entirely sold (except where regulation requires retention of economic risk), while we frequently retain a portion of syndicated bank loans. This hold portfolio is also subject to the aforementioned principles and policy guidelines. We also participate in conservatively underwritten unsecured lines of credit to well-capitalized real estate investment trusts and other public companies, which are generally investment-grade. We provide both fixed rate (generally securitized product) and floating rate loans, with interest rate exposure subject to hedging arrangements. In addition, sub-performing and non-performing loans and pools of loans are acquired from other financial institutions at generally substantial discounts to both the notional amounts and current collateral values. The underwriting process for these is stringent and the exposure is managed under separate portfolio limits. Commercial real estate property valuations and rental incomes can be significantly impacted by macro-economic conditions and underlying properties to idiosyncratic events. Accordingly, the portfolio is categorized as higher risk and hence subject to the aforementioned tight restrictions on concentration.

Our credit exposure to our ten largest counterparties accounted for 8 % of our aggregated total credit exposure in these categories as of December 31, 2018 compared with 8 % as of December 31, 2017. Our top ten counterparty exposures were with well-rated counterparties or otherwise related to structured trades which show high levels of risk mitigation.

Overall credit exposure to the industry sector Financial and Insurance Activities comprise predominantly investment-grade exposures.

Total Loans across all applicable measurement categories amounting to € 93.9 billion, Total Repo and Repo Style transaction across all applicable measurement categories amounting to €78.7 billion and Commitment activities amounting to € 62.7 billion as of December 31, 2018 within Financial and Insurance activities is principally associated with Corporate & Investment Bank Portfolios and are majorly held in North America and Europe region.

The statement on focus industries below follows the Credit Risk Management view on industries, which can differ from the allocation on the basis of NACE codes.

As of December 31, 2018 our loan and contingent liabilities exposure to the focus industry "Shipping & other maritime" has been significantly reduced from € 4.8 billion to € 3.3 billion. Besides the classic ship lending this includes € 0.6 billion for port facilities and yards, € 0.2 billion for traded loan positions and € 0.3 billion for shipping securitizations, an area which was expanded over the year and which accounts for € 0.7 billion of the additional € 1 billion irrevocable undrawn lending commitments. In line with our strategy, the long-term classic ship lending exposure has been significantly de-risked by circa € 1.5 billion to € 2.2 billion as a result of various single ship or loan sales and a portfolio

loan sale transaction involving € 0.8 billion of underlying loans. Even though the transaction was successfully executed and settled in July 2018, we expect to realize € 0.3 billion loan of reductions from this transaction only in 2019 due to a delayed loan transfer process. The remaining ship lending portfolio shows improved credit metrics resulting in a reduction of risk weighted assets by circa € 1 billion, and continues to benefit from a satisfactory diversification across sectors and client groups. Driven by improving bulker and container markets as well as favorable sales prices, there were overall credit loss provision releases in 2018 and the portfolio will no longer be reported as a focus portfolio.

Main credit exposure categories by geographical region

	Dec 31, 2018						
	Loans				Off-balance sheet		OTC derivatives
in € m.	at amortized cost1	trading - at fair value through P&L	Designated / mandatory at fair value through P&L	at fair value through OCI2	Revocable and irrevo- cable lending commitments3	Contingent liabilities	at fair value through P&L4
Europe	293,979	3,829	9,905	1,785	111,675	31,174	16,390
Of which:							
Germany	207,429	497	304	390	61,587	12,193	1,403
United Kingdom	5,553	671	1,331	278	7,304	3,127	5,766
France	2,415	123	212	81	5,025	2,460	826
Luxembourg	7,543	533	6,920	41	6,682	875	933
Italy	21,363	373	99	0	3,417	3,416	1,174
Netherlands	7,968	125	41	384	9,384	1,470	1,984
Spain	16,729	320	57	67	2,507	3,167	931
Ireland	5,792	230	324	166	3,430	153	772
Switzerland	5,960	31	127	208	3,996	2,419	251
Poland	3,135	0	5	0	301	132	53
Belgium	988	2	53	84	1,986	395	264
Other Europe	9,104	924	431	85	6,057	1,366	2,033
North America	65,716	4,383	2,365	2,311	91,672	9,274	8,011
Of which:							
U.S.	53,195	4,036	2,358	2,209	85,445	8,797	6,196
Cayman Islands	2,562	55	7	0	2,151	17	756
Canada	2,181	48	0	102	2,649	76	828
Other North America	7,778	244	0	0	1,427	384	232
Asia/Pacific	38,176	1,794	471	863	7,052	9,591	2,391
Of which:							
Japan	1,682	37	0	123	334	236	362
Australia	1,224	177	417	11	2,016	135	358

India	7,355	188	18	3	782	2,061	115
China	4,530	60	0	18	346	1,101	399
Singapore	6,136	238	0	109	1,063	992	192
Hong Kong	4,026	203	0	17	1,023	586	138
Other Asia/Pacific	13,223	893	37	582	1,489	4,480	827
Other geographical areas	6,667	1,456	0	132	1,651	1,566	625
Total	404,537	11,462	12,741	5,092	212,049	51,605	27,417

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	Dec 31, 2018						
	Debt Securities			Repo and repo-style transactions7			Total
in € m.	at amortized cost5	at fair value through P&L	at fair value through OCI6	at amortized cost8	at fair value through P&L	at fair value through OCI9	
Europe	4,467	36,459	24,922	4,394	14,342	316	553,638
Of which:							
Germany	1,443	6,685	9,597	925	899	2	303,352
United Kingdom	182	14,552	2,499	966	4,379	0	46,608
France	714	3,061	1,559	0	3,681	0	20,157
Luxembourg	167	1,332	3,474	89	1,206	0	29,796
Italy	249	2,707	1,146	578	1,040	0	35,563
Netherlands	592	1,785	1,219	0	179	0	25,130
Spain	168	2,146	504	379	529	0	27,504
Ireland	91	920	215	0	1,277	0	13,370
Switzerland	40	560	119	112	316	0	14,139
Poland	0	130	2,387	0	0	0	6,144
Belgium	139	542	481	0	0	0	4,935
Other Europe	682	2,038	1,724	1,344	836	315	26,938
North America	237	34,356	14,491	1,942	45,548	0	280,306
Of which:							
U.S.	220	33,112	13,915	1,275	30,428	0	241,186
Cayman Islands	0	631	9	655	14,094	0	20,937
Canada	0	419	556	0	847	0	7,707
Other North America	17	194	10	12	178	0	10,476
Asia/Pacific	495	19,343	5,037	4,567	8,625	226	98,632
Of which:							
Japan	63	3,142	8	2,752	5,808	0	14,545
Australia	0	3,977	510	19	523	0	9,366

India	267	2,172	1,849	0	79	61	14,948
China	0	2,124	0	0	614	0	9,192
Singapore	114	1,403	671	0	325	0	11,242
Hong Kong	0	520	222	0	11	0	6,746
Other Asia/Pacific	51	6,006	1,777	1,797	1,266	165	32,594
Other geographical areas	0	2,506	543	714	237	555	16,651
Total	5,199	92,664	44,993	11,618	68,752	1,097	949,227

1Includes stage 3 and stage 3 POCI loans at amortized cost amounting to € 9.1 billion as of December 31, 2018.

2Includes stage 3 and stage 3 POCI loans at fair value through OCI amounting to € 1 million as of December 31, 2018.

3Includes stage 3 and stage 3 POCI off-balance sheet exposure amounting to € 599 million as of December 31, 2018.

4Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.

5Includes stage 3 and stage 3 POCI debt securities at amortized cost amounting to € 73 million as of December 31, 2018.

6Includes stage 3 and stage 3 POCI debt securities at fair value through OCI amounting to € 2 million as of December 31, 2018.

7Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

8Includes stage 3 and stage 3 POCI repo and repo-style transactions at amortized cost amounting to € 0 as of December 31, 2018.

9Includes stage 3 and stage 3 POCI repo and repo-style transactions at fair value through OCI amounting to € 0 as of December 31, 2018.

	Dec 31, 2017								
	Loans		Off-balance sheet		OTC derivatives3	Debt securities		Repo and repo-style transactions5	Total
in € m.	Loans1	Traded Loans	Irrevocable lending commit-ments2	Contingent liabilities	OTC derivatives3	Debt securities4	Traded Bonds	Repo and repo-style transactions5	Total
Europe	299,937	3,149	65,739	27,574	18,353	35,304	33,120	26,648	509,825
Of which:									
Germany	199,867	146	27,483	10,739	1,661	12,414	4,912	3,421	260,644
	6,895	190	5,748	1,514	5,849	864	9,668	10,123	40,851

United Kingdom									
France	2,651	242	8,265	1,266	1,231	3,597	3,096	3,442	23,788
Luxembourg	15,983	247	2,858	484	1,102	6,142	1,017	711	28,544
Italy	21,836	497	1,642	3,657	1,750	642	4,167	820	35,012
Netherlands	8,304	493	6,498	1,627	2,292	2,793	2,022	82	24,112
Spain	13,250	227	1,866	3,046	704	946	2,188	987	23,213
Ireland	4,415	272	1,843	481	972	655	1,022	2,673	12,333
Switzerland	6,922	65	2,324	2,488	313	163	644	416	13,336
Poland	7,871	36	807	234	26	1,820	296	0	11,089
Belgium	1,177	12	1,280	405	352	1,574	601	0	5,401
Other Europe	10,765	723	5,124	1,633	2,099	3,696	3,486	3,975	31,500
North America	64,086	5,129	85,358	10,031	10,015	10,986	31,636	56,776	274,017
Of which:									
U.S.	53,795	4,750	80,776	9,489	8,036	10,623	29,972	44,659	242,101
Cayman Islands	2,312	103	1,951	52	700	17	1,041	9,162	15,336
Canada	838	87	1,564	110	1,092	346	272	1,688	5,996
Other North America	7,141	190	1,068	380	187	0	351	1,267	10,584
Asia/Pacific	34,469	1,735	4,447	8,967	2,254	1,025	20,319	19,909	93,126
Of which:									
Japan	1,093	66	276	349	366	15	4,760	10,354	17,278
Australia	1,477	310	1,076	128	277	588	3,716	1,453	9,026
India	7,034	86	717	1,645	219	0	3,973	1,517	15,191
China	4,393	2	378	1,195	263	0	836	3,130	10,198
Singapore	4,946	75	419	794	177	0	927	220	7,559
Hong Kong	4,224	551	385	598	144	2	399	45	6,348
Other Asia/Pacific	11,300	644	1,197	4,259	808	419	5,707	3,190	27,526
Other geographical areas	7,130	862	2,708	1,639	808	936	2,190	1,466	17,739
Total	405,621	10,876	158,253	48,212	31,430	48,251	87,264	104,800	894,707

1Includes impaired loans amounting to € 6.2 billion as of December 31, 2017.

2Includes irrevocable lending commitments related to consumer credit exposure of € 10.1 billion as of December 31, 2017.

3Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.

4Includes debt securities on financial assets available for sale and securities held to maturity.

5Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

The above tables give an overview of our credit exposure by geographical region, allocated based on the counterparty's country of domicile, see also section "Credit Exposure to Certain Eurozone Countries" of this report for a detailed discussion of the "country of domicile view".

Our largest concentration of credit risk within loans from a regional perspective is in our home market Germany, with a significant share in households, which includes the majority of our mortgage lending business.

Within OTC derivatives, tradable assets as well as repo and repo-style transactions, our largest concentrations from a regional perspective were in Europe and North America.

Credit Exposure to Certain Eurozone Countries

Certain Eurozone countries are presented within the table below due to concerns relating to sovereign risk.

In our "country of domicile view" we aggregate credit risk exposures to counterparties by allocating them to the domicile of the primary counterparty, irrespective of any link to other counterparties, or in relation to credit default swaps underlying reference assets from, these Eurozone countries. Hence we also include counterparties whose group parent is located outside of these countries and exposures to special purpose entities whose underlying assets are from entities domiciled in other countries.

The following table, which is based on the country of domicile view, presents our gross position, the included amount thereof of undrawn / contingent exposure and our net exposure to these Eurozone countries. The gross exposure reflects our net credit risk exposure grossed up for net credit derivative protection purchased with underlying reference assets domiciled in one of these countries, guarantees received and collateral. Such collateral is particularly held with respect to the retail portfolio, but also for financial institutions predominantly based on derivative margining arrangements, as well as for corporates. In addition, the amounts also reflect the allowance for credit losses. In some cases, our counterparties' ability to draw on undrawn commitments is limited by terms included in the specific contractual documentation. Net credit exposures are presented after effects of collateral held, guarantees received and further risk mitigation, including net notional amounts of credit derivatives for protection sold/bought. The provided gross and net exposures to certain European countries do not include credit derivative tranches and credit derivatives in relation to our correlation business which, by design, is structured to be credit risk neutral. Additionally, the tranche and correlated nature of these positions does not allow a meaningful disaggregated notional presentation by country, e.g., as identical notional exposures represent different levels of risk for different tranche levels.

Gross position, included undrawn exposure and net exposure to certain Eurozone countries – Country of Domicile View

	Sovereign		Financial Institutions		Corporates		Individuals		Other		Total	
in € m.	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018[1]	Dec 31, 2017
Greece												

Gross	53	55	821	734	406	526	5	5	1	0	1,286	1,320
Undrawn / contingent	0	0	35	30	4	5	1	0	0	0	41	36
Net	35	38	277	270	(5)	8	2	1	1	0	311	317
Ireland												
Gross	418	865	662	927	9,016	7,556	26	31	3,8752	2,2752	13,998	11,654
Undrawn / contingent	0	0	23	4	3,279	2,005	1	0	8022	3162	4,105	2,326
Net	339	717	198	477	6,186	4,420	6	6	3,7772	2,2752	10,506	7,895
Italy												
Gross	3,628	2,875	3,188	3,338	11,893	12,050	18,449	16,489	264	147	37,422	34,898
Undrawn / contingent	1	13	34	28	5,211	5,162	1,790	96	0	0	7,035	5,300
Net	2,538	1,015	634	672	7,864	8,202	9,997	7,633	264	146	21,296	17,669
Portugal												
Gross	(204)	(227)	64	185	888	1,329	14	1,757	27	80	789	3,123
Undrawn / contingent	0	0	32	75	382	374	5	24	0	0	419	474
Net	(122)	(223)	61	115	832	893	7	134	27	80	805	998
Spain												
Gross	1,779	1,672	1,575	1,301	12,597	9,106	9,990	9,570	167	128	26,108	21,777
Undrawn / contingent	0	0	184	225	4,890	4,583	533	259	18	0	5,625	5,068
Net	1,766	1,554	910	552	10,257	7,113	2,668	2,117	256	128	15,857	11,464
Total gross	5,674	5,240	6,310	6,485	34,800	30,566	28,484	27,851	4,335	2,629	79,603	72,771
Total Undrawn / contingent	1	14	307	364	13,767	12,130	2,331	380	819	316	17,225	13,203
Total net[3]	4,555	3,102	2,080	2,086	25,134	20,637	12,680	9,891	4,325	2,629	48,775	38,344

1Approximately 75 % of the overall exposure as per December 31, 2018 will mature within the next 5 years.

2Other exposures to Ireland include exposures to counterparties where the domicile of the group parent is located outside of Ireland as well as exposures to special purpose entities whose underlying assets are from entities domiciled in other countries.

3Total net exposure excludes credit valuation reserves for derivatives amounting to € 86.3 million as of December 31, 2018 and € 64.6 million as of December 31, 2017.

4 Revocable commitments not included in the year were € 2.5 billion.

Net exposure to the above selected Eurozone countries increased by € 10.4 billion in 2018 driven by increased exposure in Spain, Italy and Ireland. Further, movement of € 2.5 billion in net exposure is due to first time inclusion of revocable loan commitments as part of the IFRS 9 introduction.

Sovereign Credit Risk Exposure to Certain Eurozone Countries

The amounts below reflect a net “country of domicile view” of our sovereign exposure.

Sovereign credit risk exposure to certain Eurozone countries

	Dec 31, 2018				Dec 31, 2017			
in € m.	Direct Sovereign exposure[1]	Net Notional of CDS referencing sovereign debt	Net sovereign exposure	Memo Item: Net fair value of CDS referencing sovereign debt[2]	Direct Sovereign exposure[1]	Net Notional of CDS referencing sovereign debt	Net sovereign exposure	Memo Item: Net fair value of CDS referencing sovereign debt[2]
Greece	53	(18)	35	0	55	(17)	38	0
Ireland	334	5	339	(0)	709	9	717	0
Italy	3,627	(1,089)	2,538	58	2,834	(1,818)	1,016	49
Portugal	(204)	82	(122)	5	(227)	3	(223)	0
Spain	1,773	(8)	1,766	27	1,669	(115)	1,554	35
Total	5,583	(1,028)	4,555	90	5,040	(1,938)	3,102	84

1Includes sovereign debt classified as financial assets/liabilities at fair value through profit or loss, available for sale (December 2017) and loans carried at amortized cost. Direct Sovereign exposure is net of guarantees received and collateral.

2The amounts reflect the net fair value in relation to credit default swaps referencing sovereign debt of the respective country representing the counterparty credit risk.

The increase of € 1.5 billion in net sovereign exposure compared with year-end 2017 mainly reflects increases in debt securities in Italy.

Credit Exposure Classification

We also classify our credit exposure along our business divisions, which is in line with the Business Aligned Risk Management split within the Risk function: Corporate & Investment Bank (CIB) credit exposure and Private & Commercial Bank (PCB) credit exposure.

- Our CIB credit exposure consists of all credit exposure arising from loan, off-balance sheet, derivatives, debt securities or repo transactions in our Corporate & Investment Bank division.
- Our PCB credit exposure consists of all credit exposure in our Private & Commercial Bank division, predominantly from loans and off-balance sheet exposures.

For 2018, we provide updated information following the split along business divisions, while numbers for 2017 are based on the historically applied split of the portfolio into Consumer credit exposure (consisting of smaller-balance standardized homogeneous loans) and Corporate credit exposure (all remaining exposures). Furthermore, we have enhanced our reporting by now including all exposures in our Main Credit Exposure Categories in this section. Numbers are therefore not comparable.

CIB Credit Exposure

The tables below show our CIB Credit Exposure by product types and internal rating bands. Please refer to section "Measuring Credit Risk" for more details about our internal ratings.

Main CIB credit exposure categories according to our internal creditworthiness categories of our counterparties – gross

in € m. (unless stated otherwise)		Dec 31, 2018						
		Loans				Off-balance sheet		OTC derivatives
Ratingband	Probability of default in %1	at amortized cost	trading - at fair value through P&L	Designated / mandatory at fair value through P&L	at fair value through OCI	Revocable and irrevo- cable lending commitments	Contingent liabilities	at fair value through P&L2
iAAA–iAA	> 0.00 ≤ 0.04	12,632	25	7,879	164	20,043	4,398	9,926
iA	> 0.04 ≤ 0.11	29,455	266	518	775	44,927	10,104	7,113
iBBB	> 0.11 ≤ 0.5	29,761	1,061	519	2,734	54,477	23,743	5,789
iBB	> 0.5 ≤ 2.27	31,393	5,384	1,587	1,333	27,754	5,888	3,006
iB	> 2.27 ≤ 10.22	19,828	3,522	1,665	84	16,263	3,504	996
iCCC and below	> 10.22 ≤ 100	12,009	1,204	364	1	4,868	1,234	197
Total		135,078	11,462	12,532	5,092	168,332	48,871	27,028

in € m. (unless stated otherwise)		Dec 31, 2018						
		Debt Securities			Repo and repo-style transactions			
Ratingband	Probability of default in %1	at amortized cost	at fair value through P&L	at fair value through OCI	at amortized cost	at fair value through P&L	at fair value through OCI	Total
iAAA–iAA	> 0.00 ≤ 0.04	87	54,365	8	2,929	33,339	0	145,795
iA	> 0.04 ≤ 0.11	38	6,885	122	1,279	9,967	0	111,448
iBBB	> 0.11 ≤ 0.5	112	8,686	114	275	6,190	0	133,459
iBB	> 0.5 ≤ 2.27	189	16,657	639	3,775	14,236	0	111,841
iB	> 2.27 ≤ 10.22	105	1,365	149	2,704	891	0	51,078
iCCC and below	> 10.22 ≤ 100	49	492	0	387	61	0	20,867
Total		579	88,451	1,032	11,348	64,684	0	574,488

1Reflects the probability of default for a one year time horizon.

2Includes the effect of netting agreements and cash collateral received where applicable.

Main CIB credit exposure categories according to our internal creditworthiness categories of our counterparties – net

in € m. (unless stated otherwise)		Dec 31, 2018[1] Loans				Off-balance sheet		OTC derivatives
Ratingband	Probability of default in %2	at amortized cost	trading - at fair value through P&L	Designated / mandatory at fair value through P&L	at fair value through OCI	Revocable and irrevo- cable lending commitments	Contingent liabilities	at fair value through P&L
iAAA–iAA	> 0.00 ≤ 0.04	10,064	25	7,755	164	18,804	3,872	3,890
iA	> 0.04 ≤ 0.11	25,535	266	518	775	43,491	8,444	3,292
iBBB	> 0.11 ≤ 0.5	22,151	729	518	2,641	52,159	21,321	3,637
iBB	> 0.5 ≤ 2.27	18,076	4,066	1,018	1,302	26,568	4,630	2,351
iB	> 2.27 ≤ 10.22	6,434	2,880	655	9	15,083	2,262	776
iCCC and below	> 10.22 ≤ 100	3,571	1,049	364	1	4,172	701	69
Total		85,831	9,014	10,828	4,892	160,277	41,229	14,015

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in € m. (unless stated otherwise)		Dec 31, 2018[1] Debt Securities			Repo and repo-style transactions			
Ratingband	Probability of default in %2	at amortized cost	at fair value through P&L	at fair value through OCI	at amortized cost	at fair value through P&L	at fair value through OCI	Total
iAAA–iAA	> 0.00 ≤ 0.04	87	54,365	8	1,863	359	0	101,256
iA	> 0.04 ≤ 0.11	38	6,885	122	51	269	0	89,686
iBBB	> 0.11 ≤ 0.5	112	8,686	114	115	112	0	112,294
iBB	> 0.5 ≤ 2.27	132	16,519	640	1,331	602	0	77,236
iB	> 2.27 ≤ 10.22	105	1,365	150	0	25	0	29,742
iCCC and below	> 10.22 ≤ 100	49	492	0	367	0	0	10,837
Total		523	88,313	1,033	3,728	1,367	0	421,050

1Net of eligible collateral, guarantees and hedges based on IFRS requirements.

2Reflects the probability of default for a one year time horizon.

Corporate Credit Exposure

The tables below show our Corporate Credit Exposure for 2017 by product types and internal rating bands.

Main corporate credit exposure categories according to our internal creditworthiness categories of our counterparties – gross

in € m. (unless stated otherwise)	Dec 31, 2017						
Ratingband	Probability of default in %[1]	Loans	Irrevocable lending commitments[2]	Contingent liabilities	OTC derivatives[3]	Debt securities4	Total
iAAA–iAA	> 0.00 ≤ 0.04	38,743	18,643	5,108	13,025	39,405	114,924
iA	> 0.04 ≤ 0.11	39,428	44,388	13,899	8,416	6,277	112,407
iBBB	> 0.11 ≤ 0.5	56,245	51,021	16,165	5,204	2,174	130,809
iBB	> 0.5 ≤ 2.27	41,888	25,652	7,882	3,390	371	79,183
iB	> 2.27 ≤ 10.22	23,556	15,286	3,434	1,174	5	43,456
iCCC and below	> 10.22 ≤ 100	13,688	3,264	1,723	220	19	18,913
Total		213,547	158,253	48,212	31,430	48,251	499,693

1Reflects the probability of default for a one year time horizon.

2Includes irrevocable lending commitments related to consumer credit exposure of € 10.1 billion as of December 31, 2017.

3Includes the effect of netting agreements and cash collateral received where applicable.

4Includes debt securities on financial assets available for sale and securities held to maturity.

Main corporate credit exposure categories according to our internal creditworthiness categories of our counterparties – net

in € m. (unless stated otherwise)	Dec 31, 2017[1]						
Rating band	Probability of default in %[2]	Loans	Irrevocable lending commitments	Contingent liabilities	OTC derivatives	Debt securities	Total
iAAA–iAA	> 0.00 ≤ 0.04	27,580	18,281	4,272	7,370	39,405	96,907
iA	> 0.04 ≤ 0.11	25,355	42,104	11,882	6,528	6,277	92,146
iBBB	> 0.11 ≤ 0.5	32,131	49,095	13,461	4,490	2,174	101,351
iBB	> 0.5 ≤ 2.27	18,845	24,056	5,267	2,506	371	51,046
iB	> 2.27 ≤ 10.22	8,306	14,130	2,097	1,106	5	25,645

iCCC and below	> 10.22 ≤ 100	4,157	2,540	629	216	15	7,557
Total		116,374	150,206	37,608	22,216	48,247	374,652

1Net of eligible collateral, guarantees and hedges based on IFRS requirements.

2Reflects the probability of default for a one year time horizon.

CPSG Risk Mitigation for the CIB Credit Exposure

Our Credit Portfolio Strategies Group ("CPSG") helps mitigate the risk of our corporate credit exposures. The notional amount of CPSG's risk reduction activities decreased from € 32.7 billion as of December 31, 2017, to € 31.1 billion as of December 31, 2018.

As of year-end 2018, CPSG mitigated the credit risk of € 30.9 billion of loans and lending-related commitments, through synthetic collateralized loan obligations supported predominantly by financial guarantees. This position totaled € 32 billion as of December 31, 2017.

CPSG also held credit derivatives with an underlying notional amount of € 0.2 billion as of December 31, 2018. The position totaled € 0.7 billion as of December 31, 2017. The credit derivatives used for our portfolio management activities are accounted for at fair value.

PCB credit exposure

PCB credit exposure, credit exposure stage 3 and net credit costs

	Total exposure in € m.	of which loan book in € m.	Credit exposure stage 3 in € m.	Net credit costs as a % of total exposure1
	Dec 31, 2018	Dec 31, 2018	Dec 31, 2018	Dec 31, 2018
PCB Germany (excl. WM)	242,277	195,435	2,737	0.09%
Consumer Finance	33,392	16,029	905	0.66%
Mortgage	153,040	143,985	1,397	(0.01%)
Business Finance	28,039	20,582	357	0.14%
Commercial Mortgage	10,102	9,660	67	(0.09%)
Financial Markets	17,099	4,574	10	(0.01%)
Other	605	605	0	0%
PCC International	38,598	34,119	1,825	0.44%
Consumer Finance	11,056	8,342	381	0.86%
Mortgage	17,419	17,333	835	0%
Business Finance	9,119	8,400	608	0.82%
Other	1,005	44	2	0%

Wealth Management	47,479	39,830	853	0.02%
Total PCB credit exposure	328,353	269,384	5,415	0.12%

[1] Net credit costs for the twelve months period ended at the respective balance sheet date divided by the total exposure at that balance sheet date.

The tables below presents our Consumer Credit Exposure for 2017.

Consumer credit exposure, consumer loan delinquencies and net credit costs

	Total exposure in € m.[1]	90 days or more past due as a % of total exposure[1]	Net credit costs as a % of total exposure[2]
	Dec 31, 2017[3]	Dec 31, 2017[3]	Dec 31, 2017[3]
Consumer credit exposure Germany:	153,728	0.73	0.12
Consumer and small business financing	21,224	2.96	1.07
Mortgage lending	132,505	0.37	(0.03)
Consumer credit exposure outside Germany	38,345	3.77	0.39
Consumer and small business financing	15,298	6.54	0.78
Mortgage lending	23,047	1.93	0.12
Total consumer credit exposure	192,074	1.34	0.17

[1] Includes impaired loans amounting to € 2.8 billion as of December 31, 2017

[2] Net credit costs for the twelve months period ended at the respective balance sheet date divided by the exposure at that balance sheet date.

[3] Total Exposure above represents Loans at amortized cost basis IAS 39 accounting rules applicable on December 31, 2017.

Consumer finance is divided into personal instalment loans, credit lines and credit cards. Consumer finance business is uncollateralized, loan risk depends on client quality. Various lending requirements are stipulated, including (but not limited to) client rating, maximum loan amounts and maximum tenors, and are adapted to regional conditions and/or circumstances of the borrower (i.e., for consumer loans a maximum loan amount taking into account customer net income). Given the largely homogeneous nature of this portfolio, counterparty credit-worthiness and ratings are predominately derived by utilizing an automated decision engine.

Mortgage business is principally the financing of owner-occupied residential properties (minor focus on buy-to-let and commercial properties) sold by various business channels in Europe, primarily in Germany but also in Spain and Italy. The level of credit risk of the mortgage loan portfolio is determined by assessing the quality of the client and the underlying collateral. The loan amounts are generally larger than consumer finance loans and they are extended for

longer time horizons. Based on our underwriting criteria and processes and the diversified portfolio (customers/properties) with low loan-to-value (LTV) ratios, the mortgage portfolio is categorized as lower risk, while consumer finance is categorized as medium risk.

Business finance represents credit products for small businesses, SME up to large corporates. Products range from current accounts and credit lines to investment loans or revolving facilities, factoring and leasing. Smaller clients below a turnover of € 2.5 million are limited to current accounts and loans. Clients are located primarily in Germany, but credit can also be extended to subsidiaries abroad, mostly in Europe. The debtors of factoring clients may be located worldwide. The respective credit exposure is usually insured through Hermes guarantees or trade insurance.

Commercial mortgage business is the financing of commercial properties, mostly office, retail, hotels and residential properties. Financing is made via SPV, through investment funds or directly. Focus locations are prime real estate locations primarily in Western Europe with Germany as the most important market.

Financial Market represents treasury investments in corporates, banks and financial institutions as well as sovereigns. Products are mostly covered and uncovered bonds, in loan exposure the majority represents Bundesbank exposure as well as loans to German sub-sovereigns and public institutions.

The Wealth Management Business Unit offers customized wealth management solutions and private banking services including discretionary portfolio management and traditional and alternative investment solutions, complemented by structured risk management, wealth planning, lending and family office services for wealth, high-net-worth (HNW) and ultra-high-net-worth (UHNW) individuals and family offices. Wealth Management's total exposure is divided into Lombard Lending (against readily marketable liquid collateral / securities) and Structured Lending (against less liquid collateral). While the level of credit risk for the Lombard portfolio is determined by assessing the quality of the underlying collateral, the level of credit risk for the Structured portfolio is determined by assessing both the quality of the client and the collateral. Products range from secured lombard and mortgage loans to current accounts (Europe only), credit lines and other loans; to a lesser extent derivatives and contingencies. Clients are located globally.

According to the new scope of this chapter, the loan to value for December 2018 is calculated for the PCB mortgage portfolio instead of the consumer mortgage portfolio.

PCB mortgage loan-to-value [1]

	Dec 31, 2018
≤ 50 %	67 %
> 50 ≤ 70 %	16 %
> 70 ≤ 90 %	9 %
> 90 ≤ 100 %	3 %
> 100 ≤ 110 %	2 %
> 110 ≤ 130 %	2 %
> 130 %	1 %

1 When assigning the exposure to the corresponding LTV buckets, the exposure amounts are distributed according to their relative share of the underlying assessed real estate value.

The table below shows the Consumer mortgage lending exposure grouped by loan-to-value buckets for 2017.

Consumer mortgage lending exposure grouped by loan-to-value buckets [1]

	Dec 31, 2017
≤ 50 %	68 %
> 50 ≤ 70 %	16 %
> 70 ≤ 90 %	9 %
> 90 ≤ 100 %	3 %
> 100 ≤ 110 %	2 %
> 110 ≤ 130 %	1 %
> 130 %	1 %

1 When assigning the exposure to the corresponding LTV buckets, the exposure amounts are distributed according to their relative share of the underlying assessed real estate value.

The LTV expresses the amount of exposure as a percentage of the underlying real estate value.

Our LTV ratios are calculated using the total exposure divided by the current determined value of the respective properties. These values are monitored and updated if necessary on a regular basis. The exposure of transactions that are additionally backed by liquid collateral is reduced by the respective collateral values, whereas any prior charges increase the corresponding total exposure. The LTV calculation includes exposure which is secured by real estate collateral. Any mortgage lending exposure that is collateralized exclusively by any other type of collateral is not included in the LTV calculation.

The creditor's creditworthiness, the LTV and the quality of collateral is an integral part of our risk management when originating loans and when monitoring and steering our credit risks. In general, we are willing to accept higher LTV's, the better the creditor's creditworthiness is. Nevertheless, restrictions of LTV apply e.g. for countries with negative economic outlook or expected declines of real estate values.

As of December 31, 2018, 67 % of our exposure related to the mortgage lending portfolio had a LTV ratio below or equal to 50 %, almost unchanged to 68% in the prior year.

Credit Exposure from Derivatives

All exchange traded derivatives are cleared through central counterparties ("CCPs"), the rules and regulations of which provide for daily margining of all current and future credit risk positions emerging out of such transactions. To the extent possible, we also use CCP services for OTC derivative transactions ("OTC clearing"); we thereby benefit from the credit risk mitigation achieved through the CCP's settlement system.

The Dodd-Frank Act provides for an extensive framework for the regulation of OTC derivatives, including mandatory clearing, exchange trading and transaction reporting of certain OTC derivatives, as well as rules regarding the registration of, and capital, margin and business conduct standards for, swap dealers, security-based swap dealers, major swap participants and major security-based swap participants. The Dodd-Frank Act and related CFTC rules introduced in 2013 mandatory OTC clearing in the United States for certain standardized OTC derivative transactions, including certain interest rate swaps and index credit default swaps. The European Regulation (EU) No 648/2012 on OTC Derivatives, Central Counterparties and Trade Repositories ("EMIR") introduced a number of risk mitigation techniques for non-centrally cleared OTC derivatives in 2013 and the reporting of OTC and exchange traded derivatives in 2014. Mandatory clearing for certain standardized OTC derivatives transactions in the EU began in June

2016, and margin requirements for uncleared OTC derivative transactions in the EU started in February 2017. Deutsche Bank implemented the exchange of both initial and variation margin in the EU from February 2017 for the first category of counterparties subject to the EMIR margin for uncleared derivatives requirements. All other in-scope entities followed the variation margin requirements from March 1, 2017. Deutsche Bank further implemented the exchange of initial margin with the second and third categories of counterparties beginning in September 2017 and September 2018, respectively. Initial margin requirements are subject to a phased implementation schedule which will be fully applied by September 2020.

The CFTC adopted final rules in 2016 that require additional interest rate swaps to be cleared, with a phased implementation schedule ending in October 2018. Deutsche Bank implemented the CFTC's expanded clearing requirements for the relevant interest rate swaps subject to the phased compliance, covering identified instruments denominated in AUD, CAD, CHF, HKD, MXN, NOK, PLN, SEK and SGD. In December 2016, also pursuant to the Dodd-Frank Act, the CFTC re-proposed regulations to impose position limits on certain commodities and economically equivalent swaps, futures and options. More recently, in November 2018, the CFTC proposed amendments to the rules that would significantly expand swap mandatory trading requirements. This proposal has not yet been finalized. The Securities and Exchange Commission ("SEC") has also finalized rules regarding registration, reporting, business conduct standards and trade acknowledgement and verification requirements for security-based swap dealers and major security-based swap participants, although these rules will not come into effect until the SEC completes further security-based swap rulemakings. Finally, U.S. prudential regulators (the Federal Reserve, the FDIC, the Office of the Comptroller of the Currency, the Farm Credit Administration and the Federal Housing Finance Agency) have adopted final rules establishing margin requirements for non-cleared swaps and security-based swaps, and the CFTC has adopted final rules establishing margin requirements for non-cleared swaps. The final margin rules follow a phased implementation schedule, with certain initial margin and variation margin requirements in effect as of September 2016 and additional variation margin requirements in effect as of March 1, 2017 for all covered counterparties. Deutsche Bank implemented the exchange of both initial and variation margin for uncleared derivatives in the U.S. from September 2016, for the first category of counterparties subject to the U.S. prudential regulators' margin requirements. Additional initial margin requirements for smaller counterparties are phased in on an annual basis from September 2017 through September 2020, with the relevant compliance dates depending in each case on the transactional volume of the parties and their affiliates. The SEC proposal to establish margin requirements for non-cleared security-based swaps has not yet been finalized.

The following table shows a breakdown of notional amounts and gross market value of derivative transactions along with a breakdown of notional amounts of OTC derivative assets and liabilities on the basis of clearing channel.

Notional amounts of derivatives on basis of clearing channel and type of derivative

	Dec 31, 2018						
	Notional amount maturity distribution						
in € m.	Within 1 year	> 1 and ≤ 5 years	After 5 years	Total	Positive market value	Negative market value	Net market value
Interest rate related:							
OTC	12,741,035	9,791,856	5,605,269	28,138,160	202,480	181,453	21,028
Bilateral (Amt)	2,511,405	2,706,991	1,871,607	7,090,004	176,248	156,339	19,909
CCP (Amt)	10,229,630	7,084,865	3,733,661	21,048,156	26,233	25,114	1,119

Exchange-traded	5,643,533	1,813,582	367	7,457,483	560	357	203
Total Interest rate related	18,384,569	11,605,439	5,605,636	35,595,643	203,040	181,809	21,231
Currency related:							
OTC	4,277,488	1,063,548	440,037	5,781,073	85,221	81,555	3,666
Bilateral (Amt)	4,217,941	1,063,386	440,037	5,721,364	84,592	80,765	3,827
CCP (Amt)	59,547	162	0	59,709	629	790	(161)
Exchange-traded	23,137	0	0	23,137	5	7	(2)
Total Currency related	4,300,625	1,063,548	440,037	5,804,211	85,226	81,562	3,664
Equity/index related:							
OTC	265,587	145,152	16,391	427,130	15,645	19,925	(4,280)
Bilateral (Amt)	265,587	145,152	16,391	427,130	15,645	19,925	(4,280)
CCP (Amt)	0	0	0	0	0	0	0
Exchange-traded	605,254	110,450	10,974	726,678	10,407	9,969	438
Total Equity/index related	870,841	255,602	27,365	1,153,808	26,052	29,894	(3,843)
Credit derivatives related							
OTC	115,256	615,668	123,651	854,575	8,197	8,382	(184)
Bilateral (Amt)	71,996	175,015	49,365	296,375	3,138	3,142	(3)
CCP (Amt)	43,260	440,653	74,287	558,200	5,059	5,240	(181)
Exchange-traded	0	0	0	0	0	0	0
Total Credit derivatives related	115,256	615,668	123,651	854,575	8,197	8,382	(184)
Commodity related:							
OTC	5,028	1,015	1,432	7,476	99	1,090	(991)
Bilateral (Amt)	5,028	1,015	1,432	7,476	99	1,090	(991)
CCP (Amt)	0	0	0	0	0	0	0
Exchange-traded	22,727	1,333	0	24,060	246	289	(43)
Total Commodity related	27,755	2,348	1,432	31,535	345	1,379	(1,034)
Other:							
OTC	11,854	2,555	86	14,494	213	337	(124)
Bilateral (Amt)	11,853	2,555	86	14,493	213	336	(124)
CCP (Amt)	1	0	0	1	0	0	0
Exchange-traded	5,244	3	0	5,247	13	46	(33)
Total Other	17,098	2,558	86	19,741	226	383	(157)
Total OTC business	17,416,248	11,619,795	6,186,866	35,222,909	311,855	292,741	19,115
Total bilateral business	7,083,810	4,094,114	2,378,919	13,556,843	279,935	261,597	18,338
Total CCP business	10,332,438	7,525,680	3,807,948	21,666,066	31,921	31,144	777
Total exchange-traded business	6,299,896	1,925,368	11,341	8,236,605	11,231	10,668	563
Total	23,716,144	13,545,163	6,198,208	43,459,514	323,086	303,409	19,678
Positive market values after netting and cash	0	0	0	0	29,393	0	0

collateral received

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	Dec 31, 2017						
	Notional amount maturity distribution						
in € m.	Within 1 year	> 1 and ≤ 5 years	After 5 years	Total	Positive market value	Negative market value	Net market value
Interest rate related:							
OTC	18,389,853	9,644,152	5,862,868	33,896,874	224,783	202,492	22,291
Bilateral (Amt)	2,231,176	2,624,101	1,989,543	6,844,820	200,520	177,989	22,532
CCP (Amt)	16,158,677	7,020,051	3,873,326	27,052,054	24,262	24,503	(241)
Exchange-traded	4,100,955	1,379,528	155	5,480,638	250	275	(25)
Total Interest rate related	22,490,809	11,023,680	5,863,023	39,377,512	225,033	202,767	22,266
Currency related:							
OTC	4,265,081	1,036,897	470,541	5,772,518	82,392	75,535	6,858
Bilateral (Amt)	4,209,509	1,036,536	470,541	5,716,586	81,597	74,823	6,774
CCP (Amt)	55,572	361	0	55,932	795	712	83
Exchange-traded	48,252	0	0	48,252	19	18	1
Total Currency related	4,313,333	1,036,897	470,541	5,820,771	82,411	75,553	6,859
Equity/index related:							
OTC	301,662	156,272	19,248	477,182	18,201	23,010	(4,810)
Bilateral (Amt)	301,662	156,272	19,248	477,182	18,201	23,010	(4,810)
CCP (Amt)	0	0	0	0	0	0	0
Exchange-traded	732,870	107,631	5,398	845,900	9,986	12,708	(2,722)
Total Equity/index related	1,034,533	263,903	24,647	1,323,082	28,187	35,718	(7,531)
Credit derivatives related							
OTC	209,376	1,321,066	153,867	1,684,309	28,317	27,888	429
Bilateral (Amt)	91,919	204,583	49,442	345,944	5,363	4,779	584
CCP (Amt)	117,457	1,116,482	104,426	1,338,365	22,954	23,108	(154)
Exchange-traded	0	0	0	0	0	0	0
Total Credit derivatives related	209,376	1,321,066	153,867	1,684,309	28,317	27,888	429
Commodity related:							
OTC	3,431	995	2,015	6,441	35	1,485	(1,449)
Bilateral (Amt)	3,431	995	2,015	6,441	35	1,485	(1,449)
CCP (Amt)	0	0	0	0	0	0	0
Exchange-traded	39,955	4,163	0	44,119	187	214	(27)
Total Commodity related	43,386	5,158	2,015	50,560	222	1,699	(1,476)
Other:							

OTC	3,744	765	0	4,509	9	371	(362)
Bilateral (Amt)	3,744	765	0	4,509	9	371	(362)
CCP (Amt)	0	0	0	0	0	0	0
Exchange-traded	5,196	1	0	5,197	5	26	(20)
Total Other	8,940	766	0	9,706	14	397	(382)
Total OTC business	23,173,146	12,160,146	6,508,540	41,841,833	353,737	330,780	22,957
Total bilateral business	6,841,441	4,023,253	2,530,789	13,395,482	305,726	282,457	23,269
Total CCP business	16,331,705	8,136,894	3,977,751	28,446,351	48,012	48,324	(312)
Total exchange-traded business	4,927,230	1,491,323	5,553	6,424,106	10,447	13,240	(2,793)
Total	28,100,376	13,651,470	6,514,093	48,265,939	364,185	344,020	20,164
Positive market values after netting and cash collateral received	0	0	0	0	32,083	0	0

Equity Exposure

The table below presents the carrying values of our equity investments according to IFRS definition split by trading and nontrading for the respective reporting dates. We manage our respective positions within our market risk and other appropriate risk frameworks.

Composition of our Equity Exposure

in € m.	Dec 31, 2018	Dec 31, 2017
Trading Equities	56,673	85,932
Nontrading Equities[1]	2,835	2,496
Total Equity Exposure	59,507	88,427

1Includes equity investment funds amounting to € 605 million as of December 31, 2018 and € 367 million as of December 31, 2017.

As of December 31, 2018, our Trading Equities exposure was mainly composed of € 54.3 billion from Corporate & Investment Bank activities and € 2.3 billion from Asset Management. Overall trading equities decreased by € 29.3 billion year on year driven mainly by decreased exposure in Corporate & Investment Bank activities.

Asset Quality

For 2018, we provide information following the IFRS 9 accounting standard, while 2017 numbers are based on the IAS 39 accounting rules. Since the accounting requirements have changed significantly, numbers are not comparable. Therefore 2017 figures are shown in a separate section subsequent to the disclosures under IFRS 9. The main reasons are the broader scope of assets subject to impairment, differences in asset classification as well as in impairment calculation and definition:

The Asset Quality section under IFRS 9 describes the quality of debt instruments subject to impairment, which under IFRS 9 consist of debt instruments measured at amortized cost, financial instruments at fair value through other

comprehensive income (FVOCI) as well as off-balance sheet lending commitments such as loan commitments and financial guarantees (hereafter collectively referred to as “Financial Assets”). Under IAS 39 the Asset Quality section mainly described the quality of the group Loans measured at amortized costs classified as Loans in our balance sheet.

The determination of impairment losses and allowance moves from an incurred credit loss model under IAS 39, whereby credit losses are recognized when a defined loss event occurs, to an expected credit loss model under IFRS 9, where allowances for loan losses are recorded upon initial recognition of the Financial Asset, based on expectations of potential credit losses at the time of initial recognition.

The Group has aligned its definition of “credit-impaired” under IFRS 9 to the default definition as per Art. 178 of the Capital Requirements Regulation (CRR) for regulatory purposes. As a consequence, Stage 3 financial assets consist of two types of defaulted financial assets: firstly financial assets, where the Group expects an impairment loss reflected in an allowance for credit losses, and secondly, financial assets, where the Group does not expect an impairment loss (e.g., due to high quality collateral or sufficient expected future cash flows following thorough due diligence). This is a major difference to our impairment definition under IAS 39, where financial assets were only considered to be impaired if the Group expected to suffer an impairment loss.

For further information please refer to chapter “IFRS 9 Transition Impact Analysis” in Note 2 “Recently Adopted and New Accounting Pronouncements” to the consolidated financial statements.

Overview of financial assets subject to impairment

The following tables provide an overview of the exposure amount and allowance for credit losses by financial asset class broken down into stages as per IFRS 9 requirements.

Overview of financial assets subject to impairment

	Dec 31, 2018									
	Gross Carrying Amount					Allowance for Credit Losses2				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Amortized Cost1	637,037	32,335	7,452	1,963	678,787	509	501	3,247	3	4,259

1 Financial Assets at Amortized Cost consist of: Loans at Amortized Cost, Cash and central bank balances, Interbank balances (w/o central banks), Central bank funds sold and securities purchased under resale agreements, Securities borrowed and certain subcategories of Other assets.

2 Allowance for credit losses do not include allowance for country risk amounting to € 6 million as of Dec 31, 2018.

	Dec 31, 2018									
	Fair Value					Allowance for Credit Losses				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Fair Value through OCI	50,932	247	2	1	51,182	11	1	0	(0)	13

	Dec 31, 2018	
	Notional Amount	Allowance for Credit Losses1

in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Off-balance sheet	252,039	10,021	599	0	262,659	132	73	84	0	289

1 Allowance for credit losses do not include allowance for country risk amounting to € 5 million as of Dec 31, 2018.

Financial assets at amortized cost

The following tables provide an overview of the gross carrying amount and credit loss allowance by financial asset class broken down into stages as per IFRS 9 requirements.

Development of exposures and allowance for credit losses in the reporting period

	Dec 31, 2018				
	Gross carrying amount				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Balance, beginning of year	663,707	30,305	7,726	2,019	703,756
Movements in financial assets including new business	29,175	5,743	1,058	(61)	35,914
Transfers due to changes in creditworthiness	1,240	(2,344)	1,104	N/M	0
Changes due to modifications that did not result in derecognition	(11)	(8)	(208)	0	(227)
Changes in models	N/M	N/M	N/M	N/M	N/M
Financial assets that have been derecognized during the period	(65,682)	(1,766)	(2,411)	(4)	(69,863)
Recovery of written off amounts	0	0	146	0	146
Foreign exchange and other changes	8,608	405	37	10	9,060
Balance, end of reporting period	637,037	32,335	7,452	1,963	678,787

Financial assets at amortized cost subject to impairment dropped by € 25 billion or 4 % in 2018 mainly driven by Stage 1:

Stage 1 exposures decreased by € 27 billion or 4 % driven by Cash and central bank balances due to reductions in deposits and short-term borrowings.

Stage 2 exposures increased by € 2 billion or 7 % driven by Loans at amortized cost in CIB.

Stage 3 exposures decreased by € 274 million or 4 % in 2018 driven by CIB, mainly reflecting de-risking activities in our shipping portfolio. This reduction was partly offset by an increase in PCB driven by the Postbank business, partly as a result of non-recurring effects.

	Dec 31, 2018
	Allowance for Credit Losses3

in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Balance, beginning of year	462	494	3,638	3	4,596
Movements in financial assets including new business	(132)	215	440	(17)	507
Transfers due to changes in creditworthiness	199	(137)	(62)	N/M	0
Changes due to modifications that did not result in derecognition	N/M	N/M	N/M	N/M	N/M
Changes in models	0	0	0	0	0
Financial assets that have been derecognized during the period[2]	(6)	(17)	(972)	0	(995)
Recovery of written off amounts	0	0	172	0	172
Foreign exchange and other changes	(14)	(54)	30	17	(21)
Balance, end of reporting period	509	501	3,247	3	4,259
Provision for Credit Losses excluding country risk1	66	78	379	(17)	507

1 Movements in financial assets including new business, transfers due to changes in creditworthiness and changes in models add up to Provision for Credit Losses excluding country risk.

2 This position includes charge offs of allowance for credit losses.

3 Allowance for credit losses does not include allowance for country risk amounting to € 6 million as of Dec. 31, 2018.

Allowance for credit losses against financial assets at amortized cost subject to impairment dropped by € 338 million or 7 % in 2018 mainly driven by Stage 3:

Stage 1 allowances increased by € 47 million or 10% driven by additional provisions in CIB to reflect for a weakening macro-economic outlook as well as a one-off adjustment to the calculation methodology on certain loans on which we hold insurance protection.

Stage 2 allowances remained almost stable.

Stage 3 allowances decreased by € 391 million or 11 % driven by CIB, where charge offs partly related to de-risking activities in our shipping portfolio overcompensated additional provisions.

Financial assets at amortized cost by business division

	Dec 31, 2018									
	Gross Carrying Amount					Allowance for Credit Losses				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Corporate & Investment Bank	327,094	14,241	2,403	1,692	345,429	184	99	896	3	1,183
Private & Commercial Bank	299,003	17,226	5,047	271	321,547	321	400	2,350	0	3,071
Asset Management	1,998	304	2	0	2,303	0	0	0	0	1
Corporate & Other	8,943	564	1	0	9,508	3	1	1	0	5

Total	637,037	32,335	7,452	1,963	678,787	509	501	3,247	3	4,259

Financial assets at amortized cost by industry sector

	Dec 31, 2018									
	Gross Carrying Amount					Allowance for Credit Losses				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Agriculture, forestry and fishing	533	38	60	0	631	1	2	21	0	24
Mining and quarrying	2,970	273	147	0	3,390	8	1	5	0	15
Manufacturing	26,695	1,291	783	66	28,836	25	24	449	1	498
Electricity, gas, steam and air conditioning supply	3,476	286	77	0	3,839	3	16	5	0	24
Water supply, sewerage, waste management and remediation activities	777	10	10	0	796	0	0	7	0	7
Construction	3,108	289	338	88	3,823	4	4	244	1	254
Wholesale and retail trade, repair of motor vehicles and motorcycles	19,119	859	593	0	20,572	19	18	403	(0)	440
Transport and storage	4,314	875	539	0	5,728	7	6	201	0	214
Accommodation and food service activities	1,692	166	35	121	2,014	3	2	17	0	23
Information and communication	4,443	286	46	0	4,774	8	13	27	0	48
Financial and insurance activities	318,867	10,526	373	633	330,400	81	33	153	7	274
Real estate activities	33,166	2,801	380	401	36,748	35	17	84	(9)	128
Professional, scientific and technical activities	8,169	498	151	190	9,008	7	8	83	0	98
Administrative and support service activities	7,091	189	62	32	7,374	8	3	19	(4)	25
Public administration and defense, compulsory social security	12,054	1,089	81	1	13,224	4	7	5	0	16
Education	612	19	8	0	638	1	0	7	0	9
Human health services and social work activities	3,246	209	12	2	3,468	7	5	5	0	18
Arts, entertainment and recreation	818	24	14	0	856	2	0	5	0	7
Other service activities	7,788	486	104	239	8,617	9	4	34	4	51
Activities of households as employers, undifferentiated	177,927	12,121	3,639	191	193,878	276	336	1,473	4	2,088

goods- and services-producing activities of households for own use										
Activities of extraterritorial organizations and bodies	173	0	1	0	173	0	0	0	0	0
Total	637,037	32,335	7,452	1,963	678,787	509	501	3,247	3	4,259

Financial assets at amortized cost by region

	Dec 31, 2018									
	Gross Carrying Amount					Allowance for Credit Losses				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Germany	291,850	12,247	3,088	303	307,488	247	275	1,303	0	1,825
Western Europe (excluding Germany)	119,622	7,499	3,072	1,543	131,736	122	175	1,604	5	1,907
Eastern Europe	6,309	401	88	0	6,798	5	4	38	0	47
North America	147,300	7,572	554	20	155,446	66	32	48	1	147
Central and South America	4,717	558	155	0	5,430	7	2	22	0	31
Asia/Pacific	55,490	3,353	374	98	59,315	32	9	200	(4)	237
Africa	1,996	470	78	0	2,544	7	4	31	0	42
Other	9,753	234	43	0	10,031	22	0	1	0	24
Total	637,037	32,335	7,452	1,963	678,787	509	501	3,247	3	4,259

Financial assets at amortized cost by rating class

	Dec 31, 2018									
	Gross Carrying Amount					Allowance for Credit Losses				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
iAAA–iAA	235,913	2,315	0	0	238,229	2	0	0	0	3
iA	81,579	3,027	0	0	84,606	6	1	0	0	7
iBBB	138,596	2,508	0	0	141,104	36	8	0	0	43
iBB	137,768	8,318	0	232	146,318	177	61	0	0	238
iB	35,725	10,378	0	11	46,114	239	187	0	0	426
iCCC and below	7,456	5,788	7,452	1,720	22,416	49	243	3,247	3	3,542
Total	637,037	32,335	7,452	1,963	678,787	509	501	3,247	3	4,259

Our existing commitments to lend additional funds to debtors with Stage 3 financial assets at amortized cost amounted to € 117 million as of December 31, 2018.

Collateral held against financial assets at amortized cost in stage 3

	Dec 31, 2018		
in € m.	Gross Carrying Amount	Collateral	Guarantees
Financial Assets at Amortized Cost (Stage 3)	7,452	2,714	221

In 2018, we did not recognize an allowance for credit losses against Financial assets at amortized cost in Stage 3 of € 373 million due to full collateralization of these assets.

Modified Assets at Amortized Cost

A financial asset is considered modified when its contractual cash flows are renegotiated or otherwise modified. Renegotiation or modification may or may not lead to derecognition of the old and recognition of the new financial instrument. This section covers modified financial assets that have not been derecognized.

Under IFRS 9, when the terms of a Financial Asset are renegotiated or modified and the modification does not result in derecognition, a gain or loss is recognized in the income statement as the difference between the original contractual cash flows and the modified cash flows discounted at the original effective interest rate (EIR). For modified financial assets the determination of whether the asset's credit risk has increased significantly reflects the comparison of:

- The remaining lifetime probability of default (PD) at the reporting date based on the modified terms; with
- The remaining lifetime PD estimated based on data at initial recognition and based on the original contractual terms.

Modified Assets Amortized Cost

	Dec 31, 2018				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Amortized cost carrying amount prior to modification	11	8	222	0	241
Net modification gain/losses recognized	(11)	(8)	(208)	0	(227)

In the first year after the implementation of the IFRS 9 requirements, we have observed immaterial amounts of modified assets that have been upgraded to stage 1. We have not observed any subsequent re-deterioration of those assets into stages 2 and 3.

Financial Assets at Fair value through Other Comprehensive Income

The fair value of financial assets at Fair value through Other Comprehensive Income (FVOCI) subject to impairment was € 51 billion at December 31, 2018, compared to € 48 billion at the beginning of year 2018. Allowance for credit losses against these assets were almost unchanged at very low levels (€ 12 million at the beginning of year 2018 and € 13 million as of December 31, 2018, respectively). Due to immateriality no further breakdown will be provided for financial assets at FVOCI.

Off-balance sheet lending commitments and guarantee business

The following tables provide an overview of the nominal amount and credit loss allowance for our off-balance sheet financial asset class broken down into stages as per IFRS 9 requirements.

Development of nominal amount and allowance for credit losses

	Dec 31, 2018				
	Nominal Amount				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Balance, beginning of year1	243,566	7,114	1,448	0	252,129
Movements including new business	6,765	3,923	(1,191)	0	9,496
Transfers due to changes in creditworthiness	752	(1,089)	338	N/M	0
Changes in models	N/M	N/M	N/M	N/M	N/M
Foreign exchange and other changes	957	73	4	0	1,035
Balance, end of reporting period	252,039	10,021	599	0	262,659

1 Revocable commitments were included in impairment relevant exposures in Q4 2018. As a consequence, Balance, beginning of year was restated compared to our interim reports 2018.

	Dec 31, 2018				
	Allowance for Credit Losses2				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Balance, beginning of year	117	36	119	0	272
Movements including new business	(0)	31	(13)	0	18
Transfers due to changes in creditworthiness	2	(0)	(2)	N/M	0
Changes in models	N/M	N/M	N/M	N/M	N/M
Foreign exchange and other changes	14	6	(20)	0	(0)
Balance, end of reporting period	132	73	84	0	289
Provision for Credit Losses excluding country risk1	1	31	(15)	0	18

1 The above table breaks down the impact on provision for credit losses from movements in financial assets including new business, transfers due to changes in creditworthiness and changes in models.

2 Allowance for credit losses does not include allowance for country risk amounting to € 5 million as of December 31, 2018.

Legal Claims

Assets subject to enforcement activity consist of assets, which have been fully or partially written off and the Group still continues to pursue recovery of the asset. Such enforcement activity comprises for example cases where the bank continues to devote resources (e.g. our Legal Department/CRM workout unit) towards recovery, either via legal channels or third party recovery agents. Enforcement activity also applies to cases where the Bank maintains outstanding and unsettled legal claims. This is irrespective of whether amounts are expected to be recovered and the recovery timeframe. It may be common practice in certain jurisdictions for recovery cases to span several years.

Amounts outstanding on financial assets that were written off during the reporting period and are still subject to enforcement activity amounted to € 224 million for the year 2018, mainly related to CIB.

Renegotiated and forborne assets at amortized costs

For economic or legal reasons we might enter into a forbearance agreement with a borrower who faces or will face financial difficulties in order to ease the contractual obligation for a limited period of time. A case-by-case approach is applied for our corporate clients considering each transaction and client -specific facts and circumstances. For consumer loans we offer forbearances for a limited period of time, in which the total or partial outstanding or future instalments are deferred to a later point of time. However, the amount not paid including accrued interest during this period must be re-compensated at a later point of time. Repayment options include distribution over residual tenor, a one-off payment or a tenor extension. Forbearances are restricted and depending on the economic situation of the client, our risk management strategies and the local legislation. In case a forbearance agreement is entered into, an impairment measurement is conducted as described below, an impairment charge is taken if necessary and the loan is subsequently recorded as impaired.

In our management and reporting of forborne assets at amortized costs, we are following the EBA definition for forbearances and non-performing loans (Implementing Technical Standards (ITS) on Supervisory reporting on forbearance and non-performing exposures under article 99(4) of Regulation (EU) No 575/2013). Once the conditions mentioned in the ITS are met, we report the loan as being forborne; we remove the asset from our forbearance reporting, once the discontinuance criteria in the ITS are met (i.e., the contract is considered as performing, a minimum two year probation period has passed, regular payments of more than an insignificant aggregate amount of principal or interest have been made during at least half of the probation period, and none of the exposures to the debtor is more than 30 days past-due at the end of the probation period).

Forborne financial assets at amortized cost

	Dec 31, 2018			
	Performing	Non-performing		Total forborne loans at amortized cost
in € m.	Stage 2	Stage 2	Stage 3	
German	1,046	49	1,200	2,295
Non-German	741	55	1,750	2,546
Total	1,787	104	2,950	4,841

Development of forborne financial assets at amortized cost

in € m.	Dec 31, 2018
Balance beginning of period	5,089
Classified as forborne during the year	1,679
Transferred to non-forborne during the year (including repayments)	(1,574)
Charge-offs	(386)
Exchange rate and other movements	33
Balance end of period	4,841

The reduction in forborne assets at amortized cost of € 248 million or 5 % was mainly driven by non-performing exposures in CIB mainly reflecting the ongoing de-risking of our shipping portfolio as well as in PCB, among others caused by disposals.

Collateral Obtained

We obtain collateral on the balance sheet only in certain cases by either taking possession of collateral held as security or by calling upon other credit enhancements. Collateral obtained is made available for sale in an orderly fashion or through public auctions, with the proceeds used to repay or reduce outstanding indebtedness. Generally we do not occupy obtained properties for our business use. The commercial and residential real estate collateral obtained in 2018 refers predominantly to our exposures in Spain.

Collateral Obtained during the reporting period

in € m.	2018
Commercial real estate	7
Residential real estate1	57
Other	0
Total collateral obtained during the reporting period	64

1 Carrying amount of foreclosed residential real estate properties amounted to € 62 million as of December 31, 2018 and € 67 million as of December 31, 2017.

The collateral obtained, as shown in the table above, excludes collateral recorded as a result of consolidating securitization trusts under IFRS 10. In 2018 as well as in 2017 the Group did not obtain any collateral related to these trusts.

Asset Quality (Previous year's figures reported under IAS 39)

This section below describes the asset quality of our loans for the comparative period 2017. All loans where known information about possible credit problems of borrowers causes our management to have serious doubts as to the collectability of the borrower's contractual obligations, are included in this section.

Overview of performing, renegotiated, past due and impaired loans by customer groups

	Dec 31, 2017		
in € m.	Corporate loans	Consumer loans	Total
Loans neither past due, nor renegotiated or impaired	208,457	185,979	394,436
Past due loans, neither renegotiated nor impaired	1,167	2,778	3,945
Loans renegotiated, but not impaired	518	488	1,006
Impaired loans	3,406	2,828	6,234
Total	213,547	192,074	405,621

Past Due Loans

Loans are considered to be past due if contractually agreed payments of principal and/or interest remain unpaid by the borrower, except if those loans are acquired through consolidation. The latter are considered to be past due if payments of principal and/or interest, which were expected at a certain payment date at the time of the initial consolidation of the loans, are unpaid by the borrower.

Non-impaired past due loans at amortized cost by past due status

in € m.	Dec 31, 2017
Loans less than 30 days past due	2,747
Loans 30 or more but less than 60 days past due	482
Loans 60 or more but less than 90 days past due	250
Loans 90 days or more past due	776
Total	4,255

Non-impaired past due loans at amortized cost by industry

in € m.	Dec 31, 2017
Financial intermediation	267
Fund management activities	40
Manufacturing	179
Wholesale and retail trade	233
Households	2,481
Commercial real estate activities	363
Public sector	10
Other	682
Total	4,255

Non-impaired past due loans at amortized cost by region

in € m.	Dec 31, 2017
Germany	1,810
Western Europe (excluding Germany)	1,758
Eastern Europe	158
North America	343
Central and South America	6
Asia/Pacific	161
Africa	19
Other	0
Total	4,255

Our non-impaired past due loans increased to € 4.3 billion as of December 31, 2017, largely caused by loans, that were overdue by a few days. Businesswise, the main driver was PCB.

Aggregated value of collateral – with the fair values of collateral capped at loan outstanding – held against our non-impaired past due loans

in € m.	Dec 31, 2017
Financial and other collateral	2,364
Guarantees received	148
Total	2,512

Renegotiated and forborne loans

The tables below give an overview of the Group's forborne loans.

Forborne loans

	Dec 31, 2017[1]			
	Performing	Non- performing		Total forborne loans
in € m.	Nonimpaired	Nonimpaired	Impaired	
German	1,183	601	804	2,587
Non-German	612	553	1,337	2,502
Total	1,794	1,154	2,141	5,089

1 Forborne Loans have been restated following a refinement of internal processes.

Development of forborne loans

in € m.	Dec 31, 2017[1]
Balance beginning of period	5,468
Classified as forborne during the year	1,492
Transferred to non-forborne during the year (including repayments)	(1,519)
Charge-offs	(234)
Exchange rate and other movements	(119)
Balance end of period	5,089

1 Balance, end of period as well as Classified as forborne during the year have been restated following a refinement of internal processes.

The total forborne loans in 2017 decreased by € 379 million mainly driven by non-performing forborne loans to non-German clients mainly reflecting non-performing loan sales in our shipping portfolio reported in CIB as well as in PCC International.

Impaired loans

Credit Risk Management regularly assesses at each balance sheet date whether there is objective evidence that a loan or group of loans is impaired. A loan or group of loans is impaired and impairment losses are incurred if:

- there is objective evidence of impairment as a result of a loss event that occurred after the initial recognition of the asset and up to the balance sheet date (a “loss event”). When making our assessment we consider information on such events that is reasonably available up to the date the financial statements are authorized for issuance in line with the requirements of IAS 10;
- the loss event had an impact on the estimated future cash flows of the financial asset or the group of financial assets, and
- a reliable estimate of the loss amount can be made at each reporting date.

Credit Risk Management’s loss assessments are subject to regular review in collaboration with Group Finance. The results of this review are reported to and approved by Group Finance and Risk Senior Management.

For further details with regard to impaired loans please refer to Note 1 “Significant Accounting Policies and Critical Accounting Estimates” to the consolidated financial statements.

Impairment loss and allowance for loan losses

If there is evidence of impairment the impairment loss is generally calculated on the basis of discounted expected cash flows using the original effective interest rate of the loan. If the terms of a loan are renegotiated or otherwise modified because of financial difficulties of the borrower without qualifying for de-recognition of the loan, the impairment loss is measured using the original effective interest rate before modification of terms. We reduce the carrying amount of the impaired loan by the use of an allowance account and recognize the amount of the loss in the consolidated statement of income as a component of the provision for credit losses. We record increases to our allowance for loan losses as an increase of the provision for loan losses in our income statement. Charge-offs reduce our allowance while recoveries, if any, are credited to the allowance account. If we determine that we no longer require allowances which we have previously established, we decrease our allowance and record the amount as a reduction of the provision for loan losses in our income statement. When it is considered that there is no realistic prospect of recovery and all collateral has been realized or transferred to us, the loan and any associated allowance for loan losses is charged off (i.e., the loan and the related allowance for loan losses are removed from the balance sheet).

While we assess the impairment for our corporate credit exposures individually, we assess the impairment of our smaller-balance standardized homogeneous loans collectively.

Our collectively assessed allowance for non-impaired loans reflects allowances to cover for incurred losses that have neither been individually identified nor provided for as part of the impairment assessment of smaller-balance homogeneous loans.

For further details regarding our accounting policies regarding impairment loss and allowance for credit losses, please refer to Note 1 “Significant Accounting Policies and Critical Accounting Estimates”.to the consolidated financial statements.

Impaired loans, allowance for loan losses and coverage ratios by business division

	Dec 31, 2017		
in € m.	Impaired loans	Loan loss allowance	Impaired loan coverage

			ratio
Corporate & Investment Bank	2,517	1,565	62 %
Private & Commercial Bank	3,717	2,355	63 %
Asset Management	0	0	N/M
Corporate & Other	1	1	N/M
Total	6,234	3,921	63 %

N/M – not meaningful.

Impaired loans, allowance for loan losses and coverage ratios by industry

	Dec 31, 2017							
	Impaired Loans			Loan loss allowance				
in € m.	Individually assessed	Collectively assessed	Total	Individually assessed allowance	Collectively assessed allowance for impaired loans	Collectively assessed allowance for non-impaired loans	Total	Impaired loan coverage ratio
Financial intermediation	121	8	129	1	3	40	44	34 %
Fund management activities	8	8	16	1	0	3	4	24 %
Manufacturing	520	165	685	439	146	51	635	93 %
Wholesale and retail trade	333	188	521	211	156	27	394	76 %
Households	155	2,233	2,388	153	1,290	83	1,526	64 %
Commercial real estate activities	345	30	376	115	11	42	168	45 %
Public sector	74	0	74	6	0	12	17	24 %
Other[1]	1,792	254	2,046	840	139	153	1,132	55 %
Total	3,348	2,886	6,234	1,766	1,745	410	3,921	63 %

1 Thereof: ‘Transportation, storage and communication’ - Total Impaired Loans € 808 million/Total Loan loss allowance € 469 million, ‘Real estate; renting and business activities’ - € 482 million/ € 234 million, ‘Construction’: € 378 million/ € 144 million, ‘Mining and quarrying’ - € 169 million/ € 116 million.

Impaired loans, allowance for loan losses and coverage ratios by region

	Dec 31, 2017							
	Impaired Loans			Loan loss allowance				
in € m.	Individually assessed	Collectively assessed	Total	Individually assessed allowance	Collectively assessed allowance	Collectively assessed allowance for	Total	Impaired loan coverage

					for impaired loans	non-impaired loans		ratio
Germany	953	1,312	2,266	600	823	104	1,527	67 %
Western Europe (excluding Germany)	1,471	1,422	2,892	815	822	113	1,749	60 %
Eastern Europe	45	123	168	45	92	11	147	88 %
North America	497	1	498	67	0	102	170	34 %
Central and South America	70	0	70	14	0	21	35	50 %
Asia/Pacific	264	28	292	223	8	41	272	93 %
Africa	48	0	49	1	0	9	10	20 %
Other	0	0	0	0	0	11	11	N/M
Total	3,348	2,886	6,234	1,766	1,745	410	3,921	63 %

N/M – not meaningful.

Development of impaired loans

	Dec 31, 2017		
in € m.	Individually assessed	Collectively assessed	Total
Balance, beginning of year	4,126	3,321	7,447
Classified as impaired during the year	1,370	1,248	2,618
Transferred to not impaired during the year1	(1,127)	(961)	(2,088)
Charge-offs	(540)	(605)	(1,146)
Disposals of impaired loans	(267)	(116)	(383)
Exchange rate and other movements	(215)	(1)	(216)
Balance, end of year	3,348	2,886	6,234

1 Includes repayments.

Our impaired loans decreased in 2017 by € 1.2 billion or 16 % to € 6.2 billion. The reduction in our individually assessed portfolio mainly reflects charge-offs in CIB along with de-risking of former NCOU assets, while the reduction in our collectively assessed portfolio was driven by charge-offs related to disposals in PCC International.

The impaired loan coverage ratio (defined as total on-balance sheet allowances) for all loans individually impaired or collectively assessed divided by IFRS impaired loans (excluding collateral) increased from 61 % as of year-end 2016 to 63 % as of December 31, 2017.

Provision for loan losses and recoveries by Industry

2017

	Provision for loan losses before recoveries				
in € m.	For individually assessed loans	For collectively assessed impaired loans	For collectively assessed non-impaired loans	Total	Recoveries
Financial intermediation	25	(2)	(3)	20	4
Fund management activities	0	0	(2)	(1)	0
Manufacturing	48	18	(28)	38	19
Wholesale and retail trade	46	19	1	66	5
Households	11	322	20	354	66
Commercial real estate activities	(20)	4	5	(10)	12
Public sector	2	0	9	11	0
Other1	239	23	(62)	201	20
Total	352	385	(59)	678	127

1 In 2017, the largest contributions to risk provisioning in the "Other" category came from the "Transport, Storage and Communications" sector (€ 107 million) and the "Mining and quarrying" sector (€ 72 million).

Our existing commitments to lend additional funds to debtors with impaired loans amounted to € 28 million as of December 31, 2017.

Collateral held against impaired loans, with fair values capped at transactional outstanding

in € m.	Dec 31, 2017
Financial and other collateral1	1,757
Guarantees received	309
Total collateral held for impaired loans	2,066

1 Defaulted mortgage loans secured by residential real estate properties, where the loan agreement has been terminated/cancelled are generally subject to formal foreclosure proceedings.

Our coverage ratio including collateral (defined as total on-balance sheet allowances for all loans individually impaired or collectively assessed plus collateral held against impaired loans, with fair values capped at transactional outstanding, divided by IFRS impaired loans) increased to 96 % as of December 31, 2017.

Financial assets available for sale

The impairment concept is also applicable for available for sale debt instruments, which are otherwise carried at fair value with changes in fair value reported in other comprehensive income. If an available for sale debt instrument is considered impaired, the cumulative impairment loss reflects the difference between the amortized cost and the current fair value of the instrument. For a detailed discussion of our accounting procedures please refer to Note 1

“Significant Accounting policies and Critical Accounting Estimates” to the consolidated financial statements.

Non-impaired past due and impaired financial assets available for sale, accumulated impairments, coverage ratio and collateral held against impaired financial assets available for sale

in € m.	Dec 31, 2017
Financial assets non-impaired past due available for sale	1,538
Of which:	
Less than 30 days past due	176
30 or more but less than 60 days past due	23
60 or more but less than 90 days past due	138
90 days or more past due	1,201
Impaired financial assets available for sale	157
Accumulated impairment for financial assets available for sale	113
Impaired financial assets available for sale coverage ratio in %	71 %
Collateral held against impaired financial assets available for sale	17
Of which:	
Financial and other collateral	17
Guarantees received	0

Collateral obtained

The below table give an overview of the group’s collateral obtained in the reporting period. The commercial and residential real estate collateral obtained in 2017 refers predominantly to our exposures in Spain.

Collateral obtained during the reporting periods

in € m.	2017
Commercial real estate	9
Residential real estate1	63
Other	0
Total collateral obtained during the reporting period	72

1Carrying amount of foreclosed residential real estate properties amounted to € 67 million as of December 31, 2017.

The collateral obtained, as shown in the table above, excludes collateral recorded as a result of consolidating securitization trusts under IFRS 10. In 2017, the Group did not obtain any collateral related to these trusts.

Allowance for credit losses

Development of allowance for credit losses

2017

	Allowance for Loan Losses			Allowance for Off-Balance Sheet Positions			
in € m.	Individually assessed	Collectively assessed	Subtotal	Individually assessed	Collectively assessed	Subtotal	Total
Balance, beginning of year	2,071	2,475	4,546	162	183	346	4,892
Provision for credit losses	299	253	552	(23)	(4)	(27)	525
Of which: (Gains)/Losses from disposal of impaired loans	(83)	(32)	(115)	0	0	0	(115)
Net charge-offs:	(487)	(532)	(1,019)	0	0	0	(1,019)
Charge-offs	(541)	(605)	(1,146)	0	0	0	(1,146)
Recoveries	54	73	127	0	0	0	127
Other changes	(117)	(41)	(158)	(18)	(16)	(34)	(191)
Balance, end of year	1,766	2,155	3,9211	122	163	2852	4,207
Changes compared to prior year							
Provision for credit losses							
Absolute	(444)	(351)	(795)	(47)	(16)	(62)	(857)
Relative	(60) %	(58) %	(59) %	(196) %	(132) %	(175) %	(62) %
Net charge-offs							
Absolute	407	338	745	0	0	0	745
Relative	(45) %	(39) %	(42) %	0 %	0 %	0 %	(42) %
Balance, end of year							
Absolute	(305)	(320)	(625)	(41)	(20)	(60)	(685)
Relative	(15) %	(13) %	(14) %	(25) %	(11) %	(17) %	(14) %

1 of which: ‘Transfer risk reserve’ € 5 million.

2 of which: ‘Transfer risk reserve’ € 8 million.

Allowance for credit losses as of December 31, 2017 amounted to € 4.2 billion compared to € 4.9 billion as of December 31, 2016. The reduction was driven by charge-offs, partly compensated by additional provision for credit losses.

As of December 31, 2017, provision for credit losses decreased by € 857 million. compared to year-end 2016, driven by a decrease in provision for loan losses of € 795 million, as well as by a reduction in provisions for off-balance sheet positions of € 62 million. The decrease in our individually assessed loan portfolio mainly resulted from CIB, driven by all portfolios including shipping. Despite the year-over-year reduction, shipping continued to be the main driver of provision for credit losses in 2017, in part related to the re-evaluation of the respective impairment method during the year as discussed in Note 1, “Significant accounting policies and critical accounting estimates” to the consolidated financial statements. A further year-over-year reduction in PCB was driven by a significant release in former Postbank. The decrease in provisions for our collectively assessed loan portfolio mainly resulted from the non-recurrence of one-off items related to assets reported under NCOU in the prior year and further reflected the good portfolio quality and ongoing benign economic environment in PCB.

The decrease in net charge-offs of € 745 million compared to 2016 was mainly driven by non-recurrence of net charge offs related to assets reported under NCOU in the prior year as well as in former Postbank.

Derivatives – Credit Valuation Adjustment

We establish counterparty Credit Valuation Adjustment (CVA) for OTC derivative transactions to cover expected credit losses. The adjustment amount is determined by assessing the potential credit exposure to a given counterparty and taking into account any collateral held, the effect of any relevant netting arrangements, expected loss given default and the credit risk, based on available market information, including CDS spreads.

Treatment of default situations under derivatives

Unlike standard loan assets, we generally have more options to manage the credit risk in our derivatives transactions when movement in the current replacement costs or the behavior of our counterparty indicate that there is the risk that upcoming payment obligations under the transactions might not be honored. In these situations, we are frequently able under the relevant derivatives agreements to obtain additional collateral or to terminate and close-out the derivative transactions at short notice.

The master agreements for OTC derivative transactions executed with our clients usually provide for a broad set of standard or bespoke termination rights, which allow us to respond swiftly to a counterparty's default or to other circumstances which indicate a high probability of failure. Considering the severe systemic disruptions to the financial system, that could be caused by a disorderly failure of a CCP, the Financial Stability Board ("FSB") has recommended to subject CCPs to resolution regimes that apply the same objectives and provisions that apply to global systematically important banks (G-SIBs).

Our contractual termination rights are supported by internal policies and procedures with defined roles and responsibilities which ensure that potential counterparty defaults are identified and addressed in a timely fashion. These procedures include necessary settlement and trading restrictions. When our decision to terminate derivative transactions results in a residual net obligation owed by the counterparty, we restructure the obligation into a non-derivative claim and manage it through our regular work-out process. As a consequence, for accounting purposes we typically do not show any nonperforming derivatives.

Wrong-way risk occurs when exposure to a counterparty is adversely correlated with the credit quality of that counterparty. In compliance with Article 291(2) and (4) CRR we, excluding DB PFK AG, had established a monthly process to monitor several layers of wrong-way risk (specific wrong-way risk, general explicit wrong-way risk at country/industry/region levels and general implicit wrong-way risk, whereby relevant exposures arising from transactions subject to wrong-way risk are automatically selected and presented for comment to the responsible credit officer). A wrong-way risk report is then sent to Credit Risk senior management on a monthly basis. In addition, we, excluding DB PFK AG, utilized our established process for calibrating our own alpha factor (as defined in Article 284 (9) CRR) to estimate the overall wrong-way risk in our derivatives and securities financing transaction portfolio. DB PFK AG derivative counterparty risk is immaterial to the Group and collateral held is typically in the form of cash.

Trading Market Risk Exposures

Value-at-Risk Metrics of Trading Units of Deutsche Bank Group

The tables and graph below present the value-at-risk metrics calculated with a 99 % confidence level and a one-day holding period for our trading units.

Value-at-Risk of our Trading Units by Risk Type

	Total		Diversification effect		Interest rate risk		Credit spread risk		Equity price risk		Foreign exchange risk[1]		Commodity price risk	
in € m.	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Average	27.5	29.8	(25.5)	(28.1)	17.6	20.2	16.4	19.7	10.0	8.7	8.3	8.4	0.6	0.8
Maximum	40.9	38.4	(35.0)	(37.6)	32.6	26.0	24.0	25.1	14.5	12.5	13.0	16.5	1.3	3.0
Minimum	19.8	20.1	(20.2)	(21.4)	12.4	13.5	13.0	13.5	6.9	4.4	3.8	4.2	0.2	0.1
Period-end	32.1	29.1	(26.9)	(22.5)	14.1	21.4	22.3	14.4	13.0	10.1	9.2	4.9	0.3	0.7

1Includes value-at-risk from gold and other precious metal positions.

Development of value-at-risk by risk types in 2018

The average value-at-risk over 2018 was € 27.5 million, which is a decrease of € 2.3 million compared with the full year 2017 driven by reductions in credit spread and interest rate risk.

The period end value-at-risk increase was driven by increases coming from across credit spread, equity and foreign exchange asset classes.

Regulatory Trading Market Risk Measures

The table below presents the stressed value-at-risk metrics calculated with a 99 % confidence level and a one-day holding period for our trading units.

Average, Maximum and Minimum Stressed Value-at-Risk by Risk Type

	Total		Diversification effect		Interest rate risk		Credit spread risk		Equity price risk		Foreign exchange risk[1]		Commodity price risk	
in € m.	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Average	84.1	76.7	(81.9)	(88.4)	58.3	69.8	69.3	62.1	16.1	18.8	20.0	12.6	2.4	1.8
Maximum	124.7	125.0	(106.7)	(115.8)	89.9	92.0	79.7	73.2	78.1	66.8	38.2	28.0	7.7	6.1
Minimum	61.2	42.0	(66.1)	(73.0)	35.2	48.3	59.0	54.3	2.4	1.5	7.7	6.9	0.5	0.3
Period-end	96.2	85.6	(75.3)	(81.0)	57.6	67.8	70.1	64.3	21.3	19.9	21.7	12.6	0.7	1.9

1Includes value-at-risk from gold and other precious metal positions.

The average stressed value-at-risk was € 84.1 million over 2018, an increase of € 7.4 million compared with the full year 2017. The increase was driven by a reduction in the diversification effect with some additional increase coming from the credit spread and foreign exchange asset classes.

The period end stressed value-at-risk increase was driven by a reduction in diversification effect and increases in the credit spread, foreign exchange and equity asset classes.

The following graph compares the development of the daily value-at-risk with the daily stressed value-at-risk and their 60 day averages, calculated with a 99 % confidence level and a one-day holding period for our trading units. Amounts are shown in millions of euro.

Development of value-at-risk and stressed value-at-risk in 2018

For regulatory reporting purposes, the incremental risk charge for the respective reporting dates represents the higher of the spot value at the reporting dates, and their preceding 12-week average calculation.

Average, Maximum and Minimum Incremental Risk Charge of Trading Units (with a 99.9 % confidence level and one-year capital horizon)1,2,3,

	Total		Global Credit Trading		Core Rates		Fixed Income & Currencies APAC		Emerging Markets - Debt		Other	
in € m.	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Average	680.6	802.1	335.8	544.6	271.1	107.1	224.8	168.1	(11.9)	37.2	(139.2)	(54.8)
Maximum	847.6	899.3	403.4	597.4	481.9	172.5	451.9	229.0	17.3	62.9	(111.3)	(20.4)
Minimum	550.8	754.8	274.6	503.7	159.1	48.7	72.1	92.4	(29.2)	(1.4)	(177.1)	(90.0)
Period-end	805.4	789.6	383.6	540.1	388.6	133.2	188.0	142.3	5.8	19.9	(160.5)	(45.9)

1Amounts show the bands within which the values fluctuated during the 12-weeks preceding December 31, 2018 and December 31, 2017, respectively.

2Business line breakdowns have been updated for 2018 reporting to better reflect the current business structure.

3All liquidity horizons are set to 12 months.

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The incremental risk charge as at the end of 2018 was € 805 million an increase of € 15 million (2 %) compared with year end 2017. The 12-week average of the incremental risk charge as at the end of 2018 was € 681 million and thus € 121 million (15 %) lower compared with the average for the 12-week period ended December 31, 2017. The decreased average incremental risk charge is driven by a decrease in credit exposures in the Global Credit Trading and Emerging Markets - Debt business areas when compared to the full year 2017.

For regulatory reporting purposes, the comprehensive risk measure for the respective reporting dates represents the higher of the internal spot value at the reporting dates, their preceding 12-week average calculation, and the floor, where the floor is equal to 8 % of the equivalent capital charge under the standardized approach securitization framework.

Average, Maximum and Minimum Comprehensive Risk Measure of Trading Units (with a 99.9 % confidence level and one-year capital horizon)1,2,3

in € m.	2018	2017
Average	0.0	5.4
Maximum	0.0	6.3
Minimum	0.0	4.5
Period-end	0.0	4.4

1Regulatory Comprehensive Risk Measure calculated for the 12-week period ending December 31.

2Period end is based on the internal model spot value.

3All liquidity horizons are set to 12 months.

The internal model comprehensive risk measure was decommissioned in the fourth quarter of 2018 following regulatory approval. The small remaining exposures captured by this model are now covered by the incremental risk charge and the market risk standardized approach.

Market Risk Standardized Approach

As of December 31, 2018, the securitization positions, for which the specific interest rate risk is calculated using the market risk standardized approach, generated capital requirements of € 418 million corresponding to risk weighted-assets of € 5.2 billion. As of December 31, 2017 these positions generated capital requirements of € 379.5 million corresponding to risk weighted-assets of € 4.7 billion.

For nth-to-default credit default swaps the capital requirement was € 2.6 million corresponding to risk weighted-assets of € 33 million as of December 31, 2018 compared with € 2.8 million and € 35 million as of December 31, 2017.

The capital requirement for Collective Investment Undertakings under the market risk standardized approach was € 14 million corresponding to risk weighted-assets of € 180 million as of December 31, 2018, compared with € 45 million and € 556 million as of December 31, 2017.

The capital requirement for longevity risk under the market risk standardized approach was € 14 million corresponding to risk-weighted assets of € 180 million as of December 31, 2018, compared with € 32 million and € 395 million as of December 31, 2017.

Results of Regulatory Backtesting of Trading Market Risk

In 2018 we observed one global outlier, where our loss on a buy-and-hold basis exceeded the value-at-risk of our Trading Books, compared with three outliers in 2017. The outlier in 2018 occurred in February driven by losses coming from the Equities business line due to an increase in market volatility. There were no Actual Backtesting outliers, which compares the VaR to Total Income less Fees & Commissions, in 2018 compared to two in 2017.

Based on the backtesting results, our analysis of the underlying reasons for outliers and enhancements included in our value-at-risk methodology we continue to believe that our value-at-risk model will remain an appropriate measure for our trading market risk under normal market conditions. The following graph shows the trading units daily buy-and-hold income in comparison to the value-at-risk as of the close of the previous business day for the trading days of the reporting period. The value-at-risk is presented in negative amounts to visually compare the estimated potential loss of our trading positions with the buy and hold income. Figures are shown in millions of euro. The chart

shows that our trading units achieved a positive buy and hold income for 52 % of the trading days in 2018 (versus 57 % in 2017), as well as displaying the global outlier experienced in 2018.

The capital requirements for the value-at-risk model, for which the backtesting results are shown here, accounts for 1.5 % of the total capital requirement for the Group.

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EU MR4 – Comparison of VAR estimates with gains/losses

Daily Income of our Trading Units

The following histogram shows the distribution of daily income of our trading units. Daily income is defined as total income which consists of new trades, fees & commissions, buy & hold income, reserves, carry and other income. It displays the number of trading days on which we reached each level of trading income shown on the horizontal axis in millions of euro.

Distribution of daily income of our trading units in 2018

Our trading units achieved a positive revenue for 86 % of the trading days in 2018 compared with 93 % in the full year 2017.

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Nontrading Market Risk Exposures

Economic Capital Usage for Nontrading Market Risk

The following table shows the Nontrading Market Risk economic capital usage by risk type:

Economic Capital Usage by risk type.

	Economic capital usage	
in € m.	Dec 31, 2018	Dec 31, 2017
Interest rate risk	1,416	1,743
Credit spread risk	271	722
Equity and Investment risk	1,239	1,431
Foreign exchange risk	1,713	1,509
Pension risk	1,588	1,174
Guaranteed funds risk	68	49
Total nontrading market risk portfolios	6,295	6,628

The economic capital figures do take into account diversification benefits between the different risk types.

Economic Capital Usage for Nontrading Market Risk totaled € 6.3 billion as of December 31, 2018, which is € 0.3 billion below our economic capital usage at year-end 2017.

- Interest rate risk. Economic capital charge for interest rate risk in the banking book, including gap risk, basis risk and option risk, such as the risk of a change in client behavior embedded in modelled non-maturity deposits or prepayment risk. In total the economic capital usage for December 31, 2018 was € 1,416 million, compared to € 1,743 million for December 31, 2017. The decrease in economic capital contribution was mainly driven by diversification effects.
- Credit spread risk. Economic capital charge for portfolios in the banking book subject to material credit spread risk. Economic capital usage was € 271 million as of December 31, 2018, versus € 722 million as of December 31, 2017. The decrease in economic capital contribution was mainly driven by accounting methodology changes in combination with diversification effects.
- Equity and Investment risk. Economic capital charge for equity risk from our non-consolidated investment holdings, such as our strategic investments and alternative assets, and from a structural short position in our own share price arising from our equity compensation plans. The economic capital usage was € 1,239 million as of December 31, 2018, compared with € 1,431 million as of December 31, 2017, predominately driven by a reduced market value of our equity compensation short position.
- Pension risk. This risk arises from our defined benefit obligations, including interest rate risk and inflation risk, credit spread risk, equity risk and longevity risk. The economic capital usage was € 1,588 million and € 1,174 million as of December 31, 2018 and December 31, 2017 respectively. The increase in Pension economic capital is mainly related to methodological improvements and reduced diversification with other risk types.
- Foreign exchange risk. Foreign exchange risk predominately arises from our structural position in unhedged capital and retained earnings in non-euro currencies in certain subsidiaries. Our economic capital usage was € 1,713 million as of December 31, 2018 versus € 1,509 million as of December 31, 2017. The increase in economic capital contribution was mainly driven by changes in deferred tax assets in foreign currency.
- Guaranteed funds risk. Economic capital usage was € 68 million as of December 31, 2018, versus € 49 million as of December 31, 2017. The increase in economic capital contribution was largely was largely driven by diversification effects and market performance.

Interest Rate Risk in the Banking Book

The following table shows the impact on the Group's net interest income in the banking book as well as the change of the economic value for the banking book positions from interest rate changes under the six standard scenarios defined by Basel Committee on Banking Supervision (BCBS):

Economic value & net interest income interest rate risk in the banking book by scenario

	Delta EVE		Delta NII[1]	
in € bn.	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017
Parallel up	0.8	(0.4)	2.9	2.8
Parallel down	(3.2)	(1.1)	(0.8)	(0.8)
Steepener	0.9	0.2	(0.5)	(0.6)
Flattener	(1.6)	(0.6)	2.7	2.7
Short rate up	(0.7)	(0.5)	3.6	3.5

Short rate down	(0.1)	0.0	(1.0)	(0.7)
Maximum	(3.2)	(1.1)	(1.0)	(0.8)

in € bn.	Dec 31, 2018	Dec 31, 2017
Tier 1 Capital	55.1	57.6

N/A – Not applicable

1Delta Net Interest Income (NII) reflects the difference between projected NII in the respective scenario with shifted rates vs. unchanged rates. Sensitivities are based on a static balance sheet at constant exchange rates, excluding trading positions and DWS. Figures do not include Mark to Market (MtM) / Other Comprehensive Income (OCI) effects on centrally managed positions not eligible for hedge accounting.

A sudden parallel increase in the yield curve would positively impact the Group's earnings (net interest income) from the banking book positions. Deutsche Bank estimates that the total one-year net interest income change resulting from parallel yield curve shifts of +200 and (200) basis points (floored by a rate of zero) would be € 2.9 billion and € (0.8) billion, respectively, at December 31, 2018.

The maximum Economic Value of Equity (EVE) loss was € (3.2) billion as of December 2018, compared to € (1.1) billion as of December 2017. The increase in maximum EVE loss was mainly driven by an alignment with regards to the treatment of commercial margins and methodology enhancements with regards to the capture of convexity impacts in combination with the change in interest rate levels. As per December 2018 the maximum EVE loss represents 5.8 % of Tier 1 Capital.

The following table shows the variation of the economic value for Deutsche Bank's banking book positions resulting from downward and upward interest rate shocks by currency:

Economic value interest rate risk in the banking book by currency

	Dec 31, 2018	
in € bn.	-200 bp[1]	+200 bp
EUR	(1.9)	0.6
GBP	(0.1)	0.1
USD	(1.3)	0.2
JPY	(0.0)	0.0
Other	0.1	(0.1)
Total	(3.2)	0.8

1Floored at zero

The estimated change in the economic value resulting from the impact of the BCBS parallel yield curve shifts of -200 bps (floored by a rate of zero) and +200 bps would be € (3.2) billion and € 0.8 billion, respectively, at December 31, 2018. The change in +200bps scenario from € (0.4) billion to € 0.8 billion was predominately driven by the alignment with regards to the treatment of commercial margins.

Operational risk exposure

Operational risk – risk profile

Operational risk losses by event type (profit and loss view)

in € m.	2018	2017[1]
Clients, Products and Business Practices	156	513
Internal Fraud	13	(48)
External Fraud	50	19
Execution, Delivery and Process Management	44	224
Others	19	42
Group	282	749

12017 loss figures revised from prior year presentation due to subsequent capture of losses and reclassification.

As of December 31, 2018, profit and loss based operational losses decreased by € 467 million or 62 % compared to year-end 2017. The decrease was driven by the event types “Clients, Products and Business Practices” and “Execution, Delivery and Process Management”, due to settlements reached and increased litigation reserves for unsettled cases in 2017.

Operational losses by event type occurred in the period 2018 (2013-2017)1

1Percentages in brackets correspond to loss frequency respectively to loss amount for losses occurred in 2013-2017 period. Frequency and amounts can change subsequently.

The above left chart “Frequency of Operational Losses” summarizes operational risk events which occurred in 2018 compared to the five-year period 2013-2017 in brackets based on the period in which a loss was first recognized for that event. For example, for a loss event that was first recognized in 2010 with an additional profit/loss event recognized in 2018, the frequency chart would not include the loss event, but the loss distribution chart would include the profit/loss recognized in the respective period.

Frequencies are driven by the event types “External Fraud” with a frequency of 54 % and the event type “Clients, Products and Business Practices” with 34 % of all observed loss events. “Execution, Delivery and Process Management” contributes 10 %. “Others” are stable at 2 %. The event type “Internal Fraud” has a low frequency, resulting in less than 1 % of the loss events in the period 2018.

The above right chart “Distribution of Operational Losses” summarizes operational risk loss postings recognized in the profit/loss in 2018 compared to the five-year period 2013-2017. The event type “Clients, Products and Business Practices” dominates the operational loss distribution with a share of 55 % and is determined by outflows related to litigation, investigations and enforcement actions. “External Fraud” has the second highest share (18 %) which is related to one large event in 2018. Finally, the event types “Execution, Delivery and Process Management” (16 %), “Others” (7 %) and “Internal Fraud” (5 %) are minor, compared to other event types.

While we seek to ensure the comprehensive capture of operational risk loss events with a P&L impact of € 10.000 or greater, the totals shown in this section may be underestimated due to delayed detection and recording of loss events.

Liquidity Risk Exposure

Funding Markets and Capital Markets Issuance

2018 has been a challenging year for credit markets. The transition from Quantitative Easing to Quantitative Tightening combined with an increased macro uncertainty led to higher volatility and credit spreads.

Our 5 year CDS traded within a range of 65 to 224 basis points. The peak was observed in the beginning of December, since then, the spread has declined and as of year-end was trading at 208 basis points. The spreads on our bonds exhibited similar behavior . For example, our 2.375 % EUR benchmark maturing in January 2023 traded in a range of 51 to 259 basis points, closing at 230 basis points at year end 2018.

Our revised 2018 issuance plan of € 20-22 billion, comprising debt issuance with an original maturity in excess of one year, was completed and we concluded 2018 having raised €19.8 billion in term funding. This funding was broadly spread across the following funding sources: Senior non-preferred plain-vanilla issuance (€ 9.4 billion), senior preferred plain-vanilla issuance (€ 1.0 billion), covered bond issuance (€ 2.5 billion), and other senior preferred structured issuance (€ 6.9 billion). The (€ 19.8 billion) total is divided into Euro (€ 8.3 billion), US dollar (€ 9.7 billion), British Pound (€ 0.3 billion) and other currencies aggregated (€ 1.5 billion). In addition to direct issuance, we use long-term cross currency swaps to manage our non-Euro funding needs. Our investor base for 2018 issuances comprised asset managers and pension funds (40 %), retail customers (19 %), banks (8 %), governments and agencies (5 %), insurance companies (3%) and other institutional investors (18 %). The geographical distribution was split between Germany (20 %), rest of Europe (35 %), US (25 %), Asia/Pacific (15 %) and Other (5 %).

The average spread of our issuance over 3-months-Euribor (all non-Euro funding spreads are rebased versus 3-months Euribor) was 60 basis points for the full year and lower compared to 71 basis points average spread in 2017. The average tenor was 6.1 years. Our issuance activities were higher in the first half of the year. We issued the following volumes over each quarter: Q1: € 10.8 billion, Q2: € 3.0 billion, Q3: € 3.2 billion and Q4: € 2.8 billion, respectively.

In 2019, our issuance plan is € 20-25 billion which we plan to cover by accessing the above sources, without being overly dependent on any one source. We also plan to raise a portion of this funding in U.S. dollar and may enter into cross currency swaps to manage any residual requirements. We have total capital markets maturities, excluding legally exercisable calls of approximately € 22 billion in 2019.

Funding Diversification

In 2018, total external funding decreased by € 72.1 billion from € 1,015.8 billion at December 31, 2017 to € 943.8 billion at December 31, 2018. The overall decrease was primarily driven by a decrease of balances in Secured Funding and Shorts by € 39.8 billion (55.2 %). This is due to managed reductions as a result of our balance sheet optimization initiatives and increased netting. In addition, unsecured wholesale funding decreased by € 16.4 billion (22.7 %) and Transaction Banking deposits by € 8.2 billion (11.4 %), primarily due to lower volumes and matured trades with financial institution and maturing certificates of deposits held by other wholesale customers. This decrease was partly offset by an increase of € 7.1 billion (9.8 %) in our retail business. The decrease of the Capital Markets and Equity volume by € 3.3 billion (4.6 %) relates to total issuance maturities in excess of new issuances.

The overall proportion of our most stable funding sources (comprising capital markets and equity, retail, and transaction banking) has increased from 72 % in 2017 to 77.5 % in 2018.

Composition of External Funding Sources

1Other includes fiduciary, self-funding structures (e.g. X-markets), margin / Prime Brokerage cash balances (shown on a net basis) Reference:Reconciliation to total balance sheet: Derivatives & settlement balances € 325.0 billion (€ 369.4 billion), add-back for netting effect for Margin & Prime Brokerage cash balances (shown on a net basis) € 51.1 billion (€ 59.2 billion), other non-funding liabilities € 28.3 billion (€ 30.3 billion) for December 31, 2018 and December 31, 2017 respectively; figures may not add up due to rounding.

Maturity of unsecured wholesale funding, ABCP and capital markets issuance1

	Dec 31, 2018							
in € m.	Not more than 1 month	Over 1 month but not more than 3 months	Over 3 months but not more than 6 months	Over 6 months but not more than 1 year	Sub-total less than 1 year	Over 1 year but not more than 2 years	Over 2 years	Total
Deposits from banks	1,119	1,542	4,064	1,181	7,906	151	271	8,328
Deposits from other wholesale customers	1,820	1,868	5,413	5,044	14,145	1,017	1,459	16,621
CDs and CP	823	946	1,313	889	3,972	7	0	3,979
ABCP	0	0	0	0	0	0	0	0
Senior non-preferred plain vanilla	600	5,276	7,463	5,812	19,150	8,954	44,256	72,360
Senior preferred plain vanilla	0	0	0	0	0	5	1,012	1,017
Senior structured	626	951	1,186	1,655	4,418	3,490	15,630	23,538
Covered bonds/ABS	213	972	553	407	2,145	3,848	15,666	21,659
Subordinated liabilities	9	731	2,226	32	2,998	2,217	9,605	14,820
Other	0	0	0	0	0	0	0	0
Total	5,209	12,285	22,219	15,022	54,734	19,690	87,898	162,322
Of which:								
Secured	213	972	553	407	2,145	3,848	15,666	21,659
Unsecured	4,997	11,313	21,666	14,615	52,590	15,842	72,232	140,663

1Includes additional Tier 1 notes reported as additional equity components in the financial statements. Liabilities with call features are shown at earliest legally exercisable call date. No assumption is made as to whether such calls would be exercised.

The total volume of unsecured wholesale liabilities, ABCP and capital markets issuance maturing within one year amount to € 55 billion as of December 31, 2018, and should be viewed in the context of our total Liquidity Reserves of € 259 billion.

Dec 31, 2017

in € m.	Not more than 1 month	Over 1 month but not more than 3 months	Over 3 months but not more than 6 months	Over 6 months but not more than 1 year	Sub-total less than 1 year	Over 1 year but not more than 2 years	Over 2 years	Total
Deposits from banks	9,709	3,477	2,196	1,172	16,554	721	54	17,330
Deposits from other wholesale customers	3,451	5,884	4,112	3,974	17,421	483	525	18,429
CDs and CP	1,579	2,595	2,381	2,873	9,427	6	82	9,516
ABCP	0	0	0	0	0	0	0	0
Senior non-preferred plain vanilla	405	4,038	3,231	3,288	10,961	16,009	44,399	71,368
Senior preferred plain vanilla	0	0	0	0	0	0	0	0
Senior structured	345	868	1,654	2,952	5,818	3,044	16,893	25,756
Covered bonds/ABS	90	194	1,711	737	2,731	2,190	17,248	22,169
Subordinated liabilities	50	234	5,265	700	6,250	135	11,694	18,079
Other	4	0	0	0	4	0	0	4
Total	15,632	17,289	20,550	15,695	69,167	22,588	90,895	182,650
Of which:								
Secured	90	194	1,711	737	2,731	2,190	17,248	22,169
Unsecured	15,542	17,096	18,840	14,959	66,436	20,398	73,647	160,481

The following table shows the currency breakdown of our short-term unsecured wholesale funding, of our ABCP funding and of our capital markets issuance.

Unsecured wholesale funding, ABCP and capital markets issuance (currency breakdown)

	Dec 31,2018					Dec 31,2017				
in € m.	in EUR	in USD	in GBP	in other CCYs	Total	in EUR	in USD	in GBP	in other CCYs	Total
Deposits from banks	2,400	5,241	22	665	8,328	2,310	11,096	2,423	1,502	17,330
Deposits from other whole- sale customers	15,482	678	269	192	16,621	14,109	3,743	233	344	18,429
CDs and CP	2,279	769	94	838	3,979	6,401	1,942	310	863	9,516
ABCP	0	0	0	0	0	0	0	0	0	0
Senior non-preferred plain	33,736	31,549	1,163	5,913	72,360	36,407	27,482	864	6,616	71,368

vanilla										
Senior preferred plain vanilla	1,017	0	0	0	1,017	0	0	0	0	0
Senior structured	8,858	11,564	22	3,094	23,538	9,937	12,301	31	3,487	25,756
Covered bonds/ ABS	21,659	0	0	0	21,659	22,142	25	0	2	22,169
Subordinated liabilities	6,338	7,498	801	183	14,820	7,940	8,960	801	378	18,079
Other	0	0	0	0	0	0	4	0	0	4
Total	91,768	57,298	2,372	10,884	162,322	99,245	65,552	4,662	13,192	182,650
Of which:										
Secured	21,659	0	0	0	21,659	22,142	25	0	2	22,169
Unsecured	70,110	57,298	2,372	10,884	140,663	77,103	65,527	4,662	13,190	160,481

Liquidity Reserves

Composition of our liquidity reserves by parent company (including branches) and subsidiaries

	Dec 31, 2018		Dec 31, 2017	
in € bn.	Carrying Value	Liquidity Value	Carrying Value	Liquidity Value
Available cash and cash equivalents (held primarily at central banks)	184	184	222	222
Parent (incl. foreign branches)	148	148	189	189
Subsidiaries	36	36	33	33
Highly liquid securities (includes government, government guaranteed and agency securities)	61	58	39	37
Parent (incl. foreign branches)	31	28	24	23
Subsidiaries	30	30	15	15
Other unencumbered central bank eligible securities	15	11	19	13
Parent (incl. foreign branches)	11	8	11	8
Subsidiaries	3	2	8	5
Total liquidity reserves	259	252	280	272
Parent (incl. foreign branches)	191	184	223	219
Subsidiaries	69	68	56	53

As of December 31, 2018, our liquidity reserves amounted to € 259 billion compared with € 280 billion as of December 31, 2017. The decrease of € 21 billion comprised a € 38 billion decrease in cash and cash equivalents, a € 4 billion decrease in other unencumbered securities offset by an increase of € 22 billion in highly liquid securities. The development was largely driven by management action to actively reduce excess liquidity and invest in higher yielding assets as part of our strategy. Our average liquidity reserves during the year were € 271 billion compared with € 269 billion during 2017. In the table above the carrying value represents the market value of our liquidity reserves

while the liquidity value reflects our assumption of the value that could be obtained, primarily through secured funding, taking into account the experience observed in secured funding markets at times of stress.

The liquidity value (weighted) of our Liquidity Reserves of € 252 billion exceeds the liquidity value (weighted) of our High Quality Liquid Assets (HQLA) of € 250 billion. The major drivers of this difference are that Liquidity Reserves include central bank eligible, but otherwise less liquid securities (for example traded loans, other investment grade corporate bonds and ABS) which are not recognized in HQLA. Additionally, HQLA includes major index equities, but excludes cash balances deposited with central banks to satisfy minimum cash requirements as well as cash balances deposited with non EU Central Banks rated below AA- which are included in the LCR but not as part of the HQLA.

Liquidity Coverage Ratio

Our weighted average LCR of 145 % (twelve months average) has been calculated in accordance with the Commission Delegated Regulation (EU) 2015/61 and the EBA Guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 CRR.

The year-end LCR as of December 31, 2018 stands at 140.37 % compared to 139.70 % as of December 31, 2017.

LCR components

	Dec 31, 2018	Dec 31, 2017
in € bn. (unless stated otherwise)	Total adjusted weighted value (average)	Total adjusted weighted value (average)
Number of data points used in the calculation of averages	12	12
Liquidity buffer	250	247
Total net cash outflows	172	172
Liquidity Coverage Ratio (LCR) in %	145 %	144 %

Funding Risk Management

Structural Funding

All funding matrices (the aggregate currency, the U.S. dollar and the GBP funding matrix) were in line with the respective risk appetite as of year ends 2018 and 2017.

Stress Testing and Scenario Analysis

During 2018, our stressed Net Liquidity Position remained well above the risk appetite and finished 2018 with a surplus of € 48 billion.

Global All Currency Daily Stress Testing Results

	Dec 31, 2018			Dec 31, 2017		
in € bn.	Funding Gap[1]	Gap Closure[2]	Net Liquidity Position	Funding Gap[1]	Gap Closure[2]	Net Liquidity Position
Systemic market risk	93	209	116	121	284	163
1 notch downgrade (DB specific)	63	193	131	79	252	173
Severe downgrade (DB specific)	222	278	57	287	331	43
Combined3	231	279	48	318	351	33

1Funding gap caused by impaired rollover of liabilities and other projected outflows.

2Based on liquidity generation through Liquidity Reserves and other countermeasures.

3Combined impact of systemic market risk and severe downgrade.

Global EUR Daily Stress Testing Results

	Dec 31, 2018			Dec 31, 2017		
in €	Funding Gap[1]	Gap Closure[2]	Net Liquidity Position	Funding Gap[1]	Gap Closure[2]	Net Liquidity Position
Combined[3]	117	144	28	157	172	15

1Funding gap caused by impaired rollover of liabilities and other projected outflows.

2Based on liquidity generation through Liquidity Reserves and other countermeasures.

3Combined impact of systemic market risk and severe downgrade.

Global USD Daily Stress Testing Results

	Dec 31, 2018			Dec 31, 2017		
in € bn.	Funding Gap[1]	Gap Closure[2]	Net Liquidity Position	Funding Gap[1]	Gap Closure[2]	Net Liquidity Position
Combined[3]	83	96	13	114	127	13

1Funding gap caused by impaired rollover of liabilities and other projected outflows.

2Based on liquidity generation through Liquidity Reserves and other countermeasures.

3 Combined impact of systemic market risk and severe downgrade.

Global GBP Daily Stress Testing Results

	Dec 31, 2018			Dec 31, 2017		
in € bn.	Funding Gap[1]	Gap Closure[2]	Net Liquidity Position	Funding Gap	Gap Closure	Net Liquidity Position
Combined[3]	6	9	3	14	18	4

1Funding gap caused by impaired rollover of liabilities and other projected outflows.

2Based on liquidity generation through Liquidity Reserves and other countermeasures.

3 Combined impact of systemic market risk and severe downgrade.

The following table presents the amount needed to meet collateral requirements from contractual obligations in the event of a one- or two-notch downgrade by rating agencies for all currencies..

Contractual Obligations

	Dec 31, 2018		Dec 31, 2017	
in € m.	One-notch downgrade	Two-notch downgrade	One-notch downgrade	Two-notch downgrade
Contractual derivatives funding or margin requirements	688	994	1,024	1,577
Other contractual funding or margin requirements	0	0	317	1,459

Asset Encumbrance

This section refers to asset encumbrance in the group of institutions consolidated for banking regulatory purposes pursuant to the German Banking Act. Thereunder not included are insurance companies or companies outside the finance sector. Assets pledged by our insurance subsidiaries are included in Note 22 “Assets Pledged and Received as Collateral” of the consolidated financial statements, and restricted assets held to satisfy obligations to insurance companies’ policy holders are included within Note 40 “Information on Subsidiaries” of the consolidated financial statements.

Encumbered assets primarily comprise those on- and off-balance sheet assets that are pledged as collateral against secured funding, collateral swaps, and other collateralized obligations. Additionally, in line with the EBA technical standards on regulatory asset encumbrance reporting, we consider as encumbered assets placed with settlement systems, including default funds and initial margins, as well as other assets pledged which cannot be freely withdrawn such as mandatory minimum reserves at central banks. We also include derivative margin receivable assets as encumbered under these EBA guidelines.

Readily available assets are those on- and off-balance sheet assets that are not otherwise encumbered, and which are in freely transferrable form. Unencumbered financial assets at fair value, other than securities borrowed or purchased under resale agreements and positive market value from derivatives, and available for sale investments are all assumed to be readily available.

The readily available value represents the current balance sheet carrying value rather than any form of stressed liquidity value (see the “Liquidity Reserves” for an analysis of unencumbered liquid assets available under a liquidity stress scenario). Other unencumbered on- and off-balance sheet assets are those assets that have not been pledged as collateral against secured funding or other collateralized obligations, or are otherwise not considered to be ready available. Included in this category are securities borrowed or purchased under resale agreements and positive market

value from derivatives. Similarly, for loans and other advances to customers, these would only be viewed as readily available to the extent they are already in a pre-packaged transferrable format, and have not already been used to generate funding. This represents the most conservative view given that an element of such loans currently shown in Other assets could be packaged into a format that would be suitable for use to generate funding.

Encumbered and unencumbered assets

	Dec 31, 2018			
	Carrying value			
			Unencumbered assets	
in € bn. (unless stated otherwise)	Assets	Encumbered assets	Readily available	Other
Debt securities	143	56	87	0
Equity instruments	56	42	15	0
Other assets:				
Cash and due from banks & Interest earning deposits with Banks	197	12	185	0
Securities borrowed or purchased under resale agreements[1]	12	0	0	12
Financial assets at fair value through profit and loss[2]				
Trading assets	12	0	12	0
Positive market value from derivative financial instruments	320	0	0	320
Securities borrowed or purchased under resale agreements[1]	69	0	0	69
Other financial assets at fair value through profit or loss	21	0	21	0
Financial assets available for sale[2]	6	0	5	1
Loans	441	75	5	360
Other assets	71	41	0	31
Total	1,348	225	330	793

1Securities borrowed and securities purchased under resale agreements are all shown as other unencumbered. The use of the underlying collateral is separately captured in the off-balance sheet table below.

2Excludes Debt securities and Equity instruments (separately disclosed above).

	Dec 31, 2018			
	Fair value of collateral received			
			Unencumbered assets	
in € bn. (unless stated otherwise)	Assets	Encumbered assets	Readily available	Other
Collateral received:	292	240	47	5
Debt securities	185	149	37	0
Equity instruments	102	92	10	0
Other collateral received	5	0	0	5

Dec 31, 2017

	Carrying value			
			Unencumbered assets	
in € bn. (unless stated otherwise)	Assets	Encumbered assets	Readily available	Other
Debt securities	148	65	84	0
Equity instruments	86	63	23	0
Other assets:				
Cash and due from banks & Interest earning deposits with Banks	234	11	223	0
Securities borrowed or purchased under resale agreements[1]	27	0	0	27
Financial assets at fair value through profit and loss[2]				
Trading assets	11	0	11	0
Positive market value from derivative financial instruments	363	0	0	363
Securities borrowed or purchased under resale agreements[1]	78	0	0	78
Other financial assets at fair value through profit or loss	5	0	5	0
Financial assets available for sale[2]	3	0	3	0
Loans	417	70	15	332
Other assets	108	42	0	66
Total	1,480	251	363	866

1Securities borrowed and securities purchased under resale agreements are all shown as other unencumbered. The use of the underlying collateral is separately captured in the off-balance sheet table below.

2Excludes Debt securities and Equity instruments (separately disclosed above).

3Prior period results have been restated due to a refined approach to determine assets pledged.

	Dec 31, 2017			
	Fair value of collateral received			
			Unencumbered assets	
in € bn. (unless stated otherwise)	Assets	Encumbered assets	Readily available	Other
Collateral received:	365	307	58	0
Debt securities	228	189	39	0
Equity instruments	137	118	18	0
Other collateral received	0	0	0	0

1Prior period results have been restated due to a refined approach to determine collateral received and collateral re-pledged.

The above tables set out a breakdown of on- and off-balance sheet items, broken down between encumbered, readily available and other. Any securities borrowed or purchased under resale agreements are shown based on the fair value of collateral received.

The above tables of encumbered assets include assets that are not encumbered at an individual entity level, but which may be subject to restrictions in terms of their transferability within the group. Such restrictions may be due to local connected lending requirements or similar regulatory restrictions. In this situation it is not feasible to identify

individual balance sheet items that cannot be transferred.

Maturity Analysis of Assets and Financial Liabilities

Treasury manages the maturity analysis of assets and liabilities. Modeling of assets and liabilities is necessary in cases where the contractual maturity does not adequately reflect the liquidity risk position. The most significant example in this context would be immediately repayable deposits from retail and transaction banking customers which have consistently displayed high stability throughout even the most severe financial crises.

The modeling profiles are part of the overall liquidity risk management framework (see section “Liquidity Stress Testing and Scenario Analysis” for short-term liquidity positions ≤ 1 year and section “Structural Funding” for long-term liquidity positions > 1 year) which is defined and approved by the Management Board.

The following tables present a maturity analysis of our total assets based on carrying value and upon earliest legally exercisable maturity as of December 31, 2018 and 2017, respectively.

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Analysis of the earliest contractual maturity of assets

	Dec 31, 2018									
in € m.	On demand (incl. Overnight and one day notice)	Up to one month	Over 1 month to no more than 3 months	Over 3 months but no more than 6 months	Over 6 months but no more than 9 months	Over 9 months but no more than 1 year	Over 1 year but no more than 2 years	Over 2 years but no more than 5 years	Over 5 years	Total
Cash and central bank balances	182,778	2,596	224	0	22	3,070	40	0	0	188,732
Interbank balances (w/o central banks)	4,234	3,182	202	110	131	422	0	0	599	8,881
Central bank funds sold	0	0	0	0	0	0	0	0	0	0
Securities purchased under resale agreements	40	2,537	1,415	887	461	521	1,067	1,294	0	8,222
With banks	1	2,015	173	588	447	266	0	1,136	0	4,626
With customers	39	522	1,242	299	14	255	1,067	158	0	3,596
Securities borrowed	2,880	517	0	0	0	0	0	0	0	3,396
With banks	49	60	0	0	0	0	0	0	0	110
With customers	2,830	456	0	0	0	0	0	0	0	3,287
Financial assets at fair value	472,750	37,855	14,782	2,174	2,830	5,872	2,274	4,617	30,085	573,240

through profit or loss										
Trading assets	152,456	0	0	0	0	0	0	0	281	152,738
Fixed-income securities and loans	96,650	0	0	0	0	0	0	0	18	96,668
Equities and other variable-income securities	55,250	0	0	0	0	0	0	0	264	55,514
Other trading assets	556	0	0	0	0	0	0	0	0	556
Positive market values from derivative financial instruments	320,058	0	0	0	0	0	0	0	0	320,058
Non-trading financial assets mandatory at fair value through profit or loss	236	37,855	14,782	2,174	2,830	5,872	2,274	4,617	29,804	100,444
Securities purchased under resale agreements	0	32,550	3,231	616	372	78	110	2,098	5,488	44,543
Securities borrowed	0	4,331	625	2	0	0	39	0	19,213	24,210
Fixed-income securities and loans	1	739	10,855	1,556	2,458	4,590	1,777	2,501	3,763	28,239
Other non-trading financial assets mandatory at fair value through profit or loss	235	235	72	0	0	1,204	348	18	1,340	3,453
Financial assets designated at fair value through profit or loss	0	9	95	0	0	0	0	0	1	104
Positive market values from derivative financial	0	143	179	220	21	23	322	641	1,480	3,028

instruments qualifying for hedge accounting										
Financial assets available for sale	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
Financial assets at fair value through other comprehensive income	3	3,101	2,290	2,945	3,982	4,403	6,858	16,371	11,228	51,182
Securities purchased under resale agreements	0	1,097	0	0	0	0	0	0	0	1,097
Securities borrowed	0	0	0	0	0	0	0	0	0	0
Debt securities	0	1,692	1,717	2,519	3,811	4,307	6,252	13,494	11,203	44,993
Loans	3	312	574	426	171	96	606	2,878	25	5,092
Other	0	0	0	0	0	0	0	0	0	0
Loans	15,812	39,559	23,116	14,432	9,585	8,324	23,928	67,648	197,892	400,297
To banks	170	1,644	1,394	1,017	120	131	544	406	1,179	6,605
To customers	15,642	37,915	21,722	13,415	9,465	8,194	23,383	67,242	196,713	393,691
Retail	2,238	7,109	3,702	1,735	857	887	4,794	15,099	151,001	187,422
Corporates and other customers	13,404	30,806	18,020	11,680	8,609	7,307	18,589	52,143	45,712	206,269
Securities held to maturity	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M	N/M
Other financial assets	65,390	7,813	446	418	108	2,917	835	2,416	1,844	82,187
Total financial assets	743,887	97,311	42,750	21,187	17,142	25,551	35,324	92,987	243,130	1,319,269
Other assets	13,198	91	91	124	158	197	34	984	13,991	28,868
Total assets	757,086	97,402	42,841	21,311	17,300	25,749	35,357	93,972	257,121	1,348,137

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Analysis of the earliest contractual maturity of assets

	Dec 31, 2017									
in € m.	On demand (incl. Overnight and one	Up to one month	Over 1 month to no more than 3	Over 3 months but no more than 6	Over 6 months but no more than 9	Over 9 months but no more than 1	Over 1 year but no more than 2	Over 2 years but no more than 5	Over 5 years	Total

	day notice)		months	months	months	year	years	years		
Cash and central bank balances	222,082	1,173	106	94	29	2,053	118	0	0	225,655
Interbank balances (w/o central banks)	4,737	2,613	305	215	116	696	122	0	463	9,265
Central bank funds sold	0	0	0	0	0	0	0	0	0	0
Securities purchased under resale agreements	29	4,625	1,220	1,277	1,448	617	561	89	105	9,971
With banks	21	3,758	585	735	1,400	443	468	0	0	7,409
With customers	8	867	635	542	48	175	94	89	105	2,562
Securities borrowed	15,786	553	49	0	323	0	22	0	0	16,732
With banks	1,889	283	0	0	0	0	0	0	0	2,172
With customers	13,896	270	49	0	323	0	22	0	0	14,560
Financial assets at fair value through profit or loss – trading	565,632	40,074	14,269	1,914	731	455	1,805	3,047	9,043	636,970
Trading assets	184,661	0	0	0	0	0	0	0	0	184,661
Fixed-income securities and loans	98,140	0	0	0	0	0	0	0	0	98,140
Equities and other variable-income securities	85,932	0	0	0	0	0	0	0	0	85,932
Other trading assets	590	0	0	0	0	0	0	0	0	590
Positive market values from derivative financial instruments	361,032	0	0	0	0	0	0	0	0	361,032
Financial assets designated at fair value through profit	19,938	40,074	14,269	1,914	731	455	1,805	3,047	9,043	91,276

or loss										
Securities purchased under resale agreements	5,364	36,195	12,160	1,115	662	125	1,066	903	253	57,843
Securities borrowed	14,540	3,786	1,928	0	0	0	0	0	0	20,254
Fixed-income securities and loans	34	93	182	799	68	17	720	2,144	8,216	12,273
Equities and other variable-income securities	0	0	0	0	0	132	20	0	573	725
Other financial assets designated at fair value through profit or loss	0	0	0	0	0	181	0	0	1	182
Positive market values from derivative financial instruments qualifying for hedge accounting	0	40	191	26	139	9	119	1,029	1,601	3,153
Financial assets available for sale	47	1,175	1,257	2,934	1,728	2,742	5,469	15,438	18,608	49,397
Fixed-income securities and loans	24	969	1,253	2,934	1,728	2,021	5,404	15,418	18,016	47,766
Equities and other variable-income securities	23	206	4	0	0	721	64	20	592	1,630
Loans	17,334	27,284	27,229	17,442	9,273	14,628	27,053	62,232	199,225	401,699
To banks	787	2,163	2,832	1,979	1,253	821	1,103	670	1,230	12,838
To customers	16,546	25,121	24,397	15,463	8,021	13,807	25,950	61,562	197,995	388,862
Retail	4,291	4,725	4,645	1,632	1,721	1,313	4,720	15,216	151,449	189,712
Corporates and other customers	12,256	20,395	19,752	13,831	6,300	12,493	21,230	46,346	46,546	199,149

Securities held to maturity	0	0	0	0	0	0	0	1,652	1,518	3,170
Other financial assets	85,083	352	179	135	92	143	21	433	74	86,513
Total financial assets	910,728	77,889	44,804	24,037	13,878	21,343	35,290	83,920	230,636	1,442,525
Other assets	20,451	0	0	0	0	0	0	0	11,756	32,207
Total assets	931,178	77,889	44,804	24,037	13,878	21,343	35,290	83,920	242,392	1,474,732

The following tables present a maturity analysis of our total liabilities based on carrying value and upon earliest legally exercisable maturity as of December 31, 2018 and 2017, respectively.

Analysis of the earliest contractual maturity of liabilities

	Dec 31, 2018									
in € m.	On demand (incl. Over-night and one day notice)	Up to one month	Over 1 month to no more than 3 months	Over 3 months but no more than 6 months	Over 6 months but no more than 9 months	Over 9 months but no more than 1 year	Over 1 year but no more than 2 years	Over 2 years but no more than 5 years	Over 5 years	Total
Deposits	348,026	26,750	109,965	26,422	10,517	10,021	11,563	9,662	11,479	564,405
Due to banks	46,399	2,487	8,699	6,059	913	1,624	2,284	5,470	8,045	81,980
Due to customers	301,627	24,263	101,266	20,363	9,604	8,397	9,279	4,193	3,434	482,425
Retail	125,292	9,731	74,012	3,878	1,736	1,176	917	970	603	218,314
Corporates and other customers	176,335	14,532	27,254	16,486	7,868	7,221	8,362	3,223	2,831	264,111
Trading liabilities	361,411	0	0	0	0	0	0	0	0	361,411
Trading securities	59,629	0	0	0	0	0	0	0	0	59,629
Other trading liabilities	295	0	0	0	0	0	0	0	0	295
Negative market values from derivative financial instruments	301,487	0	0	0	0	0	0	0	0	301,487
Financial liabilities	11,282	28,466	3,640	4,699	540	370	639	1,041	3,079	53,757

designed at fair value through profit or loss (without loan commitments and financial guarantees)										
Securities sold under repurchase agreements	10,822	27,909	3,031	4,259	0	2	208	17	6	46,254
Long-term debt	255	33	238	234	416	155	391	936	2,949	5,607
Other financial liabilities designated at fair value through profit or loss	205	524	372	206	124	212	40	89	124	1,895
Investment contract liabilities	0	0	0	0	0	512	0	0	0	512
Negative market values from derivative financial instruments qualifying for hedge accounting	0	178	431	383	93	25	264	241	306	1,922
Central bank funds purchased	252	0	0	0	0	0	0	0	0	252
Securities sold under repurchase agreements	3,151	611	349	3	265	234	0	1	0	4,615
Due to banks	2,205	513	264	3	265	205	0	1	0	3,456
Due to customers	945	99	85	0	0	29	0	0	0	1,158
Securities loaned	3,357	1	1	0	0	0	0	0	0	3,359
Due to banks	1,320	1	0	0	0	0	0	0	0	1,322
Due to customers	2,036	0	1	0	0	0	0	0	0	2,037
Other short	11,067	899	584	1,136	266	205	0	0	0	14,158

term borrowings										
Long-term debt	0	1,735	28,579	9,505	5,017	2,480	22,627	47,762	34,377	152,083
Debt securities - senior	0	1,678	7,444	8,977	4,388	1,790	15,050	43,552	25,510	108,389
Debt securities - subordi-nated	0	28	1,943	109	1	0	1,314	1,232	2,089	6,717
Other long-term debt - senior	0	26	19,193	376	592	673	6,250	2,838	6,602	36,550
Other long-term debt - subordinated	0	3	0	42	36	17	13	141	175	427
Trust Preferred Securities	0	0	0	3,168	0	0	0	0	0	3,168
Other financial liabilities	96,571	976	1,785	134	44	1,024	268	101	59	100,962
Total financial liabilities	835,117	59,617	145,335	45,450	16,743	14,872	35,361	58,809	49,300	1,260,603
Other liabilities	18,797	0	0	0	0	0	0	0	0	18,797
Total equity	0	0	0	0	0	0	0	0	68,737	68,737
Total liabilities and equity	853,913	59,617	145,335	45,450	16,743	14,872	35,361	58,809	118,037	1,348,137
Off-balance sheet commitments given	39,720	9,767	13,480	19,872	9,390	15,678	27,793	91,753	36,200	263,654
Banks	20,274	5,010	7,445	10,854	5,178	8,539	14,394	46,720	19,178	137,593
Retail	8,192	1,246	388	86	115	577	343	79	4,360	15,386
Corporates and other customers	11,253	3,511	5,647	8,932	4,097	6,563	13,055	44,954	12,662	110,674

Analysis of the earliest contractual maturity of liabilities

	Dec 31, 2017									
in € m.	On demand (incl. Over-night	Up to one month	Over 1 month to no more than 3 months	Over 3 months but no more than 6	Over 6 months but no more than 9	Over 9 months but no more than 1	Over 1 year but no more than 2	Over 2 years but no more than 5	Over 5 years	Total

	and one day notice)			months	months	year	years	years		
Deposits	359,619	34,022	111,755	23,845	12,259	9,488	9,296	9,503	12,087	581,873
Due to banks	58,070	5,618	10,520	4,464	1,081	1,345	2,744	5,277	8,921	98,041
Due to customers	301,549	28,404	101,234	19,381	11,178	8,143	6,552	4,226	3,165	483,832
Retail	120,110	10,308	73,943	3,059	2,074	1,336	1,111	1,187	601	213,730
Corporates and other customers	181,439	18,095	27,291	16,323	9,103	6,806	5,441	3,038	2,565	270,102
Trading liabilities	414,189	0	0	0	0	0	0	0	0	414,189
Trading securities	71,148	0	0	0	0	0	0	0	0	71,148
Other trading liabilities	314	0	0	0	0	0	0	0	0	314
Negative market values from derivative financial instruments	342,726	0	0	0	0	0	0	0	0	342,726
Financial liabilities designed at fair value through profit or loss (without loan commitments and financial guarantees)	16,018	29,236	6,080	1,574	548	5,520	665	1,091	3,134	63,866
Securities sold under repurchase agreements	14,722	28,857	4,167	1,089	5	4,897	62	24	18	53,840
Long-term debt	256	33	582	323	345	427	603	889	2,980	6,439
Other financial liabilities designated at fair value through profit or loss	1,040	346	1,332	161	199	196	1	178	136	3,587
Investment contract liabilities	0	0	0	0	0	574	0	0	0	574

Negative market values from derivative financial instruments qualifying for hedge accounting	0	11	58	230	65	41	423	249	218	1,294
Central bank funds purchased	174	83	0	0	0	0	0	0	0	257
Securities sold under repurchase agreements	14,143	353	1,497	409	94	837	476	16	23	17,849
Due to banks	11,459	266	1,453	327	43	736	476	11	0	14,772
Due to customers	2,684	87	44	82	52	102	0	5	23	3,077
Securities loaned	6,684	3	1	0	0	0	0	0	1	6,688
Due to banks	2,253	3	0	0	0	0	0	0	1	2,256
Due to customers	4,432	0	1	0	0	0	0	0	0	4,433
Other short term borrowings	11,831	848	1,542	1,227	738	2,226	0	0	0	18,411
Long-term debt	0	886	5,029	16,419	9,931	14,137	21,218	49,923	42,172	159,715
Debt securities - senior	0	626	4,266	3,481	5,873	3,334	19,392	45,546	26,978	109,496
Debt securities - subordi-nated	0	0	189	267	67	11	48	1,096	5,554	7,232
Other long-term debt - senior	0	210	529	12,496	3,886	10,722	1,685	3,230	9,362	42,120
Other long-term debt - subordinated	0	50	45	176	105	70	93	50	278	868
Trust Preferred Securities	0	0	1,644	2,723	274	183	666	0	0	5,491
Other financial liabilities	112,960	1,254	2,228	180	197	177	204	163	4	117,367
Total financial liabilities	935,618	66,696	129,835	46,607	24,107	33,182	32,949	60,944	57,637	1,387,574
	19,051	0	0	0	0	0	0	0	0	19,051

Other liabilities										
Total equity	0	0	0	0	0	0	0	0	68,099	68,099
Total liabilities and equity	954,669	66,696	129,835	46,607	24,107	33,182	32,949	60,944	125,736	1,474,724
Off-balance sheet commitments given	6,290	8,484	10,418	16,261	8,234	15,928	27,732	84,121	28,996	206,464
Banks	238	406	1,398	1,591	557	733	952	346	216	6,437
Retail	352	253	389	247	108	205	223	445	8,483	10,706
Corporates and other customers	5,700	7,825	8,630	14,423	7,569	14,990	26,557	83,330	20,297	189,320

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Introduction

The 2018 Compensation Report provides detailed compensation information with regard to the overall Deutsche Bank Group.

The Compensation Report comprises the following three sections:

Management Board Compensation Report

The first section of the Report sets out the structure and design of the compensation system for the members of the Management Board of Deutsche Bank AG (compensation policies). It is followed by information on the compensation and other benefits granted by the Supervisory Board to the members of the Management Board of Deutsche Bank AG.

Employee Compensation Report

The second section of the compensation report discloses information with regard to the compensation system and structure that applies to the employees in Deutsche Bank Group (including DWS Group and Postbank units). The report provides details on the Group Compensation Framework and it outlines the decisions on Variable Compensation for 2018. Furthermore, this part contains quantitative disclosures specific to employees identified as Material Risk Takers (MRTs) in accordance with the Remuneration Ordinance for Institutions (Institutsvergütungsverordnung – InstVV).

Supervisory Board Report and Disclosure

The third section provides information on the structure and level of compensation for Supervisory Board members of Deutsche Bank AG.

The report complies with the requirements of Section 314 (1) No. 6 of the German Commercial Code (Handelsgesetzbuch, “HGB”), the German Accounting Standard No. 17 (“DRS 17”) “Reporting on Executive Body Remuneration”, CRR, InstVV, and the recommendations of the German Corporate Governance Code.

Letter of the chairman of the Supervisory Board

Dear Shareholders,

In this report you will find comprehensive information on the compensation system and the compensation for the members of the Management Board. Let me summarize in brief the main points:

We have not changed our compensation policies this year, as we believe our existing framework has proven effective. In line with our compensation policies, each Management Board member, alongside a fixed salary and a contribution to the company pension plan, is entitled to a variable compensation which is subject to the achievement of annually defined objectives. The largest part (60 %) of the variable compensation is based on long-term and Group-oriented targets, whereas the remaining (up to 40 %) is based on short-term Group targets and individual or divisional objectives. For the first time in 2018, individual objectives include performance against certain qualitative and quantitative metrics included on the Management Board Balanced Scorecards. These scorecards are being rolled out across the bank and will be further cascaded down the organization during 2019.

In the year under review, the achievement level for the Long-Term-Award was 41 % and for the short-term Group targets 70 %. For details please refer to the following pages.

The bank reported its first net profit since 2014. Since the Management Board had not received any variable compensation for financial years 2015, 2016 and 2017, we are granting the Management Board members the variable compensation that results from the achievement of their respective targets. The outcomes are at the same time differentiated and balanced with values between 80% and 154% within a range of zero to 200%. For the first time, the requirements of the 2017 German Remuneration Ordinance for Institutions have to be applied to the granting of variable compensation for the year under review. As a result, deferred compensation for Management Board members will be subject to a deferral period of at least five years and it will be possible to reclaim compensation components for up to two years after the final tranche has vested in specific situations that have been defined by the regulator.

The Supervisory Board looks forward to discussing this and other topics with you at the General Meeting.

Yours sincerely,

Dr. Paul Achleitner

Management Board Compensation Report

Management Board Compensation Governance

The Supervisory Board, as a plenary body, is responsible for the structuring and design of the system for the compensation of the members of the Management Board (compensation policies) as well as for determining their individual compensation. The Supervisory Board is supported by the Compensation Control Committee. The Compensation Control Committee controls and supports the appropriate structuring of the compensation policies and prepares the resolutions of the Supervisory Board regarding the individual compensation of the Management Board members. In addition, the Compensation Control Committee and/or the Supervisory Board will consult independent external consultants where this is considered necessary.

The Compensation Control Committee currently comprises four members. In accordance with regulatory requirements, at least one must have sufficient expertise and professional experience in the area of risk management and risk controlling and at least one other must be an employee representative.

The Supervisory Board regularly reviews the compensation policies for the members of the Management Board. In the case of a change or restructuring of the compensation policies, the Supervisory Board uses the possibility provided in § 120 (4) of the German Stock Corporation Act (Aktiengesetz – AktG) for the General Meeting to approve the system of compensation for Management Board members. This was last seen in 2017, and the Supervisory Board will continue to use this possibility in accordance with the German Act Implementing the Second Shareholder Rights Directive which is currently in the legislative process.

Principles of the Compensation Policies

Numerous factors are to be considered when structuring the compensation policies and determining individual compensation. These factors can be summarized as specific remuneration principles. The following overview shows the core remuneration principles which have an impact on both the compensation policies and the individual remuneration and have therefore been taken into consideration by the Supervisory Board when passing a resolution on questions of remuneration.

When passing a resolution on the structure and determination of compensation, the Supervisory Board considers in particular:

Governance	The structuring of the compensation policies and determination of individual remuneration takes place within the framework of the statutory and regulatory requirements. The Supervisory Board's objective is to offer, within the regulatory requirements, a compensation package that is both in line with customary market practices and competitive with comparable roles.
Group Strategy	Through the structure of the compensation policies the members of the Management Board are to be motivated to achieve the objectives set out in the Bank's strategies, to work continuously towards the positive development of the Group and to avoid unreasonably high risks.
Collective and Individual Performance of the Management Board Members	The variable, performance-related compensation is determined on the basis of the level of achievement of previously agreed objectives. For this purpose, collective and Deutsche Bank Group-related objectives applying equally to all Management Board members are set. In addition, the Supervisory Board sets individual objectives for each member of the Management Board separately, which particularly take into account the development of the business, infrastructure or regional areas of responsibility as the case may be. Such objectives may be financial or non-financial.
Regulatory or other compensation caps	Pursuant to the regulatory approaches under CRD 4, the ratio of fixed to variable compensation is generally limited to 1:1 (cap regulation), i.e. the amount of variable compensation must not exceed that of fixed compensation. However, lawmakers have also stipulated that shareholders can resolve to relax the requirement by setting the ratio of fixed to variable compensation to 1:2. In May 2014, the General Meeting approved the aforementioned setting to 1:2 with a majority of 91 %. The compensation policies resolved by the Supervisory Board also provides fixed caps for the individual variable compensation components. In addition, the Supervisory Board is entitled to set an additional cap for the total compensation of the individual members of the Management Board. In the 2018 financial year, the additional cap is € 9.85 million.
Sustainability Aspects	The total variable compensation for Management Board members is currently only to be granted on a deferred basis. Since 2017, a portion of at least 75 % of the deferred variable compensation is to be granted in the form of equity-based compensation components, which only vest no less than five years after the grant in one tranche (cliff vesting) and are subject to an additional

	retention period of one year. The remaining portion is to be granted as non-equity based compensation component and to vest in identical tranches over a period of four years. During the deferral and retention period, deferred compensation is subject to specific forfeiture provisions. The total variable compensation may be reclaimed by the bank for up to two years after the expiry of the last deferral period in response to specific individual negative contributions to results made by the Management Board member (clawback).
Interests of the Shareholders	When designing the specific structure of the compensation policies, determining individual compensation amounts, and structuring compensation delivery and allocation, the focus is on ensuring a close link between the interests of both the Management Board members and shareholders. While defining the variable compensation, this is achieved through the utilization of clearly defined key financial figures which are directly linked to the performance of Deutsche Bank.

The compensation policies and the compensation structures they encompass are reflected in the individual Management Board members' contracts.

Compensation Structure

- Transparent Compensation Structures
- Clear link between compensation and previously agreed objectives
- Strong emphasis on the interests of the shareholders

Structure and compensation elements of the compensation policies

The compensation policies applicable since January 2017 consist of non-performance-related (fixed) and performance-related (variable) components.

Non-Performance-Related Components (Fixed Compensation)

The fixed compensation is not linked to performance and consists of the base salary, allowances, contributions to the company pension plan and "other benefits".

The annual base salary amounts to € 3.4 million for the Chairman of the Management Board. The Presidents receive an annual base salary of € 3 million. The annual base salary for ordinary Management Board members with responsibility for CIB is € 3 million and for all other ordinary board members € 2.4 million.

Various factors were considered when determining the appropriate level of the base salary. First, the base salary rewards general assumption of the office of Management Board member and the related overall responsibility of the individual Management Board members. In addition, the compensation paid in the comparable market is taken into account when determining the amount of the base salary. However, a market comparison must take into consideration that the regulatory requirements pursuant to the German Remuneration Ordinance for Institutions (Institutsvergütungsverordnung – InstVV) in conjunction with Section 25a (5) of the German Banking Act (Kreditwesengesetz) set a cap for variable compensation at 200 % of the fixed compensation. Accordingly, the fixed compensation must be determined in a way that ensures competitive compensation in line with market practice while taking into account the aforementioned requirements. The regulatory required cap was implemented in 2014.

Under InstVV rules, the Supervisory Board is able to award optional functional allowances to Management Board members who are assigned additional tasks and a particular responsibility extending beyond the assigned regular area of responsibility within the Management Board. The allowance can be a maximum of 100 % of the fixed base salary and is paid for as long as the additional tasks and the particular responsibility are assigned to the Management Board member. Under the InstVV rules, functional allowances are considered part of fixed compensation and therefore are not subject to forfeiture or clawback conditions.

Additional non-performance-related components include “other benefits”. The “other benefits” comprise the monetary value of non-cash benefits such as company cars and driver services, insurance premiums, expenses for company-related social functions and security measures including payments, if applicable, of taxes on these benefits as well as taxable reimbursements of expenses.

Performance-Related Components (Variable Compensation)

The current compensation policies provide that compensation must be linked to transparent performance criteria. The structure allows for the agreement of individual and divisional objectives alongside collective objectives and makes it possible to achieve competitive pay levels in line with market practice on the basis of the respective member’s area of responsibility and, at the same time, also meets in this respect the regulatory requirements.

The entire variable compensation is performance-related. It consists of a two components:

- the Short-Term Award and
- the Long-Term Award .

The 2017 InstVV generally stipulates a three-year assessment period for the variable compensation. This requirement is taken into account by assigning a three-year reference period to each of the three objectives of the long-term component. If the relevant three years cannot be attributed to a member of the Management Board due to that member joining the bank only recently, performance will be determined for the period that can be attributed to the Management Board member. In addition, the deferral period of the variable compensation is extended by the number of years missing with respect to the assessment period.

Short-Term Award (STA)

The STA is linked to the achievement of short term and medium-term objectives. Objectives include collective objectives to be achieved by the Management Board as a whole and individual objectives whose achievement level is determined separately for each member of the Management Board.

In order to distinguish collective objectives from individual objectives, the STA is divided into two components:

- the Group Component and
- the Individual Component.

Group Component

The objectives to be achieved form the basis for the calculation of the Group component as part of the STA. The key objective of the Group component is to link the variable compensation for the Management Board to the performance of the Bank.

In 2016, the Management Board decided to align part of the variable compensation for non-tariff employees of the Bank more closely with Group performance. This seeks to reward the contribution of all employees to the financial results of the Bank and the achievements in the implementation of its strategy. Management Board compensation is also closely linked to the performance of the Bank using selected key financial figures. The Supervisory Board decided to align the compensation policies for the Management Board members more closely with the compensation system for employees. This is achieved by using the annual performance metrics underlying the Group component in the compensation system for employees as the reference value for the Group component of the STA since 2017.

In accordance with the strategy, four performance metrics constituting important indicators for the capital, risk, cost and return profile of the Bank form the reference value for the Group Component of the STA:

Common Equity Tier 1 (CET1) capital ratio (fully loaded)	The Common Equity Tier-1 Ratio of the Bank in relation to risk-weighted assets.
Leverage ratio	The Bank´s Tier 1 capital as a percentage of its total leverage exposure pursuant to CRR/CRD 4.
Adjusted costs	Total noninterest expenses, excluding restructuring and severance, litigation and impairment of goodwill and other intangible assets.
Post-tax return on tangible equity (RoTE)	Net income (or loss) attributable to Deutsche Bank shareholders as a percentage of average tangible shareholders' equity. The latter is the shareholders' equity on the bank´s balance sheet, excluding goodwill and other intangible assets.

The Supervisory Board regularly reviews the selection of the performance metrics. The above four objectives are equally weighted at up to 25 % in the determination of the Group Component of the STA, depending on the achievement level. If, overall, the performance metric-based objectives are not achieved during the period being evaluated, the Supervisory Board may determine that a Group component will not be granted.

Individual Component

The individual component of the STA rewards the achievement of short- and medium-term individual objectives. These objectives are established by the Supervisory Board as part of the objective setting agreement for the respective financial year's performance evaluation. The key objectives are designed to contribute to the applicable business policy and strategic objectives of the Bank, in line with each Management Board member's area of responsibility. Not only is financial success taken into account in the process, but also the conduct towards staff members and clients as part of carrying out business activities. Objectives for the individual component may for example include revenue developments in the course of the year, project-related targets, diversity objectives or other developments in employee or client satisfaction.

As part of the annual objective setting agreement, corresponding key financial figures and/or factors are set for all objectives that are used to determine the objective achievement level. As a general rule, three objectives per financial year are set for each Management Board member.

For the first time in 2018, the Balanced Scorecard was integrated in the compensation policies of the individual component of the Short Term Award to be determined by the Supervisory Board. The Balanced Scorecard allows for the operationalization of strategic objectives by transforming the latter into concrete measures while simultaneously creating an overview of priorities across the Group. The Balanced Scorecard of Management Board Members consists of two components, (i) the key performance indicators (KPI) and (ii) the key deliverables, the achievement level of

which is determined at the end of the financial year. The Balanced Scorecard contains key financial figures as well as (non-financial) key performance indicators for client business, personnel, control environment and innovation. In order to link the Balanced Scorecard to the remuneration of the members of the Management Board, the Supervisory Board resolved that a ratio of 30 % of the individual component of the STA (i.e., 6-9 % of the total variable compensation) included in the component comprising the KPI will be accounted for in the performance evaluation of the Management Board members for the 2018 financial year. The component of the Balanced Scorecard comprising the key deliverables will also be accounted for in the performance evaluation as of the 2019 financial year.

The sum of individually agreed and divisional objectives amounts to a maximum of 90 % of the individual component of the STA, depending on the achievement level of the aforementioned individual objectives and key performance indicators of the Balanced Scorecard. The Supervisory Board decides on the remaining portion of 10 % of the individual component to reward outstanding contributions over the course of the financial year as an exercise of its discretionary authority. If, overall, the objectives are not achieved during the period being evaluated, the Supervisory Board may determine that an individual component will not be granted.

Minimum, Target and Maximum Values

The sum of Group-wide and individually agreed objectives amounts to a maximum of 40 % of the total variable compensation, depending on the achievement level of the aforementioned objectives. This is designed to ensure that the individual objectives do not primarily determine the value of the variable compensation. If, overall, the objectives are not achieved during the period being evaluated, the Supervisory Board may determine that an STA will not be granted.

	2018		
in €	Minimum	Target	Maximum
Chairman			
Group component	0	500,000	1,000,000
Individual component	0	1,400,000	2,800,000
STA total[1]	0	1,900,000	3,800,000
Ordinary Board member			
Group component	0	500,000	1,000,000
Individual component (from - up to)	0	800,000	1,600,000
	0	up to 1,400,000	up to 2,800,000
STA total (from - up to)	0	1,300,000	2,600,000
	0	up to 1,900,000	up to 3,800,000

1STA: Short-Term Award.

Long-Term Award (LTA)

When determining the variable compensation, a clear focus is placed on the achievement of long-term objectives. Therefore, the target figure of the LTA constitutes a portion of no less than 60 % of the total variable target compensation. As with the short-term component, the Supervisory Board determines the collective long-term objectives for the Management Board members. The achievement level is determined on the basis of the definition of clear performance metrics and/or factors which are to be agreed for these objectives at the beginning of a financial

year.

The Supervisory Board determines a total of three objectives for each Management Board member. Each objective is equally weighted at 1/3 in the assessment of the LTA. For 2018, the Supervisory Board determined the following three common objectives for all Management Board members.

The relative performance of the Deutsche Bank share in comparison to selected peer institutions is an objective within the framework of the LTA. This objective is intended to promote the sustainable performance of the Deutsche Bank share. The long-term nature of this objective is supported by the determination of the Relative Total Shareholder Return (RTSR) on the basis of a three-year assessment. The RTSR of Deutsche Bank is derived from the Total Shareholder Return of Deutsche Bank in relation to the average total shareholder returns of a selected peer group (calculated in Euros). This LTA portion is calculated from the average of the annual RTSR for the last three financial years (compensation year and the two preceding years). If the three-year average of the relative total shareholder return of Deutsche Bank is greater than 100 %, then the value of the RTSR portion increases proportionately to an upper limit of 150 % of the target figure, i.e., the value increases by 1 % for each percentage point above 100 %. If the three-year average of the relative total shareholder return is lower than 100 %, the value declines disproportionately. If the relative total shareholder return is calculated to be in the range of less than 100 % to 80 %, the value of the Award portion is reduced for each lower percentage point by 2 percentage points. In the range between 80 % and 60 %, the value of the Award portion is reduced for each lower percentage point by 3 percentage points. If the three-year average of the RTSR does not exceed 60 %, the value of the Award portion is set to zero.

The peer group used for the calculation of the relative total shareholder return is selected based on the criteria of generally comparable business activities, comparable size and international presence. The Supervisory Board reviews the composition of the peer group regularly.

In 2018, the peer group for the RTSR comprises the following banks:

Peer Group of Deutsche Bank

The Supervisory Board sets an objective designed to promote the growing and strengthening of the Bank, based on the notion of actual organic capital growth. Organic Capital Growth is defined as the balance of the following changes (which are also reported in the Consolidated Statement of Changes in Equity) occurring during the financial year, divided by the Deutsche Bank Shareholders Equity attributable as at December 31 of the previous financial year.

- Total comprehensive income, net of tax
- Coupons on additional equity components, net of tax
- Remeasurement gains (losses) related to defined benefit plans, net of tax
- Option premiums and other effects from options on common shares
- Net gains (losses) on treasury shares sold

Consequently, "non-organic" changes in equity, in particular payment of a dividend or capital increase, are of no relevance to the achievement of the objective.

As in the last year, the third objective is taken from the category “ Culture & Clients ”. In this context, the Supervisory sets an objective which is linked to corporate culture, client satisfaction and dealing with clients. This objective is

linked to the sustainable development of the intrabank environment or designed to foster the development of client relations for the 2018 financial year. One objective set by the Supervisory Board for all Management Board members is – this year again – again the evaluation of the control environment within the Deutsche Bank Group.

The Long Term Award can be a maximum of 150 % of the respective target figures.

Objectives

Objectives are established by the Supervisory Board as part of an objective setting agreement at the beginning of the respective financial year for purposes of performance evaluation. For all objectives, financial metrics are set to measure the achievement level of the objectives in a transparent way. The discretionary decision is strictly limited to 3 to 6 % with respect to the total variable compensation.

The allocation of the objectives to the individual compensation components is set out below.

Maximum Compensation

Total Compensation/Target and Maximum Values

	2018					2017
	Base salary	STA1		LTA2	Total compensation	Total compensation
in €		Group component	Individual component			
Chairman						
Target	3,400,000	500,000	1,400,000	3,400,000	8,700,000	8,700,000
Maximum	3,400,000	1,000,000	2,800,000	5,100,000	12,300,000	12,300,000
Ordinary Board member (CIB)						
Target	3,000,000	500,000	1,400,000	2,800,000	7,700,000	7,700,000
Maximum	3,000,000	1,000,000	2,800,000	4,200,000	11,000,000	11,000,000
Ordinary Board member (AM)						
Target	2,400,000	500,000	1,300,000	2,800,000	7,000,000	7,000,000
Maximum	2,400,000	1,000,000	2,600,000	4,200,000	10,200,000	10,200,000
Ordinary Board member (PCB)						
Target	2,400,000	500,000	1,100,000	2,800,000	6,800,000	6,800,000
Maximum	2,400,000	1,000,000	2,200,000	4,200,000	9,800,000	9,800,000
Ordinary Board member (Infrastructure/Region)						
Target	2,400,000	500,000	800,000	2,800,000	6,500,000	6,500,000

Maximum	2,400,000	1,000,000	1,600,000	4,200,000	9,200,000	9,200,000

1STA: Short-Term Award.

2LTA: Long-Term Award.

The total compensation of a Management Board member is subject to additional caps. Due to regulatory requirements, the variable compensation is capped at 200 % of the fixed compensation. In addition, the Supervisory Board again set a cap of € 9.85 million for the overall total compensation for the 2018 financial year. Consequently, compensation is capped at a maximum of € 9.85 million, even where the level of the target achievement would result in higher compensation.

Long-Term Incentive and Sustainability

According to the requirements of the InstVV at least 60 % of the total variable compensation must be granted on a deferred basis. Not less than half of this deferred portion may comprise equity-based compensation components, while the remaining portion must be granted as deferred cash compensation. Both compensation components must be deferred over a multi-year period which, for the equity-based compensation components, must be followed by a retention period. During the period until payment or delivery, the compensation portions awarded on a deferred basis may be forfeited. At least half of the maximum of 40 % of the Variable Compensation granted on a non-deferred basis must consist of equity-based compensation components and only the remaining portion may be paid out directly in cash. Of the total Variable Compensation, no more than a maximum of 20 % may be paid out in cash immediately, while at least 80 % are paid or delivered at a later date.

Since 2014, the total variable compensation for Management Board members is only granted on a deferred basis.

In order to bind the Management Board members even closer to the performance of the Bank and the Deutsche Bank share price, the Supervisory Board decided that as of the 2017 financial year, the long-term component (LTA), and in fact no less than 75 % of the total variable compensation, will continue to be granted only in the form of Restricted Equity Awards. Only the short-term component (STA), however, a maximum of 25 % of the total variable compensation, is granted in the form of Restricted Incentive Awards.

The Restricted Incentive Awards vest over a period of four years. The Restricted Equity Awards vest after five years in one tranche (“cliff vesting”) and have an additional retention period of one year. Accordingly, Management Board members are first permitted to dispose of the equities after six years. During the deferral and retention period, the value of the Restricted Equity Awards is linked to the Bank’s share price and is therefore tied to the sustained performance of the Bank. Specific forfeiture provisions apply for Restricted Incentive Awards and Restricted Equity Awards during the deferral and retention period.

The following chart shows the time period for the payment or the delivery of the variable compensation components in the five consecutive years following the grant year as well as the period of a possible clawback.

Timeframe for payment or delivery and non-forfeiture for the Management Board

Forfeiture Conditions / Clawback

In order to create long-term incentives, the Restricted Equity Awards and the Restricted Incentive Awards compensation components are deferred or spread out over several years. Awards may be fully or partially forfeited, for example, due to individual misconduct (including a breach of regulations) or termination for cause, and also due to a negative Group result or individual negative contributions to results. In addition, the Awards may be completely forfeited if the statutory or regulatory minimum requirements for the core capital ratio are not met during this period.

The revision of the InstVV adopted in August 2017 requires that “clawback provisions” are to be agreed with the members of the management body (Geschäftsleiter) of significant institutions. Contrary to the forfeiture conditions, this clause allows the Supervisory Board to reclaim already paid out or delivered compensation components in response to specific individual negative contributions to results made by the Management Board member for up to two years after the expiry of the last deferral period. The clawback provision which had already been individually agreed with the Management Board members in 2017 is now for the first time applicable to the compensation elements granted in the 2018 performance year.

Limitations in the Event of Exceptional Developments

In the event of exceptional developments, the total compensation for each Management Board member is limited to a maximum amount. In addition, the Supervisory Board and the members of the Management Board agreed on a possible limitation of the variable compensation which is included in the service agreements of the Management Board members and according to which the variable compensation may be limited to amounts below the provided maximum amounts or may not be granted altogether. Furthermore, statutory regulations provide that the Supervisory Board may reduce the compensation of the Management Board members to an appropriate level, if the situation of the company deteriorates in such a way following the determination of the compensation that the continued granting of the compensation would be unreasonable for the company. A payment of variable compensation elements will also not take place if the payment of Variable Compensation components is prohibited or restricted by the competent regulator in accordance with existing statutory requirements.

Shareholding Guidelines

- Long-term commitment of Management Board members to the Bank
- Identification with Deutsche Bank and its shareholders
- Link to performance of the Bank through deferred compensation

All members of the Management Board are required to hold a specified value of Deutsche Bank shares. This requirement fosters the identification of the Management Board members with Deutsche Bank and its shareholders and aims to ensure a sustainable link to the performance of the Bank.

For the Chairman, the number of shares to be held amounts to two times the annual base salary, i.e., the equivalent of € 6,800,000. For other Management Board members the number of shares to be held is one time the annual base salary, i.e., the equivalent of € 2,400,000 or € 3,000,000, respectively.

The share retention obligations must first be fulfilled on the date on which the Management Board member was granted an overall equity based variable compensation corresponding to 1 times the retention obligations since his or her appointment to the Management Board. Deferred equity-based compensation may be taken into account at 75 % of its value towards fulfillment of the obligation.

Observance of the requirement is reviewed semi-annually as of June 30 and December 31. If the required number of shares is not met, the Management Board members must correct any deficiencies by the next review.

As compensation components are deferred or spread out over several years, another link to the performance of the Deutsche Bank share is established that should generally continue to exist even for the period after leaving the Management Board.

Pension benefits

The Supervisory Board allocates an entitlement to pension plan benefits to the Management Board members. These entitlements involve a defined contribution pension plan. Under this pension plan, a personal pension account is set up for each participating member of the Management Board after appointment to the Management Board.

Management Board members receive a contribution in the form of a contractually agreed fixed annual amount in Euro. The contribution accrues interest credited in advance, determined by means of an age-related factor, at an average rate of 4 % per year up to the age of 60. From the age of 61 onwards, an additional contribution in the amount of 4 % per year of the amount reached on December 31 of the previous year will be credited to the pension account.

The annual contributions, taken together, form the pension amount available to pay the future pension benefit in case of a pension event (age limit, disability or death). The pension right is vested from the start.

Other Benefits upon Early Termination

The Management Board members are in principle entitled to receive a severance payment upon early termination of their appointment at the Bank's initiative, provided the Bank is not entitled to revoke the appointment or give notice under the contractual agreement for cause. The circumstances of the early termination of the appointment and the length of service on the Management Board are to be taken into account when determining the amount of the severance payment. The severance payment, as a rule, is two annual compensation amounts and is limited to the claims to compensation for the remaining term of the contract. The calculation of the severance payment is based on the annual compensation for the previous financial year and on the expected annual compensation for the current financial year, if applicable. The severance payment is determined and granted in accordance with the statutory and regulatory requirements, in particular with the provisions of the InstVV.

If a Management Board member leaves office in connection with a change of control, he/she is also, under certain conditions, entitled in principle to a severance payment. The exact amount of the severance payment is determined by the Supervisory Board within its sole discretion. According to the German Corporate Governance Codex, the severance payment will not exceed three annual compensation amounts and is limited to the claims to compensation for the remaining term of the contract. The calculation of the compensation is again based on the annual compensation for the previous financial year.

Management Board compensation for the 2018 financial year

Fixed Compensation

In the 2018 financial year, the annual base salary was € 3,400,000 for the Chairman of the Management Board and € 2,400,000 or € 3,000,000 respectively for the other Management Board members. For the period from November 2017 to August 2018, the Management Board member Stuart Lewis was granted a functional allowance of € 150,000 per

month. The Supervisory Board had conferred on Stuart Lewis the additional responsibility to further improve the relationship with U.S. regulators, in addition to his areas of responsibility according to the business allocation plan. For the period from December 2017 to November 2020, Garth Ritchie will receive a monthly functional allowance of € 250,000. Mr. Ritchie has been entrusted with an additional responsibility in connection with the implications of Brexit, in addition to his areas of responsibility according to the business allocation plan.

Variable Compensation

The Supervisory Board, acting on a proposal of the Compensation Control Committee, determined the variable compensation for the Management Board members for the 2018 financial year. The Supervisory Board calculated and determined the amount of the LTA and the STA based on the level of achievement of the respective objectives and/or key performance figures. The individual contribution to results was determined on the basis of the achievement of individually agreed objectives taking into account the results from the Balanced Scorecard.

Level of Objective Achievement

In the 2018 financial year, t he development of the four performance metrics for the Group Component of the STA was as follows: With respect to the Common Equity Tier 1 (CET1) capital ratio, the desired target level was achieved. The desired leverage ratio was not fully achieved; it improved year-on-year, even though the 2018 target level was not fully reached (please refer to section “Leverage Ratio” in the Risk Report for further detail). The desired 2018 target level for the adjusted noninterest expenses was fully reached. The 2018 post-tax-return target was not met.

In sum, the Supervisory Board determined an achievement level of 70 % for the Group Component.

The individual component of the STA is linked to the achievement of short-term and medium-term individual and divisional objectives determined for the Management Board members in 2018, including those from the Scorecard. The objectives of the current Management Board members as of December 31, 2018 were as follows:

Christian Sewing

Objectives for Mr. Sewing as Management Board member with responsibility for PCB included achieving the objectives of the 2018 Resources Management Plan regarding employees, risk-weighted assets and cost. Another objective was a division-related IBIT target for the 2018 financial year. Mr. Sewing’s objectives as Chairman of the Management Board included the development and implementation of a strategic plan, the communicated cost target of € 23 billion as well as stabilizing and/or improving client satisfaction and employee commitment.

Garth Ritchie

Objectives for Mr. Ritchie included the refocusing of CIB. Communication with clients and internal culture were to be improved. Another objective agreed with Mr. Ritchie as CEO was to create closer ties with regulators in Great Britain.

Karl von Rohr

One of the objectives for Mr. von Rohr was to implement the merger of Postbank AG into Deutsche Bank Privat- und Geschäftskunden AG with respect to legal and HR matters. Mr. von Rohr also had the delivery of the DWS IPO as

well as the creation of corporate governance structures at DWS supervisory board level as objectives. The number of pending legal disputes – focusing on the matters posing the highest risk – was to be further reduced. In addition, cost targets were agreed with Mr. von Rohr for his area of responsibility.

Stuart Lewis

One objective for Mr. Lewis was to streamline the risk organization by transferring non-risk-initiatives to more appropriate areas. Another objective was to improve focus and co-operation with Finance. Finally, Mr. Lewis pursued the objective of immediately remediating supervisory findings.

Sylvie Matherat

In her responsibility for the Chief Regulatory Office, Ms. Matherat was mandated to further strengthen the bank's control environment in 2018. For Compliance, she was tasked with the enhancement of Surveillance, which included an effectiveness review and development of scenarios in Trade Surveillance, expansion of e-Communication Surveillance and automation in Voice Surveillance. In addition, she was to implement the requirements of the Fourth Anti Money Laundering Directive (4AMLD) in our Anti-Financial Crime (AFC) policies and roll out the framework for the investigation of financial crime. The third objective agreed with Ms. Matherat was to improve the monitoring of financial transactions. Finally, the strengthening and enhancement of cost management was an objective agreed with Ms. Matherat.

James von Moltke

Objectives for Mr. von Moltke included the design and roll-out of the strategic "Cost Catalyst" program which aims to identify and eliminate structural cost inefficiencies, improve our cost culture and contribute to achieving Deutsche Bank's near-term operating performance targets. Further objectives related to enhancing the Bank's liquidity reporting and management capabilities and executing on organizational enhancements in line with the priorities of the Finance organization.

Nicolas Moreau

Objectives for Mr. Moreau included generating net inflows and achieving a solid investment performance. Further objectives were the implementation of cost reductions and improving cost efficiency. Performance criteria for the objective to create a performance culture in DWS were increasing the percentage of women in management positions and improving employee commitment.

Werner Steinmüller

For the financial year 2018, a revenue target relating to Asia Pacific, the region for which Mr. Steinmüller is accountable, and a cost objective were agreed with Mr. Steinmüller. An additional franchise target was agreed to strengthen and expand Governance, control environment and the Deutsche Bank brand in the region.

Frank Strauß

Mr. Strauß had to achieve an IBIT and a revenue target for the Private & Commercial Clients division. The establishment of "The Bank for Germany" was another objective. A further objective was the 2018 Resources Management Plan regarding employees, risk-weighted assets and cost. Finally, Mr. Strauß was to roll out a digital banking platform.

The individual level of achievement of the Management Board members who were in office for the entire year in 2018 is between 80 % and 154 %.

In the 2018 financial year, the development of the three performance metrics for the Group Component of the LTA was as follows: Although the RTSR improved year-on-year, the average performance in the relevant three-year-period (2016 to 2018) was 73.6 % and as a result was below the performance of the peer group; this resulted in an achievement level of 42 %. Organic Capital Growth as defined developed negatively from 2016 to 2018; the resulting achievement level was 0 %. The strengthening of the control environment was evaluated based on feedback from internal audit and supervisory authorities and has improved again in 2018; the achievement level was 81 %. As a result of these factors, the overall achievement level resolved by the Supervisory Board is 41 %.

Total Compensation

The members of the Management Board collectively received in/for the 2018 financial year compensation (without fringe benefits and pension service costs) totaling € 55,716,289 (2017: € 29,750,000). € 29,911,111 of this amount was for fixed compensation (2017: € 29,750,000). € 25,805,178 (2017: € 0) was received for performance-related components with long-term incentives.

The Supervisory Board determined the aforementioned compensation on an individual basis for 2018 and 2017 as follows:

	2018						2017
	Base salary	Functional allowance	STA[1]		LTA[2]	Total compensation	Total compensation
in €			Group component	Individual component			
Christian Sewing	3,291,111	0	350,000	2,035,931	1,327,037	7,004,079	2,900,000
Garth Ritchie	3,000,000	3,000,000	350,000	1,120,000	1,148,003	8,618,003	3,250,000
Karl von Rohr	2,836,667	0	350,000	1,200,000	1,148,003	5,534,670	2,400,000
Stuart Lewis	2,400,000	1,200,000	350,000	1,000,000	1,148,003	6,098,003	2,700,000
Sylvie Matherat	2,400,000	0	350,000	640,000	1,148,003	4,538,003	2,400,000
James von Moltke3	2,400,000	0	350,000	1,200,000	1,148,003	5,098,003	1,200,000
Nicolas Moreau4	1,200,000	0	175,000	520,000	574,001	2,469,001	2,400,000
Werner Steinmüller	2,400,000	0	350,000	880,000	1,148,003	4,778,003	2,400,000
Frank Strauß5	2,400,000	0	350,000	1,669,600	1,148,003	5,567,603	800,000
John Cryan6	1,133,333	0	116,667	175,000	464,668	1,889,668	3,400,000
	1,000,000	0	145,833	200,000	478,335	1,824,168	2,400,000

Kimberly Hammonds7							
Dr. Marcus Schenck8	1,250,000	0	145,833	422,917	478,335	2,297,085	2,900,000
Jeffrey Urwin9	0	0	0	0	0	0	600,000
Total	25,711,111	4,200,000	3,383,333	11,063,448	11,358,397	55,716,289	29,750,000

1STA: Short-Term Award.

2LTA: Long-Term Award.

3Member since July 1, 2017.

4Member until December 31, 2018. In his position as managing director of DWS Management GmbH a total compensation of € 2,916,667 was determined for 2018.

5Member since September 1, 2017.

6Member until April 8, 2018.

7Member until May 24, 2018.

8Member until May 24, 2018.

9Member until March 31, 2017.

The table above does not include any compensation elements granted to a member of the Management Board as a replacement for components of compensation that have been forfeited at the previous employer. These are shown in the tables in accordance with the German Corporate Governance Code and DRS 17.

Share awards

The number of share awards granted to the members of the Management Board in the form of Restricted Equity Awards (REA) in 2019 for the 2018 financial year was calculated by dividing the respective amounts in Euro by the higher of both, the average Xetra closing price of the Deutsche Bank share during the last ten trading days in February 2019 or the Xetra closing price on March 1, 2019 (€ 8.173). No share awards had been granted in the previous year due to the Management Board members waiving the determination and grant of variable compensation.

Management Board members do not receive any compensation for mandates on boards of Deutsche Bank subsidiaries.

Members of the Management Board		
Units	Year	Restricted Equity Award(s) (deferred with additional retention period)
Christian Sewing	2018	340,722
	2017	0
Garth Ritchie	2018	240,242

	2017	0
Karl von Rohr	2018	247,583
	2017	0
Stuart Lewis	2018	229,230
	2017	0
Sylvie Matherat	2018	196,195
	2017	0
James von Moltke1	2018	247,583
	2017	0
Nicolas Moreau2	2018	116,450
	2017	0
Werner Steinmüller	2018	218,218
	2017	0
Frank Strauß3	2018	290,676
	2017	0
John Cryan4	2018	69,405
	2017	0
Kimberly Hammonds5	2018	75,630
	2017	0
Dr. Marcus Schenck6	2018	96,086
	2017	0

1Member since July 1, 2017. The benefits granted to Mr. von Moltke in 2017 as a substitute for forfeited awards and not granted variable compensation from his previous employer are not displayed here.

2Member until December 31, 2018.

3Member since September 1, 2017.

4Member until April 8, 2018.

5Member until May 24, 2018.

6Member until May 24, 2018.

Management Board Share Ownership, Shareholding Guidelines

As of February 15, 2019 and February 16, 2018, respectively, the current members of the Management Board held Deutsche Bank shares as presented below:

Members of the Management Board	Number of shares	
Christian Sewing	2019	73,237

	2018	54,356
Garth Ritchie	2019	84,738
	2018	43,227
Karl von Rohr	2019	5,601
	2018	5,601
Frank Kuhnke1	2019	7,094
Stuart Lewis	2019	103,561
	2018	88,292
Sylvie Matherat	2019	0
	2018	0
James von Moltke2	2019	24,967
	2018	0
Werner Steinmüller	2019	146,905
	2018	119,688
Frank Strauß3	2019	10,772
	2018	7,172
Total	2019	456,875
	2018	318,336

1Member since January 1, 2019.

2Member since July 1, 2017.

3Member since September 1, 2017.

The current members of the Management Board held an aggregate of 456,875 Deutsche Bank shares on February 15, 2019, amounting to approximately 0.02 % of Deutsche Bank shares issued on that date.

The following table shows the number of share awards held by the Management Board members as of February 16, 2018 and February 15, 2019 as well as the number of share awards newly granted, delivered or forfeited in this period.

Members of the Management Board	Balance as of Feb 16, 2018	Granted	Delivered	Forfeited	Balance as of Feb 15, 2019
Christian Sewing	96,821	684	35,824	0	61,681
Garth Ritchie	618,736	2,242	76,424	0	544,554
Karl von Rohr	49,206	551	0	0	49,757
Frank Kuhnke1	–	–	–	–	104,507
Stuart Lewis	160,498	1,474	28,916	0	133,056
Sylvie Matherat	12,181	137	0	0	12,318
James von Moltke2	194,142	0	47,535	0	146,607
Werner Steinmüller	220,821	1,894	51,836	0	170,878
Frank Strauß3	46,983	20,019	6,857	0	60,144

1Member since January 1, 2019.

2Member since July 1, 2017.

3Member since September 1, 2017.

One Management Board member did not fulfill the retention obligation as of December 31, or else was unable to meet this obligation in time for that date, due to purchasing restrictions. At the time of this report, however, the obligation has been fulfilled. The remaining Management Board members fulfilled the retention obligations for shares in 2018 or are currently in the waiting period.

Pension Benefits

The following table shows the annual contributions, the interest credits, the account balances and the annual service costs for the years 2018 and 2017 as well as the corresponding defined benefit obligations for each member of the Management Board in office in 2018 as of December 31, 2018 and December 31, 2017. The different balances are attributable to the different lengths of service on the Management Board, the respective age-related factors, and the different contribution rates, as well as the individual pensionable compensation amounts and the previously mentioned additional individual entitlements.

Members of the Management Board	Annual contribution, in the year		Interest credit, in the year		Account balance, end of year		Service cost (IFRS), in the year		Present value of the defined benefit obligation (IFRS), en of year	
in €	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Christian Sewing	1,007,500	1,046,500	0	0	3,831,500	2,824,000	879,750	899,307	3,366,182	2,450,83
Garth Ritchie	1,440,000	1,500,000	0	0	4,490,000	3,050,000	1,274,429	1,306,915	4,026,939	2,704,12
Karl von Rohr	845,000	871,000	0	0	2,368,001	1,523,001	796,009	807,465	2,249,165	1,434,56
Stuart Lewis	845,000	871,000	0	0	4,058,938	3,213,938	796,009	807,465	4,236,867	3,377,86
Sylvie Matherat	754,000	786,500	0	0	2,127,168	1,373,168	755,261	774,917	2,125,681	1,354,99
James von Moltke1	975,000	503,750	0	0	1,478,750	503,750	864,990	451,453	1,334,670	463,619
Nicolas Moreau2	0	1,340,000	0	0	07	1,687,500	607,093	1,232,878	0	1,591,22
Werner Steinmüller	650,000	650,000	32,934	6,667	1,506,268	823,334	688,942	701,617	1,542,860	907,793
Frank Strauß3	1,007,500	348,834	0	0	1,356,334	348,834	876,266	313,391	1,202,739	321,839
John Cryan4	0	728,000	0	0	08	1,875,250	733,807	748,829	0	1,916,94
Kimberly Hammonds5	0	936,000	0	0	09	1,186,001	825,100	842,110	0	1,091,04
	541,668	1,105,000	0	0	2,731,169	2,189,501	504,568	1,018,267	2,553,842	2,051,09

Dr. Marcus
Schenck6

1Member since July 1, 2017.

2Member until December 31, 2018. In his position as managing director of DWS Management GmbH a service cost amount of € 607,093 was determined for 2018.

3Member since September 1, 2017.

4Member until April 8, 2018.

5Member until May 24, 2018.

6Member until May 24, 2018.

7 The pension entitlement was not vested at the time of the termination of the Management Board membership and was paid in form of a cash compensation in the amount of € 2,084,667 and in the amount of € 579,694 for the DWS Management GmbH.

8 The pension entitlement was not vested at the time of the termination of the Management Board membership and was paid in form of a cash compensation in the amount of € 3,420,961.

9 The pension entitlement was not vested at the time of the termination of the Management Board membership and was paid in form of a cash compensation in the amount of € 2,231,933.

Other Benefits upon Early Termination

In 2018, the Management Board members John Cryan, Kimberly Hammonds, Marcus Schenck and Nicolas Moreau left the Management Board. Termination payments to which they were entitled based on their employment contract were agreed with these members as follows:

John Cryan left the Management Board with effect from the end of April 8, 2018. On the basis of the termination agreement, compensation payments for a post-contractual restraint on competition already agreed in the employment contract in the amount of € 2,210,000 and a severance payment in the amount of € 8,674,000 were agreed. Of the severance, the first instalment in the amount of € 1,071,800 was disbursed in cash in May 2018. The second instalment in the amount of € 1,071,800 was granted in shares and becomes due for disbursement on April 30, 2019. A further instalment in the amount of € 3,265,200 was granted in the form of deferred cash compensation with a settlement period ending April 30, 2023. A final instalment in the amount of € 3,265,200 was granted in the form of deferred share-based compensation with a settlement period ending April 30, 2024. All contractually agreed provisions with respect to variable compensation elements apply accordingly to the severance payment, including the option to reclaim any variable compensation (clawback), and the severance payment is subject to a regulation for the offsetting of income received from other sources.

Kimberly Hammonds left the Management Board with effect from the end of May 24, 2018. On the basis of the termination agreement, compensation payments for a post-contractual restraint on competition already agreed in the employment contract in the amount of € 1,560,000 and a severance payment in the amount of € 3,303,834 were agreed.

Of the severance, the first instalment in the amount of € 192,767 was disbursed in cash in May 2018. A second instalment in the amount of € 192,767 was granted in the form of shares and becomes due for disbursement on May 31, 2019. A further instalment in the amount of € 1,459,150 was granted in the form of deferred cash compensation with a settlement period ending May 31, 2023. A final instalment in the amount of € 1,459,150 was granted in the form of deferred share-based compensation with a settlement period ending May 31, 2024. All contractually agreed provisions with respect to variable compensation elements apply accordingly to the severance payment, including the option to reclaim any variable compensation (clawback), and the severance payment is subject to a regulation for the offsetting of income received from other sources. The contractually, but not legally vested present value of the pension account in the company pension plan at the time of Mrs. Hammond's termination of the Management Board membership has been disbursed to her.

Marcus Schenck left the Management Board with effect from the end of May 24, 2018. On the basis of the termination agreement, compensation payments for a post-contractual restraint on competition were agreed in the aggregate amount of € 1,950,000, payable in 12 monthly instalments. Marcus Schenck informed the bank that he has taken up a new position as of February 1, 2019. Therefore, the payments ceased from this date onwards. No further severance payment was agreed.

Nicolas Moreau left the Management Board with effect from the end of December 31, 2018. On the basis of the termination agreement, compensation payments for a post-contractual restraint on competition agreed in the employment contract in the amount of € 960,000 and a severance payment in the amount of € 807,600 were agreed. Of the severance, the first instalment in the amount of € 403,800 was granted in the form of deferred cash compensation with a settlement period ending March 1, 2024. A second instalment in the amount of € 403,800 was granted as share-based compensation with a settlement period ending March 1, 2025. All contractually agreed provisions with respect to variable compensation elements apply accordingly to the severance payment, including the option to reclaim any variable compensation (clawback). Furthermore, the termination of the employment relationship between DWS Management GmbH and Nicolas Moreau as managing director of the GmbH was agreed. Based on this termination agreement, a severance payment in the amount of € 7,000,000 was agreed. The first instalment in the amount of € 1,400,000 was disbursed in cash in December 2018. The second instalment in the same amount was granted in shares and becomes due for disbursement on March 1, 2020. A further instalment in the amount of € 2,100,000 was granted in the form of deferred cash compensation with a settlement period ending March 1, 2024. A final instalment in the amount of € 2,100,000 was granted in the form of deferred share-based compensation with a settlement period ending March 1, 2025.

Expense for Long-Term Incentive Components

The following table presents the compensation expense recognized in the respective years for long-term incentive components of compensation granted for service on the Management Board.

Members of the Management Board	Amount expensed for			
	Share-based compensation components		Cash-based compensation components	
in €	2018	2017	2018	2017
James von Moltke[1]	225,845	0	630,407	671,148
Stuart Lewis	(393,743)2	955,633	57,414	230,974

1 Member since July 1 2017.

2 Share-based compensation of Management Board members is generally valued based on the share price at each respective reporting date and leads to a negative result in this instance.

Compensation in accordance with the German Corporate Governance Code (GCGC)

The compensation for the members of the Management Board in accordance with the requirements of section 4.2.5 paragraph 3 of the GCGC is provided below. This comprises the benefits granted for the year under review including the fringe benefits and including the maximum and minimum achievable compensation for variable compensation components. In addition, the disbursals of fixed compensation and variable compensation (broken down by Restricted Incentive Awards and Restricted Equity Awards) in/for the year under review, broken down into the relevant reference years are reported.

The following table provides the compensation granted for the 2018 and 2017 financial years according to GCGC:

	Christian Sewing					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	3,291,111	3,291,111	3,291,111	3,291,111	2,900,000	2,900,000
Functional allowance	0	0	0	0	0	0
Fringe benefits (fixed compensation)	91,805	91,805	91,805	91,805	80,307	80,307
Total	3,382,916	3,382,916	3,382,916	3,382,916	2,980,307	2,980,307
Variable compensation	3,712,968	5,055,000	0	8,491,667	0	4,400,000
thereof:						
Restricted Incentive Awards	928,242	1,818,333	0	3,636,666	0	1,600,000
Restricted Equity Awards	2,784,726	3,236,667	0	4,855,001	0	2,800,000
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	3,712,968	5,055,000	0	8,491,667	0	4,400,000
Pension service costs	879,750	879,750	879,750	879,750	899,307	899,307
Total compensation (GCGC)	7,975,634	9,317,666	4,262,666	12,754,333	3,879,614	8,279,614
Total compensation[1]	7,004,079	8,346,111	3,291,111	11,782,778	2,900,000	7,300,000

1Without fringe benefits and pension service costs.

	Garth Ritchie					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Functional allowance	3,000,000	3,000,000	3,000,000	3,000,000	250,000	250,000
Fringe benefits (fixed compensation)	189,609	189,609	189,609	189,609	269,457	269,457
Total	6,189,609	6,189,609	6,189,609	6,189,609	3,519,457	3,519,457
Variable compensation	2,618,003	4,700,000	0	8,000,000	0	4,700,000
thereof:						

Restricted Incentive Awards	654,500	1,900,000	0	3,800,000	0	1,900,000
Restricted Equity Awards	1,963,503	2,800,000	0	4,200,000	0	2,800,000
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	2,618,003	4,700,000	0	8,000,000	0	4,700,000
Pension service costs	1,274,429	1,274,429	1,274,429	1,274,429	1,306,915	1,306,915
Total compensation (GCGC)	10,082,041	12,164,038	7,464,038	15,464,038	4,826,372	9,526,372
Total compensation1	8,618,003	10,700,000	6,000,000	14,000,000	3,250,000	7,950,000

1Without fringe benefits and pension service costs.

	Karl von Rohr					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	2,836,667	2,836,667	2,836,667	2,836,667	2,400,000	2,400,000
Fringe benefits (fixed compensation)	49,853	49,853	49,853	49,853	23,642	23,642
Total	2,886,520	2,886,520	2,886,520	2,886,520	2,423,642	2,423,642
Variable compensation	2,698,003	4,100,000	0	6,800,000	0	4,100,000
thereof:						
Restricted Incentive Awards	674,500	1,300,000	0	2,600,000	0	1,300,000
Restricted Equity Awards	2,023,503	2,800,000	0	4,200,000	0	2,800,000
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	2,698,003	4,100,000	0	6,800,000	0	4,100,000
Pension service costs	796,009	796,009	796,009	796,009	807,465	807,465
Total compensation (GCGC)	6,380,532	7,782,529	3,682,529	10,482,529	3,231,107	7,331,107
Total compensation[1]	5,534,670	6,936,667	2,836,667	9,636,667	2,400,000	6,500,000

1Without fringe benefits and pension service costs.

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	Stuart Lewis					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000
Functional allowance	1,200,000	1,200,000	1,200,000	1,200,000	300,000	300,000
Fringe benefits (fixed compensation)	184,423	184,423	184,423	184,423	206,628	206,628
Total	3,784,423	3,784,423	3,784,423	3,784,423	2,906,628	2,906,628
Variable compensation	2,498,003	4,100,000	0	6,800,000	0	4,100,000
thereof:						
Restricted Incentive Awards	624,500	1,300,000	0	2,600,000	0	1,300,000
Restricted Equity Awards	1,873,503	2,800,000	0	4,200,000	0	2,800,000

Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	2,498,003	4,100,000	0	6,800,000	0	4,100,000
Pension service costs	796,009	796,009	796,009	796,009	807,465	807,465
Total compensation (GCGC)	7,078,435	8,680,432	4,580,432	11,380,432	3,714,093	7,814,093
Total compensation[1]	6,098,003	7,700,000	3,600,000	10,400,000	2,700,000	6,800,000

1Without fringe benefits and pension service costs.

	Sylvie Matherat					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000
Fringe benefits (fixed compensation)	6,392	6,392	6,392	6,392	16,338	16,338
Total	2,406,392	2,406,392	2,406,392	2,406,392	2,416,338	2,416,338
Variable compensation	2,138,003	4,100,000	0	6,800,000	0	4,100,000
thereof:						
Restricted Incentive Awards	534,500	1,300,000	0	2,600,000	0	1,300,000
Restricted Equity Awards	1,603,503	2,800,000	0	4,200,000	0	2,800,000
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	2,138,003	4,100,000	0	6,800,000	0	4,100,000
Pension service costs	755,261	755,261	755,261	755,261	774,917	774,917
Total compensation (GCGC)	5,299,656	7,261,653	3,161,653	9,961,653	3,191,255	7,291,255
Total compensation1	4,538,003	6,500,000	2,400,000	9,200,000	2,400,000	6,500,000

1Without fringe benefits and pension service costs.

	James von Moltke1					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	2,400,000	2,400,000	2,400,000	2,400,000	1,200,000	1,200,000
Fringe benefits (fixed compensation)	86,975	86,975	86,975	86,975	35,261	35,261
Total	2,486,975	2,486,975	2,486,975	2,486,975	1,235,261	1,235,261
Variable compensation	2,698,003	4,100,000	0	6,800,000	4,858,4422	2,050,000
thereof:						
Cash	0	0	0	0	355,404	0
Restricted Incentive Awards	674,500	1,300,000	0	2,600,000	1,600,227	650,000
Equity Upfront Awards	0	0	0	0	355,404	1,400,000
Restricted Equity Awards	2,023,503	2,800,000	0	4,200,000	2,547,407	0
Fringe benefits (variable compensation)	615,516	615,516	615,516	615,516	438,038	438,038

Total	3,313,519	4,715,516	615,516	7,415,516	5,296,480	2,488,038
Pension service costs	864,990	864,990	864,990	864,990	451,453	451,453
Total compensation (GCGC)	6,665,484	8,067,481	3,967,481	10,767,481	6,983,194	4,174,752
Total compensation3	5,098,003	6,500,000	2,400,000	9,200,000	6,058,442	3,250,000

1Member since July 1, 2017.

2The benefits granted to Mr. von Moltke as a substitute for forfeited awards and not granted variable compensation from his previous employer are displayed under “Variable Compensation”.

3Without fringe benefits and pension service costs.

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	Nicolas Moreau1					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	1,200,000	1,200,000	1,200,000	1,200,000	2,400,000	2,400,000
Fringe benefits (fixed compensation)	129,407	129,407	129,407	129,407	59,383	59,383
Total	1,329,407	1,329,407	1,329,407	1,329,407	2,459,383	2,459,383
Variable compensation	1,269,001	2,300,000	0	3,900,000	0	4,600,000
thereof:						
Restricted Incentive Awards	317,250	900,000	0	1,800,000	0	1,800,000
Restricted Equity Awards	951,751	1,400,000	0	2,100,000	0	2,800,000
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	1,269,001	2,300,000	0	3,900,000	0	4,600,000
Pension service costs	607,093	607,093	607,093	607,093	1,232,878	1,232,878
Total compensation (GCGC)	3,205,501	4,236,500	1,936,500	5,836,500	3,692,261	8,292,261
Total compensation2	2,469,001	3,500,000	1,200,000	5,100,000	2,400,000	7,000,000

1Member until December 31, 2018. In his position as managing director of DWS Management GmbH a total compensation (GCGC) of € 3,523,792 was determined for 2018.

2Without fringe benefits and pension service costs.

	Werner Steinmüller					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000
Fringe benefits (fixed compensation)	76,993	76,993	76,993	76,993	82,934	82,934
Total	2,476,993	2,476,993	2,476,993	2,476,993	2,482,934	2,482,934
Variable compensation	2,378,003	4,100,000	0	6,800,000	0	4,100,000
thereof:						

Restricted Incentive Awards	594,500	1,300,000	0	2,600,000	0	1,300,000
Restricted Equity Awards	1,783,503	2,800,000	0	4,200,000	0	2,800,000
Fringe benefits (variable compensation)	387,196	387,196	387,196	387,196	316,490	316,490
Total	2,765,199	4,487,196	387,196	7,187,196	316,490	4,416,490
Pension service costs	688,942	688,942	688,942	688,942	701,617	701,617
Total compensation (GCGC)	5,931,134	7,653,131	3,553,131	10,353,131	3,501,041	7,601,041
Total compensation1	4,778,003	6,500,000	2,400,000	9,200,000	2,400,000	6,500,000

1Without fringe benefits and pension service costs.

	Frank Strauß1					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	2,400,000	2,400,000	2,400,000	2,400,000	800,000	800,000
Fringe benefits (fixed compensation)	71,892	71,892	71,892	71,892	26,893	26,893
Total	2,471,892	2,471,892	2,471,892	2,471,892	826,893	826,893
Variable compensation	3,167,603	4,400,000	0	7,400,000	0	1,466,667
thereof:						
Restricted Incentive Awards	791,900	1,600,000	0	3,200,000	0	533,333
Restricted Equity Awards	2,375,703	2,800,000	0	4,200,000	0	933,333
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	3,167,603	4,400,000	0	7,400,000	0	1,466,667
Pension service costs	876,266	876,266	876,266	876,266	313,391	313,391
Total compensation (GCGC)	6,515,761	7,748,158	3,348,158	10,748,158	1,140,284	2,606,951
Total compensation2	5,567,603	6,800,000	2,400,000	9,800,000	800,000	2,266,667

1Member since September 1, 2017.

2Without fringe benefits and pension service costs.

	John Cryan1					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	1,133,333	1,133,333	1,133,333	1,133,333	3,400,000	3,400,000
Fringe benefits (fixed compensation)	10,125	10,125	10,125	10,125	220,982	220,982
Total	1,143,458	1,143,458	1,143,458	1,143,458	3,620,982	3,620,982
Variable compensation	756,335	1,766,666	0	2,966,666	0	5,300,000
thereof:						
Restricted Incentive Awards	189,083	633,333	0	1,266,666	0	1,900,000
Restricted Equity Awards	567,252	1,133,333	0	1,700,000	0	3,400,000
	0	0	0	0	0	0

Fringe benefits (variable compensation)						
Total	756,335	1,766,666	0	2,966,666	0	5,300,000
Pension service costs	733,807	733,807	733,807	733,807	748,829	748,829
Total compensation (GCGC)	2,633,600	3,643,931	1,877,265	4,843,931	4,369,811	9,669,811
Total compensation2	1,889,668	2,899,999	1,133,333	4,099,999	3,400,000	8,700,000

1Member until April 8, 2018.

2Without fringe benefits and pension service costs.

	Kimberly Hammonds1					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	1,000,000	1,000,000	1,000,000	1,000,000	2,400,000	2,400,000
Fringe benefits (fixed compensation)	209,799	209,799	209,799	209,799	260,489	260,489
Total	1,209,799	1,209,799	1,209,799	1,209,799	2,660,489	2,660,489
Variable compensation	824,168	1,708,334	0	2,833,335	0	4,100,000
thereof:						
Restricted Incentive Awards	206,042	541,667	0	1,083,334	0	1,300,000
Restricted Equity Awards	618,126	1,166,667	0	1,750,001	0	2,800,000
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	824,168	1,708,334	0	2,833,335	0	4,100,000
Pension service costs	825,100	825,100	825,100	825,100	842,110	842,110
Total compensation (GCGC)	2,859,067	3,743,233	2,034,899	4,868,234	3,502,599	7,602,599
Total compensation2	1,824,168	2,708,334	1,000,000	3,833,335	2,400,000	6,500,000

1Member until May 24, 2018.

2Without fringe benefits and pension service costs.

	Dr. Marcus Schenck1					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	1,250,000	1,250,000	1,250,000	1,250,000	2,900,000	2,900,000
Fringe benefits (fixed compensation)	13,117	13,117	13,117	13,117	16,148	16,148
Total	1,263,117	1,263,117	1,263,117	1,263,117	2,916,148	2,916,148
Variable compensation	1,047,085	1,958,334	0	3,333,335	0	4,400,000
thereof:						
Restricted Incentive Awards	261,771	791,667	0	1,583,334	0	1,600,000

Restricted Equity Awards	785,314	1,166,667	0	1,750,001	0	2,800,000
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	1,047,085	1,958,334	0	3,333,335	0	4,400,000
Pension service costs	504,568	504,568	504,568	504,568	1,018,267	1,018,267
Total compensation (GCGC)	2,814,770	3,726,019	1,767,685	5,101,020	3,934,415	8,334,415
Total compensation2	2,297,085	3,208,334	1,250,000	4,583,335	2,900,000	7,300,000

1Member until May 24, 2018.

2Without fringe benefits and pension service costs.

	Jeffrey Urwin1					
	2018				2017	
in €	Determined	Target	Min	Max	Determined	Target
Fixed compensation (base salary)	0	0	0	0	600,000	600,000
Fringe benefits (fixed compensation)	0	0	0	0	530	530
Total	0	0	0	0	600,530	600,530
Variable compensation	0	0	0	0	0	0
thereof:						
Restricted Incentive Awards	0	0	0	0	0	0
Restricted Equity Awards	0	0	0	0	0	0
Fringe benefits (variable compensation)	0	0	0	0	0	0
Total	0	0	0	0	0	0
Pension service costs	0	0	0	0	557,370	557,370
Total compensation (GCGC)	0	0	0	0	1,157,900	1,157,900
Total compensation2	0	0	0	0	600,000	600,000

1Member until March 31, 2017.

2Without fringe benefits and pension service costs.

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The following table provides the compensation disbursals in/for the 2018 and 2017 financial years according to GCGC

	Christian Sewing		Garth Ritchie		Karl von Rohr		Stuart Lewis	
in €	2018	2017	2018	2017	2018	2017	2018	2017
Fixed compensation	3,291,111	2,900,000	3,000,000	3,000,000	2,836,667	2,400,000	2,400,000	2,400,000
Functional allowance	0	0	3,000,000	250,000	0	0	1,200,000	300,000
Fringe benefits (fixed compensation)	91,805	80,307	189,609	269,457	49,853	23,642	184,423	206,628

Total	3,382,916	2,980,307	6,189,609	3,519,457	2,886,520	2,423,642	3,784,423	2,906,628
Variable compensation	0	0	0	0	0	0	431,973	999,285
thereof Cash:	0	0	0	0	0	0	0	0
thereof Restricted Incentive Awards:								
2013 Restricted Incentive Award for 2012	0	0	0	0	0	0	0	377,871
2014 Restricted Incentive Award for 2013	0	0	0	0	0	0	126,935	357,391
2015 Restricted Incentive Award for 2014	0	0	0	0	0	0	105,340	200,965
2017 Restricted Incentive Award: Buyout	0	0	0	0	0	0	0	0
thereof Equity Awards:								
2013 Equity Upfront Award for 2012	0	0	0	0	0	0	0	27,560
2014 Equity Upfront Award for 2013	0	0	0	0	0	0	0	35,498
2013 Restricted Equity Award for 2012	0	0	0	0	0	0	199,698	0
2017 Restricted Equity Award: Buyout	0	0	0	0	0	0	0	0
Fringe benefits (variable compensation)	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	431,973	999,285
Pension service costs	879,750	899,307	1,274,429	1,306,915	796,009	807,465	796,009	807,465
Total compensation (GCGC)	4,262,666	3,879,614	7,464,038	4,826,372	3,682,529	3,231,107	5,012,405	4,713,378
	Sylvie Matherat		James von Moltke1		Nicolas Moreau2		Werner Steinmüller	
in €	2018	2017	2018	2017	2018	2017	2018	2017
Fixed compensation	2,400,000	2,400,000	2,400,000	1,200,000	1,200,000	2,400,000	2,400,000	2,400,000

Functional allowance	0	0	0	0	0	0	0	0
Fringe benefits (fixed compensation)	6,392	16,338	86,975	35,261	129,407	59,383	76,993	82,934
Total	2,406,392	2,416,338	2,486,975	1,235,261	1,329,407	2,459,383	2,476,993	2,482,934
Variable compensation	0	0	1,166,703	355,404	0	0	0	0
thereof Cash:	0	0	0	355,404	0	0	0	0
thereof Restricted Incentive Awards:								
2013 Restricted Incentive Award for 2012	0	0	0	0	0	0	0	0
2014 Restricted Incentive Award for 2013	0	0	0	0	0	0	0	0
2015 Restricted Incentive Award for 2014	0	0	0	0	0	0	0	0
2017 Restricted Incentive Award: Buyout	0	0	560,758	0	0	0	0	0
thereof Equity Awards:								
2013 Equity Upfront Award for 2012	0	0	0	0	0	0	0	0
2014 Equity Upfront Award for 2013	0	0	0	0	0	0	0	0
2013 Restricted Equity Award for 2012	0	0	0	0	0	0	0	0
2017 Restricted Equity Award: Buyout	0	0	605,945	0	0	0	0	0
Fringe benefits (variable compensation)	0	0	615,516	438,038	0	0	387,196	316,490
Total	0	0	1,782,219	793,442	0	0	387,196	316,490
Pension service costs	755,261	774,917	864,990	451,453	607,093	1,232,878	688,942	701,617
Total compensation	3,161,653	3,191,255	5,134,184	2,480,156	1,936,500	3,692,261	3,553,131	3,501,041

(GCGC)

1Member since July 1, 2017. The benefits disbursed to Mr. von Moltke in 2017 as a substitute for forfeited awards and not granted variable compensation from his previous employer are displayed under “Variable Compensation”.

2Member until December 31, 2018. In his position as managing director of DWS Management GmbH a total compensation of € 2,323,792 was paid in 2018.

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	Frank Strauß1		John Cryan2		Kimberly Hammonds3		Dr. Marcus Schenck4	
in €	2018	2017	2018	2017	2018	2017	2018	2017
Fixed compensation	2,400,000	800,000	1,133,333	3,400,000	1,000,000	2,400,000	1,250,000	2,900,000
Functional allowance	0	0	0	0	0	0	0	0
Fringe benefits (fixed compensation)	71,892	26,893	10,125	220,982	209,799	260,489	13,117	16,148
Total	2,471,892	826,893	1,143,458	3,620,982	1,209,799	2,660,489	1,263,117	2,916,148
Variable compensation	0	0	0	0	0	0	0	0
thereof Cash:	0	0	0	0	0	0	0	0
thereof Restricted Incentive Awards:								
2013 Restricted Incentive Award for 2012	0	0	0	0	0	0	0	0
2014 Restricted Incentive Award for 2013	0	0	0	0	0	0	0	0
2015 Restricted Incentive Award for 2014	0	0	0	0	0	0	0	0
2017 Restricted Incentive Award: Buyout	0	0	0	0	0	0	0	0
thereof Equity Awards:								
2013 Equity Upfront Award for 2012	0	0	0	0	0	0	0	0
2014 Equity Upfront Award for 2013	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0

2013 Restricted Equity Award for 2012								
2017 Restricted Equity Award: Buyout	0	0	0	0	0	0	0	0
Fringe benefits (variable compensation)	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Pension service costs	876,266	313,391	733,807	748,829	825,100	842,110	504,568	1,018,267
Total compensation (GCGC)	3,348,158	1,140,284	1,877,265	4,369,811	2,034,899	3,502,599	1,767,685	3,934,415

1Member since September 1, 2017.

2Member until April 8, 2018.

3Member until May 24, 2018.

4Member until May 24, 2018.

	Jeffrey Urwin1	
in €	2018	2017
Fixed compensation	0	600,000
Functional allowance	0	0
Fringe benefits (fixed compensation)	0	530
Total	0	600,530
Variable compensation	0	0
thereof Cash:	0	0
thereof Restricted Incentive Awards:		
2013 Restricted Incentive Award for 2012	0	0
2014 Restricted Incentive Award for 2013	0	0
2015 Restricted Incentive Award for 2014	0	0
2017 Restricted Incentive Award: Buyout	0	0
thereof Equity Awards:		
2013 Equity Upfront Award for 2012	0	0
2014 Equity Upfront Award for 2013	0	0
2013 Restricted Equity Award for 2012	0	0
2017 Restricted Equity Award: Buyout	0	0
Fringe benefits (variable compensation)	0	0
Total	0	0
Pension service costs	0	557,370

Total compensation (GCGC)	0	1,157,900
		#REF!

1Member until March 31, 2017.

With respect to deferred awards scheduled to be delivered in the first quarter of 2019, the Supervisory Board has confirmed that the performance conditions relating to Group-wide IBIT for the financial year 2018 have been met.

Compensation in accordance with the German Accounting Standard No. 17 (GAS 17)

In accordance with the requirements of the GAS 17, the members of the Management Board collectively received in the 2018 financial year compensation totaling € 52,181,136 (2017: € 37,665,535). Of that, € 25,711,111 (2017: € 29,200,000) was for fixed compensation, € 4,200,000 (2017: € 550,000) for functional allowances, € 2,123,102 (2017: € 2,053,520) for fringe benefits and € 20,146,923 (2017: € 5,862,015) for performance-related components.

In accordance with German Accounting Standard No. 17, the Restricted Incentive Awards, as a deferred, non-equity-based compensation component subject to certain (forfeiture) conditions, must be recognized in the total compensation for the year of their payment (i.e. in the financial year in which the unconditional payment takes place) and not in the year they are originally granted. Based on this the Management Board members individually received the following compensation components for their service on the Management Board for or in the years 2018 and 2017, including the non-performance-related fringe benefits.

Compensation according to GAS 17

	Christian Sewing		Garth Ritchie		Karl von Rohr		Stuart Lewis	
in €	2018	2017	2018	2017	2018	2017	2018	2017
Compensation								
Performance-related components								
Without long-term incentives								
Immediately paid out	0	0	0	0	0	0	0	0
With short-term incentives								
Cash	0	0	0	0	0	0	0	0
With long-term incentives								
Cash-based								
Restricted Incentive Award(s) paid	0	0	0	0	0	0	232,275	936,228
Share-based								
Equity Upfront Award(s)	0	0	0	0	0	0	0	0
Restricted Equity Award(s)	2,784,726	0	1,963,503	0	2,023,503	0	1,873,503	0

Non-performance-related components								
Base salary	3,291,111	2,900,000	3,000,000	3,000,000	2,836,667	2,400,000	2,400,000	2,400,000
Functional allowance	0	0	3,000,000	250,000	0	0	1,200,000	300,000
Fringe benefits (fixed and variable compensation)	91,805	80,307	189,609	269,457	49,853	23,642	184,423	206,628
Total	6,167,642	2,980,307	8,153,112	3,519,457	4,910,023	2,423,642	5,890,201	3,842,856
	Sylvie Matherat		James von Moltke1		Nicolas Moreau2		Werner Steinmüller	
in €	2018	2017	2018	2017	2018	2017	2018	2017
Compensation								
Performance-related components								
With short-term incentives								
Cash	0	0	0	355,404	0	0	0	0
With long-term incentives								
Cash-based								
Restricted Incentive Award(s) paid	0	0	560,758	0	0	0	0	0
Share-based								
Equity Upfront Award(s)	0	0	0	355,404	0	0	0	0
Restricted Equity Award(s)	1,603,503	0	2,023,503	2,547,407	951,751	0	1,783,503	0
Non-performance-related components								
Base salary	2,400,000	2,400,000	2,400,000	1,200,000	1,200,000	2,400,000	2,400,000	2,400,000
Functional allowance	0	0	0	0	0	0	0	0
Fringe benefits (fixed and variable compensation)	6,392	16,338	702,491	473,299	129,407	59,383	464,189	399,424
Total	4,009,895	2,416,338	5,686,752	4,931,514	2,281,158	2,459,383	4,647,692	2,799,424

1Member since July 1, 2017.

2Member until December 31, 2018. In his position as managing director of DWS Management GmbH he received a total of € 2,466,699.

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	Frank Strauß1		John Cryan2		Kimberly Hammonds3		Dr. Marcus Schenck4	
in €	2018	2017	2018	2017	2018	2017	2018	2017
Compensation								
Performance-related components								
With short-term incentives								

Cash	0	0	0	0	0	0	0	0
With long-term incentives								
Cash-based								
Restricted Incentive Award(s) paid	0	0	0	0	0	0	0	0
Share-based								
Equity Upfront Award(s)	0	0	0	0	0	0	0	0
Restricted Equity Award(s)	2,375,703	0	567,252	0	618,126	0	785,314	0
Non-performance-related components								
Base salary	2,400,000	800,000	1,133,333	3,400,000	1,000,000	2,400,000	1,250,000	2,900,000
Functional allowance	0	0	0	0	0	0	0	0
Fringe benefits (fixed and variable compensation)	71,892	26,893	10,125	220,982	209,799	260,489	13,117	16,148
Total	4,847,595	826,893	1,710,710	3,620,982	1,827,925	2,660,489	2,048,431	2,916,148

1Member since September 1, 2017.

2Member until April 8, 2018.

3Member until May 24, 2018.

4Member until May 24, 2018.

	Jeffrey Urwin1		Total	
in €	2018	2017	2018	2017
Compensation				
Performance-related components				
With short-term incentives				
Cash	0	0	0	355,404
With long-term incentives				
Cash-based				
Restricted Incentive Award(s) paid	0	0	793,033	2,603,8002
Share-based				
Equity Upfront Award(s)	0	0	0	355,404
Restricted Equity Award(s)	0	0	19,353,890	2,547,407
Non-performance-related components				
Base salary	0	600,000	25,711,111	29,200,000
Functional allowance	0	0	4,200,000	550,000
Fringe benefits (fixed and variable compensation)	0	530	2,123,102	2,053,520
Total	0	600,530	52,181,136	37,665,5352

1Member until March 31, 2017.

2The amount of € 1,667,572 for Mr. Fitschen reported in last year's annual report is included in total but no longer reported separately as he had already left the Management Board in the 2016 financial year.

With respect to deferred awards scheduled to be delivered in the first quarter of 2019, the Supervisory Board has confirmed that the performance conditions relating to Group-wide IBIT for the 2018 financial year have been met.

Employee Compensation Report

The content of the 2018 Employee Compensation Report is based on the qualitative and quantitative remuneration disclosure requirements outlined in Article 450 No. 1 (a) to (i) Capital Requirements Regulation (CRR) in conjunction with Section 16 of the Remuneration Ordinance for Institutions (Institutsvergütungsverordnung – InstVV).

This Compensation Report takes a consolidated view and covers all consolidated entities of the Deutsche Bank Group. In accordance with regulatory requirements, equivalent reports for 2018 are prepared for the following Significant Institutions within Deutsche Bank Group: Deutsche Bank Privat- und Firmenkundenbank AG, Germany; BHW Bausparkasse AG, Germany; Deutsche Bank Luxembourg S.A., Luxembourg; Deutsche Bank S.p.A., Italy; and Deutsche Bank Mutui S.p.A., Italy.

Regulatory Environment

Ensuring compliance with regulatory requirements is an overarching consideration in our Group Compensation Strategy. We strive to be at the forefront of implementing regulatory requirements with respect to compensation and will continue to work closely with our prudential supervisor, the European Central Bank (ECB), to be in compliance with all existing and new requirements.

As an EU-headquartered institution, Deutsche Bank is subject to the CRR and Capital Requirements Directive 4 (CRD 4) globally, as transposed into German national law in the German Banking Act and InstVV. We adopted the rules in its current version for all of Deutsche Bank's subsidiaries and branches world-wide to the extent required in accordance with Section 27 InstVV. As a Significant Institution within the meaning of InstVV, Deutsche Bank identifies all employees whose work is deemed to have a material impact on the overall risk profile (Material Risk Takers or MRTs) in accordance with criteria stipulated under the Commission Delegated Regulation (EU) No. 604/2014. MRTs are identified at a Group level and at the level of Significant Institutions.

Taking into account more specific sectorial legislation and in accordance with InstVV, some of Deutsche Bank's subsidiaries (in particular within the DWS Group) fall under the local transpositions of the Alternative Investments Fund Managers Directive (AIFMD) or the Undertakings for Collective Investments in Transferable Securities Directive (UCITS). We also identify Material Risk Takers in these subsidiaries. Identified employees are subject to the remuneration provisions outlined in the Guidelines on sound remuneration policies under AIFMD/UCITS published by the European Securities and Markets Authority (ESMA).

Deutsche Bank also takes into account the regulations targeted at employees who engage directly or indirectly with the bank's clients (for instance the local transpositions of the Markets in Financial Instruments Directive II – MiFID II). These provisions resulted in the implementation of a specific compensation policy, a review of compensation plans and the identification of employees deemed to be Relevant Persons to ensure that they act in the best interest of clients.

Where applicable, Deutsche Bank is also subject to specific rules and regulations implemented by local regulators.

Many of these requirements are aligned with the InstVV. However, where variations are apparent, proactive and open discussions with regulators have enabled us to follow the local regulations whilst ensuring any impacted employees or locations remain within the bank's overall Group Compensation Framework. This includes, for example, the identification of Covered Employees in the United States under the requirements of the Federal Reserve Board. In any case, we apply the InstVV requirements as minimum standards globally.

Compensation Governance

Deutsche Bank has a robust governance structure enabling it to operate within the clear parameters of the Compensation Strategy and the Compensation Policies. In accordance with the German two-tier board structure, the Supervisory Board governs the compensation of the Management Board members while the Management Board oversees compensation matters for all other employees in the Group. Both the Supervisory Board and the Management Board are supported by specific committees and functions, in particular the Compensation Control Committee (CCC) and the Senior Executive Compensation Committee (SECC), respectively.

In line with their responsibilities, the bank's control functions are involved in the design and application of the bank's remuneration systems, in the identification of MRTs and in determining the total amount of VC. This includes assessing the impact of employees' behavior and the business-related risks, performance criteria, granting of remuneration and severances as well as ex-post risk adjustments.

Reward Governance structure

1Does not comprise a complete list of Supervisory Board Committees.

Compensation Control Committee (CCC)

The Supervisory Board has setup the CCC to support in establishing and monitoring the structure of the compensation system for the Management Board Members of Deutsche Bank AG, considering, in particular, the effects on the risks and risk management in accordance with the InstVV. Furthermore, the CCC monitors the appropriateness of the compensation system for the employees of Deutsche Bank Group, as established by the Management Board and the SECC. The CCC checks regularly whether the total amount of variable compensation is affordable and set in accordance with the InstVV. The CCC also assesses the impact of the compensation systems on the management of risk, capital and liquidity and seeks to ensure that the compensation systems are aligned to the business and risk strategies. Furthermore, the CCC supports the Supervisory Board in monitoring the MRT identification process and whether the internal control functions and the other relevant areas are properly involved in the structuring of the compensation systems.

The CCC consists of the Chairperson of the Supervisory Board and three further Supervisory Board Members, two of which are employee representatives. The Committee held five meetings in the calendar year 2018. In November, the members of the Risk Committee attended the Compensation Control Committee meeting as guests.

Compensation Officer

The Management Board, in cooperation with the CCC, has appointed a Group Compensation Officer to support the Supervisory Boards of Deutsche Bank AG and of the bank's Significant Institutions in Germany in performing their compensation related duties. The Compensation Officer is involved in the conceptual review, development, monitoring and the application of the employees' compensation systems on an ongoing basis. The Compensation Officer performs his monitoring obligations independently and provides an assessment on the appropriateness of design and practices of the compensation systems for employees at least annually. He supports and advises the CCC regularly.

Senior Executive Compensation Committee (SECC)

The SECC is a delegated committee established by the Management Board which has the mandate to develop sustainable compensation principles, to prepare recommendations on Total Compensation levels and to ensure appropriate compensation governance and oversight. The SECC establishes the Group Compensation Strategy and Compensation Policy. The SECC also utilizes quantitative and qualitative factors to assess Group and divisional performance as a basis for compensation decisions and makes recommendations to the Management Board regarding the total amount of annual variable compensation and its allocation across business divisions and infrastructure functions.

In order to maintain its independence, only representatives from infrastructure and control functions who are not aligned to any of the business divisions are members of the SECC. In 2018, the SECC's membership comprised of the Chief Administration Officer and the Chief Financial Officer as Co-Chairpersons, as well as the Chief Risk Officer (all of whom are Management Board Members), the Global Head of Human Resources as well as an additional representative from both Finance and Risk as voting members. The Compensation Officer, the Deputy Compensation Officer and one of the Global Co-Heads of HR Performance & Reward were nonvoting members. The SECC generally meets on a monthly basis and it had 21 meetings with regard to the compensation process for performance year 2018.

Compensation Strategy

Deutsche Bank recognizes that its compensation system plays a vital role in supporting its strategic objectives. It enables us to attract and retain the individuals required to achieve our bank's objectives. The Group Compensation Strategy is aligned to Deutsche Bank's business strategy, risk strategy, and to its corporate values and beliefs.

The Group Compensation Policy informs our employees about the implementation of the Compensation Strategy, governance processes as well as compensation structures and practices. All relevant documents are available to employees via our intranet site.

Group Compensation Framework

Our compensation framework emphasizes an appropriate balance between Fixed Pay (FP) and Variable Compensation (VC) – together Total Compensation (TC). It aligns incentives for sustainable performance at all levels of Deutsche Bank whilst ensuring the transparency of compensation decisions and their impact on shareholders and employees. The underlying principles of our compensation framework are applied to all employees equally, irrespective of differences in seniority, tenure or gender.

Pursuant to CRD 4 and the requirements subsequently adopted in the German Banking Act, Deutsche Bank is subject to a ratio of 1:1 with regard to fixed-to-variable remuneration components, which was increased to 1:2 with shareholder approval on May 22, 2014 with an approval rate of 95.27 %, based on valid votes by 27.68 % of the share capital represented at the Annual General Meeting. Nonetheless, the bank has determined that employees in specific infrastructure functions should continue to be subject to a ratio of at least 1:1 while Control Functions as defined by InstVV are subject to a ratio of 2:1 with regard to fixed-to-variable remuneration components.

The bank has assigned a Reference Total Compensation (RTC) to eligible employees that describes a reference value for their role. This value provides our employees orientation on their FP and VC. Actual individual TC can be at, above or below the Reference Total Compensation, based on Group affordability, and performance expectations having been satisfied at Group, divisional and individual levels, as determined by Deutsche Bank at its sole discretion.

Fixed Pay is used to compensate employees for their skills, experience and competencies, commensurate with the requirements, size and scope of their role. The appropriate level of FP is determined with reference to the prevailing market rates for each role, internal comparisons and applicable regulatory requirements. FP plays a key role in permitting us to meet our strategic objectives by attracting and retaining the right talent. For the majority of our employees, FP is the primary compensation component with a share of greater than 50 % of TC.

Variable Compensation reflects affordability and performance at Group, divisional, and individual level. It allows us to differentiate individual performance and to drive behavior through appropriate incentive systems that can positively influence culture. It also allows for flexibility in the cost base. VC generally consists of two elements – the Group VC Component and the Individual VC Component. The Individual VC Component is delivered either in the form of Individual VC (generally applicable for employees at the level of Vice President (VP) and above) or as Recognition Award (generally applicable for employees at the level of Assistant Vice President (AVP) and below). In cases of negative performance contributions or misconduct, an employee's VC can be reduced accordingly and can go down to zero. VC is granted and paid out subject to Group affordability. Under our compensation framework, there continues to be no guarantee of VC in an existing employment relationship. Such arrangements are utilized only on a very limited basis for new hires in the first year of employment and are subject to the bank's standard deferral requirements.

Key components of the compensation framework

1Some Assistant Vice Presidents and below in select entities and divisions are eligible for the Individual VC Component in lieu of the Recognition Award.

The Group VC Component is based on one of the overarching goals of the compensation framework – to ensure an explicit link between VC and the performance of the Group. To assess our annual achievements in reaching our strategic targets, the four Key Performance Indicators (KPIs) utilized as the basis for determining the 2018 Group VC Component were: Common Equity Tier 1 (CET 1) Capital Ratio (fully loaded), Leverage Ratio, Adjusted Costs, and Post-Tax Return on Tangible Equity (RoTE). These four KPIs represent important metrics for the capital, risk, cost and the revenue profile of our bank and provide an indication of the sustainable performance of Deutsche Bank.

Individual VC takes into consideration a number of financial and non-financial factors, including the applicable divisional performance, the employee's individual performance, conduct, and adherence to values and beliefs, as well as additional factors such as the comparison of pay levels with the employee's peer group and retention considerations.

Recognition Awards provide the opportunity to acknowledge and reward outstanding contributions made by the employees of lower seniority levels in a timely and transparent manner. Generally, the overall size of the Recognition Award budget is directly linked to a set percentage of FP for the eligible population and it is currently paid out twice a year, based on a review of nominations and contributions in a process managed at the divisional level.

Employee benefits complement Total Compensation and are considered FP from a regulatory perspective, as they have no direct link to performance or discretion. They are granted in accordance with applicable local market practices and requirements. Pension expenses represent the main element of the bank's benefits portfolio, globally.

In the context of InstVV, severance payments are considered VC. The bank has updated its severance framework to ensure full alignment with the respective new InstVV requirements.

Limited to extraordinary circumstances, the bank reserves the right to grant Retention Awards to help induce select employees which are at risk of leaving and that are critical to the bank's future, to remain at the bank. Retention Awards are generally linked to certain critical events in which the bank has a legitimate interest in retaining the employee for a defined period of time. This serves to minimize operational, financial or reputational risk. These awards are considered VC in a regulatory sense and are generally subject to the same requirements as other VC elements.

Determination of performance-based Variable Compensation

Deutsche Bank applies a methodology when determining VC that reflects the risk-adjusted performance and is primarily driven by (i) Group affordability, i.e. what can Deutsche Bank award in alignment with regulatory requirements, and (ii) performance, i.e. what should we award in order to provide an appropriate compensation for performance, while protecting the long-term health of the franchise.

Group affordability is assessed to determine that relevant parameters are meeting the current and projected future regulatory and strategic goals. The affordability parameters used are fully aligned with our Risk Appetite Framework and ensure that the bank's capital as well as liquidity position and planning, its risk-bearing capacity, the combined capital buffer requirements, and results are adequately taken into account.

When assessing Group and divisional performance, we reference a range of considerations. The performance is assessed in context of divisional financial and – based on Balanced Scorecards – non-financial targets. The financial targets are subject to appropriate risk-adjustment, in particular by referencing the degree of future potential risks to which Deutsche Bank may be exposed, and the amount of capital required to absorb severe unexpected losses arising from these risks. For the infrastructure functions, the performance assessment is mainly based on the achievement of cost targets and the Balanced Scorecards. While the allocation of VC to infrastructure functions depends on the overall performance of Deutsche Bank, it is not dependent on the performance of the division(s) these functions, particularly independent control functions, oversee.

At the level of the individual employee, we have established Variable Compensation Guiding Principles, which detail the factors and metrics that have to be taken into account when making Individual VC decisions. Our managers must fully appreciate the risk-taking activities of individuals to ensure that VC allocations are balanced and risk-taking is not inappropriately incentivized. The factors and metrics to be considered include, but are not limited to, individual performance based on quantitative and qualitative aspects, culture and behavioral considerations, and disciplinary sanctions. Managers of Material Risk Takers must specifically document the factors and risk metrics considered when making Individual VC decisions, and demonstrate how these factors influenced their decision. Generally, performance is assessed based on a one year period. However, for Management Board members of Significant Institutions, the performance across three years is taken into account.

Variable Compensation Structure

Our compensation structures are designed to provide a mechanism that promotes and supports long-term performance of our employees and our bank. Whilst a portion of VC is paid upfront, these structures require that an appropriate portion is deferred to ensure alignment to the sustainable performance of the Group.

At the same time, we believe that the use of shares or share-based instruments for deferred VC is an effective way to align compensation with Deutsche Bank's sustainable performance and the interests of shareholders. By using Deutsche Bank shares, the value of the individual's VC is linked to Deutsche Bank's share price over the deferral and retention period.

We continue to go beyond regulatory requirements with the amount of VC that is deferred and Deutsche Bank's minimum deferral periods. Whilst ensuring lower compensated employees are not subject to deferrals, we ensure an appropriate amount of deferred VC for higher earners. We start to defer parts of variable compensation for Material Risk Takers where VC is set at or above € 50,000. For non-MRTs, deferrals start at higher levels of VC. The VC threshold for MRTs requiring at least 60 % deferral is set at € 500,000. Furthermore, Directors and Managing Directors in the Corporate & Investment Bank (CIB) with Fixed Pay in excess of € 500,000 are subject to a VC deferral of 100 %. Material Risk Takers are on average subject to deferral rates in excess of the minimum 40 % (60 % for Senior Management) as required by InstVV.

As detailed in the table below, deferral periods range from three to five years, dependent on employee groups.

Overview on 2018 Award Types (excluding DWS Group)

Award Type	Description	Beneficiaries	Deferral Period	Retention Period	Proportion
Upfront: Cash VC	Upfront cash portion	All eligible employees	N/A	N/A	InstVV MRTs: 50 % of upfront VC Non-MRTs: 100 % of upfront VC
Upfront: Equity Upfront Award (EUA)	Upfront equity portion (linked to Deutsche Bank's share price over the retention period)	All InstVV MRTs with VC >= € 50,000	N/A	Twelve months	50 % of upfront VC
Deferred: Restricted Incentive Award (RIA)	Deferred cash portion	All employees with deferred VC	Equal tranche vesting over CIB: four years Sen. Mgmt.: five years Other: three years1	N/A	50 % of deferred VC
Deferred: Restricted Equity Award (REA)	Deferred equity portion (linked to Deutsche Bank's share price over the vesting and retention period)	All employees with deferred VC	Equal tranche vesting over CIB: four years Sen.Mgmt.: five years Other: three years1	Twelve months for InstVV MRTs	50 % of deferred VC

N/A – Not applicable

1Senior Management, for the purposes of performance year 2018 annual awards, is defined as Deutsche Bank's Senior Leadership Cadre, plus Management Board members of Significant Institutions and their direct reports (excl. non-management/-strategic roles) – excluding DWS Executive Board. All Senior Management employees are also considered InstVV MRTs.

Our employees are not allowed to sell, pledge, transfer or assign a deferred award or any rights in respect to the award. They may not enter into any transaction having an economic effect of hedging any variable compensation, for example offsetting the risk of price movement with respect to the equity-based award. Our Human Resources and Compliance functions, supported by the Compensation Officer, work together to monitor employee trading activity and to ensure that all our employees comply with this requirement.

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Ex-post Risk Adjustment of Variable Compensation

We believe that the future conduct and performance of our employees are key elements of deferred VC. As a result, all deferred awards are subject to performance conditions and forfeiture provisions as detailed below.

Overview on Deutsche Bank Group performance conditions and forfeiture provisions of Variable Compensation

1For award types subject to cliff-vesting, the whole award will be forfeited if at quarter end prior to vesting or settlement the Group CET 1 Capital Ratio, or the Liquidity Coverage Ratio are below the threshold. For Equity Upfront Awards, the Group CET 1 Capital Ratio, or the Liquidity Coverage Ratio are only assessed at the quarter end prior to delivery.

2Forfeiture provisions here are not a complete list, other provisions apply as outlined in the respective plan rules.

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Employee Groups with specific Compensation Structures

For some areas of the bank, compensation structures apply that deviate, within regulatory boundaries, in some aspects from the Group Compensation Framework outlined previously.

Postbank units

With effect from May 25, 2018, Deutsche Postbank AG merged with Deutsche Bank Privat- und Geschäftskunden AG to form DB Privat- und Firmenkundenbank AG. For the remainder of 2018, the Postbank units retained their compensation structures with some amendments for Material Risk Takers.

In line with Deutsche Bank Group practice, Postbank units utilize a Group and an Individual VC Component. However, for non-MRTs the Group VC Component is currently still based on Postbank business unit results. For Material Risk Takers, limited to performance year 2018, the Group VC Component reflects a combination of the objective achievement rate of both Postbank units and Deutsche Bank Group. For Senior Management, Material Risk Takers and other executive staff in Postbank units, the Group-wide deferral rules apply.

The compensation for nonexecutive staff in Postbank units is based on frameworks agreed with trade unions or with the respective workers' councils. Where no collective agreements exist, compensation is subject to individual contracts. In general, nonexecutive staff in Postbank units receive VC, but the structure and portion of VC differ between legal entities.

DWS

The vast majority of DWS asset management entities fall under AIFMD or UCITS while a limited number of entities remain in scope of the bank's Group Compensation Framework and InstVV. DWS has established its own compensation governance, policy, and structures, as well as Risk Taker identification process in line with AIFMD/UCITS requirements. These structures and processes are in line with InstVV where required, but tailored towards the Asset Management business.

DWS has implemented a self-imposed fixed-to-variable ratio of 1:2 for AIFMD/UCITS Control Function employees and 1:5 for other employees in order to align the compensation with industry standards. Generally, DWS applies remuneration rules that are equivalent to the Deutsche Bank Group approach, but use DWS Group-related parameters, where possible. Notable deviations from the Group Compensation Framework include the use of share-based instruments linked to DWS shares and fund-linked instruments. These serve to improve the alignment of employee compensation with DWS' shareholders' and investors' interests.

Control Functions

In line with InstVV, the bank has defined control functions that are subject to specific regulatory requirements. These control functions comprise Risk, Compliance, Anti-Financial Crime, Group Audit, parts of Human Resources, and the Compensation Officer and his Deputy. To prevent conflicts of interests, the parameters used to determine the Individual VC Component of these control functions do not follow the same parameters being used for the business they oversee. Based on their risk profile, these functions are subject to a fixed-to-variable pay ratio of 2:1.

In addition, for some additional corporate functions that perform control roles (including Legal, Group Finance, Group Tax, Regulation, and other parts of Human Resources), the bank has determined a voluntary application of a fixed-to-variable pay ratio of 1:1.

Tariff staff

Within Deutsche Bank Group there are more than 21,000 tariff employees in Germany (based on full-time equivalent). These tariff employees are primarily employed by Deutsche Bank AG, DB Privat- und Firmenkundenbank AG, and subsidiaries within the Postbank unit. They are subject to a collective agreement (Tarifvertrag für das private Bankgewerbe und die öffentlichen Banken), as negotiated between trade unions and employer associations. Also, former Postbank units are subject to agreements as negotiated with the respective trade unions directly. The remuneration of tariff staff is included in the quantitative disclosures in this report.

Compensation Decisions for 2018

Year-End considerations and decisions for 2018

For the determination of the total amount of VC for 2018, the Management Board considered many factors such as affordability and performance at both the Group and divisional level. The assessment of performance has been complemented by the consideration of other important aspects including the ongoing focus on achieving the bank's strategic objectives, regulatory requirements, the impact of competitive positioning on retaining and motivating

employees, and a sustainable balance between shareholder and employee interests as required by the bank's Compensation Strategy.

For the financial year 2018, Deutsche Bank's pre-tax earnings amounted to approximately € 1.3 billion. For the first time since 2014, the bank reported a net profit.

The SECC has monitored Group affordability throughout 2018 and confirmed that the bank's capital and liquidity positions remained comfortably above regulatory minimum requirements throughout the year. As such, the Management Board confirmed that the Group affordability parameters were met and the total amount of VC for performance year 2018 may be awarded.

In the context of the above considerations and taking into account the risk-adjusted financial performance, the Management Board has determined a total amount of performance-based VC for 2018 of € 1.9 billion (including the Individual VC Component, the Group VC Component, Recognition Awards, and VC for Postbank units). The determination of VC for the Management Board of Deutsche Bank AG was not part of this decision, as it was carried out by our Supervisory Board in a separate process (please refer to the Management Board Compensation Report). The VC for the Management Board is, however, included as part of performance-based VC for 2018 in the tables and charts below.

As part of the overall 2018 VC awards granted in March 2019, the Group VC Component was awarded to all eligible employees in line with the assessment of the four defined KPIs, as outlined in the chapter Group Compensation Framework. The Management Board determined a payout rate of 70 % for 2018.

Disclosure of Total Compensation for 2018

The VC for Postbank units will be included as part of performance-based VC from reporting period 2018 onwards.

In line with the new definitions of Fixed Pay and Variable Pay according to the updated Section 2 InstVV, additional compensation elements need to be included in the quantitative disclosures compared to previous years. The disclosed Fixed Pay amounts now also include pension expenses as material benefits. Disclosed Variable Pay now also includes severance payments. For ease of reference, prior year values in the following table have been adjusted to include these two elements as well as VC for Postbank units for the 2017 reporting period as well.

Based on the new definitions, compared to 2017, the Fixed Pay according to § 2 InstVV for 2018 (including pension expenses as required by InstVV) decreased by approximately 3 % from € 8.6 billion to € 8.3 billion, mainly due to headcount reductions. As established by our compensation framework, FP continues to remain the primary compensation component for the majority of our employees, especially those at the lower seniority levels.

The total amount of year-end performance-based VC for 2018 – the amount of VC that Deutsche Bank Group pays to its employees for their performance in 2018 – decreased by approximately 14 % from € 2.3 billion to € 1.9 billion. When excluding VC for the Management Board of Deutsche Bank AG, performance-based VC decreased by approximately 15 % year on year.

Variable Pay according to § 2 InstVV includes not only performance-based VC but also other VC commitments and severance payments. Compared to 2017, it decreased by approximately 8 %, mainly due to the reduced performance-based VC for 2018 – partially offset by increased severance cost in light of the bank's strategic priorities.

Compensation awards for 2018 – all employees

	2018								2017
in € m. (unless stated otherwise)[1]	Supervisory Board2	Manage-ment Board3	CIB3	PCB3	DWS3	Inde-pendent Control Functions3	Corporate Functions3	Group Total	Group Total
Number of employees (full-time equivalent)	20	9	16,373	41,706	4,024	5,676	23,948	91,737	97,535
Total compensation	6	95	3,736	3,449	704	741	1,908	10,633	11,121
Base salary and allowances	6	31	2,381	2,730	440	597	1,506	7,684	7,901
Pension expenses	0	10	173	263	41	54	116	657	726
Fixed Pay according to § 2 InstVV4	6	42	2,555	2,992	480	651	1,622	8,341	8,628
Year-end performance-based VC5	0	27	1,033	381	175	86	243	1,945	2,256
Other VC6	0	0	104	12	23	1	4	143	113
Severance payments	0	26	45	64	26	4	39	203	123
Variable Pay according to § 2 InstVV7	0	53	1,181	457	224	91	286	2,292	2,493
Retention Award Program (Jan 2017)8								0	961

N/A – Not applicable

1The table may contain marginal rounding differences.

2Supervisory Board includes the Deutsche Bank AG board members at year-end. They are not considered for the Group Total Number of employees. Employee representatives are considered with their compensation for the Supervisory Board role only (their employee compensation is included in the relevant divisional column). The remuneration for members of the Deutsche Bank AG Supervisory Board is not reflected in the Group Total.

3Management Board includes the respective board members of Deutsche Bank AG at year-end. PCB includes Postbank units. DWS includes DWS Group – irrespective of whether employees are in scope of InstVV or AIFMD/UCITS V. Independent Control Functions includes Chief Risk Officer, Group Audit, Compliance, Anti-Financial Crime. Corporate Functions comprise any infrastructure function which is neither captured as an Independent Control Function nor part of any division.

4 Fixed Pay according to § 2 InstVV includes base salary, allowances, and pension expenses.

5 Year-end performance-based VC includes Individual/Group VC Components, Recognition Award, VC for Postbank units (for 2017 and for 2018), VC for Deutsche Bank AG Management Board.

6Other VC includes other contractual VC commitments in the period such as sign-on payments and retention awards.

7Variable Pay according to § 2 InstVV includes Deutsche Bank's year-end performance-based VC awards for 2018 and other VC commitments in the relevant period, as well as severance payments. € 26 million buyouts for new hires (replacement awards for lost entitlements from previous employers) are not included. Long-term Incentive Plans are not included as they will be considered as VC for the year in which the awards are due.

8Retention Award Program (Jan 2017) amount includes forfeitures and was FX-adjusted for 2017. For more information please refer to the Annual Report 2017.

Year-end performance-based Variable Compensation and deferral rates year over year

Recognition and Amortization of Variable Compensation

As of December 31, 2018, including awards for financial year 2018 granted in early March 2019, unamortized deferred VC expenses amount to approximately € 1.6 billion. The following table outlines the amount of VC recognized on the balance sheet for 2018 and the projected future amortization of outstanding deferred VC over the next financial years (future grants and forfeitures excluded).

Year-end performance-based Variable Compensation (including Retention Award Program in 2017), recognized as of December 31, 2018 and projected amortization of deferred compensation granted

			Projected amortization (excluding future grants and forfeitures)		
in € bn.	Recognized on-balance sheet as of Dec 31, 2018	Not yet recognized on-balance sheet as of Dec 31, 2018	2019	2020	2021 - 2024
Upfront Awards - 2018	1.2	0.1	0.1	0.0	-
Deferred - 2018	0.1	0.6	0.3	0.2	0.1
Deferred - 2017 and prior1	1.6	1.0	0.5	0.3	0.2
Total	2.9	1.6	0.9	0.5	0.3

Due to rounding, numbers presented may not add up precisely to the totals provided. Including Variable Compensation for Postbank units.

1Deferred Variable Compensation granted for performance year 2017 or earlier includes Variable Compensation for Postbank units for 2017 and 2017 Retention Award Program which was not designed to compensate for performance.

Of the year-end performance-based VC for 2018, € 1.3 billion is charged to the income statement for 2018, including the upfront cash VC awards for 2018 amounting to € 1.2 billion as well as € 0.1 billion of deferred awards for 2018 already recognized as of December 31, 2018 due to regulatory requirements. € 0.7 billion will be charged to future years, including € 0.1 billion of Equity Upfront Awards which are granted upfront but amortized over a twelve months retention period as well as € 0.6 billion of Restricted Incentive and Restricted Equity Awards.

In addition, the income statement for 2018 was charged with a VC of € 0.6 billion stemming from prior years' deferrals, recognized and amortized as Other liabilities. € 1.0 billion of prior years' deferrals were recognized in Equity for 2018 as they were still part of the treasury stock distributable as of December 31, 2018. These outstanding share awards will vest and will be recognized as compensation expense during 2019 or in future years. Additional prior years' deferrals amounting to € 1.0 billion will be charged to future years.

Material Risk Taker Compensation Disclosure

On a global basis, 1,913 employees were identified as Material Risk Takers according to InstVV for financial year 2018, compared to 1,907 employees for 2017 (excluding Postbank units: 1,795 MRTs). The remuneration elements for all MRTs identified according to InstVV are detailed in the table below in accordance with Section 16 InstVV and Article 450 CRR.

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Aggregate remuneration for Material Risk Takers according to InstVV

	2018								2017
in € m. (unless stated otherwise)[1]	Super-visory Board[2]	Manage-ment Board3	CIB3	PCB3	DWS3	Inde- pendent Control Functions3	Corporate Functions3	Group Total	Group Total
Number of MRTs (headcount)	49	45	1,109	334	17	180	179	1,913	1,795
Number of MRTs (FTE)	48	39	1,013	322	15	174	170	1,781	1,772
thereof: Senior Management4	0	25	35	119	7	29	37	252	
Total Pay	7	122	1,236	174	27	94	147	1,807	2,359
Total Fixed Pay	7	57	705	103	12	74	91	1,049	981
thereof:									
in cash (incl. pension expenses)5	5	57	705	103	12	74	91	1,048	
in shares or other instruments6	1	0	0	0	0	0	0	1	
Total Variable Pay for period7	0	65	530	71	16	20	56	758	1,379
thereof:									
in cash	0	34	273	38	12	11	30	398	685
in shares or share-based instruments	0	31	257	33	3	9	26	360	689
in other types of instruments	0	0	0	0	1	0	0	0	6
Total Variable Pay for period, deferred	0	42	447	39	5	8	29	569	1,087
thereof:									

in cash	0	14	223	20	2	4	15	278	535
in shares or share-based instruments	0	27	223	19	2	4	15	291	545
in other types of instruments	0	0	0	0	0	0	0	0	6
Total amount of variable pay still outstanding at the beginning of the year that was deferred in previous years	0	61	1,303	126	24	42	121	1,678	1,783
thereof:									
vested	0	10	54	14	3	5	9	95	704
vested and paid/delivered	0	9	53	11	3	5	9	90	
unvested	0	51	1,250	112	21	37	112	1,583	1,079
Deferred Variable Pay awarded, paid out or reduced during period									
awarded during period	0	27	683	58	11	20	44	842	762
paid out during period	0	16	315	52	7	17	40	447	639
reduced through explicit risk adjustments8	0	0	7	0	0	0	0	7	3
Number of beneficiaries of guaranteed variable remuneration (incl. sign-on payments)	0	0	4	0	0	0	0	4	27
Total amount of guaranteed variable pay (incl. sign-on payments)	0	0	2	0	0	0	0	2	21
Total amount of severance payments granted during period9	0	29	15	3	8	0	2	58	21
Number of beneficiaries of severance payments granted during period	1	6	82	7	3	3	6	108	53
Highest severance payment granted to an individual during period	0	11	1	1	4	0	2	11	5

1The table may contain marginal rounding differences. Employees are allocated to columns based on their primary role. 2017 values are based on the values disclosed in the 2017 report and include the full value of the Retention

Award Program granted to MRTs in 2017.

2Supervisory Board includes the Supervisory Board members of all Significant Institutions within Deutsche Bank Group at year-end. Employee representatives solely identified due to their Supervisory Board role are considered with their compensation for the Supervisory Board role only.

3Management Board includes the respective board members of all Significant Institutions within Deutsche Bank Group at year-end. PCB includes Postbank units. As the determination of VC for some employees in Postbank units continues even beyond the publication of this report, the VC for MRTs in Postbank units is considered based on preliminary data. Final values will be disclosed in the compensation reports of DB Privat- und Firmenkundenbank AG as well as BHW Bausparkasse AG. DWS includes only InstVV Material Risk Takers within DWS Group. Independent Control Functions include Chief Risk Officer, Group Audit, Compliance, Anti-Financial Crime. Corporate Functions comprise any infrastructure function which is neither captured as an Independent Control Function nor part of any division.

4Senior Management is defined as Deutsche Bank's Senior Leadership Cadre, plus Management Board members of Significant Institutions and their direct reports (excl. non-management/-strategic roles) – excluding DWS Executive Board. All Senior Management employees are also considered InstVV MRTs. Management Board members of Significant Institutions are only included in the Management Board column.

5Fixed Pay in cash includes base salary, allowances and material benefits (pension expenses).

6Fixed Pay in shares is only granted to members of the Deutsche Bank AG Supervisory Board as described in the chapter Compensation System for Supervisory Board Members.

7Total Variable Pay for period includes Deutsche Bank's year-end performance-based VC awards for 2018 and other VC commitments in the relevant period, as well as severance payments. Buyouts and Long-term Incentive Plans are not included.

8Includes penalty (malus) and clawback.

9Severance payments are generally paid out in the year in which they have been granted.

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Remuneration of high earners

	2018
in €	Number of employees
Total Pay	
1,000,000 to 1,499,999	356
1,500,000 to 1,999,999	125
2,000,000 to 2,499,999	61
2,500,000 to 2,999,999	31
3,000,000 to 3,499,999	15
3,500,000 to 3,999,999	22
4.000,000 to 4,499,999	5
4,500,000 to 4,999,999	3

5,000,000 to 5,999,999	14
6,000,000 to 6,999,999	8
7,000,000 to 7,999,999	1
8,000,000 to 8,999,999	0
9,000,000 to 9,999,999	2
10,000,000 to 10,999,999	0
Total	643

1Compared to 2017, high earners in Postbank units and pension expenses as well as severance payments are considered for the first time. Buyouts and Long-term Incentive Plans not included.

In total, 643 employees received a Total Pay of € 1 million or more for 2018, compared to 705 employees in 2017 and 316 employees in 2016. Based on the same definitions as used in previous years – excluding pension expenses and severances – the number of high earners for 2018 would be 607 employees.

The table above does not include the four members of the Group Management Board who left the Management Board in 2018. In addition to the fixed and variable remuneration and the service costs (IFRS) for pension benefits, termination agreements were concluded with all four members of the Management Board in which termination benefits (severance payments and compensation for waiting periods) were agreed to which the members of the Management Board are entitled on the basis of their service contracts (in one case two service contracts). If all compensation components are added, the total amount in one case is between € 4.5 and 5 million, in one case between € 7 and 8 million, in one case between € 13 and 14 million and in one case between € 15 and 16 million. Details of all components are disclosed in the Management Board Compensation Report.

Compensation System for Supervisory Board Members

The compensation principles for Supervisory Board members are set forth in our Articles of Association, which our shareholders amend from time to time at the Annual General Meeting. Such compensation provisions, which were newly conceived in 2013, were last amended by resolution of the Annual General Meeting on May 18, 2017 and became effective on October 5, 2017. Accordingly, the following provisions apply:

The members of the Supervisory Board receive fixed annual compensation (“Supervisory Board Compensation”). The annual base compensation amounts to € 100,000 for each Supervisory Board member. The Supervisory Board Chairman receives twice that amount and the Deputy Chairperson one and a half times that amount.

Members and chairs of the committees of the Supervisory Board are paid additional fixed annual compensation as follows:

	Dec 31, 2018	
Committee in €	Chairperson	Member
Audit Committee	200,000	100,000
Risk Committee	200,000	100,000
Nomination Committee	100,000	50,000
Mediation Committee	0	0

Integrity Committee	200,000	100,000
Chairman's Committee	100,000	50,000
Compensation Control Committee	100,000	50,000
Strategy Committee	100,000	50,000
Technology, Data and Innovation Committee	100,000	50,000

75 % of the compensation determined is disbursed to each Supervisory Board member after submitting invoices within the first three month of the following year. The other 25 % is converted by the company at the same time into company shares based on the average closing price on the Frankfurt Stock Exchange (Xetra or successor system) during the last ten trading days of the preceding January, calculated to three digits after the decimal point. The share value of this number of shares is paid to the respective Supervisory Board member in February of the year following his departure from the Supervisory Board or the expiration of his term of office, based on the average closing price on the Frankfurt Stock Exchange (Xetra or successor system) during the last ten trading days of the preceding January, provided that the member does not leave the Supervisory Board due to important cause which would have justified dismissal.

In case of a change in Supervisory Board membership during the year, compensation for the financial year will be paid on a pro rata basis, rounded up/down to full months. For the year of departure, the entire compensation is paid in cash; a forfeiture regulation applies to 25 % of the compensation for that financial year.

The company reimburses the Supervisory Board members for the cash expenses they incur in the performance of their office, including any value added tax (VAT) on their compensation and reimbursements of expenses. Furthermore, any employer contributions to social security schemes that may be applicable under foreign law to the performance of their Supervisory Board work shall be paid for each Supervisory Board member affected. Finally, the Chairman of the Supervisory Board will be appropriately reimbursed for travel expenses incurred in performing representative tasks that his function requires and for the costs of security measures required on account of his function.

In the interest of the company, the members of the Supervisory Board will be included in an appropriate amount, with a deductible, in any financial liability insurance policy held by the company. The premiums for this are paid by the company.

Supervisory Board Compensation for the 2018 Financial Year

Individual members of the Supervisory Board received the following compensation for the 2018 financial year (excluding value added tax).

	Compensation for fiscal year 2018		Compensation for fiscal year 2017	
Members of the Supervisory Board in €	Fixed	Thereof payable in 1st quarter 2019	Fixed	Thereof paid in 1st quarter 2018
Dr. Paul Achleitner1	858,333	643,750	800,000	683,333
Detlef Polaschek2	262,500	196,875	0	0
Stefan Rudschäfski3	125,000	125,000	300,000	225,000
Ludwig Blomeyer-Bartenstein2	175,000	131,250	0	0
Wolfgang Böhr3	83,333	83,333	200,000	150,000
Frank Bsirske4	279,167	235,417	250,000	187,500
Mayree Carroll Clark2	204,167	153,125	0	0

Dina Dublon5	175,000	175,000	300,000	225,000
Jan Duscheck4	187,500	151,042	100,000	75,000
Dr. Gerhard Eschelbeck6	129,167	96,875	58,333	43,750
Katherine Garrett-Cox	241,667	181,250	200,000	150,000
Timo Heider4	229,167	192,708	200,000	150,000
Sabine Irrgang3	83,333	83,333	200,000	150,000
Prof. Dr. Henning Kagermann3	104,167	104,167	250,000	187,500
Martina Klee4	170,833	148,958	200,000	150,000
Peter Löscher7	0	0	83,333	83,333
Henriette Mark4	229,167	192,708	200,000	150,000
Richard Meddings	429,167	321,875	400,000	300,000
Louise Parent3	125,000	125,000	400,000	300,000
Gabriele Platscher4	258,333	214,583	200,000	150,000
Bernd Rose4	229,167	192,708	200,000	150,000
Gerd Alexander Schütz8	129,167	107,292	58,333	43,750
Prof. Dr. Stefan Simon	487,500	365,625	216,667	162,500
Stephan Szukalski2	116,667	87,500	0	0
Dr. Johannes Teyssen3	104,167	104,167	250,000	187,500
John Alexander Thain2	116,667	87,500	0	0
Michele Trogni2	175,000	131,250	0	0
Prof. Dr. Klaus Rüdiger Trützschler7	0	0	83,333	83,333
Prof. Dr. Norbert Winkeljohann9	58,333	43,750	0	0
Total	5,766,669	4,676,041	5,150,000	3,987,500

1Member was re-elected on May 18, 2017.

2Member since May 24, 2018.

3Member until May 24, 2018.

4As Employee representatives on April 26, 2018 re-elected.

5Member since July 31, 2018.

6Member since May 18, 2017.

7Member until May 18, 2017.

8Member since May 18, 2017. Re-elected on May 24, 2018.

9Member since August 1, 2018.

Following the submission of invoices 25 % of the compensation determined for each Supervisory Board member for the 2018 financial year was converted into notional shares of the company on the basis of a share price of € 7.9747 (average closing price on the Frankfurt Stock Exchange (Xetra) during the last ten trading days of January 2019).

Members who left the Supervisory Board in 2018 were paid the entire amount of compensation in cash. For members whose term of office ended in 2018, the total compensation for the period until then, was paid fully in cash.

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The following table shows the number of notional shares of the Supervisory Board members, to three digits after the decimal point, that were awarded in the first three month 2019 as part of their 2018 compensation as well as the number of notional shares accrued from previous years as part of the compensation 2013 to 2017 accumulated during the respective membership in the Supervisory Board and the total amounts paid out in February 2019 for departed or re-elected members.

	Number of notional shares			
Members of the Supervisory Board	Converted in February 2019 as part of the compensation 2018	Total prior-year amounts as part of the compensation from 2013 to 2017	Total (cumulative)	In February 2019 payable in €[1]
Dr. Paul Achleitner2	26,908.013	7,547.235	34,455.248	0
Detlef Polaschek3	8,229.150	0	8,229.150	0
Stefan Rudschäfski4	0	4,851.794	4,851.794	38,692
Ludwig Blomeyer-Bartenstein3	5,486.100	0	5,486.100	0
Wolfgang Böhr4	0	5,273.861	5,273.861	42,057
Frank Bsirske5	5,486.100	13,855.697	19,341.797	110,495
Mayree Carroll Clark3	6,400.450	0	6,400.450	0
Dina Dublon6	0	15,297.428	15,297.428	121,992
Jan Duscheck5	4,571.750	2,181.701	6,753.451	17,398
Dr. Gerhard Eschelbeck	4,049.264	943.404	4,992.668	0
Katherine Garrett-Cox	7,576.043	4,363.401	11,939.444	0
Timo Heider5	4,571.750	11,105.005	15,676.755	88,559
Sabine Irrgang4	0	11,105.005	11,105.005	88,559
Prof. Dr. Henning Kagermann4	0	14,560.688	14,560.688	116,117
Martina Klee5	2,743.050	11,387.001	14,130.051	90,808
Henriette Mark5	4,571.750	12,130.752	16,702.502	96,739
Richard Meddings	13,454.007	13,330.645	26,784.652	0
Louise Parent4	0	14,763.082	14,763.082	117,731
Gabriele Platscher5	5,486.100	11,848.755	17,334.855	94,490
Bernd Rose5	4,571.750	11,566.759	16,138.509	92,241
Gerd Alexander Schütz7	2,743.050	943.404	3,686.454	7,523
Prof. Dr. Stefan Simon	15,282.707	3,955.622	19,238.329	0
Stephan Szukalski3	3,657.400	0	3,657.400	0
Dr. Johannes Teyssen4	0	11,015.673	11,015.673	87,847
John Alexander Thain3	3,657.400	0	3,657.400	0

Michele Trogni3	5,486.100	0	5,486.100	0
Prof. Dr. Norbert Winkeljohann8	1,828.700	0	1,828.700	0
Total	136,760.634	182,026.912	318,787.546	1,211,250

1At a value of € 7.9747 based on the average closing price on the Frankfurt Stock Exchange (Xetra or successor system) during the last ten trading days of January 2019.

2Member was re-elected on May 18, 2017.

3Member since May 24, 2018.

4Member until May 24, 2018.

5As Employee representatives on April 26, 2018 re-elected.

6Member until July 31, 2018.

7Member since May 18, 2017. On May 24, 2018 re-elected.

8Member since August 1, 2018.

All employee representatives on the Supervisory Board, with the exception of Frank Bsirske, Jan Duscheck and Stephan Szukalski, are employed by us. In the 2018 financial year, we paid such members a total amount of € 1.11 million in the form of salary, retirement and pension compensation in addition to their Supervisory Board compensation.

We do not provide members of the Supervisory Board with any benefits after they have left the Supervisory Board, though members who are or were employed by us are entitled to the benefits associated with the termination of such employment. During 2018, we set aside € 0.12 million for pension, retirement or similar benefits for the members of the Supervisory Board who are or were employed by us.

With the agreement of the Bank's Management Board, Dr. Paul Achleitner performs representative functions in various ways on an unpaid basis for the Bank and participates in opportunities for referrals of business for the Bank. These tasks are related to the functional responsibilities of the Chairman of the Supervisory Board of Deutsche Bank AG. In this respect, the reimbursement of costs is provided for in the Articles of Association. On the basis of a separate contractual agreement, the Bank provides Dr. Paul Achleitner with infrastructure and support services free of charge for his services in the interest of the Bank. He is therefore entitled to avail himself of internal resources for preparing and carrying out these activities. The Bank's security and car services are available for Dr. Paul Achleitner for use free of charge for these tasks. The Bank also reimburses travel expenses and attendance fees and covers the taxes for any non-cash benefits provided. On September 24, 2012, the Chairman's Committee approved the conclusion of this agreement. The provisions apply for the duration of Dr. Paul Achleitner's tenure as Chairman of the Supervisory Board and are reviewed on an annual basis for appropriateness. Under this agreement between Deutsche Bank and Dr. Achleitner, support services equivalent to € 225,000 (2017: € 248,000) were provided and reimbursements for expenses amounting to € 218,672 (2017: € 197,679) were paid during the 2018 financial year.

Corporate Responsibility

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Employees

Group Headcount

As of December 31, 2018, we employed a total of 91,737 staff members compared to 97,535 as of December 31, 2017. We calculate our employee figures on a full-time equivalent basis, meaning we include proportionate numbers of part-time employees.

The following table shows our numbers of full-time equivalent employees as of December 31, 2018, 2017 and 2016.

Employees1	Dec 31, 2018	Dec 31, 2017	Dec 31, 2016
Germany	41,669	42,526	44,600
Europe (outside Germany), Middle East and Africa	20,871	23,543	24,062
Asia/Pacific	19,732	20,861	20,099
North America2	9,275	10,358	10,611
Latin America	189	247	373
Total employees	91,737	97,535	99,744

1Full-time equivalent employees; in 2018 BHW KSG aligned its FTE definition to Deutsche Bank which increased the Group number as of December 31, 2018 by 95 (prior periods not restated).

2Primarily the United States.

The number of our employees decreased in 2018 by 5,797 or 5.9 % driven by implementation of our targets announced in May 2018:

- Germany (-857; -2.0 %) driven by the implementation of restructuring measures, primarily in Private & Commercial Bank related to closure of branches;
- North America (-1,083; -11.3 %) driven mostly by reductions in Corporate & Investment Bank and in COO;
- Latin America (-58; -23.5 %) due to reductions primarily in Brazil as a result of the implementation of our footprint strategy;
- EMEA ex Germany (-2,672; -11.3 %) particularly a result of the demerger of the private and commercial banking business in Poland;
- Asia/Pacific (-1,128; -5.4 %) primarily driven by reductions in COO (-837).

Employees	Dec 31, 2018	Dec 31, 2017	Dec 31, 2016
Corporate & Investment Bank	17.8 %	18.1 %	18.2 %
Private & Commercial Bank	45.5 %	45.1 %	45.6 %
Asset Management	4.4 %	4.1 %	4.1 %

Non-Core Operations Unit	0.0 %	0.0 %	0.1 %
Infrastructure	32.3 %	32.7 %	32.0 %

- Corporate & Investment Bank (-1,314; -7.4 %) driven by reductions in the global financial centers primarily in the US, UK, Hong Kong and Singapore;
- Private & Commercial Bank (-2,244; -5.1 %) driven by the demerger of the private and commercial banking business in Poland and of reductions in Germany;
- Asset Management/DWS (+11; +0.3 %);
- Infrastructure functions (-2,250; -7.1 %) primarily driven by reductions in COO (-1,746), which were partly offset by insourcing of business critical external roles and further strengthening of Anti-Financial Crime division.

Labor Relations

In Germany, labor unions and employers' associations generally negotiate collective bargaining agreements on salaries and benefits for employees below the management level. Many companies in Germany, including ourselves and our material German subsidiaries, are members of employers' associations and are bound by collective bargaining agreements.

Accordingly, our employers' association, the Arbeitgeberverband des privaten Bankgewerbes e.V., regularly renegotiates the collective bargaining agreements that cover many of our employees. The current agreement reached in July 2016 includes the period from May 2016 onwards. After five months without any pay raise, a first pay raise of 1.5 % takes place from October 2016 on, a second pay rise of 1.1 % from January 2018 on, and a third pay raise of 1.1 % from November 2018 on. The existing collective bargaining agreement lasts until January 31, 2019. Negotiations on a new collective bargaining agreement take place in the first half of 2019.

Our employers' association negotiates with the following unions:

- ver.di (Vereinigte Dienstleistungsgewerkschaft), a union formed in July 2001 resulting from the merger of five unions, including the former bank unions Deutsche Angestellten Gewerkschaft and Gewerkschaft Handel, Banken und Versicherungen;
- Deutscher Bankangestellten Verband (DBV – Gewerkschaft der Finanzdienstleister);
- Deutscher Handels- und Industrieangestellten Verband (DHV – Die Berufsgewerkschaft).

German law prohibits us from asking our employees whether they are members of labor unions. Therefore, we do not know how many of our employees are union members. Approximately 15 % of the employees in the German banking industry are unionized. We estimate that less than 15 % of our employees in Germany are unionized (excluding former Postbank, which itself traditionally has a significantly higher unionization rate of approximately 60 %). On a worldwide basis, we estimate that approximately 15 % of our employees are members of labor unions (including former Postbank, less than 25 %).

As of December 31, 2018, 31 % of former Postbank staff members in Germany are civil servants (full-time equivalent basis), compared to 32 % as of December 31, 2017.

Post-Employment Benefit Plans

We sponsor a number of post-employment benefit plans on behalf of our employees, both defined contribution plans and defined benefit plans.

In our globally coordinated accounting process covering defined benefit plans with a defined benefit obligation exceeding € 2 million our global actuary reviews the valuations provided by locally appointed actuaries in each country.

By applying our global principles for determining the financial and demographic assumptions we ensure that the assumptions are best-estimate, unbiased and mutually compatible, and that they are globally consistent.

For a further discussion on our employee benefit plans see Note 35 “Employee Benefits” to our consolidated financial statements.

Restructuring

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Diversity and Inclusion

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Digitalization

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Key employee figures

Internal Control over Financial Reporting

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Risks in Financial Reporting

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Significant Agreements which Take Effect, Alter or Terminate upon a Change of Control of the Company Following a Takeover Bid

Agreements for Compensation in Case of a Takeover Bid

Corporate Governance Statement pursuant to Sections 289f and 315d of the German Commercial Code

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Consolidated Statement of Income

in € m.	Notes	2018	2017	2016
Interest and similar income1	5	24,793	23,542	25,143
Interest expense	5	11,601	11,164	10,436
Net interest income	5	13,192	12,378	14,707
Provision for credit losses	21	525	525	1,383
Net interest income after provision for credit losses		12,667	11,853	13,324
Commissions and fee income	6	10,039	11,002	11,744
Net gains (losses) on financial assets/liabilities at fair value through profit or loss	5	1,332	2,926	1,401
Net gains (losses) on financial assets at amortized cost		2	N/A	N/A
Net gains (losses) on financial assets at fair value through other comprehensive income		317	N/A	N/A
Net gains (losses) on financial assets available for sale	7	N/A	479	653
Net income (loss) from equity method investments	18	219	137	455
Other income (loss)	8	215	(475)	1,053
Total noninterest income		12,124	14,070	15,307
Compensation and benefits	35	11,814	12,253	11,874
General and administrative expenses	9	11,286	11,973	15,454
Policyholder benefits and claims		0	0	374
Impairment of goodwill and other intangible assets	25	0	21	1,256
Restructuring activities	10	360	447	484
Total noninterest expenses		23,461	24,695	29,442
Income (loss) before income taxes		1,330	1,228	(810)
Income tax expense (benefit)	36	989	1,963	546
Net income (loss)		341	(735)	(1,356)
Net income (loss) attributable to noncontrolling interests		75	15	45
Net income (loss) attributable to Deutsche Bank shareholders and additional equity components		267	(751)	(1,402)

[1] Interest and similar income included € 16.8 billion for the year ended December 31, 2018 calculated based on effective interest method.

Earnings per Share

in € m.	Notes	2018	2017	2016
Earnings per share:1,2	11			
Basic		(€ 0.01)	(€ 0.53)	(€ 1.08)
Diluted		(€ 0.01)	(€ 0.53)	(€ 1.08)
Number of shares in million:1				
Denominator for basic earnings per share – weighted-average shares outstanding		2,102.2	1,967.7	1,555.3
Denominator for diluted earnings per share – adjusted weighted-average shares after assumed conversions3		2,102.2	1,967.7	1,555.3

1The number of average basic and diluted shares outstanding has been adjusted for all periods before April 2017 in order to reflect the effect of the bonus component of subscription rights issued in April 2017 in connection with the capital increase.

2Earnings were adjusted by € 292 and € 298 and € 276 million net of tax for the coupons paid on Additional Tier 1 Notes in April 2018, April 2017 and April 2016. In accordance with IAS 33 the coupons paid on Additional Tier 1 Notes are not attributable to Deutsche Bank shareholders and therefore need to be deducted in the calculation. This adjustment created a net loss situation for Earnings per Common Share for 2018.

3Due to the net loss situation for 2018, 2017 and 2016 potentially dilutive shares are generally not considered for the earnings per share calculation, because to do so would decrease the net loss per share. Under a net income situation however, the number of adjusted weighted average shares after assumed conversion would have been increased by 53 million shares for 2018, 62 million shares for 2017 and 27 million shares for 2016.

The accompanying notes are an integral part of the Consolidated Financial Statements.

Consolidated Statement of Comprehensive Income

in € m.	2018	2017	2016
Net income (loss) recognized in the income statement	341	(735)	(1,356)
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Remeasurement gains (losses) related to defined benefit plans, before tax	(216)	(69)	(861)
Net fair value gains (losses) attributable to credit risk related to financial liabilities designated as at fair value through profit or loss, before tax	52	N/A	N/A
Total of income tax related to items that will not be reclassified to profit or loss	10	(23)	344
Items that are or may be reclassified to profit or loss			
Financial assets available for sale			
Unrealized net gains (losses) arising during the period, before tax	N/A	197	(2)
Realized net (gains) losses arising during the period (reclassified to profit or loss), before tax	N/A	(523)	(571)
Financial assets at fair value through other comprehensive income			

Unrealized net gains (losses) arising during the period, before tax	(245)	N/A	N/A
Realized net (gains) losses arising during the period (reclassified to profit or loss), before tax	(317)	N/A	N/A
Derivatives hedging variability of cash flows			
Unrealized net gains (losses) arising during the period, before tax	(3)	(34)	62
Realized net (gains) losses arising during the period (reclassified to profit or loss), before tax	0	(137)	(2)
Assets classified as held for sale			
Unrealized net gains (losses) arising during the period, before tax	2	(162)	529
Realized net (gains) losses arising during the period (reclassified to profit or loss), before tax	(2)	162	(1,191)
Foreign currency translation			
Unrealized net gains (losses) arising during the period, before tax	457	(2,699)	203
Realized net (gains) losses arising during the period (reclassified to profit or loss), before tax	0	20	(2)
Equity Method Investments			
Net gains (losses) arising during the period	(10)	(36)	11
Total of income tax related to items that are or may be reclassified to profit or loss	228	146	117
Other comprehensive income (loss), net of tax	(43)	(3,157)	(1,364)
Total comprehensive income (loss), net of tax	298	(3,892)	(2,721)
Attributable to:			
Noncontrolling interests	116	(20)	52
Deutsche Bank shareholders and additional equity components	182	(3,872)	(2,773)

The accompanying notes are an integral part of the Consolidated Financial Statements.

Consolidated Balance Sheet

in € m.	Notes	Dec 31, 2018	Dec 31, 2017
Assets:			
Cash and central bank balances		188,731	225,655
Interbank balances (w/o central banks)		8,881	9,265
Central bank funds sold and securities purchased under resale agreements	22	8,222	9,971
Securities borrowed	22	3,396	16,732
Financial assets at fair value through profit or loss			
Trading assets		152,738	184,661
Positive market values from derivative financial instruments		320,058	361,032
Non-trading financial assets mandatory at fair value through profit and loss		100,444	N/A
Financial assets designated at fair value through profit or loss		104	91,276

Total financial assets at fair value through profit or loss	12, 13, 22, 37	573,344	636,970
Financial assets at fair value through other comprehensive income	16	51,182	N/A
Financial assets available for sale	15, 22	N/A	49,397
Equity method investments	18	879	866
Loans at amortized cost	20, 21, 22	400,297	401,699
Securities held to maturity	17	N/A	3,170
Property and equipment	23	2,421	2,663
Goodwill and other intangible assets	25	9,141	8,839
Other assets	26, 27	93,444	101,491
Assets for current tax	36	970	1,215
Deferred tax assets	36	7,230	6,799
Total assets		1,348,137	1,474,732
Liabilities and equity:			
Deposits	28	564,405	581,873
Central bank funds purchased and securities sold under repurchase agreements	22	4,867	18,105
Securities loaned	22	3,359	6,688
Financial liabilities at fair value through profit or loss			
Trading liabilities		59,924	71,462
Negative market values from derivative financial instruments		301,487	342,726
Financial liabilities designated at fair value through profit or loss		53,757	63,874
Investment contract liabilities		512	574
Total financial liabilities at fair value through profit or loss	12, 13, 37	415,680	478,636
Other short-term borrowings	31	14,158	18,411
Other liabilities	26, 27	117,513	132,208
Provisions	21, 29	2,711	4,158
Liabilities for current tax	36	944	1,001
Deferred tax liabilities	36	512	346
Long-term debt	32	152,083	159,715
Trust preferred securities	32	3,168	5,491
Obligation to purchase common shares		0	0
Total liabilities		1,279,400	1,406,633
Common shares, no par value, nominal value of € 2.56	34	5,291	5,291
Additional paid-in capital		40,252	39,918
Retained earnings		16,714	17,454
Common shares in treasury, at cost	34	(15)	(9)
Equity classified as obligation to purchase common shares		0	0
Accumulated other comprehensive income (loss), net of tax		253	520
Total shareholders' equity		62,495	63,174
Additional equity components		4,675	4,675
Noncontrolling interests		1,568	250

Total equity	68,737	68,099
Total liabilities and equity	1,348,137	1,474,732

The accompanying notes are an integral part of the Consolidated Financial Statements.

Consolidated Statement of Changes in Equity

in € m.	Common shares (no par value)	Additional paid-in capital	Retained earnings	Common shares in treasury, at cost
Balance as of December 31, 2017 (IAS 39)	5,291	39,918	17,454	(9)
IFRS 9 Introduction Impact	0	(2)	(301)	0
Balance as of January 1, 2018 (IFRS 9)	5,291	39,916	17,153	(9)
Total comprehensive income (loss), net of tax[1]	0	0	267	0
Gains (losses) attributable to equity instruments designated as at fair value through other comprehensive income, net of tax	0	0	0	0
Gains (losses) upon early extinguishment attributable to change in own credit risk of financial liabilities designated as at fair value through profit and loss, net of tax	0	0	0	0
Common shares issued	0	0	0	0
Cash dividends paid	0	0	(227)	0
Coupon on additional equity components, net of tax	0	0	(292)	0
Remeasurement gains (losses) related to defined benefit plans, net of tax	0	0	(186)	0
Net change in share awards in the reporting period	0	90	0	0
Treasury shares distributed under share-based compensation plans	0	0	0	199
Tax benefits related to share-based compensation plans	0	(5)	0	0
Option premiums and other effects from options on common shares	0	0	0	0
Purchases of treasury shares	0	0	0	(4,119)
Sale of treasury shares	0	0	0	3,914
Net gains (losses) on treasury shares sold	0	(2)	0	0
Other	0	253 [2]	0	0
Balance as of December 31, 2018	5,291	40,252	16,714	(15)

1Excluding remeasurement gains (losses) related to defined benefit plans, net of tax.

2Includes the impact from the initial public offering of DWS Group GmbH & Co. KGaA.

in € m.	Unrealized net gains (losses)							
	On financial assets available for sale, net of tax2	On financial assets at fair value through other compre-hensive income, net of tax2	Attributable to change in own credit risk of financial liabilities designated as at fair value through profit and loss, net of tax2	On derivatives hedging variability of cash flows, net of tax2	On assets classified as held for sale, net of tax2	Foreign currency translation, net of tax2	Unrealized net gains (losses) from equity method investments	Accumula-ted other comprehen-sive income, net of tax1
Balance as of December 31, 2017 (IAS 39)	689	0	0	18	0	(227)	40	520
IFRS 9 Introduction Impact	(689)	394	(16)	0	0	(45)	(12)	(368)
Balance as of January 1, 2018 (IFRS 9)	0	394	(16)	18	0	(272)	28	152
Total comprehensive income (loss), net of tax1	0	(428)	44	(1)	0	500	(14)	101
Gains (losses) attributable to equity instruments designated as at fair value through other comprehensive income, net of tax	0	0	0	0	0	0	0	0
Gains (losses) upon early extinguishment attributable to change in own credit risk of financial liabilities	0	0	0	0	0	0	0	0

designated as at fair value through profit and loss, net of tax								
Common shares issued	0	0	0	0	0	0	0	0
Cash dividends paid	0	0	0	0	0	0	0	0
Coupon on additional equity components, net of tax	0	0	0	0	0	0	0	0
Remeasurement gains (losses) related to defined benefit plans, net of tax	0	0	0	0	0	0	0	0
Net change in share awards in the reporting period	0	0	0	0	0	0	0	0
Treasury shares distributed under share-based compensation plans	0	0	0	0	0	0	0	0
Tax benefits related to share-based compensation plans	0	0	0	0	0	0	0	0
Option premiums and other effects from options on common shares	0	0	0	0	0	0	0	0
Purchases of treasury shares	0	0	0	0	0	0	0	0
Sale of treasury shares	0	0	0	0	0	0	0	0
Net gains (losses) on treasury shares sold	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0

Balance as of December 31, 2018	0	(34)	28	17	0	228	15	253

1Excluding remeasurement gains (losses) related to defined benefit plans, net of tax.

2 Excluding unrealized net gains (losses) from equity method investments.

in € m.	Total shareholders' equity	Additional equity components2	Noncontrolling interests	Total equity
Balance as of December 31, 2017 (IAS 39)	63,174	4,675	250	68,099
IFRS 9 Introduction Impact	(671)	0	(1)	(672)
Balance as of January 1, 2018 (IFRS 9)	62,503	4,675	249	67,427
Total comprehensive income (loss), net of tax1	368	0	122	490
Gains (losses) attributable to equity instruments designated as at fair value through other comprehensive income, net of tax	0	0	0	0
Gains (losses) upon early extinguishment attributable to change in own credit risk of financial liabilities designated as at fair value through profit and loss, net of tax	0	0	0	0
Common shares issued	0	0	0	0
Cash dividends paid	(227)	0	(8)	(235)
Coupon on additional equity components, net of tax	(292)	0	0	(292)
Remeasurement gains (losses) related to defined benefit plans, net of tax	(186)	0	(12)	(198)
Net change in share awards in the reporting period	90	0	23	112
Treasury shares distributed under share- based compensation plans	199	0	0	199
Tax benefits related to share-based compensation plans	(5)	0	1	(4)
Option premiums and other effects from options on common shares	0	0	0	0
Purchases of treasury shares	(4,119)	0	0	(4,119)
Sale of treasury shares	3,914	0	0	3,914
Net gains (losses) on treasury shares sold	(2)	0	0	(2)
Other	253	0	1,193 [3]	1,446
Balance as of December 31, 2018	62,495	4,675	1,568	68,737

1Excluding remeasurement gains (losses) related to defined benefit plans, net of tax.

2Includes Additional Tier 1 Notes, which constitute unsecured and subordinated notes of Deutsche Bank and are classified as equity in accordance with IFRS.

3Includes the impact from the initial public offering of DWS Group GmbH & Co. KGaA.

in € m.	Common shares (no par value)	Additional paid-in capital	Retained earnings	Common shares in treasury, at cost
Balance as of December 31, 2015	3,531	33,572	21,182	(10)
Total comprehensive income (loss), net of tax1	0	0	(1,402)	0
Common shares issued	0	0	0	0
Cash dividends paid	0	0	0	0
Coupon on additional equity components, net of tax	0	0	(276)	0
Remeasurement gains (losses) related to defined benefit plans, net of tax	0	0	(517)	0
Net change in share awards in the reporting period	0	64	0	0
Treasury shares distributed under share-based compensation plans	0	0	0	239
Tax benefits related to share-based compensation plans	0	2	0	0
Option premiums and other effects from options on common shares	0	(129)	0	0
Purchases of treasury shares	0	0	0	(5,264)
Sale of treasury shares	0	0	0	5,035
Net gains (losses) on treasury shares sold	0	(7)	0	0
Other	0	263	0	0
Balance as of December 31, 2016	3,531	33,765	18,987	0
Total comprehensive income (loss), net of tax1	0	0	(751)	0
Common shares issued	1,760	6,277	0	0
Cash dividends paid	0	0	(392)	0
Coupon on additional equity components, net of tax	0	0	(298)	0
Remeasurement gains (losses) related to defined benefit plans, net of tax	0	0	(91)	0
Net change in share awards in the reporting period	0	(51)	0	0
Treasury shares distributed under share-	0	0	0	424

based compensation plans				
Tax benefits related to share-based compensation plans	0	3	0	0
Option premiums and other effects from options on common shares	0	(104)	0	0
Purchases of treasury shares	0	0	0	(7,912)
Sale of treasury shares	0	0	0	7,479
Net gains (losses) on treasury shares sold	0	6	0	0
Other	0	22	0	0
Balance as of December 31, 2017	5,291	39,918	17,454	(9)

1Excluding remeasurement gains (losses) related to defined benefit plans, net of tax.

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	Unrealized net gains (losses)							
in € m.	On financial assets available for sale, net of tax2	On financial assets at fair value through other compre-hensive income, net of tax2	Attributable to change in own credit risk of financial liabilities designated as at fair value through profit and loss, net of tax2	On derivatives hedging variability of cash flows, net of tax2	On assets classified as held for sale, net of tax2	Foreign currency translation, net of tax2	Unrealized net gains (losses) from equity method investments	Accumula-ted other comprehen-sive income, net of tax1
Balance as of December 31, 2015	1,384	0	0	97	662	2,196	66	4,404
Total comprehensive income (loss), net of tax1	(472)	0	0	46	(662)	223	11	(854)
Common shares issued	0	0	0	0	0	0	0	0
Cash dividends paid	0	0	0	0	0	0	0	0
Coupon on additional equity components, net of tax	0	0	0	0	0	0	0	0

Remeasurement gains (losses) related to defined benefit plans, net of tax	0	0	0	0	0	0	0	0
Net change in share awards in the reporting period	0	0	0	0	0	0	0	0
Treasury shares distributed under share-based compensation plans	0	0	0	0	0	0	0	0
Tax benefits related to share-based compensation plans	0	0	0	0	0	0	0	0
Option premiums and other effects from options on common shares	0	0	0	0	0	0	0	0
Purchases of treasury shares	0	0	0	0	0	0	0	0
Sale of treasury shares	0	0	0	0	0	0	0	0
Net gains (losses) on treasury shares sold	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Balance as of December 31, 2016	912	0	0	143	0	2,418	77	3,550
Total comprehensive income (loss), net of tax1	(223)	0	0	(125)	0	(2,646)	(36)	(3,030)
Common shares issued	0	0	0	0	0	0	0	0
Cash dividends paid	0	0	0	0	0	0	0	0
Coupon on additional	0	0	0	0	0	0	0	0

equity components, net of tax								
Remeasurement gains (losses) related to defined benefit plans, net of tax	0	0	0	0	0	0	0	0
Net change in share awards in the reporting period	0	0	0	0	0	0	0	0
Treasury shares distributed under share-based compensation plans	0	0	0	0	0	0	0	0
Tax benefits related to share-based compensation plans	0	0	0	0	0	0	0	0
Option premiums and other effects from options on common shares	0	0	0	0	0	0	0	0
Purchases of treasury shares	0	0	0	0	0	0	0	0
Sale of treasury shares	0	0	0	0	0	0	0	0
Net gains (losses) on treasury shares sold	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Balance as of December 31, 2017	689	0	0	18	0	(227)	40	520

1Excluding remeasurement gains (losses) related to defined benefit plans, net of tax.

2 Excluding unrealized net gains (losses) from equity method investments.

in € m.	Total shareholders' equity	Additional equity components2	Noncontrolling interests	Total equity
Balance as of December 31, 2015	62,678	4,675	270	67,624
Total comprehensive income (loss), net of tax1	(2,256)	0	52	(2,204)
Common shares issued	0	0	0	0
Cash dividends paid	0	0	(11)	(11)
Coupon on additional equity components, net of tax	(276)	0	0	(276)
Remeasurement gains (losses) related to defined benefit plans, net of tax	(517)	0	0	(517)
Net change in share awards in the reporting period	64	0	0	64
Treasury shares distributed under share-based compensation plans	239	0	0	239
Tax benefits related to share-based compensation plans	2	0	0	2
Option premiums and other effects from options on common shares	(129)	0	0	(129)
Purchases of treasury shares	(5,264)	0	0	(5,264)
Sale of treasury shares	5,035	0	0	5,035
Net gains (losses) on treasury shares sold	(7)	0	0	(7)
Other	263	(6)3	4	262
Balance as of December 31, 2016	59,833	4,669	316	64,819
Total comprehensive income (loss), net of tax1	(3,781)	0	(20)	(3,800)
Common shares issued	8,037	0	0	8,037
Cash dividends paid	(392)	0	(11)	(403)
Coupon on additional equity components, net of tax	(298)	0	0	(298)
Remeasurement gains (losses) related to defined benefit plans, net of tax	(91)	0	0	(91)
Net change in share awards in the reporting period	(51)	0	0	(51)
Treasury shares distributed under share-based compensation plans	424	0	0	424
Tax benefits related to share-based compensation plans	3	0	0	3
Option premiums and other effects from options on common shares	(104)	0	0	(104)
Purchases of treasury shares	(7,912)	0	0	(7,912)
Sale of treasury shares	7,479	0	0	7,479
	6	0	0	6

Net gains (losses) on treasury shares sold				
Other	22	6 [3]	(36)	(9)
Balance as of December 31, 2017	63,174	4,675	250	68,099

1Excluding remeasurement gains (losses) related to defined benefit plans, net of tax.

2Includes Additional Tier 1 Notes, which constitute unsecured and subordinated notes of Deutsche Bank and are classified as equity in accordance with IFRS.

3Includes net proceeds from purchase and sale of Additional Equity Components.

Consolidated Statement of Cash Flows

in € m.	2018	2017	2016
Net Income (loss)	341	(735)	(1,356)
Cash flows from operating activities:			
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Provision for credit losses	525	525	1,383
Restructuring activities	360	447	484
Gain on sale of financial assets available for sale and securities held to maturity	N/A	(516)	(695)
Gain on sale of financial assets at fair value through other comprehensive income, equity method investments and other	(619)	(59)	(203)
Deferred income taxes, net	276	1,234	(312)
Impairment, depreciation and other amortization, and accretion	2,391	2,159	3,745
Share of net income from equity method investments	(129)	(141)	(183)
Income (loss) adjusted for non-cash charges, credits and other items	3,145	2,914	2,862
Adjustments for net change in operating assets and liabilities:			
Interest-earning time deposits with central banks and banks	(10,954)	966	(2,814)
Central bank funds sold, securities purchased under resale agreements, securities borrowed	15,004	8,560	19,440
Non-Trading financial assets mandatory at fair value through profit and loss	(98,560)	N/A	N/A
Financial assets designated at fair value through profit or loss	91,176	(6,721)	20,337
Loans at amortized cost	302	2,759	18,190
Other assets	6,284	21,970	(7,847)
Deposits	(16,763)	34,601	(15,237)
Financial liabilities designated at fair value through profit or loss and investment contract liabilities1	(10,549)	5,461	8,686
Central bank funds purchased, securities sold under repurchase agreements, securities loaned	(16,716)	(3,355)	16,362

Other short-term borrowings	(4,266)	1,148	(10,632)
Other liabilities	(19,119)	(23,107)	(12,888)
Senior long-term debt2	(6,840)	(12,728)	12,328
Trading assets and liabilities, positive and negative market values from derivative financial instruments, net	20,542	1,596	30,341
Other, net	(6,752)	5,512	(8,518)
Net cash provided by (used in) operating activities	(54,066)	39,576	70,610
Cash flows from investing activities:			
Proceeds from:			
Sale of financial assets at fair value through other comprehensive income	22,126	N/A	N/A
Maturities of financial assets at fair value through other comprehensive income	26,001	N/A	N/A
Sale of debt securities held to collect at amortized cost	94	N/A	N/A
Maturities of debt securities held to collect at amortized cost	1,904	N/A	N/A
Sale of financial assets available for sale	N/A	10,657	26,855
Maturities of financial assets available for sale	N/A	6,798	6,029
Maturities of securities held to maturity	N/A	0	0
Sale of equity method investments	30	80	50
Sale of property and equipment	356	113	206
Purchase of:			
Financial assets at fair value through other comprehensive income	(41,031)	N/A	N/A
Debt Securities held to collect at amortized cost	(309)	N/A	N/A
Financial assets available for sale	N/A	(13,472)	(21,639)
Securities held to maturity	N/A	0	0
Equity method investments	(1)	(12)	(81)
Property and equipment	(465)	(485)	(725)
Net cash received in (paid for) business combinations/divestitures	114	82	2,023
Other, net	(1,291)	(1,328)	(1,479)
Net cash provided by (used in) investing activities	7,528	2,433	11,239
Cash flows from financing activities:			
Issuances of subordinated long-term debt	68 [3]	881	815
Repayments and extinguishments of subordinated long-term debt	(1,171)3	(176)	(1,102)
Issuances of trust preferred securities	4 [4]	266	121
Repayments and extinguishments of trust preferred securities	(2,733)4	(666)	(840)
Common shares issued	0	8,037	0
Purchases of treasury shares	(4,119)	(7,912)	(5,264)
Sale of treasury shares	3,912	7,471	4,983
Additional Equity Components (AT1) issued	0	0	0
Purchases of Additional Equity Components (AT1)	(236)	(205)	(207)
Sale of Additional Equity Components (AT1)	234	217	202
Coupon on additional equity components, pre tax	(315)	(335)	(333)
Dividends paid to noncontrolling interests	(8)	(11)	(11)

Net change in noncontrolling interests	1,205	(37)	(13)
Cash dividends paid to Deutsche Bank shareholders	(227)	(392)	0
Other, net	52	0	0
Net cash provided by (used in) financing activities	(3,334)	7,138	(1,649)
Net effect of exchange rate changes on cash and cash equivalents	1,668	(5,772)	(28)
Net increase (decrease) in cash and cash equivalents	(48,203)	43,376	80,172
Cash and cash equivalents at beginning of period	229,025	185,649	105,478
Cash and cash equivalents at end of period	180,822	229,025	185,649
Net cash provided by (used in) operating activities include			
Income taxes paid (received), net	468	689	1,572
Interest paid	11,743	11,784	10,808
Interest received	22,408	21,095	22,579
Dividends received	2,186	3,006	3,256
Cash and cash equivalents comprise			
Cash and central bank balances (not included: Interest-earning time deposits with central banks)	174,059	222,451	178,105
Interbank balances (w/o central banks) (not included: time deposits with banks of € 16.8 billion as of December 31, 2018, € 5.9 billion as of December 31, 2017 and € 7.1 billion as of December 31, 2016)	6,763	6,574	7,544
Total	180,822	229,025	185,649

1Included are senior long-term debt issuances of € 5.3 billion and € 5.0 billion and repayments and extinguishments of € 5.2 billion and € 4.6 billion through December 31, 2018 and December 31, 2017, respectively.

2Included are issuances of € 27.4 billion and € 33.4 billion and repayments and extinguishments of € 32.8 billion and € 41.3 billion through December 31, 2018 and December 31, 2017, respectively.

3Non-cash changes for Subordinated Long Term Debt are € 148 million in total and driven by FX movements € 162 million and FV changes of € (39) million.

4Non-cash changes for Trust Preferred Securities are € 407 million in total and driven by FV changes of € 178 million and FX movements of € 168 million.

The accompanying notes are an integral part of the Consolidated Financial Statements.

Notes to the Consolidated Financial Statements

01 – Significant Accounting Policies and Critical Accounting Estimates

Basis of Accounting

Deutsche Bank Aktiengesellschaft (“Deutsche Bank” or the “Parent”) is a stock corporation organized under the laws of

the Federal Republic of Germany. Deutsche Bank together with all entities in which Deutsche Bank has a controlling financial interest (the “Group”) is a global provider of a full range of corporate and investment banking, private clients and asset management products and services.

The accompanying consolidated financial statements are stated in euros, the presentation currency of the Group. All financial information presented in million euros has been rounded to the nearest million. The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”) and endorsed by the European Union (“EU”). The Group’s application of IFRS results in no differences between IFRS as issued by the IASB and IFRS as endorsed by the EU.

Disclosures about the nature and the extent of risks arising from financial instruments as required by IFRS 7, “Financial Instruments: Disclosures” are set forth in the Risk Report section of the Management Report and are an integral part of the Consolidated Financial Statements. These audited disclosures are identified by bracketing in the margins of the Risk Report.

Discount Rate for Defined Benefit Pension Plans

In 2017 the Group moved to a more standardized, simpler approach to set its discount rate used to value its defined benefit plans in the Eurozone; similar approaches are generally accepted and are already used for the Group’s other major pension plans in the United Kingdom and the United States. The refinement resulted in no change in the discount rate and so no effect on the Group’s Consolidated Statement of Comprehensive Income in 2017.

Adjustment of Impairment Methodology for Shipping Loans

In the third quarter of 2017, the Group has adjusted the parameters for shipping loans being assessed for impairment under a going concern or gone concern scenario. This change in parameters resulted in a change in the estimated impairment charge of € 70 million increase. The Group also revised its general haircut applied to shipping loans with gone concern exposures, which also resulted in a change in estimate of € 36 million additional impairment. These changes in estimates are reflected in the allowance for credit losses.

Home Savings Contracts

In the second quarter of 2018, the Group changed its accounting policy for the obligations related to interest bonuses on home savings contracts. Such bonuses are typically paid to depositors who abstain from entering into a mortgage loan when qualifying for utilization and decide to terminate the contract and receive repayment of the deposit amount plus accrued interest and bonus coupon. Previously, the Group accounted for the obligation to pay an interest bonus as a provision under IAS 37. Developments in market practice resulted in the Group analyzing its accounting policy and deciding to account for the home savings deposit, in its entirety, in accordance with IFRS 9 as it provides more reliable and relevant information about the product. The change in accounting policy resulted in a reclassification of € 1.1 billion and € 1.1 billion from Provisions to Deposits in the Group’s consolidated balance sheet as of June 30, 2018 and December 31, 2017, respectively. The re-measurement of the obligations related to interest bonuses under IFRS 9 compared to IAS 37 resulted in an immaterial effect on the Group’s Consolidated Statement of Comprehensive Income and the Group's total shareholders' equity in the current and all comparative periods, and therefore they were not adjusted.

Critical Accounting Estimates

The preparation of financial statements under IFRS requires management to make estimates and assumptions for certain categories of assets and liabilities. These estimates and assumptions affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the balance sheet date, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from management's estimates. The Group's significant accounting policies are described in "Significant Accounting Policies".

Certain of the Group's accounting policies require critical accounting estimates that involve complex and subjective judgments and the use of assumptions, some of which may be for matters that are inherently uncertain and susceptible to change. Such critical accounting estimates could change from period to period and may have a material impact on the Group's financial condition, changes in financial condition or results of operations. Critical accounting estimates could also involve estimates where management could have reasonably used another estimate in the current accounting period. The Group has identified the following significant accounting policies that involve critical accounting estimates:

- the impairment of associates (see "Associates" below)
- the impairment of financial assets at fair value through other comprehensive income (see "Financial Assets (IFRS 9 - 2018 only) – Financial Assets at Fair Value through Other Comprehensive Income" below)
- the impairment of financial assets available for sale (see "Financial Assets (IAS 39 - prior periods only) – Financial Assets Classified as Available for Sale" below)
- the determination of fair value (see "Determination of Fair Value" below)
- the recognition of trade date profit (see "Recognition of Trade Date Profit" below)
- the impairment of loans and provisions for off-balance sheet positions (see "Impairment of Loans and Provision for Off-balance Sheet Positions" below)
- the impairment of goodwill and other intangibles (see "Goodwill and Other Intangible Assets" below)
- the recognition and measurement of deferred tax assets (see "Income Taxes" below)
- the accounting for legal and regulatory contingencies and uncertain tax positions (see "Provisions" below)

Significant Accounting Policies

The following is a description of the significant accounting policies of the Group. Except for the changes in accounting policies and changes in accounting estimates described previously and noted below these policies have been consistently applied for 2016, 2017 and 2018.

Principles of Consolidation

The financial information in the Consolidated Financial Statements includes the parent company, Deutsche Bank AG, together with its consolidated subsidiaries, including certain structured entities presented as a single economic unit.

Subsidiaries

The Group's subsidiaries are those entities which it directly or indirectly controls. Control over an entity is evidenced by the Group's ability to exercise its power in order to affect any variable returns that the Group is exposed to through its involvement with the entity.

The Group sponsors the formation of structured entities and interacts with structured entities sponsored by third parties for a variety of reasons, including allowing clients to hold investments in separate legal entities, allowing clients to invest jointly in alternative assets, for asset securitization transactions, and for buying or selling credit protection.

When assessing whether to consolidate an entity, the Group evaluates a range of control factors, namely:

- the purpose and design of the entity
- the relevant activities and how these are determined
- whether the Group's rights result in the ability to direct the relevant activities
- whether the Group has exposure or rights to variable returns
- whether the Group has the ability to use its power to affect the amount of its returns

Where voting rights are relevant, the Group is deemed to have control where it holds, directly or indirectly, more than half of the voting rights over an entity unless there is evidence that another investor has the practical ability to unilaterally direct the relevant activities.

Potential voting rights that are deemed to be substantive are also considered when assessing control.

Likewise, the Group also assesses existence of control where it does not control the majority of the voting power but has the practical ability to unilaterally direct the relevant activities. This may arise in circumstances where the size and dispersion of holdings of the shareholders give the Group the power to direct the activities of the investee.

Subsidiaries are consolidated from the date on which control is transferred to the Group and are deconsolidated from the date that control ceases.

The Group reassesses the consolidation status at least at every quarterly reporting date. Therefore, any changes in the structure leading to a change in one or more of the control factors, require reassessment when they occur. This includes changes in decision making rights, changes in contractual arrangements, changes in the financing, ownership or capital structure as well as changes following a trigger event which was anticipated in the original documentation.

All intercompany transactions, balances and unrealized gains on transactions between Group companies are eliminated on consolidation.

Consistent accounting policies are applied throughout the Group for the purposes of consolidation. Issuances of a subsidiary's stock to third parties are treated as noncontrolling interests. Profit or loss attributable to noncontrolling interests are reported separately in the Consolidated Statement of Income and Consolidated Statement of Comprehensive Income.

At the date that control of a subsidiary is lost, the Group a) derecognizes the assets (including attributable goodwill) and liabilities of the subsidiary at their carrying amounts, b) derecognizes the carrying amount of any noncontrolling interests in the former subsidiary, c) recognizes the fair value of the consideration received and any distribution of the shares of the subsidiary, d) recognizes any investment retained in the former subsidiary at its fair value and e) recognizes any resulting difference of the above items as a gain or loss in the income statement. Any amounts recognized in prior periods in other comprehensive income in relation to that subsidiary would be reclassified to the Consolidated Statement of Income or transferred directly to retained earnings if required by other IFRSs.

Associates

An associate is an entity in which the Group has significant influence, but not a controlling interest, over the operating and financial management policy decisions of the entity. Significant influence is generally presumed when the Group holds between 20 % and 50 % of the voting rights. The existence and effect of potential voting rights that are currently

exercisable or convertible are considered in assessing whether the Group has significant influence. Among the other factors that are considered in determining whether the Group has significant influence are representation on the board of directors (supervisory board in the case of German stock corporations) and material intercompany transactions. The existence of these factors could require the application of the equity method of accounting for a particular investment even though the Group's investment is less than 20 % of the voting stock.

Investments in associates are accounted for under the equity method of accounting. The Group's share of the results of associates is adjusted to conform to the accounting policies of the Group and is reported in the Consolidated Statement of Income as Net income (loss) from equity method investments. The Group's share in the associate's profits and losses resulting from intercompany sales is eliminated on consolidation.

Under the equity method of accounting, the Group's investments in associates and jointly controlled entities are initially recorded at cost including any directly related transaction costs incurred in acquiring the associate, and subsequently increased (or decreased) to reflect both the Group's pro-rata share of the post-acquisition net income (or loss) of the associate or jointly controlled entity and other movements included directly in the equity of the associate or jointly controlled entity. Goodwill arising on the acquisition of an associate or a jointly controlled entity is included in the carrying value of the investment (net of any accumulated impairment loss). As goodwill is not reported separately it is not specifically tested for impairment. Rather, the entire equity method investment is tested for impairment at each balance sheet date.

If there is objective evidence of impairment, an impairment test is performed by comparing the investment's recoverable amount, which is the higher of its value in use and fair value less costs to sell, with its carrying amount. An impairment loss recognized in prior periods is only reversed if there has been a change in the estimates used to determine the investment's recoverable amount since the last impairment loss was recognized. If this is the case the carrying amount of the investment is increased to its higher recoverable amount. The increased carrying amount of the investment in associate attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined had no impairment loss been recognized for the investment in prior years.

At the date that the Group ceases to have significant influence over the associate or jointly controlled entity the Group recognizes a gain or loss on the disposal of the equity method investment equal to the difference between the sum of the fair value of any retained investment and the proceeds from disposing of the associate and the carrying amount of the investment. Amounts recognized in prior periods in other comprehensive income in relation to the associate are accounted for on the same basis as would have been required if the investee had directly disposed of the related assets or liabilities.

Critical Accounting Estimates: As the assessment of whether there is objective evidence of impairment may require significant management judgment and the estimates for impairment could change from period to period based on future events that may or may not occur, the Group considers this to be a critical accounting estimate.

Foreign Currency Translation

The Consolidated Financial Statements are prepared in euro, which is the presentation currency of the Group. Various entities in the Group use a different functional currency, being the currency of the primary economic environment in which the entity operates.

An entity records foreign currency revenues, expenses, gains and losses in its functional currency using the exchange

rates prevailing at the dates of recognition.

Monetary assets and liabilities denominated in currencies other than the entity's functional currency are translated at the period end closing rate. Foreign exchange gains and losses resulting from the translation and settlement of these items are recognized in the Consolidated Statement of Income as net gains (losses) on financial assets/liabilities at fair value through profit or loss in order to align the translation amounts with those recognized from foreign currency related transactions (derivatives) which hedge these monetary assets and liabilities.

Nonmonetary items that are measured at historical cost are translated using the historical exchange rate at the date of the transaction. Translation differences on nonmonetary items which are held at fair value through profit or loss are recognized in profit or loss. Translation differences on available for sale nonmonetary items (equity securities) are included in other comprehensive income and recognized in the Consolidated Statement of Income when the non-monetary item is sold as part of the overall gain or loss on sale of the item.

For purposes of translation into the presentation currency, assets and liabilities of foreign operations are translated at the period end closing rate and items of income and expense are translated into euros at the rates prevailing on the dates of the transactions, or average rates of exchange where these approximate actual rates. The exchange differences arising on the translation of a foreign operation are included in other comprehensive income. For foreign operations that are subsidiaries, the amount of exchange differences attributable to any noncontrolling interests is recognized in noncontrolling interests.

Upon disposal of a foreign subsidiary and associate (which results in loss of control or significant influence over that operation) the total cumulative exchange differences recognized in other comprehensive income are reclassified to profit or loss.

Upon partial disposal of a foreign operation that is a subsidiary and which does not result in loss of control, the proportionate share of cumulative exchange differences is reclassified from other comprehensive income to noncontrolling interests as this is deemed a transaction with equity holders. For a partial disposal of an associate which does not result in a loss of significant influence, the proportionate share of cumulative exchange differences is reclassified from other comprehensive income to profit or loss.

Interest, Commissions and Fees (IFRS 9 and IFRS 15 - 2018 only)

Net Interest Income – Interest income and expense from all interest-bearing assets and liabilities is recognized as net interest income using the effective interest method. The effective interest rate (EIR) is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or expense over the relevant period using the estimated future cash flows.

The estimated future cash flows used in the EIR calculation include those determined by all of the contractual terms of the asset or liability, all fees (including commissions) that are considered to be integral to the effective interest rate, direct and incremental transaction costs and all other premiums or discounts. However, if the financial instrument is carried at fair value through profit or loss, any associated fees are recognized in trading income when the instrument is initially recognized, provided there are no significant unobservable inputs used in determining its fair value.

If a financial asset is credit-impaired interest revenue is calculated by applying the effective interest rate to the gross carrying amount. The gross carrying amount of a financial asset is the amortized cost of a financial asset gross of any

impairment allowance. For assets which are initially recognized as purchased or credit-impaired, interest revenue is calculated through the use of a credit-adjusted effective interest rate which takes into consideration expected credit losses.

The Group recognizes income from government grants which are associated to interest-bearing assets and liabilities in net interest income when there is reasonable assurance that it will receive the grants and will comply with the conditions attached to the grants.

As a result of the amendments to International Accounting Standard 1: “Presentation of Financial Statements” (IAS 1) following the adoption of IFRS 9, the Group presents interest income and expense calculated using the EIR method separately in the income statement.

Commissions and Fee Income –The Group applies the IFRS 15, “Revenue from Contracts with Customers” five-step revenue recognition model to the recognition of Commissions and Fee Income, under which income must be recognized when control of goods and services is transferred, hence the contractual performance obligations to the customer has been satisfied.

Accordingly, after a contract with a customer has been identified in the first step, the second step is to identify the performance obligation – or a series of distinct performance obligations – provided to the customer. The Group must examine whether the service is capable of being distinct and is actually distinct within the context of the contract. A promised service is distinct if the customer can benefit from the service either on its own or together with other resources that are readily available to the customer, and the promise to transfer the service to the customer is separately identifiable from other promises in the contract. The amount of income is measured on the basis of the contractually agreed transaction price for the performance obligation defined in the contract. If a contract includes variable consideration, the Group estimates the amount of consideration to which it will be entitled in exchange for transferring the promised goods or services to a customer. Income is recognized in profit and loss when the identified performance obligation has been satisfied.

The Group provides asset management services that give rise to asset management and performance fees and constitute a single performance obligation. The asset management and performance fee components are variable considerations such that at each reporting date the Group estimates the fee amount to which it will be entitled in exchange for transferring the promised services to the customer. The benefits arising from the asset management services are simultaneously received and consumed by the customer over time. The Group recognizes revenue over time by measuring the progress towards complete satisfaction of that performance obligation, subject to the removal of any uncertainty as to whether it is highly probable that a significant reversal in the cumulative amount of revenue recognized would occur or not. For the management fee component this is the end of the monthly or quarterly service period. For performance fees this date is when any uncertainty related to the performance component has been fully removed.

Loan commitment fees related to commitments that are accounted for off-balance sheet are recognized in commissions and fee income over the life of the commitment if it is unlikely that the Group will enter into a specific lending arrangement. If it is probable that the Group will enter into a specific lending arrangement, the loan commitment fee is deferred until the origination of a loan and recognized as an adjustment to the loan’s effective interest rate.

The following Commissions and Fee Income is predominantly earned from services that are received and consumed by the customer over time: Administration, assets under management, foreign commercial business, loan processing

and guarantees sundry other customer services. Commissions and Fee Income predominantly earned from providing services at a point in time or transaction-type services include: other securities, underwriting and advisory fees, brokerage fees, local payments, foreign currency/ exchange business and intermediary fees.

Expenses that are directly related and incremental to the generation of Commissions and Fee Income are presented net in Commissions and Fee Income. This includes income and associated expense where the Group contractually owns the performance obligation (i.e. as Principal) in relation to the service that gives rise to the revenue and associated expense. In contrast, it does not include situations where the Group does not contractually own the performance obligation and is acting as agent. The determination of whether the Group is acting as principal or agent is based on the contractual terms of the underlying service arrangement. The gross Commissions and Fee Income and Expense amounts are disclosed in “Note 6 – Commissions and Fee Income”.

Interest, Commissions and Fees (IAS 18 - prior periods only)

The Group applied the revenue recognition requirements of IAS 18, “Revenue” (IAS 18). Revenue was recognized when the amount of revenue and associated costs could be reliably measured, it is probable that economic benefits associated with the transaction will be realized and the stage of completion of the transaction could be reliably measured. This concept was applied to the key revenue generating activities of the Group as follows.

Net Interest Income – Interest from all interest-bearing assets and liabilities was recognized as net interest income using the effective interest method. The effective interest rate is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or expense over the relevant period using the estimated future cash flows. The estimated future cash flows used in this calculation include those determined by the contractual terms of the asset or liability, all fees that are considered to be integral to the effective interest rate, direct and incremental transaction costs and all other premiums or discounts.

Once an impairment loss was recognized on a loan, held-to-maturity investment or available for sale debt instruments, although the accrual of interest in accordance with the contractual terms of the instrument was discontinued, interest income was recognized based on the rate of interest that was used to discount future cash flows for the purpose of measuring the impairment loss. For a loan and held to maturity investment this would be the original effective interest rate, but a new effective interest rate was established each time an available for sale debt instrument was impaired as impairment was measured to fair value and based on a current market rate.

The Group recognized income from government grants which are associated to interest-bearing assets and liabilities in net interest income when there was reasonable assurance that it will receive the grants and will comply with the conditions attached to the grants.

Commissions and Fee Income – The recognition of fee revenue (including commissions) was determined by the purpose of the fees and the basis of accounting for any associated financial instruments. If there was an associated financial instrument, fees that are an integral part of the effective interest rate of that financial instrument are included within the effective yield calculation. However, if the financial instrument was carried at fair value through profit or loss, any associated fees are recognized in profit or loss when the instrument was initially recognized, provided there was no significant unobservable inputs used in determining its fair value. Fees earned from services that are provided over a specified service period were recognized over that service period. Fees earned for the completion of a specific service or significant event were recognized when the service was completed or the event occurred.

Loan commitment fees related to commitments that are accounted for off-balance sheet were recognized in commissions and fee income over the life of the commitment if it is unlikely that the Group will enter into a specific lending arrangement. If it was probable that the Group will enter into a specific lending arrangement, the loan commitment fee was deferred until the origination of a loan and recognized as an adjustment to the loan’s effective

interest rate.

Performance-linked fees or fee components were recognized when the performance criteria are fulfilled.

The following fee income was predominantly earned from services that were provided over a period of time: investment fund management fees, fiduciary fees, custodian fees, portfolio and other management and advisory fees, credit-related fees and commission income. Fees predominantly earned from providing transaction-type services include underwriting fees, corporate finance fees and brokerage fees.

Expenses that were directly related and incremental to the generation of fee income were presented net in Commissions and Fee Income.

Financial Assets (IFRS 9 – 2018 only)

The Group classifies financial assets in line with the classification and measurement requirements of IFRS 9, “Financial Instruments” (IFRS 9) where financial assets are classified based on both the business model used for managing the financial assets and the contractual cash flow characteristics of the financial asset (known as Solely Payments of Principal and Interest or “SPPI”). There are three business models available:

- Hold to Collect - Financial assets held with the objective to collect contractual cash flows. They are subsequently measured at amortized cost and are recorded in multiple lines on the Group’s consolidated balance sheet.
- Hold to Collect and Sell - Financial assets held with the objective of both collecting contractual cash flows and selling financial assets. They are recorded as Financial assets at Fair Value through Other Comprehensive Income on the Group’s consolidated balance sheet.
- Other - Financial assets that do not meet the criteria of either “Hold to Collect” or “Hold to Collect and Sell”. They are recorded as Financial Assets at Fair Value through Profit or Loss on the Group’s consolidated balance sheet.

The assessment of business model requires judgment based on facts and circumstances at the date of the adoption on January 1, 2018 and upon initial measurement. As part of this assessment, the Group considers quantitative factors (e.g., the expected frequency and volume of sales) and qualitative factors such as how the performance of the business model and the financial assets held within that business model are evaluated and reported to the Group’s key management personnel. In addition to taking into consideration the risks that affect the performance of the business model and the financial assets held within that business model, in particular, the way in which those market and credit risks are managed; and how managers of the business are compensated (e.g., whether the compensation is based on the fair value of the assets managed or on the contractual cash flows collected). This assessment results in an asset being classified in either a Hold to Collect, Hold to Collect and Sell or Other business model.

If the Group holds a financial asset either in a Hold to Collect or a Hold to Collect and Sell business model, then an assessment at initial recognition to determine whether the contractual cash flows of the financial asset are Solely Payments of Principal and Interest on the principal amount outstanding at initial recognition is required to determine the classification. Contractual cash flows, that are SPPI on the principal amount outstanding, are consistent with a basic lending arrangement. Interest in a basic lending arrangement is consideration for the time value of money and the credit risk associated with the principal amount outstanding during a particular period of time. It can also include consideration for other basic lending risks (e.g., liquidity risk) and costs (e.g., administrative costs) associated with holding the financial asset for a particular period of time; and a profit margin that is consistent with a basic lending arrangement.

Financial Assets at Fair Value through Profit or Loss

Financial assets are classified at fair value through profit or loss if they are held in the other business model because they are either held for trading or because they do not meet the criteria for Hold to Collect or Hold to Collect and Sell. In addition, it includes financial assets that meet the criteria for Hold to Collect or Hold to Collect and Sell business model, but the financial asset fails SPPI or where the Group designated the financial assets under the fair value option.

Financial assets classified as Financial Assets at fair value through profit or loss are measured at fair value with realized and unrealized gains and losses included in Net gains (losses) on financial assets/liabilities at fair value through profit or loss. Interest on interest earning assets such as trading loans and debt securities and dividends on equity instruments are presented in Interest and Similar Income.

Financial assets classified at fair value through profit or loss are recognized or derecognized on trade date. Trade date is the date on which the Group commits to purchase or sell the asset.

Trading Assets – Financial assets are classified as held for trading if they have been originated, acquired or incurred principally for the purpose of selling or repurchasing them in the near term, or they form part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking. Trading assets include debt and equity securities, derivatives held for trading purposes, and trading loans. This also includes loan commitments that are allocated to the Other business model and that are classified as derivatives held for trading.

Non-Trading Financial Assets Mandatory at Fair Value through Profit and Loss – The Group assigns any non-trading financial asset that does not fall into the Hold to Collect nor Hold to Collect and Sell business models into the Other business model and classifies them as Non-Trading Financial Assets mandatory at Fair Value through Profit and Loss. This includes predominately reverse repurchase agreements which are managed on a fair value basis. Additionally, any financial asset that falls into the Hold to Collect or Hold to Collect and Sell business models for which the contractual cash flow characteristics are not SPPI is classified by the Group as Non-Trading Financial Assets Mandatory at Fair Value through Profit and Loss.

Financial Assets Designated at Fair Value through Profit or Loss – Certain financial assets that would otherwise be measured subsequently at amortized cost or at fair value through other comprehensive income, may be designated at Fair Value through Profit or Loss if the designation eliminates or significantly reduces a measurement or recognition inconsistency. The use of the fair value option under IFRS 9 is limited. The Group allows the fair value option to be designated only for those financial instruments for which a reliable estimate of fair value can be obtained.

Financial Assets at Fair Value through Other Comprehensive Income

A financial asset shall be classified and measured at Fair Value through Other Comprehensive Income (“FVOCI”), if the financial asset is held in a Hold to Collect and Sell business model and the contractual cash flows are SPPI, unless designated under the fair value option.

Under FVOCI, a financial asset is measured at its fair value with any changes being recognized in Other Comprehensive Income (”OCI”) and is assessed for impairment under the IFRS 9 expected credit loss model where provisions are recorded through profit or loss are recognized based on expectations of potential credit losses. The Group’s impairment policy is described further in the section “Impairment of Loans and Provision for Off-Balance Sheet Positions (IFRS 9 – 2018 only)”. The foreign currency translation effect for FVOCI assets is recognized in profit or loss, as is the interest component by using the effective interest method. The amortization of premiums and accretion of discounts are recorded in net interest income. Realized gains and losses are reported in net gains (losses)

on financial assets at FVOCI. Generally, the weighted-average cost method is used to determine the cost of FVOCI financial assets.

Financial assets classified as FVOCI are recognized or derecognized on trade date. Trade date is the date on which the Group commits to purchase or sell the asset.

It is possible to designate non-trading equity instruments as FVOCI. However, this category is expected to have limited usage by the Group and has not been used to date.

Financial Assets at Amortized Cost

A financial asset is classified and subsequently measured at amortized cost if the financial asset is held in a Hold to Collect business model and the contractual cash flows are SPPI.

Under this measurement category, the financial asset is measured at fair value at initial recognition. Subsequently the carrying amount is reduced for principal payments, plus or minus the cumulative amortization using the effective interest method. The financial asset is assessed for impairment under the IFRS 9 expected credit loss model where provisions are recognized based on expectations of potential credit losses. The Group's impairment of financial instruments policy is described further in the section "Impairment of Loans and Provision for Off-Balance Sheet Positions (IFRS 9 – 2018 only)". Financial assets measured at amortized cost are recognized on a settlement date basis.

Financial Assets at Amortized Cost include predominately Loans at amortized costs, Central bank funds sold and securities purchased under resale agreements, Securities borrowed and certain receivables presented in Other Assets.

Modification of Financial Assets

When the terms of a financial asset are renegotiated or modified and the modification does not result in derecognition, a gain or loss is recognized in the income statement as the difference between the original contractual cash flows and the modified cash flows discounted at the original effective interest rate. The modified financial asset will continue to accrue interest at its original EIR.

Noncredit related or commercial renegotiations where an obligor has not experienced a significant increase in credit risk since origination, and has a readily exercisable right to early terminate the financial asset results in derecognition of the original agreement and recognition of a new financial asset based on the newly negotiated commercial terms.

For credit related modifications (i.e., those modifications due to significant increase in credit risk since inception) or those where the obligor does not have the readily exercisable right to early terminate, the Group assesses whether the modified terms result in the financial asset being significantly modified and therefore derecognized. This assessment includes a quantitative assessment of the impact of the change in cash flows from the modification of contractual terms and additionally where necessary a qualitative assessment of the impact of the change in the contractual terms. Where these modifications are not concluded to be significant, the financial asset is not derecognized and is accounted for as a modification as described above.

If the changes are concluded to be significant, the old instrument is derecognized and a new instrument recognized. Where a modification results in a new financial asset being recognized, the date of the modification is the date of initial recognition of the new financial asset. The Group then recognizes a credit loss allowance based on 12-month expected credit losses at each reporting date. However, if following a modification that results in a derecognition of the original financial asset, there is evidence that the new financial asset is credit-impaired on initial recognition, then the new financial asset should be recognized as an originated credit-impaired financial asset and initially classified in

Stage 3 (refer to section "Impairment of Loans and Provision for Off-Balance Sheet Positions (IFRS 9 – 2018 only)" below).

Financial Assets (IAS 39 - prior periods only)

The Group applied the classification and measurement requirements of IAS 39, "Financial Instruments: Recognition and Measurement" in prior periods.

The Group classified its financial assets into the following categories: financial assets at fair value through profit or loss, loans, held-to-maturity and financial assets available for sale ("AFS"). Appropriate classification of financial assets was determined at the time of initial recognition or when reclassified in the consolidated balance sheet.

Financial assets classified at fair value through profit or loss and financial assets classified as AFS were recognized or derecognized on trade date if a regular way period for the instrument exists. Trade date is the date on which the Group commits to purchase or sell the asset or issue or repurchase the financial liability. Financial instruments measured at amortized cost were recognized on a settlement date basis.

Financial Assets at Fair Value through Profit or Loss

The Group classified certain financial assets either as held for trading or designated at fair value through profit or loss. They were carried at fair value and presented as financial assets at fair value through profit or loss. Related realized and unrealized gains and losses are included in net gains (losses) on financial assets/liabilities at fair value through profit or loss. Interest on interest earning assets such as trading loans and debt securities and dividends on equity instruments were presented in interest and similar income for financial instruments at fair value through profit or loss.

Trading Assets – Financial assets were classified as held for trading if they have been originated or acquired principally for the purpose of selling or repurchasing them in the near term, or they formed part of a portfolio of identified financial assets that were managed together and for which there was evidence of a recent actual pattern of short-term profit-taking. Trading assets included debt and equity securities, derivatives held for trading purposes, commodities and trading loans.

Financial Assets Designated at Fair Value through Profit or Loss – Certain financial assets that did not meet the definition of trading assets were designated at fair value through profit or loss using the fair value option. To be designated at fair value through profit or loss, financial assets had to meet one of the following criteria: (1) the designation eliminates or significantly reduced a measurement or recognition inconsistency; (2) a group of financial assets or liabilities or both was managed and its performance is evaluated on a fair value basis in accordance with a documented risk management or investment strategy; or (3) the instrument contains one or more embedded derivatives, unless: (a) the embedded derivative does not significantly modify the cash flows that otherwise would be required by the contract; or (b) it is clear with little or no analysis that separation is prohibited. In addition, the Group allowed the fair value option to be designated only for those financial instruments for which a reliable estimate of fair value can be obtained. Financial assets which were designated at fair value through profit or loss, under the fair value option, include repurchase and reverse repurchase agreements, certain loans and loan commitments and debt and equity securities.

Loans

Loans included originated and purchased non-derivative financial assets with fixed or determinable payments that were not quoted in an active market and which were not classified as financial assets at fair value through profit or

loss, held-to-maturity or financial assets AFS. An active market exists when quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service or regulatory agency and those prices represent actual and regularly occurring market transactions on an arm's length basis.

Loans not acquired in a business combination or in an asset purchase were initially recognized at their transaction price representing the fair value, which is the cash amount advanced to the borrower. In addition, the net of direct and incremental transaction costs and fees were included in the initial carrying amount of loans. These loans were subsequently measured at amortized cost using the effective interest method less impairment.

Loans which have been acquired as either part of a business combination or as an asset purchase were initially recognized at fair value at the acquisition date. This included loans for which an impairment loss had been established by the acquiree before their initial recognition by the Group. The fair value at the acquisition date incorporated expected cash flows which considered the credit quality of these loans including any incurred losses, which became the new amortized cost base. Interest income was recognized using the effective interest method. Subsequent to the acquisition date the Group assessed whether there was objective evidence of impairment in line with the policies described in the section entitled "Impairment of Loans and Provision for Off-Balance Sheet Positions (IAS 39 Prior Periods)". If the loans were determined to be impaired then a loan loss allowance was recognized with a corresponding charge to the provision for credit losses line in the Consolidated Statement of Income. Releases of such loan loss allowances established after their initial recognition were included in the provision for credit losses line. Subsequent improvements in the credit quality of such loans for which no loss allowance had been recorded were recognized immediately through an adjustment to the current carrying value and a corresponding gain was recognized in interest income.

Held-to-Maturity Investments

Held-to-maturity investments were non-derivative financial assets with fixed or determinable payments and a fixed maturity that the Group had the positive intention and ability to hold to maturity and which were not classified as financial assets at fair value through profit or loss, loans or financial assets AFS.

Held-to-maturity investments were initially recorded at fair value plus any directly attributable transaction costs and were subsequently measured at amortized cost using the effective interest method. Subsequent to the acquisition date, the Group assessed whether there was objective evidence of impairment in line with the policies described in the section entitled "Impairment of Loans and Provision for Off-Balance Sheet provisions (IAS 39 Prior Periods only)". If a held-to-maturity investment was considered impaired, then an impairment loss was recognized in the Consolidated Statement of Income.

Financial Assets Classified as Available for Sale

Financial assets that were classified as AFS are initially recognized at its fair value plus transaction costs that were directly attributable to the acquisition of the financial asset. The amortization of premiums and accretion of discount were recorded in net interest income. Financial assets classified as AFS were carried at fair value with the changes in fair value reported in other comprehensive income, unless the asset was subject to a fair value hedge, in which case changes in fair value resulting from the risk being hedged were recorded in other income. For monetary financial assets classified as AFS (debt instruments), changes in carrying amounts relating to changes in foreign exchange rate were recognized in the Consolidated Statement of Income and other changes in carrying amount were recognized in other comprehensive income as indicated above. For financial assets classified as AFS that were nonmonetary items (equity instruments), the fair value gain or loss was recognized in other comprehensive income, which also includes any related foreign exchange component.

Equity investments classified as AFS were assessed for impairment if, objective evidence demonstrates a significant or prolonged decline in the fair value of the investment below cost. In the case of debt securities classified as AFS,

impairment was assessed based on the same criteria as for loans.

If there was evidence of impairment, any amounts previously recognized in other comprehensive income was recognized in the Consolidated Statement of Income for the period, reported in net gains (losses) on financial assets available for sale. This impairment loss for the period was determined as the difference between the acquisition cost (net of any principal repayments and amortization) and current fair value of the asset less any impairment loss on that investment previously recognized in the Consolidated Statement of Income.

When an AFS debt security was impaired, any subsequent decreases in fair value were recognized in the Consolidated Statement of Income as it was considered further impairment. Any subsequent increases were also recognized in the Consolidated Statement of Income until the asset is no longer considered impaired. When the fair value of the AFS debt security recovered to at least amortized cost it was no longer considered impaired and subsequent changes in fair value were reported in other comprehensive income.

Reversals of impairment losses on equity investments classified as AFS were not reversed through the Consolidated Statement of Income; increases in their fair value after impairment were recognized in other comprehensive income.

Realized gains and losses were reported in net gains (losses) on financial assets available for sale. Generally, the weighted-average cost method was used to determine the cost of financial assets. Unrealized gains and losses recorded in other comprehensive income were transferred to the Consolidated Statement of Income on disposal of an available for sale asset and reported in net gains (losses) on financial assets available for sale.

Critical Accounting Estimates – Because the assessment of objective evidence of impairment required significant management judgment and the estimate of impairment could change from period to period based upon future events that may or may not occur, the Group considered the impairment of Financial Assets classified as Available for Sale to be a critical accounting estimate. For additional information see Note 7 “Net Gains (Losses) on Financial Assets Available for Sale”.

Loan Commitments

Loan commitments remain off-balance sheet, unless classified as derivatives held for trading or designated at fair value through profit or loss under the fair value option (IAS 39 only). The Group does not recognize and measure changes in fair value of these off-balance sheet loan commitments that result from changes in market interest rates or credit spreads. However, as specified in the sections “Impairment of Loans and Provision for Off-Balance Sheet Positions (IFRS 9 – 2018 only)” and “Impairment of Loans and Provision for Off-Balance Sheet Positions (IAS 39 prior periods only)” below, these off-balance sheet loan commitments are assessed for impairment individually and where appropriate, collectively.

Financial Liabilities (IFRS 9 in 2018 and IAS 39 in prior periods)

Under both IFRS 9 and IAS 39, financial liabilities are measured at amortized cost using the effective interest method, except for financial liabilities at fair value through profit or loss.

Financial Liabilities at Fair Value through Profit or Loss

Financial liabilities at fair value through profit or loss include Trading Liabilities, Financial Liabilities Designated at Fair Value through Profit or Loss and Non-Participating Investment Contracts (“Investment Contracts”). Under IFRS 9 and IAS 39 they are carried at fair value with realized and unrealized gains and losses included in net gains (losses) on

financial assets and liabilities at fair value through profit or loss. However under IFRS 9, for financial liabilities designated at fair value through profit and loss the fair value movements attributable to the Group's own credit component for fair value movements is recognized in Other Comprehensive Income rather than in the Statement of Income as under IAS 39.

Financial liabilities classified at fair value through profit or loss are recognized or derecognized on trade date. Trade date is the date on which the Group commits to issue or repurchase the financial liability.

Interest on interest paying liabilities are presented in interest expense for financial instruments at fair value through profit or loss.

Trading Liabilities - Financial liabilities are classified as held for trading if they have been originated or incurred principally for the purpose of repurchasing them in the near term. Trading liabilities consist primarily of derivative liabilities (including certain loan commitments) and short positions. This also includes loan commitments that are allocated to the other business model and that are classified as derivatives held for trading.

Financial Liabilities Designated at Fair Value through Profit or Loss - Certain financial liabilities that do not meet the definition of trading liabilities are designated at fair value through profit or loss using the fair value option. To be designated at fair value through profit or loss, financial liabilities must meet one of the following criteria: (1) the designation eliminates or significantly reduces a measurement or recognition inconsistency; (2) a group of financial liabilities is managed and its performance is evaluated on a fair value basis in accordance with a documented risk management or investment strategy; or (3) the instrument contains one or more embedded derivatives unless: (a) the embedded derivative does not significantly modify the cash flows that otherwise would be required by the contract; or (b) it is clear with little or no analysis that separation is prohibited. In addition, the Group allows the fair value option to be designated only for those financial instruments for which a reliable estimate of fair value can be obtained. Financial liabilities which are designated at fair value through profit or loss, under the fair value option, include repurchase agreements, loan commitments and structured note liabilities.

Investment Contracts - All of the Group's investment contracts are unit-linked and do not contain significant insurance risk or discretionary participation features. The contract liabilities are determined using current unit prices multiplied by the number of units attributed to the contract holders as of the balance sheet date. As this amount represents fair value, the liabilities have been classified as financial liabilities at fair value through profit or loss. Deposits collected under investment contracts are accounted for as an adjustment to the investment contract liabilities. Investment income attributable to investment contracts is included in the consolidated statement of Income. Investment contract claims reflect the excess of amounts paid over the account balance released. Investment contract policyholders are charged fees for policy administration, investment management, surrenders or other contract services.

Embedded Derivatives

Some hybrid financial liability contracts contain both a derivative and a non-derivative component. In such cases, the derivative component is termed an embedded derivative, with the non-derivative component representing the host financial liability contract. If the economic characteristics and risks of embedded derivatives are not closely related to those of the host financial liability contract and the hybrid financial liability contract itself is not carried at fair value through profit or loss, the embedded derivative is bifurcated and reported at fair value, with gains and losses recognized in net gains (losses) on financial assets/liabilities at fair value through profit or loss. The host financial liability contract will continue to be accounted for in accordance with the appropriate accounting standard. The carrying amount of an embedded derivative is reported in the same consolidated balance sheet line item as the host financial liability contract. Certain hybrid financial liability instruments have been designated at fair value through

profit or loss using the fair value option.

Financial Liabilities at Amortized Cost

Financial liabilities measured at amortized cost include long-term and short-term debt issued which are initially measured at fair value, which is the consideration received, net of transaction costs incurred. Repurchases of issued debt in the market are treated as extinguishments and any related gain or loss is recorded in the Consolidated Statement of Income. A subsequent sale of own bonds in the market is treated as a reissuance of debt. Financial liabilities measured at amortized cost are recognized on a settlement date basis.

Offsetting of Financial Instruments

Financial assets and liabilities are offset, with the net amount presented in the consolidated balance sheet, only if the Group holds a currently enforceable legal right to set off the recognized amounts and there is an intention to settle on a net basis or to realize an asset and settle the liability simultaneously. The legal right to set off the recognized amounts must be enforceable in both the normal course of business and in the event of default, insolvency or bankruptcy of both the Group and its counterparty. In all other situations they are presented gross. When financial assets and financial liabilities are offset in the consolidated balance sheet, the associated income and expense items will also be offset in the Consolidated Statement of Income, unless specifically prohibited by an applicable accounting standard.

The majority of the offsetting applied by the Group relates to derivatives and repurchase and reverse repurchase agreements. A significant portion of offsetting is applied to interest rate derivatives and related cash margin balances, which are cleared through central clearing parties such as the London Clearing House. For further information please refer to Note 19 “Offsetting Financial Assets and Financial Liabilities”.

Determination of Fair Value

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an arm’s length transaction between market participants at the measurement date. The fair value of instruments that are quoted in active markets is determined using the quoted prices where they represent those at which regularly and recently occurring transactions take place. The Group measures certain portfolios of financial assets and financial liabilities on the basis of their net risk exposures when the following criteria are met:

- The group of financial assets and liabilities is managed on the basis of its net exposure to a particular market risk (or risks) or to the credit risk of a particular counterparty, in accordance with a documented risk management strategy,
- The fair values are provided to key management personnel, and
- The financial assets and liabilities are measured at fair value through profit or loss.

This portfolio valuation approach is consistent with how the Group manages its net exposures to market and counterparty credit risks.

Critical Accounting Estimates – The Group uses valuation techniques to establish the fair value of instruments where prices quoted in active markets are not available. Therefore, where possible, parameter inputs to the valuation techniques are based on observable data derived from prices of relevant instruments traded in an active market. These valuation techniques involve some level of management estimation and judgment, the degree of which will depend on the price transparency for the instrument or market and the instrument’s complexity.

In reaching estimates of fair value management judgment needs to be exercised. The areas requiring significant management judgment are identified, documented and reported to senior management as part of the valuation control process and the standard monthly reporting cycle. The specialist model validation and valuation control groups focus attention on the areas of subjectivity and judgment.

The level of management judgment required in establishing fair value of financial instruments for which there is a quoted price in an active market is usually minimal. Similarly there is little subjectivity or judgment required for instruments valued using valuation models which are standard across the industry and where all parameter inputs are quoted in active markets.

The level of subjectivity and degree of management judgment required is more significant for those instruments valued using specialized and sophisticated models and where some or all of the parameter inputs are less liquid or less observable. Management judgment is required in the selection and application of appropriate parameters, assumptions and modelling techniques. In particular, where data are obtained from infrequent market transactions then extrapolation and interpolation techniques must be applied. Where no market data are available for a particular instrument then pricing inputs are determined by assessing other relevant sources of information such as historical data, fundamental analysis of the economics of the transaction and proxy information from similar transactions, and making appropriate adjustment to reflect the actual instrument being valued and current market conditions. Where different valuation techniques indicate a range of possible fair values for an instrument then management has to decide what point within the range of estimates appropriately represents the fair value. Further, some valuation adjustments may require the exercise of management judgment to achieve fair value.

Financial assets and liabilities carried at fair value are required to be disclosed according to the inputs to the valuation method that are used to determine their fair value. Specifically, segmentation is required between those valued using quoted market prices in an active market (level 1), valuation techniques based on observable parameters (level 2) and valuation techniques using significant unobservable parameters (level 3). Management judgment is required in determining the category to which certain instruments should be allocated. This specifically arises when the valuation is determined by a number of parameters, some of which are observable and others are not. Further, the classification of an instrument can change over time to reflect changes in market liquidity and therefore price transparency.

The Group provides a sensitivity analysis of the impact upon the level 3 financial instruments of using a reasonably possible alternative for the unobservable parameter. The determination of reasonably possible alternatives requires significant management judgment.

For financial instruments measured at amortized cost (which includes loans, deposits and short and long term debt issued) the Group discloses the fair value. Generally there is limited or no trading activity in these instruments and therefore the fair value determination requires significant management judgment.

For further discussion of the valuation methods and controls and quantitative disclosures with respect to the determination of fair value, please refer to Note 13 “Financial Instruments carried at Fair Value” and Note 14 “Fair Value of Financial Instruments not carried at Fair Value”.

Recognition of Trade Date Profit

If there are significant unobservable inputs used in the valuation technique, the financial instrument is recognized at the transaction price and any profit implied from the valuation technique at trade date is deferred.

Using systematic methods, the deferred amount is recognized over the period between trade date and the date when

the market is expected to become observable, or over the life of the trade (whichever is shorter). Such methodology is used because it reflects the changing economic and risk profile of the instrument as the market develops or as the instrument itself progresses to maturity. Any remaining trade date deferred profit is recognized in the Consolidated Statement of Income when the transaction becomes observable or the Group enters into offsetting transactions that substantially eliminate the instrument's risk. In the rare circumstances that a trade date loss arises, it would be recognized at inception of the transaction to the extent that it is probable that a loss has been incurred and a reliable estimate of the loss amount can be made.

Critical Accounting Estimates – Management judgment is required in determining whether there exist significant unobservable inputs in the valuation technique. Once deferred, the decision to subsequently recognize the trade date profit requires a careful assessment of the then current facts and circumstances supporting observability of parameters and/or risk mitigation.

Derivatives and Hedge Accounting

Derivatives are used to manage exposures to interest rate, foreign currency, credit and other market price risks, including exposures arising from forecast transactions. All freestanding contracts that are considered derivatives for accounting purposes are carried at fair value on the consolidated balance sheet regardless of whether they are held for trading or non-trading purposes.

The changes in fair value on derivatives held for trading are included in net gains (losses) on financial assets/liabilities at fair value through profit or loss.

Hedge Accounting

IFRS 9 includes an accounting policy choice to defer the adoption of IFRS 9 hedge accounting and to continue with IAS 39 hedge accounting. The Group decided to exercise this accounting policy choice and did not adopt IFRS 9 hedge accounting as of January 1, 2018.

For accounting purposes there are three possible types of hedges: (1) hedges of changes in the fair value of assets, liabilities or unrecognized firm commitments (fair value hedges); (2) hedges of the variability of future cash flows from highly probable forecast transactions and floating rate assets and liabilities (cash flow hedges); and (3) hedges of the translation adjustments resulting from translating the functional currency financial statements of foreign operations into the presentation currency of the parent (hedges of net investments in foreign operations).

When hedge accounting is applied, the Group designates and documents the relationship between the hedging instrument and the hedged item as well as its risk management objective and strategy for undertaking the hedging transactions and the nature of the risk being hedged. This documentation includes a description of how the Group will assess the hedging instrument's effectiveness in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. Hedge effectiveness is assessed at inception and throughout the term of each hedging relationship. Hedge effectiveness is always assessed, even when the terms of the derivative and hedged item are matched.

Hedging derivatives are reported as other assets and other liabilities. In the event that a derivative is subsequently de-designated from a hedging relationship, it is transferred to financial assets/liabilities at fair value through profit or loss.

For hedges of changes in fair value, the changes in the fair value of the hedged asset, liability or unrecognized firm commitment, or a portion thereof, attributable to the risk being hedged, are recognized in the Consolidated Statement of Income along with changes in the entire fair value of the derivative. When hedging interest rate risk, any interest

accrued or paid on both the derivative and the hedged item is reported in interest income or expense and the unrealized gains and losses from the hedge accounting fair value adjustments are reported in other revenue. When the foreign exchange risk of an AFS equity security was hedged in prior accounting periods, the fair value adjustments related to the security's foreign exchange exposures were also recorded in other revenue. Hedge ineffectiveness is reported in other revenue and is measured as the net effect of changes in the fair value of the hedging instrument and changes in the fair value of the hedged item arising from changes in the market rate or price related to the risk(s) being hedged.

If a fair value hedge of a debt instrument is discontinued prior to the instrument's maturity because the derivative is terminated or the relationship is de-designated, any remaining interest rate-related fair value adjustments made to the carrying amount of the debt instrument (basis adjustments) are amortized to interest income or expense over the remaining term of the original hedging relationship. For other types of fair value adjustments and whenever a fair value hedged asset or liability is sold or otherwise derecognized, any basis adjustments are included in the calculation of the gain or loss on derecognition.

For hedges of variability in future cash flows, there is no change to the accounting for the hedged item and the derivative is carried at fair value, with changes in value reported initially in other comprehensive income to the extent the hedge is effective. These amounts initially recorded in other comprehensive income are subsequently reclassified into the Consolidated Statement of Income in the same periods during which the forecast transaction affects the Consolidated Statement of Income. Thus, for hedges of interest rate risk, the amounts are amortized into interest income or expense at the same time as the interest is accrued on the hedged transaction.

Hedge ineffectiveness is recorded in other income and is measured as changes in the excess (if any) in the absolute cumulative change in fair value of the actual hedging derivative over the absolute cumulative change in the fair value of the hypothetically perfect hedge.

When hedges of variability in cash flows attributable to interest rate risk are discontinued, amounts remaining in accumulated other comprehensive income are amortized to interest income or expense over the remaining life of the original hedge relationship, unless the hedged transaction is no longer expected to occur in which case the amount will be reclassified into other income immediately. When hedges of variability in cash flows attributable to other risks are discontinued, the related amounts in accumulated other comprehensive income are reclassified into either the same Consolidated Statement of Income caption and period as profit or loss from the forecast transaction, or into other income when the forecast transaction is no longer expected to occur.

For hedges of the translation adjustments resulting from translating the functional currency financial statements of foreign operations (hedges of net investments in foreign operations) into the functional currency of the parent, the portion of the change in fair value of the derivative due to changes in the spot foreign exchange rates is recorded as a foreign currency translation adjustment in other comprehensive income to the extent the hedge is effective; the remainder is recorded as other income in the Consolidated Statement of Income.

Changes in fair value of the hedging instrument relating to the effective portion of the hedge are subsequently recognized in profit or loss on disposal of the foreign operations.

Impairment of Loans and Provision for Off-Balance Sheet Positions (IFRS 9 – 2018 only)

The impairment requirements of IFRS 9 apply to all credit exposures that are measured at amortized cost or FVOCI, and to off-balance sheet lending commitments such as loan commitments and financial guarantees. For purposes of the impairment policy below, these instruments are referred to as ("Financial Assets").

The determination of impairment losses and allowance moves from an incurred credit loss model whereby credit losses are recognized when a defined loss event occurs under IAS 39, to an expected credit loss model under IFRS 9, where allowances are taken upon initial recognition of the Financial Asset, based on expectations of potential credit losses at the time of initial recognition.

Staged Approach to the Determination of Expected Credit Losses

IFRS 9 introduces a three stage approach to impairment for Financial Assets that are not credit-impaired at the date of origination or purchase. This approach is summarized as follows:

- Stage 1: The Group recognizes a credit loss allowance at an amount equal to 12-month expected credit losses. This represents the portion of lifetime expected credit losses from default events that are expected within 12 months of the reporting date, assuming that credit risk has not increased significantly after initial recognition.
- Stage 2: The Group recognizes a credit loss allowance at an amount equal to lifetime expected credit losses for those Financial Assets which are considered to have experienced a significant increase in credit risk since initial recognition. This requires the computation of ECL based on lifetime probability of default, lifetime loss given default and lifetime exposure at default that represents the probability of default occurring over the remaining lifetime of the Financial Asset. Allowance for credit losses are higher in this stage because of an increase in credit risk and the impact of a longer time horizon being considered compared to 12 months in Stage 1.
- Stage 3: The Group recognizes a loss allowance at an amount equal to lifetime expected credit losses, reflecting a Probability of Default of 100 %, via the expected recoverable cash flows for the asset, for those Financial Assets that are credit-impaired. The Group's definition of default is aligned with the regulatory definition. Financial Assets that are credit-impaired upon initial recognition are categorized within Stage 3 with a carrying value already reflecting the lifetime expected credit losses. The accounting treatment for these purchased or originated credit-impaired ("POCI") assets is discussed further below.

Significant Increase in Credit Risk

Under IFRS 9, when determining whether the credit risk (i.e., risk of default) of a Financial Asset has increased significantly since initial recognition, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes quantitative and qualitative information based on the Group's historical experience, credit risk assessment and forward-looking information (including macro-economic factors). The assessment of significant credit deterioration is key in determining when to move from measuring an allowance based on 12-month ECLs to one that is based on lifetime ECLs (i.e., transfer from Stage 1 to Stage 2).

The Group's framework for determining if there has been a significant increase in credit risk aligns with the internal Credit Risk Management ("CRM") process and covers rating related and process related indicators which are discussed further in section "IFRS 9 Impairment Approach" in the Risk Report.

Credit-impaired Financial Assets in Stage 3

The Group has aligned its definition of credit-impaired under IFRS 9 to when a Financial Asset has defaulted for regulatory purposes, according to the Capital Requirements Regulation under Art. 178.

The determination of whether a Financial Asset is credit-impaired and therefore in Stage 3 focusses exclusively on default risk, without taking into consideration the effects of credit risk mitigants such as collateral or guarantees. Specifically, a Financial Asset is credit-impaired and in Stage 3 when:

- The Group considers the obligor is unlikely to pay its credit obligations to the Group. Determination may include forbearance actions, where a concession has been granted to the borrower or economic or legal reasons that are qualitative indicators of credit impairment; or
- Contractual payments of either principal or interest by the obligor are past due by more than 90 days.

For Financial Assets considered to be credit-impaired, the ECL allowance covers the amount of loss the Group is expected to suffer. The estimation of ECLs is done on a case-by-case basis for non-homogeneous portfolios, or by applying portfolio based parameters to individual Financial Assets in these portfolios via the Group's ECL model for homogeneous portfolios. This estimate includes the use of discounted cash flows that are adjusted for scenarios.

Forecasts of future economic conditions when calculating ECLs are considered. The lifetime expected losses are estimated based on the probability-weighted present value of the difference between the contractual cash flows that are due to the Group under the contract; and the cash flows that the Group expects to receive.

A Financial Asset can be classified as credit-impaired in Stage 3 but without an allowance for credit losses (i.e., no impairment loss is expected). This may be due to the value of collateral. The Group's engine based ECL calculation is conducted on a monthly basis, whereas the case-by-case assessment of ECL in Stage 3 for non-homogeneous portfolio has to be performed at least on a quarterly basis.

Purchased or Originated Credit-Impaired Financial Assets in Stage 3

A Financial Asset is considered purchased or originated credit-impaired if there is objective evidence of impairment at the time of initial recognition. Such credit-impaired Financial Assets are termed POCI Financial Assets. POCI Financial Assets are measured to reflect lifetime expected credit losses, and all subsequent changes in lifetime expected credit losses, whether positive or negative, are recognized in the income statement as a component of the provision for credit losses. POCI Financial Assets can only be classified in Stage 3 over the life of the Financial Asset.

Write-Offs

The Group reduces the gross carrying amount of a Financial Asset when there is no reasonable expectation of recovery. Write-offs can relate to a Financial Asset in its entirety, or to a portion of it, and constitute a derecognition event. The Group considers all relevant information in making this determination, including but not limited to:

- Foreclosure actions taken by the Group which have not been successful or have a high probability of not being successful
- Collateral liquidation which has not, or will not lead to further considerable recoveries
- Situations where no further recoveries are reasonably expected

Write-offs can take place before legal actions against the borrower to recover the debt have been concluded, and a write-off does not involve the Group forfeiting its legal right to recover the debt.

Collateral for Financial Assets Considered in the Impairment Analysis

IFRS 9 requires cash flows expected from collateral and other credit enhancement to be reflected in the ECL calculation. The following are key aspects with respect to collateral and guarantees:

- Eligibility of collateral, i.e. which collateral should be considered in the ECL calculation;
- Collateral evaluation, i.e. what collateral (liquidation) value should be used; and
- Projection of the available collateral amount over the life of a transaction.

These concepts are outlined in more detail in section “IFRS 9 Impairment Approach” in the Risk Report.

Critical Accounting Estimates – The accounting estimates and judgments related to the impairment of Financial Assets is a critical accounting estimate because the underlying assumptions used can change from period to period and may significantly affect the Group’s results of operations.

In assessing assets for impairments, management judgment is required, particularly in projecting future economic information and scenarios in particular where circumstances of economic and financial uncertainty, when developments and changes to expected cash flows can occur both with greater rapidity and less predictability. The actual amount of the future cash flows and their timing may differ from the estimates used by management and consequently may cause actual losses to differ from reported allowances.

For those non-homogeneous loans in Stage 3 the determination of the impairment allowance often requires the use of considerable judgment concerning such matters as local economic conditions, the financial performance of the counterparty and the value of any collateral held, for which there may not be a readily accessible market.

The determination of the expected credit losses in Stages 1 and 2 and for homogeneous loans in Stage 3 is calculated using statistical expected loss models. The model incorporates numerous estimates and judgments. The Group performs a regular review of the model and underlying data and assumptions. The probability of defaults, loss recovery rates and judgments concerning ability of borrowers in foreign countries to transfer the foreign currency necessary to comply with debt repayments, amongst other things, are incorporated into this review.

The quantitative disclosures are provided in Note 20 “Loans” and Note 21 “Allowance for Credit Losses”.

Impairment of Loans and Provision for Off-Balance Sheet Positions (IAS 39 - prior periods only)

The Group applied the impairment requirements of IAS 39 “Financial Instruments: Recognition and Measurement” and IAS 37, “Provisions, Contingent Liabilities and Contingent Assets” in prior periods.

The Group first assessed whether objective evidence of impairment existed individually for loans that were individually significant. It then assessed collectively for loans that were not individually significant and loans which were significant but for which there was no objective evidence of impairment under the individual assessment.

To allow management to determine whether a loss event has occurred on an individual basis, all significant counterparty relationships were reviewed periodically. This evaluation considered information and events related to the counterparty, such as the counterparty experiencing significant financial difficulty or a breach of contract, for example, default or delinquency in interest or principal payments.

If there was evidence of impairment leading to an impairment loss for an individual counterparty relationship, then the amount of the loss was determined as the difference between the carrying amount of the loan(s), including accrued interest, and the present value of expected future cash flows discounted at the loan’s original effective interest rate or the effective interest rate established upon reclassification to loans, including cash flows that may result from foreclosure less costs for obtaining and selling the collateral. The carrying amount of the loans was reduced by the use of an allowance account and the amount of the loss was recognized in the Consolidated Statement of Income as a component of the provision for credit losses.

The collective assessment of impairment was to establish an allowance amount relating to loans that were either individually significant but for which there was no objective evidence of impairment, or were not individually significant but for which there was, on a portfolio basis, a loss amount that was probable of having occurred and was reasonably estimable. The loss amount had three components. The first component was an amount for transfer and currency convertibility risks for loan exposures in countries where there were serious doubts about the ability of counterparties to comply with the repayment terms due to the economic or political situation prevailing in the respective country of domicile. This amount was calculated using ratings for country risk and transfer risk which were established and regularly reviewed for each country in which the Group does business. The second component was an allowance amount representing the incurred losses on the portfolio of smaller-balance homogeneous loans, which were loans to individuals and small business customers of the private and retail business. The loans were grouped according to similar credit risk characteristics and the allowance for each group was determined using statistical models based on historical experience. The third component represented an estimate of incurred losses inherent in the group of loans that had not yet been individually identified or measured as part of the smaller-balance homogeneous loans. Loans that were found not to be impaired when evaluated on an individual basis were included in the scope of this component of the allowance.

Once a loan was identified as impaired, although the accrual of interest in accordance with the contractual terms of the loan was discontinued, the accretion of the net present value of the written down amount of the loan due to the passage of time was recognized as interest income based on the original effective interest rate of the loan.

At each balance sheet date, all impaired loans were reviewed for changes to the present value of expected future cash flows discounted at the loan's original effective interest rate. Any change to the previously recognized impairment loss was recognized as a change to the allowance account and recorded in the Consolidated Statement of Income as a component of the provision for credit losses.

When it was considered that there was no realistic prospect of recovery and all collateral had been realized or transferred to the Group, the loan and any associated allowance was charged off (the loan and the related allowance were removed from the balance sheet). Individually significant loans where specific loan loss provisions were in place were evaluated at least quarterly on a case-by-case basis. For this category of loans, the number of days past due was an indicator for a charge-off but was not a determining factor. A charge-off would only take place after considering all relevant information, such as the occurrence of a significant change in the borrower's financial position such that the borrower could no longer pay the obligation, or the proceeds from the collateral were insufficient to completely satisfy the current carrying amount of the loan.

For collectively assessed loans, which were primarily mortgages and consumer finance loans, the timing of a charge-off depended on whether there was any underlying collateral and the Group's estimate of the amount collectible and the legal requirements in the jurisdiction in which the loan was originated.

Subsequent recoveries, if any, were credited to the allowance account and were recorded in the Consolidated Statement of Income as a component of the provision for credit losses.

The process to determine the provision for off-balance sheet positions is similar to the methodology used for loans. Any loss amounts were recognized as an allowance in the consolidated balance sheet within provisions and charged to the Consolidated Statement of Income as a component of the provision for credit losses.

If in a subsequent period the amount of a previously recognized impairment loss decreased and the decrease was due to an event occurring after the impairment was recognized, the impairment loss was reversed by reducing the

allowance account accordingly. Such reversal was recognized in profit or loss.

Critical Accounting Estimates –The accounting estimates and judgments related to the impairment of loans and provision for off-balance sheet positions was a critical accounting estimate because the underlying assumptions used for both the individually and collectively assessed impairment can change from period to period and may significantly affect the Group's results of operations.

The quantitative disclosures are provided in Note 20 "Loans" and Note 21 "Allowance for Credit Losses".

Derecognition of Financial Assets and Liabilities

Financial Asset Derecognition

A financial asset is considered for derecognition when the contractual rights to the cash flows from the financial asset expire, or the Group has either transferred the contractual right to receive the cash flows from that asset, or has assumed an obligation to pay those cash flows to one or more recipients, subject to certain criteria.

The Group derecognizes a transferred financial asset if it transfers substantially all the risks and rewards of ownership.

The Group enters into transactions in which it transfers previously recognized financial assets but retains substantially all the associated risks and rewards of those assets; for example, a sale to a third party in which the Group enters into a concurrent total return swap with the same counterparty. These types of transactions are accounted for as secured financing transactions.

In transactions in which substantially all the risks and rewards of ownership of a financial asset are neither retained nor transferred, the Group derecognizes the transferred asset if control over that asset is not retained, i.e., if the transferee has the practical ability to sell the transferred asset. The rights and obligations retained in the transfer are recognized separately as assets and liabilities, as appropriate. If control over the asset is retained, the Group continues to recognize the asset to the extent of its continuing involvement, which is determined by the extent to which it remains exposed to changes in the value of the transferred asset.

The derecognition criteria are also applied to the transfer of part of an asset, rather than the asset as a whole, or to a group of similar financial assets in their entirety, when applicable. If transferring a part of an asset, such part must be a specifically identified cash flow, a fully proportionate share of the asset, or a fully proportionate share of a specifically-identified cash flow.

If an existing financial asset is replaced by another asset from the same counterparty on substantially different terms, or if the terms of the financial asset are substantially modified (due to forbearance measures or otherwise), the existing financial asset is derecognized and a new asset is recognized. Any difference between the respective carrying amounts is recognized in the Consolidated Statement of Income.

Securitization

The Group securitizes various consumer and commercial financial assets, which is achieved via the transfer of these assets to a structured entity, which issues securities to investors to finance the acquisition of the assets. Financial assets awaiting securitization are classified and measured as appropriate under the policies in the "Financial Assets and

Liabilities" section. If the structured entity is not consolidated then the transferred assets may qualify for derecognition in full or in part, under the policy on derecognition of financial assets. Synthetic securitization structures typically involve derivative financial instruments for which the policies in the "Derivatives and Hedge Accounting" section would apply. Those transfers that do not qualify for derecognition may be reported as secured financing or result in the recognition of continuing involvement liabilities. The investors and the securitization vehicles generally have no recourse to the Group's other assets in cases where the issuers of the financial assets fail to perform under the original terms of those assets.

Interests in the securitized financial assets may be retained in the form of senior or subordinated tranches, interest only strips or other residual interests (collectively referred to as "retained interests"). Provided the Group's retained interests do not result in consolidation of a structured entity, nor in continued recognition of the transferred assets, these interests are typically recorded in financial assets at fair value through profit or loss and carried at fair value. Consistent with the valuation of similar financial instruments, the fair value of retained tranches or the financial assets is initially and subsequently determined using market price quotations where available or internal pricing models that utilize variables such as yield curves, prepayment speeds, default rates, loss severity, interest rate volatilities and spreads. The assumptions used for pricing are based on observable transactions in similar securities and are verified by external pricing sources, where available. Where observable transactions in similar securities and other external pricing sources are not available, management judgment must be used to determine fair value. The Group may also periodically hold interests in securitized financial assets and record them at amortized cost.

In situations where the Group has a present obligation (either legal or constructive) to provide financial support to an unconsolidated securitization entity a provision will be created if the obligation can be reliably measured and it is probable that there will be an outflow of economic resources required to settle it.

When an asset is derecognized a gain or loss equal to the difference between the consideration received and the carrying amount of the transferred asset is recorded. When a part of an asset is derecognized, gains or losses on securitization depend in part on the carrying amount of the transferred financial assets, allocated between the financial assets derecognized and the retained interests based on their relative fair values at the date of the transfer.

Derecognition of Financial Liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. If an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of the existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the Consolidated Statement of Income.

Repurchase and Reverse Repurchase Agreements

Securities purchased under resale agreements ("reverse repurchase agreements") and securities sold under agreements to repurchase ("repurchase agreements") are treated as collateralized financings and are recognized initially at fair value, being the amount of cash disbursed and received, respectively. The party disbursing the cash takes possession of the securities serving as collateral for the financing and having a market value equal to, or in excess of, the principal amount loaned. The securities received under reverse repurchase agreements and securities delivered under repurchase agreements are not recognized on, or derecognized from, the balance sheet, because the risks and rewards of ownership are not obtained nor relinquished. Securities delivered under repurchase agreements which are not derecognized from the balance sheet and where the counterparty has the right by contract or custom to sell or repledge the collateral are disclosed in Note 22 "Transfer of Financial Assets, Assets Pledged and Received as Collateral".

Under IFRS 9 the Group allocates reverse repurchase portfolios that are managed on a fair value basis to the other business model and classifies them as "Non-trading financial assets mandatory at fair value through profit or loss".

Under IAS 39 the Group choose to apply the fair value option to certain repurchase and reverse repurchase portfolios that were managed on a fair value basis.

Interest earned on reverse repurchase agreements and interest incurred on repurchase agreements is reported as interest income and interest expense, respectively.

Securities Borrowed and Securities Loaned

Securities borrowed transactions generally require the Group to deposit cash with the securities lender. In a securities loaned transaction, the Group generally receives either cash collateral, in an amount equal to or in excess of the market value of securities loaned, or securities. The Group monitors the fair value of securities borrowed and securities loaned and additional collateral is disbursed or obtained, if necessary.

The securities borrowed are not themselves recognized in the financial statements. If they are sold to third parties, the obligation to return the securities is recorded as a financial liability at fair value through profit or loss and any subsequent gain or loss is included in the Consolidated Statement of Income in net gains (losses) on financial assets/liabilities at fair value through profit or loss. Securities lent to counterparties are also retained on the consolidated balance sheet.

Under IFRS 9 and IAS 39 the Group records the amount of cash advanced or received as securities borrowed and securities loaned, respectively, in the consolidated balance sheet.

Fees received or paid are reported in interest income and interest expense, respectively. Securities lent to counterparties which are not derecognized from the consolidated balance sheet and where the counterparty has the right by contract or custom to sell or repledge the collateral are disclosed in Note 22 “Transfer of Financial Assets, Assets Pledged and Received as Collateral”.

Goodwill and Other Intangible Assets

Goodwill arises on the acquisition of subsidiaries and associates and represents the excess of the aggregate of the cost of an acquisition and any noncontrolling interests in the acquiree over the fair value of the identifiable net assets acquired at the date of the acquisition.

For the purpose of calculating goodwill, fair values of acquired assets, liabilities and contingent liabilities are determined by reference to market values or by discounting expected future cash flows to present value. This discounting is either performed using market rates or by using risk-free rates and risk-adjusted expected future cash flows. Any noncontrolling interests in the acquiree is measured either at fair value or at the noncontrolling interests’ proportionate share of the acquiree’s identifiable net assets (this is determined for each business combination).

Goodwill on the acquisition of subsidiaries is capitalized and reviewed for impairment annually or more frequently if there are indications that impairment may have occurred. For the purposes of impairment testing, goodwill acquired in a business combination is allocated to cash-generating units (“CGUs”), which are the smallest identifiable groups of assets that generate cash inflows largely independent of the cash inflows from other assets or groups of assets and that are expected to benefit from the synergies of the combination and considering the business level at which goodwill is monitored for internal management purposes. In identifying whether cash inflows from an asset (or a group of assets) are largely independent of the cash inflows from other assets (or groups of assets) various factors are considered, including how management monitors the entity’s operations or makes decisions about continuing or disposing of the entity’s assets and operations.

If goodwill has been allocated to a CGU and an operation within that unit is disposed of, the attributable goodwill is included in the carrying amount of the operation when determining the gain or loss on its disposal.

Certain non-integrated investments are not allocated to a CGU. Impairment testing is performed individually for each of these assets.

Corporate assets are allocated to a CGU when the allocation can be done on a reasonable and consistent basis. If this is not possible, the individual CGU is tested without the corporate assets. They are then tested on the level of the minimum collection of CGUs to which they can be allocated on a reasonable and consistent basis.

Intangible assets are recognized separately from goodwill when they are separable or arise from contractual or other legal rights and their fair value can be measured reliably. Intangible assets that have a finite useful life are stated at cost less any accumulated amortization and accumulated impairment losses. Customer-related intangible assets that have a finite useful life are amortized over periods of between 1 and 20 years on a straight-line basis based on their expected useful life. These assets are tested for impairment and their useful lives reaffirmed at least annually.

Certain intangible assets have an indefinite useful life and hence are not amortized, but are tested for impairment at least annually or more frequently if events or changes in circumstances indicate that impairment may have occurred.

Costs related to software developed or obtained for internal use are capitalized if it is probable that future economic benefits will flow to the Group and the cost can be measured reliably. Capitalized costs are amortized using the straight-line method over the asset's useful life which is deemed to be either three, five or ten years. Eligible costs include external direct costs for materials and services, as well as payroll and payroll-related costs for employees directly associated with an internal-use software project. Overhead costs, as well as costs incurred during the research phase or after software is ready for use, are expensed as incurred. Capitalized software costs are tested for impairment either annually if still under development or any time when there is an indication of impairment once the software is in use.

Critical Accounting Estimates – The determination of the recoverable amount in the impairment assessment of non-financial assets requires estimates based on quoted market prices, prices of comparable businesses, present value or other valuation techniques, or a combination thereof, necessitating management to make subjective judgments and assumptions. Because these estimates and assumptions could result in significant differences to the amounts reported if underlying circumstances were to change, the Group considers these estimates to be critical.

The quantitative disclosures are provided in Note 25 "Goodwill and Other Intangible Assets".

Provisions

Provisions are recognized if the Group has a present legal or constructive obligation as a result of past events, if it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation as of the balance sheet date, taking into account the risks and uncertainties surrounding the obligation.

If the effect of the time value of money is material, provisions are discounted and measured at the present value of the

expenditure expected to be required to settle the obligation, using a pre-tax rate that reflects the current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognized as interest expense.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party (for example, because the obligation is covered by an insurance policy), an asset is recognized if it is virtually certain that reimbursement will be received.

Critical Accounting Estimates – The use of estimates is important in determining provisions for potential losses that may arise from litigation, regulatory proceedings and uncertain income tax positions. The Group estimates and provides for potential losses that may arise out of litigation, regulatory proceedings and uncertain income tax positions to the extent that such losses are probable and can be estimated, in accordance with IAS 37, “Provisions, Contingent Liabilities and Contingent Assets” or IAS 12, “Income Taxes”, respectively. Significant judgment is required in making these estimates and the Group’s final liabilities may ultimately be materially different.

Contingencies in respect of legal matters are subject to many uncertainties and the outcome of individual matters is not predictable with assurance. Significant judgment is required in assessing probability and making estimates in respect of contingencies, and the Group’s final liability may ultimately be materially different. The Group’s total liability in respect of litigation, arbitration and regulatory proceedings is determined on a case-by-case basis and represents an estimate of probable losses after considering, among other factors, the progress of each case, the Group’s experience and the experience of others in similar cases, and the opinions and views of legal counsel. Predicting the outcome of the Group’s litigation matters is inherently difficult, particularly in cases in which claimants seek substantial or indeterminate damages. See Note 29 “Provisions” for information on the Group’s judicial, regulatory and arbitration proceedings.

Income Taxes

The Group recognizes the current and deferred tax consequences of transactions that have been included in the consolidated financial statements using the provisions of the respective jurisdictions’ tax laws. Current and deferred taxes are recognized in profit or loss except to the extent that the tax relates to items that are recognized directly in equity or other comprehensive income in which case the related tax is recognized either directly in equity or other comprehensive income accordingly.

Deferred tax assets and liabilities are recognized for future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, unused tax losses and unused tax credits. Deferred tax assets are recognized only to the extent that it is probable that sufficient taxable profit will be available against which those unused tax losses, unused tax credits and deductible temporary differences can be utilized.

Deferred tax assets and liabilities are measured based on the tax rates that are expected to apply in the period that the asset is realized or the liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted at the balance sheet date.

Current tax assets and liabilities are offset when (1) they arise from the same tax reporting entity or tax group of reporting entities, (2) the legally enforceable right to offset exists and (3) they are intended to be settled net or realized simultaneously.

Deferred tax assets and liabilities are offset when the legally enforceable right to offset current tax assets and liabilities exists and the deferred tax assets and liabilities relate to income taxes levied by the same taxing authority on either the same tax reporting entity or tax group of reporting entities.

Deferred tax liabilities are provided on taxable temporary differences arising from investments in subsidiaries, branches and associates and interests in joint ventures except when the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the difference will not reverse in the foreseeable future. Deferred income tax assets are provided on deductible temporary differences arising from such investments only to the extent that it is probable that the differences will reverse in the foreseeable future and sufficient taxable income will be available against which those temporary differences can be utilized.

Deferred tax related to fair value remeasurement of financial assets classified as AFS under IAS 39 and as FVTOCI under IFRS 9, cash flow hedges and other items, which are charged or credited directly to other comprehensive income, is also credited or charged directly to other comprehensive income and subsequently recognized in the Consolidated Statement of Income once the underlying transaction or event to which the deferred tax relates is recognized in the Consolidated Statement of Income.

For share-based payment transactions, the Group may receive a tax deduction related to the compensation paid in shares. The amount deductible for tax purposes may differ from the cumulative compensation expense recorded. At any reporting date, the Group must estimate the expected future tax deduction based on the current share price. The associated current and deferred tax consequences are recognized as income or expense in the Consolidated Statement of Income for the period. If the amount deductible, or expected to be deductible, for tax purposes exceeds the cumulative compensation expense, the excess tax benefit is recognized directly in equity.

Critical Accounting Estimates – In determining the amount of deferred tax assets, the Group uses historical tax capacity and profitability information and, if relevant, forecasted operating results based upon approved business plans, including a review of the eligible carry-forward periods, available tax planning opportunities and other relevant considerations. Each quarter, the Group re-evaluates its estimate related to deferred tax assets, including its assumptions about future profitability.

The Group believes that the accounting estimate related to the deferred tax assets is a critical accounting estimate because the underlying assumptions can change from period to period and requires significant management judgment. For example, tax law changes or variances in future projected operating performance could result in a change of the deferred tax asset. If the Group was not able to realize all or part of its net deferred tax assets in the future, an adjustment to its deferred tax assets would be charged to income tax expense or directly to equity in the period such determination was made. If the Group was to recognize previously unrecognized deferred tax assets in the future, an adjustment to its deferred tax asset would be credited to income tax expense or directly to equity in the period such determination was made.

For further information on the Group’s deferred taxes (including quantitative disclosures on recognized deferred tax assets) see Note 36 “Income Taxes”.

Business Combinations and Noncontrolling Interests

The Group uses the acquisition method to account for business combinations. At the date the Group obtains control of the subsidiary, the cost of an acquisition is measured at the fair value of the consideration given, including any cash or non-cash consideration (equity instruments) transferred, any contingent consideration, any previously held equity interest in the acquiree and liabilities incurred or assumed. The excess of the aggregate of the cost of an acquisition

and any noncontrolling interests in the acquiree over the Group's share of the fair value of the identifiable net assets acquired is recorded as goodwill. If the aggregate of the acquisition cost and any noncontrolling interests is below the fair value of the identifiable net assets (negative goodwill), a gain is reported in other income. Acquisition-related costs are recognized as expenses in the period in which they are incurred.

In business combinations achieved in stages ("step acquisitions"), a previously held equity interest in the acquiree is remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognized in profit or loss. Amounts recognized in prior periods in other comprehensive income associated with the previously held investment would be recognized on the same basis as would be required if the Group had directly disposed of the previously held equity interest.

Noncontrolling interests are shown in the consolidated balance sheet as a separate component of equity, which is distinct from the Group's shareholders' equity. The net income attributable to noncontrolling interests is separately disclosed on the face of the Consolidated Statement of Income. Changes in the ownership interest in subsidiaries which do not result in a change of control are treated as transactions between equity holders and are reported in additional paid-in capital ("APIC").

Non-Current Assets Held for Sale

Individual non-current non-financial assets (and disposal groups) are classified as held for sale if they are available for immediate sale in their present condition subject only to the customary sales terms of such assets (and disposal groups) and their sale is considered highly probable. For a sale to be highly probable, management must be committed to a sales plan and actively looking for a buyer. Furthermore, the assets (and disposal groups) must be actively marketed at a reasonable sales price in relation to their current fair value and the sale should be expected to be completed within one year. Non-current non-financial assets (and disposal groups) which meet the criteria for held for sale classification are measured at the lower of their carrying amount and fair value less costs to sell and are presented within "Other assets" and "Other liabilities" in the balance sheet. The comparatives are not represented when non-current assets (and disposal groups) are classified as held for sale. If the disposal group contains financial instruments, no adjustment to their carrying amounts is permitted.

Property and Equipment

Property and equipment includes own-use properties, leasehold improvements, furniture and equipment and software (operating systems only). Own-use properties are carried at cost less accumulated depreciation and accumulated impairment losses. Depreciation is generally recognized using the straight-line method over the estimated useful lives of the assets. The range of estimated useful lives is 25 to 50 years for property and 3 to 10 years for furniture and equipment (including initial improvements to purchased buildings). Leasehold improvements are capitalized and subsequently depreciated on a straight-line basis over the shorter of the term of the lease and the estimated useful life of the improvement, which generally ranges from 3 to 18 years. Depreciation of property and equipment is included in general and administrative expenses. Maintenance and repairs are also charged to general and administrative expenses. Gains and losses on disposals are included in other income.

Property and equipment are assessed for any indication of impairment at each quarterly reporting date. If such indication exists, the recoverable amount, which is the higher of fair value less costs to sell and value in use, must be estimated and an impairment charge is recorded to the extent the recoverable amount is less than its carrying amount. Value in use is the present value of the future cash flows expected to be derived from the asset. After the recognition of impairment of an asset, the depreciation charge is adjusted in future periods to reflect the asset's revised carrying amount. If an impairment is later reversed, the depreciation charge is adjusted prospectively.

Properties leased under a finance lease are capitalized as assets in property and equipment and depreciated over the terms of the leases.

Financial Guarantees

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due in accordance with the terms of a debt instrument.

The Group has chosen to apply the fair value option to certain written financial guarantees that are managed on a fair value basis. Financial guarantees that the Group has not designated at fair value are recognized initially in the financial statements at fair value on the date the guarantee is given. Subsequent to initial recognition, the Group's liabilities under such guarantees are measured at the higher of the amount initially recognized, less cumulative amortization, and the best estimate of the expenditure required to settle any financial obligation as of the balance sheet date. These estimates are determined based on experience with similar transactions and history of past losses, and management's determination of the best estimate.

Any increase in the liability relating to guarantees is recorded in the Consolidated Statement of Income in provision for credit losses.

Leasing Transactions

The Group enters into lease contracts, predominantly for premises, as a lessee. The terms and conditions of these contracts are assessed and the leases are classified as operating leases or finance leases according to their economic substance at inception of the lease.

Assets held under finance leases are initially recognized on the consolidated balance sheet at an amount equal to the fair value of the leased property or, if lower, the present value of the minimum lease payments. The corresponding liability to the lessor is included in the Consolidated balance sheet as a finance lease obligation. The discount rate used in calculating the present value of the minimum lease payments is either the interest rate implicit in the lease, if it is practicable to determine, or the incremental borrowing rate. Contingent rentals are recognized as an expense in the periods in which they are incurred.

Operating lease rentals payable are recognized as an expense on a straight-line basis over the lease term, which commences when the lessee controls the physical use of the property. Lease incentives are treated as a reduction of rental expense and are also recognized over the lease term on a straight-line basis. Contingent rentals arising under operating leases are recognized as an expense in the period in which they are incurred.

Employee Benefits

Pension Benefits

The Group provides a number of pension plans. In addition to defined contribution plans, there are retirement benefit plans accounted for as defined benefit plans. The assets of all the Group's defined contribution plans are held in independently administered funds. Contributions are generally determined as a percentage of salary and are expensed based on employee services rendered, generally in the year of contribution.

All retirement benefit plans accounted for as defined benefit plans are valued using the projected unit-credit method to determine the present value of the defined benefit obligation and the related service costs. Under this method, the determination is based on actuarial calculations which include assumptions about demographics, salary increases and interest and inflation rates. Actuarial gains and losses are recognized in other comprehensive income and presented in equity in the period in which they occur. The majority of the Group's benefit plans is funded.

Other Post-Employment Benefits

In addition, the Group maintains unfunded contributory post-employment medical plans for a number of current and retired employees who are mainly located in the United States. These plans pay stated percentages of eligible medical and dental expenses of retirees after a stated deductible has been met. The Group funds these plans on a cash basis as benefits are due. Analogous to retirement benefit plans these plans are valued using the projected unit-credit method. Actuarial gains and losses are recognized in full in the period in which they occur in other comprehensive income and presented in equity.

Refer to Note 35 "Employee Benefits" for further information on the accounting for pension benefits and other post-employment benefits.

Termination benefits

Termination benefits arise when employment is terminated by the Group before the normal retirement date or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognizes termination benefits as a liability and an expense if the Group is demonstrably committed to a detailed formal plan without realistic possibility of withdrawal. In the case of an offer made to encourage voluntary redundancy, termination benefits are measured based on the number of employees expected to accept the offer. Benefits falling due more than twelve months after the end of the reporting period are discounted to their present value. The discount rate is determined by reference to market yields on high-quality corporate bonds.

Share-Based Compensation

Compensation expense for awards classified as equity instruments is measured at the grant date based on the fair value of the share-based award. For share awards, the fair value is the quoted market price of the share reduced by the present value of the expected dividends that will not be received by the employee and adjusted for the effect, if any, of restrictions beyond the vesting date. In case an award is modified such that its fair value immediately after modification exceeds its fair value immediately prior to modification, a remeasurement takes place and the resulting increase in fair value is recognized as additional compensation expense.

The Group records the offsetting amount to the recognized compensation expense in additional paid-in capital ("APIC"). Compensation expense is recorded on a straight-line basis over the period in which employees perform services to which the awards relate or over the period of the tranches for those awards delivered in tranches. Estimates of expected forfeitures are periodically adjusted in the event of actual forfeitures or for changes in expectations. The timing of expense recognition relating to grants which, due to early retirement provisions, include a nominal but non-substantive service period are accelerated by shortening the amortization period of the expense from the grant date to the date when the employee meets the eligibility criteria for the award, and not the vesting date. For awards that are delivered in tranches, each tranche is considered a separate award and amortized separately.

Compensation expense for share-based awards payable in cash is remeasured to fair value at each balance sheet date and recognized over the vesting period in which the related employee services are rendered. The related obligations are included in other liabilities until paid.

Obligations to Purchase Common Shares

Forward purchases of Deutsche Bank shares, and written put options where Deutsche Bank shares are the underlying, are reported as obligations to purchase common shares if the number of shares is fixed and physical settlement for a fixed amount of cash is required. At inception, the obligation is recorded at the present value of the settlement amount of the forward or option. For forward purchases and written put options of Deutsche Bank shares, a corresponding charge is made to shareholders' equity and reported as equity classified as an obligation to purchase common shares.

The liabilities are accounted for on an accrual basis, and interest costs, which consist of time value of money and dividends, on the liability are reported as interest expense. Upon settlement of such forward purchases and written put options, the liability is extinguished and the charge to equity is reclassified to common shares in treasury.

Deutsche Bank common shares subject to such forward contracts are not considered to be outstanding for purposes of basic earnings per share calculations, but are for dilutive earnings per share calculations to the extent that they are, in fact, dilutive.

Option and forward contracts on Deutsche Bank shares are classified as equity if the number of shares is fixed and physical settlement is required. All other contracts in which Deutsche Bank shares are the underlying are recorded as financial assets or liabilities at fair value through profit or loss.

Consolidated Statement of Cash Flows

For purposes of the consolidated statement of cash flows, the Group's cash and cash equivalents include highly liquid investments that are readily convertible into cash and which are subject to an insignificant risk of change in value. Such investments include cash and balances at central banks and demand deposits with banks.

The Group's assignment of cash flows to the operating, investing or financing category depends on the business model ("management approach"). For the Group the primary operating activity is to manage financial assets and financial liabilities. Therefore, the issuance and management of long-term borrowings is a core operating activity which is different than for a non-financial company, where borrowing is not a principal revenue producing activity and thus is part of the financing category.

The Group views the issuance of senior long-term debt as an operating activity. Senior long-term debt comprises structured notes and asset-backed securities, which are designed and executed by Corporate & Investment Bank business lines and which are revenue generating activities. The other component is debt issued by Treasury, which is considered interchangeable with other funding sources; all of the funding costs are allocated to business activities to establish their profitability.

Cash flows related to subordinated long-term debt and trust preferred securities are viewed differently than those related to senior-long term debt because they are managed as an integral part of the Group's capital, primarily to meet regulatory capital requirements. As a result they are not interchangeable with other operating liabilities, but can only be interchanged with equity and thus are considered part of the financing category.

The amounts shown in the consolidated statement of cash flows do not precisely match the movements in the consolidated balance sheet from one period to the next as they exclude non-cash items such as movements due to foreign exchange translation and movements due to changes in the group of consolidated companies.

Movements in balances carried at fair value through profit or loss represent all changes affecting the carrying value. This includes the effects of market movements and cash inflows and outflows. The movements in balances carried at fair value are usually presented in operating cash flows.

02 – Recently Adopted and New Accounting Pronouncements

Recently Adopted Accounting Pronouncements

The following are those accounting pronouncements which are relevant to the Group and which have been adopted during 2018 in the preparation of these consolidated financial statements.

IFRS 2 Share-based Payments

On January 1, 2018, the Group adopted amendments to IFRS 2, “Share-based Payment” which clarify the accounting for certain types of share-based payment transactions. The amendments which were developed through the IFRS Interpretations Committee clarify the accounting for cash-settled share-based payment transactions that include a performance condition, the classification of share-based payment transactions with net settlement features and the accounting for modifications of share-based payment transactions from cash-settled to equity-settled. The amendments did not have a material impact on the Group’s consolidated financial statements.

IFRS 9 Financial Instruments

On January 1, 2018, the Group adopted IFRS 9 “Financial Instruments”, which replaces IAS 39, “Financial Instruments: Recognition and Measurement”. IFRS 9 introduces new requirements on how an entity should classify and measure financial assets, requires changes to the reporting of ‘own credit’ with respect to issued debt liabilities that are designated at fair value, replaces the rules for impairment of financial assets and amends the requirements for hedge accounting. The standard also requires entities to provide users of financial statements with more informative and relevant disclosures. The standard has been endorsed by the European Union (EU).

As a result of IFRS 9, Deutsche Bank has introduced changes to the financial statements presentation. These changes relate to specific line items in the consolidated income statement and consolidated balance sheet.

IFRS 9 incorporates new hedge accounting rules that intend to better align hedge accounting with risk management practices. Generally, some restrictions under IAS 39 rules have been removed and a greater variety of hedging instruments and hedged items become available for hedge accounting. IFRS 9 includes an accounting policy choice to defer the adoption of IFRS 9 hedge accounting and to continue with IAS 39 hedge accounting. The Group has decided to exercise this accounting policy choice and did not adopt IFRS 9 hedge accounting as of January 1, 2018. However, the Group implemented the revised hedge accounting disclosures that are required by the IFRS 9 related amendments to IFRS 7 “Financial Instruments: Disclosures”.

In October 2017, the IASB issued an amendment to IFRS 9 "Prepayment Features with Negative Compensation", which allows entities to measure particular pre-payable financial assets with so-called negative compensation (also known as two way break clauses) at amortized cost or at fair value through other comprehensive income if the prepayment amount substantially represents unpaid principal and interest and reasonable compensation. Reasonable compensation may be positive or negative. Prior to this amendment financial assets with this negative compensation feature would have failed the solely payments of principal and interest test and have been mandatorily measured at fair

value through profit or loss. The amendment has been endorsed by the EU and is effective for annual periods beginning on or after January 1, 2019, with early adoption allowed. In the second quarter of 2018, the Group adopted the amendments to IFRS 9 “Prepayment Features with Negative Compensation”. The amendments did not have a material impact on the IFRS 9 Transition Impact Analysis.

IFRS 9 Transition Impact Analysis

The purpose of this section is to describe the key aspects of the changes following the adoption of IFRS 9 with regards to classification and measurement and impairment as well as to provide an overview of the impact on key ratios, regulatory capital, Total Shareholders’ Equity and Risk Weighted Assets (RWA) at Deutsche Bank. This section provides a movement analysis from IAS 39 reported numbers as included in the Deutsche Bank Annual Report 2017 to IFRS 9 numbers as adopted from January 1, 2018.

The transition rules of IFRS 9 do not require a retrospective application to prior periods, accordingly the initial adoption effect is reflected in the opening balance of Shareholders’ equity for the financial year 2018. Comparative periods in this report are presented in the structure according to IAS 39.

Key metrics

		IAS 39	IFRS 9	
		Dec 31, 2017	Jan 1, 2018 [1]	Impact
IFRS Total shareholders’ equity	in € m	63,174	62,503	(671)
Common Equity Tier 1 capital fully loaded	in € m	48,300	47,907	(393)
Risk Weighted Assets	in € bn	344	345	0.5
Tier 1 Capital fully loaded	in € m	52,921	52,528	(393)
CET 1 Ratio fully loaded	in %	14.0	13.9	(13)2
Leverage Exposure	in € bn	1,395	1,395	(0.4)
Leverage Ratio fully loaded	in %	3.8	3.8	(3)2
Leverage Ratio phase-in	in %	4.1	4.1	(3)2

[1] Pro forma.

[2] In bps.

The implementation of IFRS 9 as of January 1, 2018 led to a decrease of Deutsche Bank’s Shareholders’ equity of € 671 million including a tax benefit of € 199 million. Regulatory capital decreased by € 393 million due to a lower deduction of expected credit losses exceeding impairments for these exposures under the regulatory internal rating based approach (IRBA). Fully loaded CET 1 ratio decreased by 13 basis points, higher than earlier estimates due to refinements to the calculation of the impact of reducing the deduction for expected credit losses, and fully loaded Leverage Ratio is lower by 3 basis points.

Deutsche Bank decided not to apply transitional rules for calculating regulatory ratios pursuant to CRR Art. 473a. This section will therefore only refer to the full IFRS 9 impact.

Impact on Regulatory Capital, RWA, and Leverage Exposure

Fully loaded

in € m.	Total shareholders' equity per accounting balance sheet	Common Equity Tier 1 capital	Tier 1 Capital
Balance as of Dec 31, 2017	63,174	48,300	52,921
IFRS 9 changes from	(870)	(870)	(870)
Classification and Measurement	(193)	(193)	(193)
Impairments	(677)	(677)	(677)
Tax effects from	199	199	199
Classification and Measurement	65	65	65
Impairments	134	134	134
IFRS 9 impact net of tax	(671)	(671)	(671)
Changes to regulatory deductions			
Negative amounts resulting from the calculation of expected loss amounts		278	278
Balance as of Jan 1, 20181	62,503	47,907	52,528

1 Pro forma.

in € bn	Risk Weighted Assets	Leverage Exposure
Balance as of Dec 31, 2017	344	1,395
Changes from	0	(0)
DTA RWA / Change of Total Assets	1	(1)
SA RWA/ Lower Deductions	(0)	0
Balance as of Jan 1, 20181	345	1,395
Ratios as of Dec 31, 2017	14.0 %	3.8 %
Ratios as of Jan 1, 20181	13.9 %	3.8 %
Change in bps	(13)	(3)

1 Pro forma.

Transitional rules

in € m.	Total shareholders' equity per accounting balance sheet	Common Equity Tier 1 capital	Tier 1 Capital
Balance as of Dec 31, 2017	63,174	50,808	57,631
IFRS 9 changes from	(870)	(870)	(870)
Classification and Measurement	(193)	(193)	(193)
Impairments	(677)	(677)	(677)
Tax effects from	199	199	199
Classification and Measurement	65	65	65
Impairments	134	134	134
IFRS 9 impact net of tax	(671)	(671)	(671)

Changes to regulatory deductions			
Negative amounts resulting from the calculation of expected loss amounts		223	278
Balance as of Jan 1, 20181	62,503	50,3592	57,238

1 Pro forma.

2 Pro forma view considering 80 % phase-in according to CRR transitional rules.

in € bn	Risk Weighted Assets	Leverage Exposure
Balance as of Dec 31, 2017	343	1,396
Changes from	0	0
DTA RWA / Change of Total Assets	1	0
SA RWA/ Lower Deductions	(0)	0
Balance as of Jan 1, 20181	344	1,396
Ratios as of Dec 31, 2017	14.8 %	4.1 %
Ratios as of Jan 1, 20181	14.6 %	4.1 %
Change in bps	(15)	(3)

1 Pro forma.

Main Credit Exposure Categories by Business Divisions

With the introduction of IFRS 9 Deutsche Bank reviewed the way how credit risk exposure is presented within the Risk Report. The definition of the Main Credit Exposure Categories were expanded and instead of only showing a certain subset of products, it was decided to show all products, regardless of their classification and measurement under IFRS 9. The below table presents the 2017 comparative amounts for each Main Credit Exposure Category. A description of the categories is included in the “Credit Risk Exposure” section of the Risk Report.

	Loans		Off-balance sheet		OTC derivatives		Debt securities		Repo and repo-style transactions		Total
in € m.	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018	Dec 31, 2017	Dec 31, 2018
Corporate & Investment Bank	164,163	153,473	217,203	206,021	27,028	30,993	90,062	86,272	76,032	99,335	574,488
Private & Commercial Bank	269,384	270,398	45,969	46,082	353	422	12,387	14,421	260	835	328,353
Asset Management	68	87	131	69	0	0	419	106	0	0	618
Corporate & Other	216	26	351	159	37	15	39,989	42,187	5,175	4,630	45,768

Total	433,832	423,984	263,654	252,331	27,417	31,430	142,857	142,986	81,467	104,800	949,227

Classification and Measurement

The following table provides an overview of the impact of the changes to total assets under classification and measurement from IAS 39 as of December 31, 2017 to IFRS 9 as of January 1, 2018, excluding allowances for On- and Off-Balance Sheet positions, affected by IFRS 9.

in € m.	IAS 39 carrying amount Dec 31, 2017 (i)	Reclassi-fications (ii)	Remeasure-ments (iii)	IFRS 9 carrying amount Jan 1, 2018 (iv=i+ii+iii)
Fair Value through Profit or Loss				
From Available for Sale (IAS 39)	-	2,535	(3)	-
From Amortized Cost (IAS 39)	-	41,914	(3)	-
To Amortized Cost (IFRS 9)	-	(5,900)	-	-
To Fair Value through Other Comprehensive Income (IFRS 9)	-	(6,508)	-	-
Total Fair Value through Profit or Loss	636,970	32,041	(6)	669,004
Fair Value through Other Comprehensive Income				
From Available for Sale (IAS 39)	-	41,219	(104)	-
From Amortized Cost (IAS 39)	-	9,943	64	-
From Fair Value through Profit or Loss (IAS 39)	-	6,508	-	-
To Amortized Cost (IFRS 9)	-	-	-	-
To Fair Value through Profit or Loss (IFRS 9)	-	-	-	-
Total Fair Value through Other Comprehensive Income	-	57,671	(40)	57,631
Amortized Cost				
From Amortized Cost (IAS 39)	-	-	-	-
From Available for Sale (IAS 39)	-	5,642	24	-
From Fair Value through Profit or Loss (IAS 39)	-	5,900	(184)	-
To Fair Value through Other Comprehensive Income (IFRS 9)	-	(6,773)	-	-
To Fair Value through Profit or Loss (IFRS 9)	-	(41,914)	-	-
Total Amortized Cost	780,721	(37,145)	(159)	743,417
Tax Assets	8,396	-	230	8,626
Available for Sale (IAS 39)	49,397	(49,397)	-	-
Held to Maturity (IAS 39)	3,170	(3,170)	-	-
	1,478,654	0	24	1,478,678

Total Financial Asset balances affected by IFRS 9, Reclassifications and Remeasurements

Impairment

The following table provides an overview of IAS 39 allowance for all debt instruments that are measured at amortized costs or fair value through other comprehensive income and off-balance sheet lending commitments, including financial guarantees (referred to as On- and Off-Balance Sheet positions in the table below) as of December 31, 2017 to the IFRS 9 expected credit loss allowance as of January 1, 2018.

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in € m.	IAS 39 Allowance for On-and Off-Balance Sheet positions as at Dec 31, 2017 (i)	Changes due to reclassifications (ii)	Changes due to the introduction of the IFRS 9 ECL model (iii)	IFRS 9 Allowance for On-and Off- Balance Sheet Positions as at Jan 1, 2018 (iv=i+ii+iii)
Fair Value through profit or loss				
From available for sale (IAS 39)	-	-	-	-
From amortized cost (IAS 39)	-	-	-	-
To amortized cost (IFRS 9)	-	-	-	-
To fair value through other comprehensive income (IFRS 9)	-	-	-	-
Total Fair Value through Profit or Loss	-	-	-	-
Fair Value through other comprehensive income				
From available for sale (IAS 39)	-	-	12	12
From amortized cost (IAS 39)	-	-	0	0
From fair value through profit or loss (IAS 39)	-	-	-	-
To amortized cost (IFRS 9)	-	-	-	-
To fair value through profit or loss (IFRS 9)	-	-	-	-
Total Fair Value through Other Comprehensive Income	-	-	12	12
Amortized cost				

From amortized cost (IAS 39)	3,856	-	737	4,594
From available for sale (IAS 39)	-	-	-	-
From fair value through profit or loss (IAS 39)	-	-	9	9
To fair value through other comprehensive income (IFRS 9)	10	(10)	-	-
To fair value through profit or loss (IFRS 9)	55	(55)	-	-
Total Amortized Cost	3,921	(65)	746	4,603
Total On Balance Sheet Positions affected by IFRS 9 ECL Model	3,921	(65)	758	4,615
Off Balance Sheet	285	-	(6)	280
Total On- and Off Balance Sheet Positions affected by IFRS 9 ECL Model	4,207	(65)	753	4,894

IFRS 15 Revenue from Contracts with Customers

On January 1, 2018, the Group adopted IFRS 15, “Revenue from Contracts with Customers” (including the amendments issued subsequently to the original issuance of IFRS 15), which specifies how and when revenue is recognized, but does not impact income recognition related to financial instruments in scope of IFRS 9. The new requirements replace several other IFRS standards and interpretations that governed revenue recognition under IFRS and provides a single, principles-based five-step model to be applied to all contracts with customers. The Standard also requires entities to provide users of financial statements with more informative and relevant disclosures. The Group has exercised the initial application relief and applied the cumulative effect method, which allowed the Group to apply IFRS 15 to reporting periods beginning on or after January 1, 2018. IFRS 15 did not have a material impact on the Group’s consolidated financial statements. The impact has been limited to the presentation of enhanced disclosures, including a disaggregation of the Group’s revenue types prior to deduction of associated expenses.

New Accounting Pronouncements

The following accounting pronouncements were not effective as of December 31, 2018 and therefore have not been applied in preparing these financial statements.

IFRS 3 Business Combinations

In October 2018, the IASB issued amendments to IFRS 3 “Business Combinations”. These amendments clarify the determination of whether an acquisition made is of a business or a group of assets. The amended definition of a business emphasizes that the output of a business is to provide goods and services to customers, whereas the previous definition focused on returns in the form of dividends, lower costs or other economic benefits to investors and others. Distinguishing between a business and a group of assets is important because an acquirer recognizes goodwill only when acquiring a business. The amendments will be effective for annual periods beginning on or after January 1, 2020 with early adoption permitted. The amendments will not have a material impact on the Group’s consolidated financial

statements. These amendments have yet to be endorsed by the EU.

IFRS 16 Leases

In January 2016, the IASB issued IFRS 16, “Leases”, which introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. A lessee is required to recognize a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments. There will be only minor changes to the current accounting for lessors. The standard also requires entities to provide users of financial statements with more informative and relevant disclosures. IFRS 16 is effective for annual periods beginning on or after January 1, 2019. The standard has been endorsed by the EU.

The Group has analyzed the impact of the initial application of IFRS 16 in a Group-wide implementation program. The majority of leases are for land and buildings; other categories are company cars and technical/IT equipment.

The Group will apply the practical expedient in IFRS 16 to contracts that were identified as leases applying IAS 17, “Leases”, and IFRIC 4, “Determining whether an Arrangement contains a Lease”, on transition.

The Group has chosen to apply the modified retrospective transition approach, without restatement of comparative figures. Under the modified retrospective approach, the Group can choose on a lease by lease basis to either (i) measure the right-of-use asset at the same amount as the lease liability, or (ii) to measure the right-of-use asset retrospectively using the transition discount rate. For approach (ii), the resulting difference between the right-of-use asset and the lease liability will be recognized as an adjustment to the opening balance of retained earnings on transition.

On initial application the Group will apply approach (i) to leases classified as operating leases under IAS 17 except for larger property leases where the Group will elect to apply approach (ii) which is expected to result in an adjustment to the opening balance of retained earnings on transition of € 150 million, taking deferred taxes into account.

In addition, provisions previously recognized for onerous operating leases as well as accrued operating liabilities will be derecognized upon transition, and the value of the right-of-use assets will be reduced by that same amount.

The expected impact upon adoption will result in an approximately € 3.3 billion and € 3.5 billion increase in the balance sheet related to the recognition of right of use assets and corresponding liabilities, respectively. This will lead to an overall reduction in the Group’s total shareholders’ equity of € 150 million, taking deferred taxes into account. These estimates may change as the Group finalizes its implementation project in the first quarter of 2019.

IFRS 17 Insurance Contracts

In May 2017, the IASB issued IFRS 17, “Insurance Contracts”, which establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the standard. IFRS 17 replaces IFRS 4 which has given companies dispensation to carry on accounting for insurance contracts using national accounting standards, resulting in a multitude of different approaches. IFRS 17 solves the comparison problems created by IFRS 4 by requiring all insurance contracts to be accounted for in a consistent manner, benefiting both investors and insurance companies. Insurance obligations will be accounted for using current values – instead of historical cost. The information will be updated regularly, providing more useful information to users of financial statements. IFRS 17 is effective for annual periods beginning on or after January 1, 2021. Based on the Group’s current

business activities it is expected that IFRS 17 will not have a material impact on the Group's consolidated financial statements. The standard has yet to be endorsed by the EU.

Improvements to IFRS 2015-2017 Cycles

In December 2017, the IASB issued amendments to multiple IFRS standards, which resulted from the IASB's annual improvement project for the 2015-2017 cycles. This comprises amendments that result in accounting changes for presentation, recognition or measurement purposes as well as terminology or editorial amendments related to IFRS 3 "Business combinations", IAS 12 "Income taxes" and IAS 23 "Borrowing costs". The amendments will be effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. The Group expects that the amendments will not have a material impact on the Group's consolidated financial statements. The amendments have been endorsed by the EU.

03 – Acquisitions and Dispositions

Business Combinations

During the years 2018, 2017 and 2016, the Group did not undertake any acquisitions accounted for as business combinations.

Acquisitions and Dispositions of Noncontrolling Interests while Retaining Control

Deutsche Bank's Ownership Interest following Initial Public Offering of DWS shares

Deutsche Bank announced on February 26, 2018 its intention to proceed with the planned Initial Public Offering ("IPO") of its subsidiary DWS Group GmbH & Co. KGaA ("DWS") on the regulated market of the Frankfurt Stock Exchange. The IPO consisted purely of the sale of existing shares directly held by DWS's sole shareholder, DB Beteiligungs Holding GmbH, a 100 % subsidiary of Deutsche Bank AG. The total placement volume is comprised of 44.5 million DWS shares including over-allotments (greenshoe) of 4.5 million shares.

As announced on March 22, 2018, the placement price for shares offered in the IPO had been set at € 32.50 per share. As of March 31, 2018, 40.0 million DWS shares were sold to new investors. Based on the placement price, the market capitalization of DWS amounted to € 6.5 billion. Deutsche Bank received gross proceeds of € 1.3 billion from the placement of DWS shares, resulting in investors other than Deutsche Bank holding 20.0 % of DWS. Subsequently, Deutsche Bank remains DWS's majority shareholder post IPO.

The final carrying amount of DWS's net assets in the Group's consolidated financial statements on the date of the IPO was € 6.0 billion. This includes the net assets from the U.S. Asset Management business transferred to DWS on April 2, 2018 which was subject to contractually binding agreements between the Group entities involved and constituted an element of the offering.

The following table summarizes the effect of changes in Deutsche Bank's ownership interest in DWS and their impact on shareholders' equity at the end of the reporting period:

Deutsche Bank's Ownership Interest in DWS and Impact on Shareholders' Equity

in €	2018
Deutsche Bank’s ownership interest at the time of the IPO	5,991
Net decrease in Deutsche Bank’s ownership interest	(1,229)
Deutsche Bank’s share of net income or loss	239
Deutsche Bank’s share of other comprehensive income	149
Deutsche Bank’s share of other equity changes	37
Deutsche Bank’s ownership interest in DWS at the end of the reporting period	5,187
Excess amount from the IPO	73
Total effect on shareholders' equity from a change in Deutsche Bank's ownership interest in DWS, at the end of the reporting period	5,260

By the end of the stabilization period (April 20, 2018), out of the total greenshoe volume of 4.5 million shares, 1,018,128 shares were allocated to new shareholders, which increased the proportion of outside shareholders in DWS to 20.51 %.

Dispositions

During 2018, 2017 and 2016, the Group finalized several dispositions of subsidiaries/businesses. These disposals are mainly of businesses the Group had previously classified as held for sale. Accordingly, dispositions in 2018 included the partial sale of the Polish PCB business, while disposals in 2017 contained the Group’s Argentine subsidiary Deutsche Bank S.A. and Sal. Oppenheim’s Luxembourg-based fund administration and custody business. Divestitures in 2016 comprised the sale of Abbey Life and Maher Terminals Port Elizabeth. For more detail on these transactions, please refer to Note 26 “Non-Current Assets and Disposal Groups Held for Sale”. The total consideration received for these dispositions (thereof in cash) in 2018, 2017 and 2016 was € 398 million (cash € 164 million), € 129 million (cash) and € 2.0 billion (cash), respectively. The table below shows the assets and liabilities that were included in these disposals.

in € m.	2018	2017	2016
Cash and cash equivalents	50	47	0
All remaining assets	4,619	848	14,858
Total assets disposed	4,669	895	14,858
Total liabilities disposed	6,035	814	12,250

04 – Business Segments and Related Information

The Group’s segmental information has been prepared in accordance with the “management approach”, which requires presentation of the segments on the basis of the internal management reports of the entity which are regularly reviewed by the chief operating decision maker, which is the Deutsche Bank Management Board, in order to allocate resources to a segment and to assess its financial performance.

Business Segments

The Group’s segment reporting follows the organizational structure as reflected in its internal management reporting systems, which are the basis for assessing the financial performance of the business segments and for allocating resources to the business segments. Generally, restatements due to changes in the organizational structure were implemented in the presentation of prior period comparables if they were considered in the Group’s management

reporting systems.

Our business operations are organized under the divisional structure comprising the following corporate divisions:

- Corporate & Investment Bank (“CIB”),
- Private & Commercial Bank (“PCB”),
- Asset Management (“AM”).

The key changes compared to Deutsche Bank’s previously reported segmental information are outlined below.

In the first quarter of 2018, the definition of CIB’s “Sales & Trading (FIC)” revenue category has been updated to improve alignment with peer reporting and enable more relevant comparisons. As a result, the category “Financing” ceased to exist and the majority of revenues previously reported under that category, for the year 2017 more than 95 %, has been moved into the “Sales & Trading (FIC)” category and the remainder into “Other”. In the current quarter revenues related to Listed Derivatives & Clearing have been transferred from Sales & Trading (FIC) to Sales & Trading (Equities) to better align to the priorities of the business. The presentation of comparison periods has been adjusted accordingly.

In May 2018, Deutsche Bank successfully merged Deutsche Bank Privat- und Geschäftskunden AG and Postbank into DB Privat- und Firmenkundenbank AG. After the agreement to sell our retail business in Portugal and agreement for the partial sale of the Polish retail business in the first quarter of 2018, revenues from these Private and Commercial Clients International (PCCI) businesses, as well as Hua Xia Bank and the PCS disposed business are reported in a separate category to better reflect our exited businesses. As a result, since the second quarter of 2018, PCB’s revenues are now reported as follows:

- Private and Commercial Business (Germany),
- Private and Commercial Business (International), which covers operations in Belgium, India, Italy and Spain,
- Wealth Management (Global), and
- Exited businesses, which covers operations in Poland and Portugal as well as Private Client Services (PCS) and Hua Xia Bank in historical periods.

The presentation of comparison periods has been adjusted accordingly.

In March 2017, Deutsche Bank announced its intention to pursue an initial public offering (IPO) of Deutsche Asset Management, which was completed in March 2018. Since March 23, 2018, shares of the holding company DWS Group GmbH & Co. KGaA are listed on the Frankfurt stock exchange. The corporate division “Deutsche Asset Management” was renamed “Asset Management” during the first quarter 2018. Deutsche Bank remains DWS’s majority shareholder post IPO.

From 2018 onwards Group Infrastructure expenses are allocated to the corporate divisions based on Plan. Any delta between Plan and Actual allocations is captured centrally within “Corporate & Other”. Infrastructure expenses relating to shareholder activities as defined in the OECD Transfer Pricing Guidelines, i.e. costs for specific group functions, are no longer allocated to segments, but instead held centrally and reported under “Corporate & Other (C&O)”, formerly “Consolidation & Adjustments (C&A)”. These infrastructure expenses amounted to € 422 million in 2018 and € 371 million in 2017. All categories previously reported under C&A, including valuation and timing differences as well as treasury-related and corporate items not allocated to the divisions, remain in C&O. The presentation of comparison periods has been adjusted accordingly.

From 2017 onwards, Non-Core Operations Unit (NCOU) ceased to exist as a standalone division. The remaining legacy assets as of December 31, 2016 are now managed by the corresponding operating segments, predominately in Corporate & Investment Bank and Private & Commercial Bank.

Measurement of Segment Profit or Loss

Segment reporting requires a presentation of the segment results based on management reporting methods, including a reconciliation between the results of the business segments and the consolidated financial statements, which is presented in the “Management Report: Operating and Financial Review: Deutsche Bank Group: Corporate Divisions: Corporate and Other”. The information provided about each segment is based on internal management reporting about segment profit or loss, assets and other information which is regularly reviewed by the chief operating decision maker. Segment assets are presented in the Group’s internal management reporting based on a consolidated view, i.e., the amounts do not include intersegment balances.

Non-IFRS compliant accounting methods are rarely used in the Group’s management reporting and represent either valuation or classification differences. The largest valuation differences relate to measurement at fair value in management reporting versus measurement at amortized cost under IFRS and to the recognition of trading results from own shares in revenues in management reporting (mainly in CIB) and in equity under IFRS. The major classification difference relates to noncontrolling interest, which represents the net share of minority shareholders in revenues, provision for credit losses, noninterest expenses and income tax expenses. Noncontrolling interest is reported as a component of pre-tax income for the businesses in management reporting (with a reversal in C&O) and a component of net income appropriation under IFRS.

Since the Group’s business activities are diverse in nature and its operations are integrated, certain estimates and judgments have been made to apportion revenue and expense items among the business segments.

The management reporting systems allocate the Group’s external net interest income according to the value of funding consumed or provided by each business segment’s activities, with transfer pricing referencing the Group’s access to financing in the wholesale markets. Furthermore, to retain comparability with those competitors that have legally independent units with their own equity funding, the Group allocates a net notional interest benefit on its consolidated capital, in line with each segment’s proportion of average shareholders’ equity.

Management uses certain measures for equity and related ratios as part of its internal reporting system because it believes that these measures provide it with a useful indication of the financial performance of the business segments. The Group discloses such measures to provide investors and analysts with further insight into how management operates the Group’s businesses and to enable them to better understand the Group’s results. These measures include:

Allocation of Average Shareholders’ Equity - Since 2017, Shareholders’ equity is fully allocated to the Group’s segments based on the regulatory capital demand of each segment and is no longer capped at the amount of shareholders’ equity required to meet the externally communicated targets for the Group’s Common Equity Tier 1 ratio and the Group’s Leverage ratio. Regulatory capital demand reflects the combined contribution of each segment to the Groups’ Common Equity Tier 1 ratio, the Groups’ Leverage ratio and the Group’s Capital Loss under Stress. Contributions in each of the three dimensions are weighted to reflect their relative importance and level of constraint for the Group. Contributions to the Common Equity Tier 1 ratio and the Leverage ratio are measured though Risk-Weighted Assets (RWA) and Leverage Ratio Exposure (LRE) assuming full implementation of CRR/CRD 4 rules. The Group’s Capital Loss under Stress is a measure of the Group’s overall economic risk exposure under a defined stress scenario. Goodwill and other intangibles continue to be directly attributed to the Group’s segments in order to allow the determination of allocated tangible shareholders’ equity and the respective returns. Shareholders’ equity and tangible shareholders’ equity is allocated on a monthly basis and averaged across quarters and for the full year. All reported periods in 2016 and 2017 have been restated.

Segment average shareholders' equity in December 2016 represents the spot values for the period end. The difference

between the spot values of the segments and the average Group amount is captured in C&O.

For purposes of the 2017 average shareholders' equity allocation the Non-Core Operations Unit (NCOU) balances from year-end 2016 have been allocated to Corporate & Other (C&O) as Non-Core Operations Unit (NCOU) has ceased to exist as a separate corporate division from 2017 onwards.

Net interest income as a component of net revenue, income (loss) before income taxes and related ratios is presented on a fully taxable-equivalent basis for U.S. tax-exempt securities for the Corporate & Investment Bank. This enables management to measure performance of taxable and tax-exempt securities on a comparable basis. This presentation resulted in an increase in Corporate & Investment Bank net interest income of € 42.4 million for full year 2018 (€ 113.6 million for full year 2017, € 126.4 million for full year 2016). This increase is offset in Group consolidated figures through a reversal in C&O. The tax rate used in determining the fully taxable-equivalent net interest income in respect of the majority of the US tax-exempt securities is 21 % for 2018 and 35 % for 2017 and 2016.

Segmental Results of Operations

The following tables present the results of the Group's business segments, including the reconciliation to the consolidated results of operations under IFRS.

	2018					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total Consolidated
Net revenues1	13,046	10,158	2,186	–	(73)	25,316
Provision for credit losses	120	406	(1)	–	0	525
Noninterest expenses						
Compensation and benefits	3,970	4,001	787	–	3,055	11,814
General and administrative expenses	8,115	4,867	929	–	(2,624)	11,286
Policyholder benefits and claims	0	0	0	–	0	0
Impairment of goodwill and other intangible assets	0	0	0	–	0	0
Restructuring activities	287	55	19	–	0	360
Total noninterest expenses	12,372	8,923	1,735	–	431	23,461
Noncontrolling interests	24	(0)	85	–	(109)	0
Income (loss) before income taxes	530	829	367	–	(396)	1,330

Cost/income ratio	95 %	88 %	79 %	–	N/M	93 %
Assets2	988,531	343,704	10,030	–	5,872	1,348,137
Additions to non-current assets	514	516	43	–	575	1,647
Risk-weighted assets3	236,306	87,709	10,365	–	16,053	350,432
CRD 4 leverage exposure measure (spot value at reporting date)	892,653	354,584	5,044	–	20,644	1,272,926
Average shareholders' equity	43,427	14,514	4,669	–	0	62,610
Post-tax return on average tangible shareholders' equity4	1 %`	5 %	18 %	–	N/M	1 %
Post-tax return on average shareholders' equity4	1 %	4 %	6 %	–	N/M	0 %
1 includes:						
Net interest income	3,574	6,077	(52)	–	3,592	13,192
Net income (loss) from equity method investments	170	2	41	–	6	219
2 includes:						
Equity method investments	556	78	240	–	5	879

N/M – Not meaningful

3Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

4The post-tax return on average tangible shareholders' equity and average shareholders' equity at the Group level reflects the reported effective tax rate for the Group, which was 74 % for the year ended December 31, 2018. For the post-tax return on average tangible shareholders' equity and average shareholders' equity of the segments, the Group effective tax rate was adjusted to exclude the impact of permanent differences not attributed to the segments, so that the segment tax rates were 28 % for the year ended December 31, 2018.

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	2017					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total Consolidated
Net revenues1	14,227	10,178	2,532	–	(489)	26,447
Provision for credit losses	213	313	(1)	–	(0)	525

Noninterest expenses						
Compensation and benefits	4,364	4,027	812	–	3,050	12,253
General and administrative expenses	8,441	5,012	978	–	(2,458)	11,973
Policyholder benefits and claims	0	0	0	–	0	0
Impairment of goodwill and other intangible assets	6	12	3	–	0	21
Restructuring activities	81	360	6	–	0	447
Total noninterest expenses	12,892	9,411	1,799	–	593	24,695
Noncontrolling interests	26	(12)	1	–	(16)	0
Income (loss) before income taxes	1,096	465	732	–	(1,066)	1,228
Cost/income ratio	91 %	93 %	71 %	–	N/M	93 %
Assets2	1,127,028	333,069	8,050	–	6,586	1,474,732
Additions to non-current assets	125	551	60	–	1,067	1,803
Risk-weighted assets3	231,574	87,472	8,432	–	16,734	344,212
CRD 4 leverage exposure measure (spot value at reporting date)	1,029,946	344,087	2,870	–	17,983	1,394,886
Average shareholders' equity	44,197	14,943	4,687	–	99	63,926
Post-tax return on average tangible shareholders' equity4	2 %	2 %	56 %	–	N/M	(1) %
Post-tax return on average shareholders' equity4	2 %	2 %	10 %	–	N/M	(1) %
1 includes:						
Net interest income	4,104	5,875	(19)	–	2,418	12,378
Net income (loss) from equity method investments	81	3	44	–	9	137
2 includes:						
Equity method investments	553	91	211	–	10	866

N/M – Not meaningful

3Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

4The post-tax return on average tangible shareholders' equity and average shareholders' equity at the Group level reflects the reported effective tax rate for the Group, which was 160 % for the year ended December 31, 2017. For the post-tax return on average tangible shareholders' equity and average shareholders' equity of the segments, the Group effective tax rate was adjusted to exclude the impact of permanent differences not attributed to the segments, so that the segment tax rates were 33 % for the year ended December 31, 2017.

	2016					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total Consolidated
Net revenues1	16,764	11,090	3,015	(382)	(473)	30,014
Provision for credit losses	816	439	1	128	(0)	1,383
Noninterest expenses						
Compensation and benefits	4,062	4,075	737	68	2,931	11,874
General and administrative expenses	9,280	4,888	1,026	2,659	(2,398)	15,454
Policyholder benefits and claims	0	0	374	0	0	374
Impairment of goodwill and other intangible assets	285	0	1,021	(49)	(0)	1,256
Restructuring activities	299	142	47	4	(7)	484
Total noninterest expenses	13,926	9,104	3,205	2,682	525	29,442
Noncontrolling interests	49	0	0	(4)	(46)	0
Income (loss) before income taxes	1,973	1,547	(190)	(3,187)	(952)	(810)
Cost/income ratio	83 %	82 %	106 %	N/M	N/M	98 %
Assets2	1,201,894	329,869	12,300	5,523	40,959	1,590,546
Additions to non-current assets	22	480	1	0	1,517	2,019
Risk-weighted assets3	237,596	86,082	8,960	9,174	15,706	357,518
CRD 4 leverage exposure measure (spot value at reporting date)	954,203	342,424	3,126	7,882	40,018	1,347,653
Average shareholders' equity	40,312	14,371	4,460	690	2,249	62,082
	3 %	8 %	71 %	N/M	N/M	(3) %

Post-tax return on average tangible shareholders' equity4						
Post-tax return on average shareholders' equity4	3 %	7 %	(3) %	N/M	N/M	(2) %
1 includes:						
Net interest income	6,314	6,201	326	142	1,724	14,707
Net income (loss) from equity method investments	138	5	44	269	(1)	455
2 includes:						
Equity method investments	698	23	203	98	4	1,027

N/M – Not meaningful

3Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

4The post-tax return on average tangible shareholders' equity and average shareholders' equity at the Group level reflects the reported effective tax rate for the Group, which was (67) % for the year ended December 31, 2016. For the post-tax return on average tangible shareholders' equity and average shareholders' equity of the segments, the Group effective tax rate was adjusted to exclude the impact of permanent differences not attributed to the segments, so that the segment tax rates were 35 % for the year ended December 31, 2016.

Corporate & Investment Bank

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues							
Global Transaction Banking	3,834	3,917	4,419	(83)	(2)	(502)	(11)
Equity Origination	362	396	405	(34)	(9)	(9)	(2)
Debt Origination	1,081	1,327	1,393	(247)	(19)	(66)	(5)
Advisory	493	508	495	(16)	(3)	13	3
Origination and Advisory	1,935	2,232	2,292	(296)	(13)	(60)	(3)
Sales & Trading (Equity)	1,957	2,233	2,751	(276)	(12)	(518)	(19)
Sales & Trading (FIC)	5,361	6,447	7,066	(1,087)	(17)	(619)	(9)
Sales & Trading	7,317	8,680	9,817	(1,363)	(16)	(1,137)	(12)
Other	(40)	(601)	235	561	(93)	(836)	N/M
Total net revenues	13,046	14,227	16,764	(1,181)	(8)	(2,537)	(15)
Provision for credit losses	120	213	816	(94)	(44)	(603)	(74)
Noninterest expenses							

Compensation and benefits	3,970	4,364	4,062	(393)	(9)	302	7
General and administrative expenses	8,115	8,441	9,280	(326)	(4)	(839)	(9)
Impairment of goodwill and other intangible assets	0	6	285	(6)	N/M	(279)	(98)
Restructuring activities	287	81	299	205	N/M	(218)	(73)
Total noninterest expenses	12,372	12,892	13,926	(520)	(4)	(1,034)	(7)
Noncontrolling interests	24	26	49	(2)	(7)	(23)	(46)
Income (loss) before income taxes	530	1,096	1,973	(566)	(52)	(877)	(44)
Cost/income ratio	95 %	91 %	83 %	N/M	4 ppt	N/M	8 ppt
Assets[1]	988,531	1,127,028	1,201,894	(138,497)	(12)	(74,866)	(6)
Risk-weighted assets[2]	236,306	231,574	237,596	4,733	2	(6,022)	(3)
Average shareholders' equity[3]	43,427	44,197	40,312	(770)	(2)	3,885	10
Post-tax return on average tangible shareholders' equity	1 %	2 %	3 %	N/M	(1) ppt	N/M	(2) ppt
Post-tax return on average shareholders' equity	1 %	2 %	3 %	N/M	(1) ppt	N/M	(2) ppt

N/M – Not meaningful

1Segment assets represent consolidated view, i.e., the amounts do not include intersegment balances.

2Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

3See "Measurement of Segment Profit or Loss" above for a description of how average shareholders' equity is allocated to the divisions.

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Private & Commercial Bank

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues:							
Private and Commercial Business (Germany)	6,802	6,583	6,873	220	3	(290)	(4)
Private and Commercial Business (International)1	1,439	1,455	1,466	(16)	(1)	(11)	(1)
Wealth Management (Global)	1,746	2,021	1,720	(274)	(14)	301	18
Exited businesses2	170	119	1,031	51	42	(912)	(88)
Total net revenues	10,158	10,178	11,090	(20)	(0)	(912)	(8)
Of which:							
Net interest income	6,077	5,875	6,201	202	3	(326)	(5)
Commissions and fee income	3,143	3,367	3,395	(224)	(7)	(28)	(1)

Remaining income	937	935	1,494	2	0	(558)	(37)
Provision for credit losses	406	313	439	93	30	(126)	(29)
Noninterest expenses:							
Compensation and benefits	4,001	4,027	4,075	(26)	(1)	(47)	(1)
General and administrative expenses	4,867	5,012	4,888	(145)	(3)	124	3
Impairment of goodwill and other intangible assets	0	12	0	(12)	N/M	12	N/M
Restructuring activities	55	360	142	(305)	(85)	218	154
Total noninterest expenses	8,923	9,411	9,104	(488)	(5)	307	3
Noncontrolling interests	(0)	(12)	0	12	(100)	(12)	N/M
Income (loss) before income taxes	829	465	1,547	363	78	(1,081)	(70)
Cost/income ratio	88 %	92 %	82 %	N/M	(5) ppt	N/M	10 ppt
Assets3	343,704	333,069	329,869	10,635	3	3,200	1
Risk-weighted assets4	87,709	87,472	86,082	237	0	1,390	2
Average shareholders' equity5	14,514	14,943	14,371	(429)	(3)	572	4
Post-tax return on average tangible shareholders’ equity	5 %	2 %	8 %	N/M	2 ppt	N/M	(6) ppt
Post-tax return on average shareholders' equity	4 %	2 %	7 %	N/M	2 ppt	N/M	(5) ppt

N/M – Not meaningful

1Covers operations in Belgium, India, Italy and Spain.

2Covers operations in Poland and Portugal as well as Private Client Services (PCS) and Hua Xia in historical periods.

3Segment assets represent consolidated view, i.e., the amounts do not include intersegment balances.

4Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

5 See “Measurement of Segment Profit or Loss” above for a description of how average shareholders' equity is allocated to the divisions.

Asset Management

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues							
Management Fees	2,115	2,247	2,190	(132)	(6)	57	3
Performance and transaction fees	91	199	220	(109)	(55)	(21)	(9)

Other revenues	(20)	86	209	(106)	N/M	(123)	(59)
Mark-to-market movements on policyholder positions in Abbey Life	0	0	396	0	N/M	(396)	N/M
Total net revenues	2,186	2,532	3,015	(346)	(14)	(483)	(16)
Provision for credit losses	(1)	(1)	1	(0)	67	(1)	N/M
Noninterest expenses							
Compensation and benefits	787	812	737	(25)	(3)	75	10
General and administrative expenses	929	978	1,026	(49)	(5)	(48)	(5)
Policyholder benefits and claims	0	0	374	(0)	N/M	(374)	(100)
Impairment of goodwill and other intangible assets	0	3	1,021	(3)	N/M	(1,018)	(100)
Restructuring activities	19	6	47	13	N/M	(41)	(88)
Total noninterest expenses	1,735	1,799	3,205	(64)	(4)	(1,405)	(44)
Noncontrolling interests	85	1	0	83	N/M	1	N/M
Income (loss) before income taxes	367	732	(190)	(364)	(50)	922	N/M
Cost/income ratio	79 %	71 %	106 %	N/M	8 ppt	N/M	(35) ppt
Assets[1]	10,030	8,050	12,300	1,980	25	(4,250)	(35)
Risk-weighted assets[2]	10,365	8,432	8,960	1,932	23	(528)	(6)
Average shareholders' equity[3]	4,669	4,687	4,460	(19)	(0)	227	5
Post-tax return on average tangible shareholders' equity	18 %	56 %	71 %	N/M	(38) ppt	N/M	(15) ppt
Post-tax return on average shareholders' equity	6 %	10 %	(3) %	N/M	(5) ppt	N/M	13 ppt

N/M – Not meaningful

1Segment assets represent consolidated view, i.e., the amounts do not include intersegment balances.

2Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

3See "Measurement of Segment Profit or Loss" above for a description of how average shareholders' equity is allocated to the divisions.

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Non-Core Operations Unit

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues	–	–	(382)	0	N/M	382	N/M
thereof:							
Net interest income and net gains (losses) on financial assets/liabilities at fair value through	–	–	(1,307)	0	N/M	1,307	N/M

profit or loss							
Provision for credit losses	–	–	128	0	N/M	(128)	N/M
Noninterest expenses							
Compensation and benefits	–	–	68	0	N/M	(68)	N/M
General and administrative expenses	–	–	2,659	0	N/M	(2,659)	N/M
Policyholder benefits and claims	–	–	0	0	N/M	0	N/M
Impairment of goodwill and other intangible assets	–	–	(49)	0	N/M	49	N/M
Restructuring activities	–	–	4	0	N/M	(4)	N/M
Total noninterest expenses	–	–	2,682	0	N/M	(2,682)	N/M
Noncontrolling interests	–	–	(4)	0	N/M	4	N/M
Income (loss) before income taxes	–	–	(3,187)	0	N/M	3,187	N/M
Assets[1]	–	–	5,523	0	N/M	(5,523)	N/M
Risk-weighted assets[2]	–	–	9,174	0	N/M	(9,174)	N/M
Average shareholders' equity[3]	–	–	690	0	N/M	(690)	N/M

N/M – Not meaningful

1Segment assets represent consolidated view, i.e., the amounts do not include intersegment balances.

2Risk-weighted assets and capital ratios are based upon CRR/CRD 4 fully loaded.

3See "Measurement of Segment Profit or Loss" above for a description of how average shareholders' equity is allocated to the divisions.

Corporate & Other (C&O)

				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
in € m. (unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Net revenues	(73)	(489)	(473)	416	(85)	(17)	4
Provision for credit losses	0	(0)	(0)	1	N/M	0	(19)
Noninterest expenses							
Compensation and benefits	3,055	3,050	2,931	5	0	119	4
General and administrative expenses	(2,624)	(2,458)	(2,398)	(166)	7	(59)	2
Policyholder benefits and claims	0	0	0	0	N/M	0	N/M
Impairment of goodwill and other intangible assets	0	0	(0)	0	N/M	0	N/M
Restructuring activities	0	0	(7)	(0)	(85)	7	N/M
Total noninterest expenses	431	593	525	(161)	(27)	67	13
Noncontrolling interests	(109)	(16)	(46)	(93)	N/M	30	(65)
Income (loss) before income taxes	(396)	(1,066)	(952)	670	(63)	(114)	12
Assets1	5,872	6,586	40,959	(714)	(11)	(34,373)	(84)
Risk-weighted assets2	16,053	16,734	15,706	(681)	(4)	1,028	7

Average shareholders' equity	0	99	2,249	(99)	N/M	(2,150)	(96)

N/M – Not meaningful

[1] Assets in C&O reflect residual Treasury assets not allocated to the business segments as well as Corporate assets, such as deferred tax assets and central clearing accounts, outside the management responsibility of the business segments.

[2] Risk weighted assets are based upon CRR/CRD 4 fully loaded. Risk-weighted assets in C&O reflect Treasury and Corporate assets outside the management responsibility of the business segments, primarily the Group's deferred tax assets.

Entity-Wide Disclosures

The Group's Entity-Wide Disclosures include net revenues from internal and external counterparties. Excluding revenues from internal counterparties would require disproportionate IT investment and is not in line with the Bank's management approach. For detail on our Net Revenue Components please see "Management Report: Operating and Financial Review: Results of Operations: Corporate Divisions".

The following table presents total net revenues (before provisions for credit losses) by geographic area for the years ended December 31, 2018, 2017 and 2016, respectively. The information presented for CIB, PCB, AM and NCOU has been classified based primarily on the location of the Group's office in which the revenues are recorded. The information for C&O is presented on a global level only, as management responsibility for C&O is held centrally.

in € m.	2018	2017	2016
Germany:			
Corporate & Investment Bank	1,400	1,503	1,924
Private & Commercial Bank	7,342	7,225	7,571
Asset Management	985	1,009	888
Non-Core Operations Unit	0	0	221
Total Germany[1]	9,727	9,737	10,604
UK:			
Corporate & Investment Bank	3,338	3,818	4,298
Private & Commercial Bank	26	34	83
Asset Management	294	434	836
Non-Core Operations Unit	0	0	(322)
Total UK	3,659	4,286	4,895
Rest of Europe, Middle East and Africa:			
Corporate & Investment Bank	1,124	1,268	1,545
Private & Commercial Bank	1,901	2,037	2,360
Asset Management	379	465	497
Non-Core Operations Unit	0	0	23
Total Rest of Europe, Middle East and Africa	3,404	3,770	4,425

Americas (primarily United States):			
Corporate & Investment Bank	4,671	4,999	5,929
Private & Commercial Bank	362	390	625
Asset Management	413	491	578
Non-Core Operations Unit	0	0	(305)
Total Americas	5,445	5,881	6,827
Asia/Pacific:			
Corporate & Investment Bank	2,513	2,639	3,069
Private & Commercial Bank	526	491	451
Asset Management	114	133	216
Non-Core Operations Unit	0	0	1
Total Asia/Pacific	3,154	3,263	3,736
Corporate and Other	(73)	(489)	(473)
Consolidated net revenues[2]	25,316	26,447	30,014

1All Postbank operations are disclosed as German operations subject to further systems integration

2Consolidated net revenues comprise interest and similar income, interest expenses and total noninterest income (including net commission and fee income). Revenues are attributed to countries based on the location in which the Group's booking office is located. The location of a transaction on the Group's books is sometimes different from the location of the headquarters or other offices of a customer and different from the location of the Group's personnel who entered into or facilitated the transaction. Where the Group records a transaction involving its staff and customers and other third parties in different locations frequently depends on other considerations, such as the nature of the transaction, regulatory considerations and transaction processing considerations.

Notes to the Consolidated Income Statement

05 – Net Interest Income and Net Gains (Losses) on Financial Assets/Liabilities at Fair Value through Profit or Loss

Net Interest Income

in € m.	2018	2017	2016
Interest and similar income:1			
Interest income on cash and central bank balances	1,860	1,070	433
Interest income on interbank balances (w/o central banks)	223	245	252
Central bank funds sold and securities purchased under resale agreements	221	292	359
Interest income on financial assets available for sale	N/A	1,083	1,313
Dividend income on financial assets available for sale	N/A	88	205
Loans	12,992	12,004	12,311
Interest income on securities held to maturity	N/A	68	67
Other	497	1,406	1,417

Total Interest and similar income from assets at amortized cost	15,793	16,256	16,357
Interest income from assets at fair value through other comprehensive income	1,014	N/A	N/A
Total interest and similar income not at fair value through profit or loss	16,807	16,256	16,357
Financial assets at fair value through profit or loss	7,985	7,286	8,786
Total interest and similar income	24,793	23,542	25,143
Interest expense:1			
Interest-bearing deposits	3,122	2,833	2,583
Central bank funds purchased and securities sold under repurchase agreements	379	431	255
Other short-term borrowings	139	135	179
Long-term debt	1,981	1,795	1,759
Trust preferred securities	234	413	437
Other	1,923	1,500	1,083
Total interest expense not at fair value through profit or loss	7,778	7,107	6,295
Financial liabilities at fair value through profit or loss	3,822	4,058	4,141
Total interest expense	11,601	11,164	10,436
Net interest income	13,192	12,378	14,707

1 Prior period comparatives for gross interest income and gross interest expense have been restated. The restatements did not affect net interest income. € 550 million and € 493 million for year ended December 31, 2017 and 2016 were restated.

Interest income recorded on impaired financial assets was € 61 million and € 63 million for the years ended December 31, 2017 and 2016, respectively.

Other interest income for the years ended December 31, 2018 and 2017 included € 93 million and € 116 million which were related to government grants under the Targeted Longer-Term Refinancing Operations II (TLTRO II)-program.

Net Gains (Losses) on Financial Assets/Liabilities at Fair Value through Profit or Loss

in € m.	2018	2017	2016
Trading income:			
Sales & Trading (Equity)	407	1,142	588
Sales & Trading (FIC)	2,802	4,058	3,562
Total Sales & Trading	3,209	5,200	4,150
Other trading income	(3,157)	(1,826)	(3,603)
Total trading income	52	3,374	547
Net gains (losses) on non-trading financial assets mandatory at fair value through profit or loss:			
Breakdown by financial assets category:			
Debt Securities	(77)	N/A	N/A
Equity Securities	159	N/A	N/A
Loans and loan commitments	77	N/A	N/A
Deposits	27	N/A	N/A

Others non-trading financial assets mandatory at fair value through profit and loss	26	N/A	N/A
Total net gains (losses) on non-trading financial assets mandatory at fair value through profit or loss:	212	N/A	N/A
Net gains (losses) on financial assets/liabilities designated at fair value through profit or loss:			
Breakdown by financial asset/liability category:			
Securities purchased/sold under resale/repurchase agreements	4	3	(3)
Securities borrowed/loaned	0	(1)	1
Loans and loan commitments	7	(32)	(109)
Deposits	19	(30)	(28)
Long-term debt	1,118	(398)	303
Other financial assets/liabilities designated at fair value through profit or loss	(79)	10	691
Total net gains (losses) on financial assets/liabilities designated at fair value through profit or loss	1,069	(448)	854
Total net gains (losses) on financial assets/liabilities at fair value through profit or loss	1,332	2,926	1,401

Combined Net Interest Income and Net Gains (Losses) on Financial Assets/Liabilities at Fair Value through Profit or Loss

in € m.	2018	2017	2016
Net interest income	13,192	12,378	14,707
Trading income1	52	3,374	547
Net gains (losses) on non-trading financial assets mandatory at fair value through profit or loss	212	N/A	N/A
Net gains (losses) on financial assets/liabilities designated at fair value through profit or loss	1,069	(448)	854
Total net gains (losses) on financial assets/liabilities at fair value through profit or loss	1,332	2,926	1,401
Total net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss	14,524	15,304	16,108
Sales & Trading (Equity)	1,514	1,516	1,931
Sales & Trading (FIC)	5,027	6,351	7,161
Total Sales & Trading	6,541	7,868	9,092
Global Transaction Banking	1,869	1,932	2,097
Remaining Products	(504)	(1,148)	(415)
Corporate & Investment Bank	7,905	8,651	10,774
Private & Commercial Bank	6,283	6,158	6,420
Asset Management	(89)	30	365
Non-Core Operations Unit	N/A	N/A	(1,307)
Corporate & Other	425	464	(144)
Total net interest income and net gains (losses) on financial assets/liabilities at fair value through profit or loss	14,524	15,304	16,108

1Trading income includes gains and losses from derivatives not qualifying for hedge accounting.

The Group's trading and risk management businesses include significant activities in interest rate instruments and related derivatives. Under IFRS, interest and similar income earned from trading instruments and financial instruments designated at fair value through profit or loss (i.e., coupon and dividend income), and the costs of funding net trading positions, are part of net interest income. The Group's trading activities can periodically drive income to either net interest income or to net gains (losses) of financial assets/liabilities at fair value through profit or loss depending on a variety of factors, including risk management strategies. The above table combines net interest income and net gains (losses) of financial assets/liabilities at fair value through profit or loss by business division and by product within Corporate & Investment Bank.

06 – Commissions and Fee Income

in € m.	2018	2017	2016
Commission and fee income and expense:			
Commission and fee income	12,921	14,102	14,999
Commission and fee expense	2,882	3,100	3,255
Net commissions and fee income	10,039	11,002	11,744

In the first quarter of 2018, the Group adopted IFRS 15 "Revenue from Contracts with Customers" which requires disaggregation of revenues prior to the deduction of associated expenses.

Disaggregation of revenues by product type and business segment – based on IFRS 15

	Dec 31,2018				
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Corporate & Other	Total Consolidated
Major type of services:					
Commissions for administration	292	257	22	(3)	568
Commissions for assets under management	45	261	3,131	(0)	3,436
Commissions for other securities	302	30	2	0	335
Underwriting and advisory fees	1,708	17	(1)	(28)	1,696
Brokerage fees	1,223	933	82	0	2,238
Commissions for local payments	414	1,047	(0)	(1)	1,460
Commissions for foreign commercial business	485	137	0	(1)	621
Commissions for foreign currency/exchange business	7	8	0	(0)	15
Commissions for loan processing and guarantees	690	291	0	1	981
Intermediary fees	3	478	0	12	493

Fees for sundry other customer services	730	229	117	0	1,076
Total fee and commissions income	5,898	3,688	3,352	(18)	12,921
Gross expense					(2,882)
Net fees and commissions					10,039

The Group has applied IFRS 15 to reporting periods beginning on or after January 1, 2018 (as allowed under the cumulative effect method under IFRS 15). Prior to adoption of IFRS 15 the Group disclosed total commissions and fee income and expenses on a gross basis annually. The disaggregation of commissions and fees were reported annually on a net basis. For the years ended 31 December 2017 and 2016, annual commissions and fees were € 4.3 billion and € 4.3 billion respectively for fiduciary activities, € 3.0 billion and € 3.3 billion respectively for brokers' fees, mark-ups on securities underwriting and other securities activities, and € 3.7 billion and € 4.2 billion respectively for fees for other customer services.

As of December 31, 2018, the Group's balance of receivables from commission and fee income was € 839 million. As of December 31, 2018, the Group's balance of contract liabilities associated to commission and fee income was € 74 million. Contract liabilities arise from the Group's obligation to provide future services to a customer for which it has received consideration from the customer prior to completion of the services. The balances of receivables and contract liabilities do not vary significantly from period to period reflecting the fact that they predominately relate to recurring service contracts with service periods of less than one year such as monthly current account services and quarterly asset management services. Customer payment in exchange for services provided are generally subject to performance by the Group over the specific service period such that the Group's right to payment arises at the end of the service period when its performance obligations are fully completed. Therefore no material balance of contract asset is reported.

07 – Net Gains (Losses) on Financial Assets Available for Sale

in € m.	2018	2017	2016
Net gains (losses) on financial assets available for sale:			
Net gains (losses) on debt securities:	N/A	114	229
Net gains (losses) from disposal	N/A	115	230
Impairments	N/A	(1)	(1)
Net gains (losses) on equity securities:	N/A	219	79
Net gains (losses) from disposal/remeasurement	N/A	219	96
Impairments	N/A	(1)	(17)
Net gains (losses) on loans:	N/A	37	6
Net gains (losses) from disposal	N/A	45	21
Impairments	N/A	(8)	(15)
Reversal of impairments	N/A	0	0
Net gains (losses) on other equity interests:	N/A	110	339
Net gains (losses) from disposal	N/A	137	348
Impairments	N/A	(27)	(9)
Total net gains (losses) on financial assets available for sale	N/A	479	653

Please also refer to Note 15 “Financial Assets Available for Sale” of this report.

08 – Other Income

in € m.	2018	2017	2016
Other income:			
Net gains (losses) on disposal of loans	(4)	19	(128)
Insurance premiums[1]	3	4	89
Net income (loss) from hedge relationships qualifying for hedge accounting	(497)	(609)	(370)
Consolidated investments	0	0	362
Remaining other income[2]	712	112	1,100
Total other income (loss)	215	(475)	1,053

1Net of reinsurance premiums paid. The development is primarily driven by Abbey Life Assurance Company Limited which has been sold in 2016.

2Includes net gains (losses) of € 141 million, € -81 million and € 744 million for the years ended December 31, 2018, 2017 and 2016, respectively, that are related to non-current assets and disposal groups held for sale.

09 – General and Administrative Expenses

in € m.	2018	2017	2016
General and administrative expenses:			
IT costs1	3,822	3,816	3,872
Regulatory, Tax & Insurance2,3	1,545	1,489	1,421
Occupancy, furniture and equipment expenses	1,723	1,849	1,972
Professional service fees1	1,530	1,750	2,305
Banking and transaction charges	753	744	664
Communication and data services	636	686	761
Travel and representation expenses	347	405	450
Marketing expenses	278	309	285
Consolidated investments	0	0	334
Other expenses4	652	925	3,390
Total general and administrative expenses	11,286	11,973	15,454

1Prior year numbers have been restated to reflect a shift from IT costs to professional service fees due to a change in the organizational structure.

2Regulatory, Tax & Insurance which comprises Bank levy and Insurance and Deposit protection has been presented separately in order to provide further transparency. In the Annual Report for the year ended December 31, 2017, these expenses were included within Other expenses.

3 Includes bank levy of € 690 million in 2018, € 596 million in 2017 and € 547 million in 2016.

4 Includes litigation related expenses of € 88 million in 2018, € 213 million in 2017 and € 2.4 billion in 2016. See Note 29 “Provisions”, for more detail on litigation.

10 – Restructuring

Restructuring forms part of the Group's strategy implementation. We have defined measures that aim to strengthen the bank, position it for growth and simplify its organizational set-up. The measures also target to reduce adjusted costs through higher efficiency, by optimizing and streamlining processes, and by exploiting synergies.

Restructuring expense is comprised of termination benefits, additional expenses covering the acceleration of deferred compensation awards not yet amortized due to the discontinuation of employment and contract termination costs related to real estate.

in € m.	2018	2017	2016
Corporate & Investment Bank	287	81	292
Private & Commercial Bank	55	360	141
Asset Management	19	6	47
Non-Core Operations Unit	–	–	4
Total Net Restructuring Charges	360	447	484

in € m.	2018	2017	2016
Restructuring – Staff related	367	430	491
thereof:			
Termination Benefits	248	402	432
Retention Acceleration	113	26	54
Social Security	6	2	5
Restructuring – Non Staff related	(6)	17	(7)
Total Net Restructuring Charges	360	447	484

Provisions for restructuring amounted to € 585 million, € 696 million and € 741 million as of December 31, 2018, December 31, 2017 and December 31, 2016, respectively. The majority of the current provisions for restructuring are expected to be utilized in the next two years.

During 2018, 3,000 full-time equivalent staff was reduced through restructuring (2017: 2,045 and 2016: 1,451).

Full-time equivalent staff	2018	2017	2016
Corporate & Investment Bank	1,002	502	356
Private & Commercial Bank	767	1,054	453
Asset Management	92	38	101
Infrastructure/Regional Management	1,138	451	541
Total full-time equivalent staff	3,000	2,045	1,451

11 – Earnings per Share

Basic earnings per share amounts are computed by dividing net income (loss) attributable to Deutsche Bank shareholders by the average number of common shares outstanding during the year. The average number of common

shares outstanding is defined as the average number of common shares issued, reduced by the average number of shares in treasury and by the average number of shares that will be acquired under physically-settled forward purchase contracts, and increased by undistributed vested shares awarded under deferred share plans.

Diluted earnings per share assumes the conversion into common shares of outstanding securities or other contracts to issue common stock, such as share options, convertible debt, unvested deferred share awards and forward contracts. The aforementioned instruments are only included in the calculation of diluted earnings per share if they are dilutive in the respective reporting period.

Computation of basic and diluted earnings per share

in € m.	2018	2017	2016
Net income (loss) attributable to Deutsche Bank shareholders – numerator for basic earnings per share[1]	267	(1,049)	(1,678)
Effect of dilutive securities:			
Forwards and options	0	0	0
Convertible debt	0	0	0
Net income (loss) attributable to Deutsche Bank shareholders after assumed conversions – numerator for diluted earnings per share[1]	267	(1,049)	(1,678)
Number of shares in million			
Weighted-average shares outstanding – denominator for basic earnings per share	2,102.2	1,967.7	1,555.3
Effect of dilutive securities:			
Forwards	0.0	0.0	0.0
Employee stock compensation options	0.0	0.0	0.0
Deferred shares	0.0	0.0	0.0
Other (including trading options)	0.0	0.0	0.0
Dilutive potential common shares	0.0	0.0	0.0
Adjusted weighted-average shares after assumed conversions – denominator for diluted earnings per share	2,102.2	1,967.7	1,555.3

1Earnings were adjusted by € 292 million and € 298 million and € 276 million net of tax for the coupons paid on Additional Tier 1 Notes in April 2018, April 2017 and April 2016.

Earnings per share

in €	2018	2017	2016
Basic earnings per share	(0.01)	(0.53)	(1.08)
Diluted earnings per share	(0.01)	(0.53)	(1.08)

On April 7, 2017, Deutsche Bank AG completed a capital increase with subscription rights. As the subscription price of the new shares was lower than the market price of the existing shares, the capital increase included a bonus element. According to IAS 33, the bonus element is the result of an implicit change in the number of shares outstanding for all periods prior to the capital increase without a fully proportionate change in resources. As a consequence, the weighted average number of shares outstanding has been adjusted retrospectively.

In accordance with IAS 33 the coupons paid on Additional Tier 1 Notes are not attributable to Deutsche Bank shareholders and therefore need to be deducted in the calculation. This adjustment created a net loss situation for Earnings per Common Share in 2018. Due to the net loss situation for 2018, 2017 and 2016 potentially dilutive shares

are generally not considered for the earnings per share calculation, because to do so would have been anti-dilutive and hence decreased the net loss per share.

Instruments outstanding and not included in the calculation of diluted earnings per share1

Number of shares in m.	2018	2017	2016
Call options sold	0.0	0.0	0.0
Employee stock compensation options	0.0	0.0	0.0
Deferred shares	108.8	104.4	69.6

1Not included in the calculation of diluted earnings per share, because to do so would have been anti-dilutive.

Notes to the Consolidated Balance Sheet

12 – Financial Assets/Liabilities at Fair Value through Profit or Loss

in € m.	Dec 31, 2018	Dec 31, 2017
Trading Financial assets:		
Trading assets:		
Trading securities	140,720	173,196
Other trading assets1	12,017	11,466
Total trading assets	152,738	184,661
Positive market values from derivative financial instruments	320,058	361,032
Total Trading Financial assets	472,796	545,693
Non-trading financial assets mandatory at fair value through profit or loss:		
Securities purchased under resale agreements	44,543	N/A
Securities borrowed	24,210	N/A
Loans	12,741	N/A
Other financial assets mandatory at fair value through profit or loss	18,951	N/A
Total Non-trading financial assets mandatory at fair value through profit or loss	100,444	N/A
Financial assets designated at fair value through profit or loss:		
Securities purchased under resale agreements	0	57,843
Securities borrowed	0	20,254
Loans	0	4,802
Other financial assets designated at fair value through profit or loss	104	8,377
Total financial assets designated at fair value through profit or loss	104	91,276
Total financial assets at fair value through profit or loss	573,344	636,970

1Includes traded loans of € 11.5 billion and € 10.9 billion at December 31, 2018 and 2017 respectively.

in € m.	Dec 31, 2018	Dec 31, 2017
Financial liabilities classified as held for trading:		
Trading liabilities:		
Trading securities	59,629	71,148
Other trading liabilities	295	314
Total trading liabilities	59,924	71,462
Negative market values from derivative financial instruments	301,487	342,726
Total financial liabilities classified as held for trading	361,411	414,189
Financial liabilities designated at fair value through profit or loss:		
Securities sold under repurchase agreements	46,254	53,840
Loan commitments	0	8
Long-term debt	5,607	6,439
Other financial liabilities designated at fair value through profit or loss	1,895	3,587
Total financial liabilities designated at fair value through profit or loss	53,757	63,874
Investment contract liabilities	512	574
Total financial liabilities at fair value through profit or loss	415,680	478,636

Financial Assets & Liabilities designated at Fair Value through Profit or Loss

The Group previously designated various lending relationships at fair value through profit or loss. In 2018, these facilities are mandatorily at fair value through profit or loss under IFRS 9. Lending facilities consist of drawn loan assets and undrawn irrevocable loan commitments. The maximum exposure to credit risk on a drawn loan is its fair value. The Group's maximum exposure to credit risk on drawn loans, including securities purchased under resale agreements and securities borrowed, was € 0 million and € 83 billion as of December 31, 2018, and 2017, respectively. Exposure to credit risk also exists for undrawn irrevocable loan commitments and is predominantly counterparty credit risk.

The credit risk on the securities purchased under resale agreements and securities borrowed designated under the fair value option is mitigated by the holding of collateral. The valuation of these instruments takes into account the credit enhancement in the form of the collateral received. As such there is no material movement during the year or cumulatively due to movements in counterparty credit risk on these instruments.

Changes in fair value of financial assets attributable to movements in counterparty credit risk

in €	Dec 31, 2018	Dec 31, 2017
Notional value of financial assets exposed to credit risk	0	N/A
Annual change in the fair value reflected in the Statement of Income	0	N/A
Cumulative change in the fair value	0	N/A
Notional of credit derivatives used to mitigate credit risk	0	N/A
Annual change in the fair value reflected in the Statement of Income	0	N/A

Cumulative change in the fair value	0	N/A

Changes in fair value of loans1 and loan commitments attributable to movements in counterparty credit risk2

	Dec 31, 2018		Dec 31, 2017	
in € m.	Loans	Loan commitments	Loans	Loan commitments
Notional value of loans and loan commitments exposed to credit risk	N/A	N/A	2,865	1,973
Annual change in the fair value reflected in the Statement of Income	N/A	N/A	7	14
Cumulative change in the fair value³	N/A	N/A	10	30
Notional of credit derivatives used to mitigate credit risk	N/A	N/A	536	4,728
Annual change in the fair value reflected in the Statement of Income	N/A	N/A	(0)	(42)
Cumulative change in the fair value³	N/A	N/A	1	(46)

1Where the loans are over-collateralized there is no material movement in valuation during the year or cumulatively due to movements in counterparty credit risk.

2Determined using valuation models that exclude the fair value impact associated with market risk.

3Changes are attributable to loans and loan commitments held at reporting date, which may differ from those held in prior periods. No adjustments are made to prior year to reflect differences in the underlying population.

Changes in fair value of financial liabilities attributable to movements in the Group's credit risk1

in € m.	Dec 31, 2018	Dec 31, 2017²
Presented in Other comprehensive Income		
Cumulative change in the fair value	(49)	N/A
Presented in Statement of income		
Annual change in the fair value reflected in the Statement of Income	0	60
Cumulative change in the fair value	0	72

1The fair value of a financial liability incorporates the credit risk of that financial liability. Changes in the fair value of financial liabilities issued by consolidated structured entities have been excluded as this is not related to the Group's credit risk but to that of the legally isolated structured entity, which is dependent on the collateral it holds.

Transfers of the cumulative gains or losses within equity during the period

in € m.	Dec 31, 2018	Dec 31, 2017
Cumulative gains or losses within equity during the period	0	N/A

Amounts realized on derecognition of liabilities designated at fair value through profit or loss

in € m.	Dec 31, 2018	Dec 31, 2017

Amount presented in other comprehensive income realized at derecognition	(3)	N/A

The excess of the contractual amount repayable at maturity over the carrying value of financial liabilities1

in € m.	Dec 31, 2018	Dec 31, 2017
Including undrawn loan commitments²	2,545	6,088
Excluding undrawn loan commitments	2,536	2,073

1Assuming the liability is extinguished at the earliest contractual maturity that the Group can be required to repay. When the amount payable is not fixed, it is determined by reference to conditions existing at the reporting date.

2The contractual cash flows at maturity for undrawn loan commitments assume full drawdown of the facility.

13 – Financial Instruments carried at Fair Value

Valuation Methods and Control

The Group has an established valuation control framework which governs internal control standards, methodologies, and procedures over the valuation process.

Prices Quoted in Active Markets – The fair value of instruments that are quoted in active markets are determined using the quoted prices where they represent prices at which regularly and recently occurring transactions take place.

Valuation Techniques – The Group uses valuation techniques to establish the fair value of instruments where prices, quoted in active markets, are not available. Valuation techniques used for financial instruments include modelling techniques, the use of indicative quotes for proxy instruments, quotes from recent and less regular transactions and broker quotes.

For some financial instruments a rate or other parameter, rather than a price, is quoted. Where this is the case then the market rate or parameter is used as an input to a valuation model to determine fair value. For some instruments, modelling techniques follow industry standard models, for example, discounted cash flow analysis and standard option pricing models. These models are dependent upon estimated future cash flows, discount factors and volatility levels. For more complex or unique instruments, more sophisticated modelling techniques are required, and may rely upon assumptions or more complex parameters such as correlations, prepayment speeds, default rates and loss severity.

Frequently, valuation models require multiple parameter inputs. Where possible, parameter inputs are based on observable data or are derived from the prices of relevant instruments traded in active markets. Where observable data is not available for parameter inputs, then other market information is considered. For example, indicative broker quotes and consensus pricing information are used to support parameter inputs where they are available. Where no observable information is available to support parameter inputs then they are based on other relevant sources of information such as prices for similar transactions, historic data, economic fundamentals, and research information, with appropriate adjustment to reflect the terms of the actual instrument being valued and current market conditions.

Valuation Adjustments – Valuation adjustments are an integral part of the valuation process. In making appropriate valuation adjustments, the Group follows methodologies that consider factors such as bid-offer spreads, counterparty/own credit and funding risk. Bid-offer spread valuation adjustments are required to adjust mid market

valuations to the appropriate bid or offer valuation. The bid or offer valuation is the best representation of the fair value for an instrument, and therefore its fair value. The carrying value of a long position is adjusted from mid to bid, and the carrying value of a short position is adjusted from mid to offer. Bid-offer valuation adjustments are determined from bid-offer prices observed in relevant trading activity and in quotes from other broker-dealers or other knowledgeable counterparties. Where the quoted price for the instrument is already a bid-offer price then no additional bid-offer valuation adjustment is necessary. Where the fair value of financial instruments is derived from a modelling technique, then the parameter inputs into that model are normally at a mid-market level. Such instruments are generally managed on a portfolio basis and, when specified criteria are met, valuation adjustments are taken to reflect the cost of closing out the net exposure the Bank has to individual market or counterparty risks. These adjustments are determined from bid-offer prices observed in relevant trading activity and quotes from other broker-dealers.

Where complex valuation models are used, or where less-liquid positions are being valued, then bid-offer levels for those positions may not be available directly from the market, and therefore for the close-out cost of these positions, models and parameters must be estimated. When these adjustments are designed, the Group closely examines the valuation risks associated with the model as well as the positions themselves, and the resulting adjustments are closely monitored on an ongoing basis.

Counterparty Credit Valuation Adjustments (CVAs) are required to cover expected credit losses to the extent that the valuation technique does not already include an expected credit loss factor relating to the non-performance risk of the counterparty. The CVA amount is applied to all relevant over-the-counter (OTC) derivatives, and is determined by assessing the potential credit exposure to a given counterparty and taking into account any collateral held, the effect of any relevant netting arrangements, expected loss given default and the probability of default, based on available market information, including Credit Default Swap (CDS) spreads. Where counterparty CDS spreads are not available, relevant proxies are used.

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The fair value of the Group’s financial liabilities at fair value through profit or loss (i.e., OTC derivative liabilities and issued note liabilities designated at fair value through profit or loss) incorporates valuation adjustments to measure the change in the Group’s own credit risk (i.e. Debt Valuation Adjustments (DVA) for Derivatives and Own Credit Adjustment (OCA) for structured notes). For derivative liabilities the Group considers its own creditworthiness by assessing all counterparties’ expected future exposure to the Group, taking into account any collateral posted by the Group, the effect of relevant netting arrangements, the probability of default of the Group, based on the Group’s market CDS level and the expected loss given default, taking into account the seniority of derivative claims under resolution (statutory subordination). Issued note liabilities are discounted utilizing the spread at which similar instruments would be issued or bought back at the measurement date as this reflects the value from the perspective of a market participant who holds the identical item as an asset. This spread is further parameterized into a market level of funding component and an idiosyncratic own credit component. Under IFRS 9 the change in the own credit component is reported under Other Comprehensive Income (OCI).

When determining CVA and DVA, additional adjustments are made where appropriate to achieve fair value, due to the expected loss estimate of a particular arrangement, or where the credit risk being assessed differs in nature to that described by the available CDS instrument.

Funding Valuation Adjustments (FVA) are required to incorporate the market implied funding costs into the fair value of derivative positions. The FVA reflects a discounting spread applied to uncollateralized and partially collateralized derivatives and is determined by assessing the market-implied funding costs on both assets and liabilities.

Where there is uncertainty in the assumptions used within a modelling technique, an additional adjustment is taken to calibrate the model price to the expected market price of the financial instrument. Typically, such transactions have bid-offer levels which are less observable, and these adjustments aim to estimate the bid-offer by computing the liquidity-premium associated with the transaction. Where a financial instrument is of sufficient complexity that the cost of closing it out would be higher than the cost of closing out its component risks, then an additional adjustment is taken to reflect this.

Valuation Control – The Group has an independent specialized valuation control group within the Finance function which governs and develops the valuation control framework and manages the valuation control processes. The mandate of this specialist function includes the performance of the independent valuation control process for all businesses, the continued development of valuation control methodologies and techniques, as well as devising and governing the formal valuation control policy framework. Special attention of this independent valuation control group is directed to areas where management judgment forms part of the valuation process.

Results of the valuation control process are collected and analyzed as part of a standard monthly reporting cycle. Variances of differences outside of preset and approved tolerance levels are escalated both within the Finance function and with Senior Business Management for review, resolution and, if required, adjustment.

For instruments where fair value is determined from valuation models, the assumptions and techniques used within the models are independently validated by an independent specialist model validation group that is part of the Group's Risk Management function.

Quotes for transactions and parameter inputs are obtained from a number of third party sources including exchanges, pricing service providers, firm broker quotes and consensus pricing services. Price sources are examined and assessed to determine the quality of fair value information they represent, with greater emphasis given to those possessing greater valuation certainty and relevance. The results are compared against actual transactions in the market to ensure the model valuations are calibrated to market prices.

Price and parameter inputs to models, assumptions and valuation adjustments are verified against independent sources. Where they cannot be verified to independent sources due to lack of observable information, the estimate of fair value is subject to procedures to assess its reasonableness. Such procedures include performing revaluation using independently generated models (including where existing models are independently recalibrated), assessing the valuations against appropriate proxy instruments and other benchmarks, and performing extrapolation techniques. Assessment is made as to whether the valuation techniques produce fair value estimates that are reflective of market levels by calibrating the results of the valuation models against market transactions where possible.

Fair Value Hierarchy

The financial instruments carried at fair value have been categorized under the three levels of the IFRS fair value hierarchy as follows:

Level 1 – Instruments valued using quoted prices in active markets are instruments where the fair value can be determined directly from prices which are quoted in active, liquid markets and where the instrument observed in the market is representative of that being priced in the Group's inventory.

These include: government bonds, exchange-traded derivatives and equity securities traded on active, liquid

exchanges.

Level 2 – Instruments valued with valuation techniques using observable market data are instruments where the fair value can be determined by reference to similar instruments trading in active markets, or where a technique is used to derive the valuation but where all inputs to that technique are observable.

These include: many OTC derivatives; many investment-grade listed credit bonds; some CDS; many collateralized debt obligations (CDO); and many less-liquid equities.

Level 3 – Instruments valued using valuation techniques using market data which is not directly observable are instruments where the fair value cannot be determined directly by reference to market-observable information, and some other pricing technique must be employed. Instruments classified in this category have an element which is unobservable and which has a significant impact on the fair value.

These include: more-complex OTC derivatives; distressed debt; highly-structured bonds; illiquid asset-backed securities (ABS); illiquid CDO's (cash and synthetic); monoline exposures; some private equity placements; many commercial real estate (CRE) loans; illiquid loans; and some municipal bonds.

Carrying value of the financial instruments held at fair value1

	Dec 31, 2018			Dec 31, 2017		
in € m.	Quoted prices in active market (Level 1)	Valuation technique observable parameters (Level 2)	Valuation technique unobservable parameters (Level 3)	Quoted prices in active market (Level 1)	Valuation technique observable parameters (Level 2)	Valuation technique unobservable parameters (Level 3)
Financial assets held at fair value:						
Trading assets	75,415	67,560	9,763	106,075	69,543	9,043
Trading securities	75,210	61,424	4,086	105,792	62,770	4,634
Other trading assets	205	6,136	5,676	283	6,773	4,409
Positive market values from derivative financial instruments	10,140	301,609	8,309	12,280	341,413	7,340
Non-trading financial assets mandatory at fair value through profit or loss	8,288	86,090	6,066	N/A	N/A	N/A
Financial assets designated at fair value through profit or loss	104	0	0	6,547	83,242	1,488
Financial assets at fair value through other comprehensive	32,517	18,397	268	N/A	N/A	N/A

income						
Financial assets available for sale	N/A	N/A	N/A	29,579	15,713	4,104
Other financial assets at fair value	42	2,7792	207	0	3,2582	47
Total financial assets held at fair value	126,505	476,435	24,614	154,480	513,169	22,022
Financial liabilities held at fair value:						
Trading liabilities	42,548	17,361	15	53,644	17,817	2
Trading securities	42,547	17,082	0	53,644	17,503	2
Other trading liabilities	1	279	15	0	314	0
Negative market values from derivative financial instruments	9,638	285,561	6,289	9,163	327,572	5,992
Financial liabilities designated at fair value through profit or loss	119	51,617	2,021	4	62,426	1,444
Investment contract liabilities	0	512	0	0	574	0
Other financial liabilities at fair value	201	2,6582	(611)3	0	2,5592,4	(298)3
Total financial liabilities held at fair value	52,505	357,709	7,714	62,810	410,948	7,139

1Amounts in this table are generally presented on a gross basis, in line with the Group's accounting policy regarding offsetting of financial instruments, as described in Note 1 "Significant Accounting Policies and Critical Accounting Estimates".

2Predominantly relates to derivatives qualifying for hedge accounting.

3Relates to derivatives which are embedded in contracts where the host contract is held at amortized cost but for which the embedded derivative is separated. The separated embedded derivatives may have a positive or a negative fair value but have been presented in this table to be consistent with the classification of the host contract. The separated embedded derivatives are held at fair value on a recurring basis and have been split between the fair value hierarchy classifications.

4Restatement undertaken represents pure reclass from Note 14 "Fair Value of Financial Instruments not carried at Fair Value" to Note 13 "Financial Instruments carried at Fair Value"- no change in amounts. Amounts are carried at fair value.

In 2018, there were transfers of € 1.5 billion from Level 1 to Level 2 on trading securities based on changes in liquidity testing procedures.

Valuation Techniques

The following is an explanation of the valuation techniques used in establishing the fair value of the different types of financial instruments that the Group trades.

Sovereign, Quasi-sovereign and Corporate Debt and Equity Securities – Where there are no recent transactions then fair value may be determined from the last market price adjusted for all changes in risks and information since that date. Where a close proxy instrument is quoted in an active market then fair value is determined by adjusting the proxy value for differences in the risk profile of the instruments. Where close proxies are not available then fair value is estimated using more complex modelling techniques. These techniques include discounted cash flow models using current market rates for credit, interest, liquidity and other risks. For equity securities modeling techniques may also include those based on earnings multiples.

Mortgage- and Other Asset-Backed Securities (MBS/ABS) include residential and commercial MBS and other ABS including CDOs. ABS have specific characteristics as they have different underlying assets and the issuing entities have different capital structures. The complexity increases further where the underlying assets are themselves ABS, as is the case with many of the CDO instruments.

Where no reliable external pricing is available, ABS are valued, where applicable, using either relative value analysis which is performed based on similar transactions observable in the market, or industry-standard valuation models making largest possible use of available observable inputs. The industry standard models calculate principal and interest payments for a given deal based on assumptions that can be independently price tested. The inputs include prepayment speeds, loss assumptions (timing and severity) and a discount rate (spread, yield or discount margin). These inputs/assumptions are derived from actual transactions, external market research and market indices where appropriate.

Loans – For certain loans fair value may be determined from the market price on a recently occurring transaction adjusted for all changes in risks and information since that transaction date. Where there are no recent market transactions then broker quotes, consensus pricing, proxy instruments or discounted cash flow models are used to determine fair value. Discounted cash flow models incorporate parameter inputs for credit risk, interest rate risk, foreign exchange risk, loss given default estimates and amounts utilized given default, as appropriate. Credit risk, loss given default and utilization given default parameters are determined using information from the loan or other credit markets, where available and appropriate.

Leveraged loans can have transaction-specific characteristics which can limit the relevance of market-observed transactions. Where similar transactions exist for which observable quotes are available from external pricing services then this information is used with appropriate adjustments to reflect the transaction differences. When no similar transactions exist, a discounted cash flow valuation technique is used with credit spreads derived from the appropriate leveraged loan index, incorporating the industry classification, subordination of the loan, and any other relevant information on the loan and loan counterparty.

Over-The-Counter Derivative Financial Instruments – Market standard transactions in liquid trading markets, such as interest rate swaps, foreign exchange forward and option contracts in G7 currencies, and equity swap and option contracts on listed securities or indices are valued using market standard models and quoted parameter inputs. Parameter inputs are obtained from pricing services, consensus pricing services and recently occurring transactions in active markets wherever possible.

More complex instruments are modeled using more sophisticated modeling techniques specific for the instrument and are calibrated to available market prices. Where the model output value does not calibrate to a relevant market reference then valuation adjustments are made to the model output value to adjust for any difference. In less active markets, data is obtained from less frequent market transactions, broker quotes and through extrapolation and interpolation techniques. Where observable prices or inputs are not available, management judgment is required to determine fair values by assessing other relevant sources of information such as historical data, fundamental analysis of the economics of the transaction and proxy information from similar transactions.

Financial Liabilities Designated at Fair Value through Profit or Loss under the Fair Value Option – The fair value of financial liabilities designated at fair value through profit or loss under the fair value option incorporates all market risk factors including a measure of the Group's credit risk relevant for that financial liability. The financial liabilities include structured note issuances, structured deposits, and other structured securities issued by consolidated vehicles, which may not be quoted in an active market. The fair value of these financial liabilities is determined by discounting the contractual cash flows using the relevant credit-adjusted yield curve. The market risk parameters are valued consistently to similar instruments held as assets, for example, any derivatives embedded within the structured notes are valued using the same methodology discussed in the "Over-The-Counter Derivative Financial Instruments" section above.

Where the financial liabilities designated at fair value through profit or loss under the fair value option are collateralized, such as securities loaned and securities sold under repurchase agreements, the credit enhancement is factored into the fair valuation of the liability.

Investment Contract Liabilities – Assets which are linked to the investment contract liabilities are owned by the Group. The investment contract obliges the Group to use these assets to settle these liabilities. Therefore, the fair value of investment contract liabilities is determined by the fair value of the underlying assets (i.e., amount payable on surrender of the policies).

Analysis of Financial Instruments with Fair Value Derived from Valuation Techniques Containing Significant Unobservable Parameters (Level 3)

Some of the financial assets and financial liabilities in Level 3 of the fair value hierarchy have identical or similar offsetting exposures to the unobservable input. However, according to IFRS they are required to be presented gross.

Trading Securities – Certain illiquid emerging market corporate bonds and illiquid highly structured corporate bonds are included in this level of the hierarchy. In addition, some of the holdings of notes issued by securitization entities, commercial and residential MBS, collateralized debt obligation securities and other ABS are reported here. The decrease in the year is mainly due to a combination of sales and settlements offset by purchases, gains and transfers between Level 2 and Level 3 due to changes in the observability of input parameters used to value these instruments.

Positive and Negative Market Values from Derivative Instruments categorized in this level of the fair value hierarchy are valued based on one or more significant unobservable parameters. The unobservable parameters may include certain correlations, certain longer-term volatilities, certain prepayment rates, credit spreads and other transaction-specific parameters.

Level 3 derivatives includes certain options where the volatility is unobservable; certain basket options in which the correlations between the referenced underlying assets are unobservable; longer-term interest rate option derivatives;

multi-currency foreign exchange derivatives; and certain credit default swaps for which the credit spread is not observable.

The increase in assets was due to gains and transfers between Level 2 and Level 3 due to changes in the observability of input parameters used to value these instruments offset by settlements. The increase in liabilities was due to losses and transfers between Level 2 and Level 3 offset by settlements.

Other Trading Instruments classified in Level 3 of the fair value hierarchy mainly consist of traded loans valued using valuation models based on one or more significant unobservable parameters. Level 3 loans comprise illiquid leveraged loans and illiquid residential and commercial mortgage loans. The balance increased in the year due to purchases, issuances, gains and transfers between Level 2 and Level 3 due to changes in the observability of input parameters used to value these instruments offset by sales and settlements.

Non-trading financial assets mandatory at fair value through profit or loss (2018) classified in level 3 of fair value hierarchy consist of any non-trading financial asset that does not fall into the Hold to Collect nor Hold to Collect and Sell business models. This includes predominately reverse repurchase agreements which are managed on a fair value basis. Additionally, any financial asset that falls into the Hold to Collect or Hold to Collect and Sell business models for which the contractual cash flow characteristics are not SPPI. The increase in the period is driven by purchases, issuances, gains and transfers between Level 2 and Level 3 due to changes in the observability of input parameters used to value these instruments offset by sales and settlements.

Financial Assets/Liabilities designated at Fair Value through Profit or Loss – Certain corporate loans and structured liabilities which were designated at fair value through profit or loss under the fair value option were categorized in this level of the fair value hierarchy. The corporate loans are valued using valuation techniques which incorporate observable credit spreads, recovery rates and unobservable utilization parameters. Revolving loan facilities are reported in the third level of the hierarchy because the utilization in the event of the default parameter is significant and unobservable.

In addition, certain hybrid debt issuances designated at fair value through profit or loss containing embedded derivatives are valued based on significant unobservable parameters. These unobservable parameters include single stock volatility correlations. Assets marginally decreased during the year due to settlements and transfers between Level 2 and Level 3 offset by gains. Liabilities increased in the year due to issuances and transfers between Level 2 and Level 3 offset by settlements and gains.

Financial assets at fair value through other comprehensive income (2018)/Financial Assets Available for Sale (2017) include non-performing loan portfolios where there is no trading intent and the market is very illiquid. Assets increased marginally due to purchases offset by transfers between levels 2 and 3, sales, settlements and losses.

Reconciliation of financial instruments classified in Level 3

Reconciliation of financial instruments classified in Level 3

	Dec 31, 2018									
in € m.	Balance, beginning of year	Changes in the group of consoli-dated companies	Total gains/ losses1	Purchases	Sales	Issu-ances2	Settle-ments3	Transfers into Level 34	Transfers out of Level 34	Balance, end of year

Financial assets held at fair value:										
Trading securities	4,148	6	105	2,146	(1,908)	0	(481)	897	(826)	4,086
Positive market values from derivative financial instruments	7,340	0	718	0	0	0	(137)	1,940	(1,551)	8,309
Other trading assets	4,426	0	233	981	(2,027)	3,055	(1,241)	506	(257)	5,676
Non-trading financial assets mandatory at fair value through profit or loss	4,573	3	426	3,627	(567)	1,013	(3,128)	411	(292)	6,066
Financial assets designated at fair value through profit or loss	91	0	4	0	0	0	(22)	0	(72)	0
Financial assets at fair value through other comprehensive income	231	3	(4)5	260	(162)	0	(6)	2	(55)	268
Other financial assets at fair value	47	0	0	0	0	0	0	207	(47)	207
Total financial assets held at fair value	20,8558	12	1,4816,7	7,014	(4,664)	4,068	(5,015)	3,963	(3,100)	24,614
Financial liabilities held at fair value:										
Trading securities	2	(0)	(1)	0	0	0	(0)	0	(1)	0
Negative market values from derivative financial instruments	5,992	0	531	0	0	0	(522)	1,319	(1,031)	6,289
Other trading liabilities	0	0	(1)	0	0	0	16	0	0	15
Financial	1,444	0	(121)	0	0	692	(270)	408	(134)	2,021

liabilities designated at fair value through profit or loss										
Other financial liabilities at fair value	(298)	0	(299)	0	0	0	38	(29)	(23)	(611)
Total financial liabilities held at fair value	7,139	0	1106,7	0	0	692	(738)	1,699	(1,189)	7,714

1Total gains and losses predominantly relate to net gains (losses) on financial assets/liabilities at fair value through profit or loss reported in the consolidated statement of income. The balance also includes net gains (losses) on financial assets available for sale reported in the consolidated statement of income and unrealized net gains (losses) on financial assets available for sale and exchange rate changes reported in other comprehensive income, net of tax. Further, certain instruments are hedged with instruments in Level 1 or Level 2 but the table above does not include the gains and losses on these hedging instruments. Additionally, both observable and unobservable parameters may be used to determine the fair value of an instrument classified within Level 3 of the fair value hierarchy; the gains and losses presented below are attributable to movements in both the observable and unobservable parameters.

2Issuances relate to the cash amount received on the issuance of a liability and the cash amount paid on the primary issuance of a loan to a borrower.

3Settlements represent cash flows to settle the asset or liability. For debt and loan instruments this includes principal on maturity, principal amortizations and principal repayments. For derivatives all cash flows are presented in settlements.

4Transfers in and transfers out of Level 3 are related to changes in observability of input parameters. During the year they are recorded at their fair value at the beginning of year. For instruments transferred into Level 3 the table shows the gains and losses and cash flows on the instruments as if they had been transferred at the beginning of the year. Similarly for instruments transferred out of Level 3 the table does not show any gains or losses or cash flows on the instruments during the year since the table is presented as if they have been transferred out at the beginning of the year.

5Total gains and losses on financial assets at fair value through other comprehensive income include a loss of € 8 million recognized in other comprehensive income, net of tax, and a loss of € 4 million recognized in the income statement presented in net gains (losses).

6This amount includes the effect of exchange rate changes. For total financial assets held at fair value this effect is a gain of € 136 million and for total financial liabilities held at fair value this is a loss of € 33 million. The effect of exchange rate changes is reported in other comprehensive income, net of tax.

7For assets positive balances represent gains, negative balances represent losses. For liabilities positive balances represent losses, negative balances represent gains.

8Opening balances have been restated due to reassessment of trades due to IFRS 9.

Dec 31, 2017

in € m.	Balance, beginning of year	Changes in the group of consoli-dated companies	Total gains/ losses1	Purchases	Sales	Issu-ances2	Settle-ments3	Transfers into Level 34	Transfers out of Level 34	Balance, end of year
Financial assets held at fair value:										
Trading securities	5,012	(1)	(153)	2,144	(1,660)	0	(818)	772	(662)	4,634
Positive market values from derivative financial instruments	9,798	(0)	(610)	0	0	0	(1,889)	2,298	(2,257)	7,340
Other trading assets	5,674	(7)	(283)	2,095	(2,328)	636	(1,803)	950	(524)	4,409
Financial assets designated at fair value through profit or loss	1,601	0	(78)	807	(118)	63	(710)	58	(134)	1,488
Financial assets available for sale	4,153	(40)	2055	722	(249)	0	(1,206)	539	(21)	4,104
Other financial assets at fair value	33	0	33	0	0	0	(26)	7	0	47
Total financial assets held at fair value	26,271	(47)	(886)6,7	5,768	(4,356)	699	(6,453)	4,624	(3,598)	22,022
Financial liabilities held at fair value:										
Trading securities	52	0	(6)	0	0	0	(46)	1	0	2
Negative market values from	8,857	(5)	(64)	0	0	0	(1,827)	924	(1,892)	5,992

derivative financial instruments										
Other trading liabilities	0	0	(0)	0	0	0	0	0	0	0
Financial liabilities designated at fair value through profit or loss	2,229	(7)	(128)	0	0	146	(564)	154	(387)	1,444
Other financial liabilities at fair value	(848)	0	268	0	0	0	286	(18)	15	(298)
Total financial liabilities held at fair value	10,290	(12)	696,7	0	0	146	(2,151)	1,061	(2,265)	7,139

1Total gains and losses predominantly relate to net gains (losses) on financial assets/liabilities at fair value through profit or loss reported in the consolidated statement of income. The balance also includes net gains (losses) on financial assets available for sale reported in the consolidated statement of income and unrealized net gains (losses) on financial assets available for sale and exchange rate changes reported in other comprehensive income, net of tax. Further, certain instruments are hedged with instruments in Level 1 or Level 2 but the table above does not include the gains and losses on these hedging instruments. Additionally, both observable and unobservable parameters may be used to determine the fair value of an instrument classified within Level 3 of the fair value hierarchy; the gains and losses presented below are attributable to movements in both the observable and unobservable parameters.

2Issuances relate to the cash amount received on the issuance of a liability and the cash amount paid on the primary issuance of a loan to a borrower.

3Settlements represent cash flows to settle the asset or liability. For debt and loan instruments this includes principal on maturity, principal amortizations and principal repayments. For derivatives all cash flows are presented in settlements.

4Transfers in and transfers out of Level 3 are related to changes in observability of input parameters. During the year they are recorded at their fair value at the beginning of year. For instruments transferred into Level 3 the table shows the gains and losses and cash flows on the instruments as if they had been transferred at the beginning of the year. Similarly for instruments transferred out of Level 3 the table does not show any gains or losses or cash flows on the instruments during the year since the table is presented as if they have been transferred out at the beginning of the year.

5Total gains and losses on available for sale include a gain of € 94 million recognized in other comprehensive income, net of tax, and a loss of € 8 million recognized in the income statement presented in net gains (losses) on financial assets available for sale.

6This amount includes the effect of exchange rate changes. For total financial assets held at fair value this effect is a loss of € 565 million and for total financial liabilities held at fair value this is a gain of € 123 million. The effect of exchange rate changes is reported in other comprehensive income, net of tax.

7For assets positive balances represent gains, negative balances represent losses. For liabilities positive balances represent losses, negative balances represent gains.

Sensitivity Analysis of Unobservable Parameters

Where the value of financial instruments is dependent on unobservable parameter inputs, the precise level for these parameters at the balance sheet date might be drawn from a range of reasonably possible alternatives. In preparing the financial statements, appropriate levels for these unobservable input parameters are chosen so that they are consistent with prevailing market evidence and in line with the Group's approach to valuation control detailed above. Were the Group to have marked the financial instruments concerned using parameter values drawn from the extremes of the ranges of reasonably possible alternatives then as of December 31, 2018 it could have increased fair value by as much as € 1.6 billion or decreased fair value by as much as € 1.0 billion. As of December 31, 2017 it could have increased fair value by as much as € 1.6 billion or decreased fair value by as much as € 1.0 billion.

The changes in sensitive amounts from December 31, 2017 to December 31, 2018 were an increase in positive fair value movement of € 91 million, and an increase in negative fair value movement of € 47 million. The increases in positive and negative fair value movements are largely in line with the increase in Group Level 3 in the period, with Level 3 assets increasing from € 22.0 billion at December 31 2017 to € 24.6 billion at December 31 2018, and Level 3 Liabilities increasing from € 7.1 billion at December 31 2017 to € 7.7 billion at December 31 2018. These moves represent a percentage increase of 11 % in Group Level 3 in gross terms.

The change in positive fair value movements from December 31, 2017 to December 31, 2018 represents a 6 % increase and the change in negative fair value movements represents a 5 % increase. These increases are proportionally smaller than the 11 % increase in Group Level 3 primarily due to changes to the underlying Level 3 population as a result of IFRS 9 implementation in the first quarter of 2018. A significant subset of positions which moved from fair value through profit and loss to amortized cost due to IFRS 9 were Non-Performing Loans, which had previously contributed materially to both the positive and negative fair value movement totals given the material valuation uncertainty associated with such assets.

Our sensitivity calculation of unobservable parameters for Level 3 aligns to the approach used to assess valuation uncertainty for Prudent Valuation purposes. Prudent Valuation is a capital requirement for assets held at fair value. It provides a mechanism for quantifying and capitalizing valuation uncertainty in accordance with the European Commission Delegated Regulation (EU) 2016/101, which supplements Article 34 of Regulation (EU) No. 575/2013 (CRR), requiring institutions to apply as a deduction from CET 1 for the amount of any additional value adjustments on all assets measured at fair value calculated in accordance with Article 105 (14). This utilizes exit price analysis performed for the relevant assets and liabilities in the Prudent Valuation assessment. The downside sensitivity may be limited in some cases where the fair value is already demonstrably prudent.

This disclosure is intended to illustrate the potential impact of the relative uncertainty in the fair value of financial instruments for which valuation is dependent on unobservable input parameters. However, it is unlikely in practice that all unobservable parameters would be simultaneously at the extremes of their ranges of reasonably possible alternatives. Hence, the estimates disclosed above are likely to be greater than the true uncertainty in fair value at the balance sheet date. Furthermore, the disclosure is neither predictive nor indicative of future movements in fair value.

For many of the financial instruments considered here, in particular derivatives, unobservable input parameters represent only a subset of the parameters required to price the financial instrument, the remainder being observable. Hence for these instruments the overall impact of moving the unobservable input parameters to the extremes of their ranges might be relatively small compared with the total fair value of the financial instrument. For other instruments, fair value is determined based on the price of the entire instrument, for example, by adjusting the fair value of a reasonable proxy instrument. In addition, all financial instruments are already carried at fair values which are inclusive of valuation adjustments for the cost to close out that instrument and hence already factor in uncertainty as it reflects itself in market pricing. Any negative impact of uncertainty calculated within this disclosure, then, will be over and above that already included in the fair value contained in the financial statements.

Breakdown of the sensitivity analysis by type of instrument1

	Dec 31, 2018		Dec 31, 2017	
in € m.	Positive fair value movement from using reasonable possible alternatives	Negative fair value movement from using reasonable possible alternatives	Positive fair value movement from using reasonable possible alternatives	Negative fair value movement from using reasonable possible alternatives
Securities:				
Debt securities	179	118	126	90
Commercial mortgage-backed securities	5	4	6	6
Mortgage and other asset-backed securities	38	37	26	28
Corporate, sovereign and other debt securities	136	77	94	56
Equity securities	84	67	95	67
Derivatives:				
Credit	151	116	155	125
Equity	257	207	164	138
Interest related	346	206	340	173
Foreign Exchange	49	26	65	12
Other	106	89	106	73
Loans:				
Loans	475	219	504	320
Other	0	0	0	0
Total	1,647	1,046	1,556	999

1Where the exposure to an unobservable parameter is offset across different instruments then only the net impact is disclosed in the table.

Quantitative Information about the Sensitivity of Significant Unobservable Inputs

The behavior of the unobservable parameters on Level 3 fair value measurement is not necessarily independent, and dynamic relationships often exist between the other unobservable parameters and the observable parameters. Such relationships, where material to the fair value of a given instrument, are explicitly captured via correlation parameters, or are otherwise controlled via pricing models or valuation techniques. Frequently, where a valuation technique utilizes more than one input, the choice of a certain input will bound the range of possible values for other inputs. In addition, broader market factors (such as interest rates, equity, credit or commodity indices or foreign exchange rates) can also have effects.

The range of values shown below represents the highest and lowest inputs used to value the significant exposures within Level 3. The diversity of financial instruments that make up the disclosure is significant and therefore the ranges of certain parameters can be large. For example, the range of credit spreads on mortgage backed securities represents performing, more liquid positions with lower spreads than the less liquid, non-performing positions which will have higher credit spreads. As Level 3 contains the less liquid fair value instruments, the wide ranges of parameters seen is to be expected, as there is a high degree of pricing differentiation within each exposure type to capture the relevant market dynamics. There follows a brief description of each of the principal parameter types, along with a commentary on significant interrelationships between them.

Credit Parameters are used to assess the creditworthiness of an exposure, by enabling the probability of default and resulting losses of a default to be represented. The credit spread is the primary reflection of creditworthiness, and represents the premium or yield return above the benchmark reference instrument (typically LIBOR, or relevant Treasury Instrument, depending upon the asset being assessed), that a bond holder would require to allow for the credit quality difference between that entity and the reference benchmark. Higher credit spreads will indicate lower credit quality, and lead to a lower value for a given bond or other loan-asset that is to be repaid to the holder or lender by the borrower. Recovery Rates represent an estimate of the amount a lender would receive in the case of a default of a loan, or a bond holder would receive in the case of default of the bond. Higher recovery rates will give a higher valuation for a given bond position, if other parameters are held constant. Constant Default Rate (CDR) and Constant Prepayment Rate (CPR) allow more complex loan and debt assets to be assessed, as these parameters estimate the ongoing defaults arising on scheduled repayments and coupons, or whether the borrower is making additional (usually voluntary) prepayments. These parameters are particularly relevant when forming a fair value opinion for mortgage or other types of lending, where repayments are delivered by the borrower through time, or where the borrower may pre-pay the loan (seen for example in some residential mortgages). Higher CDR will lead to lower valuation of a given loan or mortgage as the lender will ultimately receive less cash.

Interest rates, credit spreads, inflation rates, foreign exchange rates and equity prices are referenced in some option instruments, or other complex derivatives, where the payoff a holder of the derivative will receive is dependent upon the behavior of these underlying references through time. Volatility parameters describe key attributes of option behavior by enabling the variability of returns of the underlying instrument to be assessed. This volatility is a measure of probability, with higher volatilities denoting higher probabilities of a particular outcome occurring. The underlying references (interest rates, credit spreads etc.) have an effect on the valuation of options, by describing the size of the return that can be expected from the option. Therefore the value of a given option is dependent upon the value of the underlying instrument, and the volatility of that instrument, representing the size of the payoff, and the probability of that payoff occurring. Where volatilities are high, the option holder will see a higher option value as there is greater probability of positive returns. A higher option value will also occur where the payoff described by the option is significant.

Correlations are used to describe influential relationships between underlying references where a derivative or other instrument has more than one underlying reference. Behind some of these relationships, for example commodity

correlation and interest rate-foreign exchange correlations, typically lie macroeconomic factors such as the impact of global demand on groups of commodities, or the pricing parity effect of interest rates on foreign exchange rates. More specific relationships can exist between credit references or equity stocks in the case of credit derivatives and equity basket derivatives, for example. Credit correlations are used to estimate the relationship between the credit performance of a range of credit names, and stock correlations are used to estimate the relationship between the returns of a range of equities. A derivative with a correlation exposure will be either long- or short-correlation. A high correlation suggests a strong relationship between the underlying references is in force, and this will lead to an increase in value of a long-correlation derivative. Negative correlations suggest that the relationship between underlying references is opposing, i.e., an increase in price of one underlying reference will lead to a reduction in the price of the other.

An EBITDA (‘earnings before interest, tax, depreciation and amortization’) multiple approach can be used in the valuation of less liquid securities. Under this approach the enterprise value (‘EV’) of an entity can be estimated via identifying the ratio of the EV to EBITDA of a comparable observable entity and applying this ratio to the EBITDA of the entity for which a valuation is being estimated. Under this approach a liquidity adjustment is often applied due to the difference in liquidity between the generally listed comparable used and the company under valuation. A higher EV/EBITDA multiple will result in a higher fair value.

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Financial instruments classified in Level 3 and quantitative information about unobservable inputs

	Dec 31, 2018					
	Fair value					
in € m. (unless stated otherwise)	Assets	Liabilities	Valuation technique(s)[1]	Significant unobservable input(s) (Level 3)	Range	
Financial instruments held at fair value – held for trading, mandatory at fair value, designated at fair value, at fair value through OCI:						
Mortgage and other asset backed securities held for trading:						
Commercial mortgage-backed securities	66	0	Price based	Price	0 %	120 %
			Discounted cash flow	Credit spread (bps)	97	1,444
Mortgage- and other asset-backed securities	745	0	Price based	Price	0 %	102 %
			Discounted cash flow	Credit spread (bps)	26	2,203
				Recovery rate	0 %	90 %
				Constant default rate	0 %	16 %
				Constant prepayment rate	0 %	42 %
Total mortgage- and other asset-backed securities	811	0				
Debt securities and other debt	3,876	1,764	Price based	Price	0 %	148 %

obligations						
Held for trading	3,037	0	Discounted cash flow	Credit spread (bps)	5	582
Corporate, sovereign and other debt securities	3,037					
Non-trading financial assets mandatory at fair value through profit or loss	726					
Designated at fair value through profit or loss	0	1,764				
Financial assets at fair value through other comprehensive income	114					
Equity securities	1,244	0	Market approach	Price per net asset value	70 %	100 %
Held for trading	239	0		Enterprise value/EBITDA (multiple)	6	17
Non-trading financial assets mandatory at fair value through profit or loss	1,005		Discounted cash flow	Weighted average cost capital	7 %	20 %
Loans	7,167	15	Price based	Price	0 %	341 %
Held for trading	5,651	15	Discounted cash flow	Credit spread (bps)	40	930
Non-trading financial assets mandatory at fair value through profit or loss	1,362			Constant default rate	0	0
Designated at fair value through profit or loss	0	0		Recovery rate	35 %	40 %
Financial assets at fair value through other comprehensive income	154					
Loan commitments	0	0	Discounted cash flow	Credit spread (bps)	30	2,864
				Recovery rate	25 %	75 %
			Loan pricing model	Utilization	0 %	100 %
Other financial instruments	2,9992	2573	Discounted cash flow	IRR	3 %	46 %
				Repo rate (bps)	65	387
Total non-derivative financial instruments held at fair value	16,097	2,037				

1Valuation technique(s) and subsequently the significant unobservable input(s) relate to the respective total position.

2Other financial assets include € 26 million of other trading assets and € 3.0 billion of other financial assets mandatory at fair value.

3Other financial liabilities include € 185 million of securities sold under repurchase agreements designated at fair value and € 72 million of other financial liabilities designated at fair value.

	Dec 31, 2018 Fair value					
in € m. (unless stated otherwise)	Assets	Liabilities	Valuation technique(s)	Significant unobservable input(s) (Level 3)	Range	
Financial instruments held at fair value:						
Market values from derivative financial instruments:						
Interest rate derivatives	4,264	2,568	Discounted cash flow	Swap rate (bps)	(124)	2,316
				Inflation swap rate	1 %	6 %
				Constant default rate	0 %	35 %
				Constant prepayment rate	2 %	43 %
			Option pricing model	Inflation volatility	0 %	5 %
				Interest rate volatility	0 %	31 %
				IR - IR correlation	(30) %	90 %
				Hybrid correlation	(59) %	75 %
Credit derivatives	638	964	Discounted cash flow	Credit spread (bps)	0	1,541
				Recovery rate	0 %	80 %
			Correlation pricing model	Credit correlation	25 %	85 %
Equity derivatives	1,583	1,498	Option pricing model	Stock volatility	4 %	96 %
				Index volatility	11 %	79 %
				Index - index correlation	1	1
				Stock - stock correlation	2 %	89 %
				Stock Forwards	0 %	63 %
				Index Forwards	0 %	5 %
FX derivatives	1,034	1,005	Option pricing model	Volatility	(6) %	34 %
Other derivatives	997	(357)1	Discounted cash flow	Credit spread (bps)	–	–
			Option pricing model	Index volatility	5 %	92 %
				Commodity correlation	0 %	0 %
Total market values from derivative financial instruments	8,516	5,677				

1Includes derivatives which are embedded in contracts where the host contract is held at amortized cost but for which the embedded derivative is separated.

	Dec 31, 2017					
	Fair value					
in € m. (unless stated otherwise)	Assets	Liabilities	Valuation technique(s)[1]	Significant unobservable input(s) (Level 3)	Range	
Financial instruments held at fair value – held for trading, designated at fair value and available for sale:						
Mortgage and other asset backed securities held for trading:						
Commercial mortgage-backed securities	79	0	Price based	Price	0 %	102 %
			Discounted cash flow	Credit spread (bps)	136	2,217
Mortgage- and other asset-backed securities	714	0	Price based	Price	0 %	102 %
			Discounted cash flow	Credit spread (bps)	12	2,000
				Recovery rate	0 %	90 %
				Constant default rate	0 %	25 %
				Constant prepayment rate	0 %	29 %
Total mortgage- and other asset-backed securities	793	0				
Debt securities and other debt obligations	3,870	1,307	Price based	Price	0 %	176 %
Held for trading	3,559	2	Discounted cash flow	Credit spread (bps)	34	500
Corporate, sovereign and other debt securities	3,559					
Designated at fair value through profit or loss	44	1,305				
Available-for-sale	267					
Equity securities	913	0	Market approach	Price per net asset value	60 %	100 %
Held for trading	282	0		Enterprise value/EBITDA (multiple)	1	14
Designated at fair value through profit or loss	151		Discounted cash flow	Weighted average cost capital	8 %	20 %
Available-for-sale	480					
Loans	7,397	0	Price based	Price	0 %	161 %
Held for trading	4,376	0		Credit spread (bps)	190	1,578

			Discounted cash flow			
Designated at fair value through profit or loss	338	0		Constant default rate	–	–
Available-for-sale	2,684			Recovery rate	40 %	40 %
Loan commitments	0	8	Discounted cash flow	Credit spread (bps)	5	261
				Recovery rate	37 %	75 %
			Loan pricing model	Utilization	0 %	100 %
Other financial instruments	1,7102	1313	Discounted cash flow	IRR	1 %	24 %
				Repo rate (bps)	224	254
Total non-derivative financial instruments held at fair value	14,683	1,446				

1Valuation technique(s) and subsequently the significant unobservable input(s) relate to the respective total position.

2Other financial assets include € 34 million of other trading assets, € 956 million of other financial assets designated at fair value and € 674 million other financial assets available for sale.

3Other financial liabilities include € 131 million of securities sold under repurchase agreements designated at fair value.

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	Dec 31, 2017					
	Fair value					
in € m. (unless stated otherwise)	Assets	Liabilities	Valuation technique(s)	Significant unobservable input(s) (Level 3)	Range	
Financial instruments held at fair value:						
Market values from derivative financial instruments:						
Interest rate derivatives	4,466	2,250	Discounted cash flow	Swap rate (bps)	(72)	1,036
				Inflation swap rate	(3) %	11 %
				Constant default rate	0 %	16 %
				Constant prepayment rate	2 %	38 %
			Option pricing model	Inflation volatility	0 %	5 %
				Interest rate volatility	0 %	103 %
				IR - IR correlation	(25) %	100 %

				Hybrid correlation	(85) %	90 %
Credit derivatives	630	909	Discounted cash flow	Credit spread (bps)	0	17,957
				Recovery rate	0 %	94 %
			Correlation pricing model	Credit correlation	37 %	90 %
Equity derivatives	728	1,347	Option pricing model	Stock volatility	6 %	90 %
				Index volatility	7 %	53 %
				Index - index correlation	–	–
				Stock - stock correlation	2 %	93 %
				Stock Forwards	0 %	7 %
				Index Forwards	0 %	95 %
FX derivatives	1,113	1,058	Option pricing model	Volatility	(6) %	31 %
Other derivatives	402	1291	Discounted cash flow	Credit spread (bps)	–	–
			Option pricing model	Index volatility	0 %	79 %
				Commodity correlation	10 %	75 %
Total market values from derivative financial instruments	7,340	5,693				

1Includes derivatives which are embedded in contracts where the host contract is held at amortized cost but for which the embedded derivative is separated.

Unrealized Gains or Losses on Level 3 Instruments held or in Issue at the Reporting Date

The unrealized gains or losses on Level 3 Instruments are not due solely to unobservable parameters. Many of the parameter inputs to the valuation of instruments in this level of the hierarchy are observable and the gain or loss is partly due to movements in these observable parameters over the period. Many of the positions in this level of the hierarchy are economically hedged by instruments which are categorized in other levels of the fair value hierarchy. The offsetting gains and losses that have been recorded on all such hedges are not included in the table below, which only shows the gains and losses related to the Level 3 classified instruments themselves held at the reporting date in accordance with IFRS 13.The unrealized gains and losses on Level 3 instruments are included in both net interest income and net gains on financial assets/liabilities at fair value through profit or loss in the consolidated income statement.

in € m.	Dec 31, 2018	Dec 31, 2017
Financial assets held at fair value:		
Trading securities	46	(15)
Positive market values from derivative financial instruments	1,152	171
Other trading assets	136	55

Non-trading financial assets mandatory at fair value through profit or loss	354	N/A
Financial assets designated at fair value through profit or loss	0	2
Financial assets at fair value through other comprehensive income	2	N/A
Financial assets available for sale	N/A	123
Other financial assets at fair value	2	33
Total financial assets held at fair value	1,692	368
Financial liabilities held at fair value:		
Trading securities	0	3
Negative market values from derivative financial instruments	(849)	(740)
Other trading liabilities	0	0
Financial liabilities designated at fair value through profit or loss	124	4
Other financial liabilities at fair value	294	(249)
Total financial liabilities held at fair value	(431)	(981)
Total	1,261	(613)

Recognition of Trade Date Profit

If there are significant unobservable inputs used in a valuation technique, the financial instrument is recognized at the transaction price and any trade date profit is deferred. The table below presents the year-to-year movement of the trade date profits deferred due to significant unobservable parameters for financial instruments classified at fair value through profit or loss. The balance is predominantly related to derivative instruments.

in € m.	2018	2017
Balance, beginning of year	5961	916
New trades during the period	226	277
Amortization	(126)	(282)
Matured trades	(126)	(140)
Subsequent move to observability	(42)	(71)
Exchange rate changes	2	(11)
Balance, end of year	531	690

1Opening balances have been restated due to reassessment of trades due to IFRS 9.

14 – Fair Value of Financial Instruments not carried at Fair Value

The valuation techniques used to establish fair value for the Group's financial instruments which are not carried at fair value in the balance sheet and their respective IFRS fair value hierarchy categorization are consistent with those outlined in Note 13 "Financial Instruments carried at Fair Value".

Other financial instruments not carried at fair value are not managed on a fair value basis, for example, retail loans and deposits and credit facilities extended to corporate clients. For these instruments fair values are calculated for disclosure purposes only and do not impact the balance sheet or income statement. Additionally, since the instruments

generally do not trade there is significant management judgment required to determine these fair values.

Short-term financial instruments – The carrying value represents a reasonable estimate of fair value for the following financial instruments which are predominantly short-term:

Assets	Liabilities
Cash and central bank balances	Deposits
Interbank balances (w/o central banks)	Central bank funds purchased and securities sold under repurchase agreements
Central bank funds sold and securities purchased under resale agreements	Securities loaned
Securities borrowed	Other short-term borrowings
Other financial assets	Other financial liabilities

For longer-term financial instruments within these categories, fair value is determined by discounting contractual cash flows using rates which could be earned for assets with similar remaining maturities and credit risks and, in the case of liabilities, rates at which the liabilities with similar remaining maturities could be issued, at the balance sheet date.

Loans – Fair value is determined using discounted cash flow models that incorporate parameter inputs for credit risk, interest rate risk, foreign exchange risk, loss given default estimates and amounts utilized given default, as appropriate. Credit risk, loss given default and utilization given default parameters are determined using information from the loan agreement or credit default swap markets, where available and appropriate.

For retail lending portfolios with a large number of homogenous loans (i.e. German residential mortgages), the fair value is calculated on a portfolio basis by discounting the portfolio's contractual cash flows using own new interest rates on this type of loan. For similar retail lending portfolios outside Germany, the fair value is calculated on a portfolio basis by discounting the portfolio's contractual cash flows using risk-free interest rates. This present value calculation is then adjusted for credit risk by discounting at the margins which could be earned on similar loans if issued at the balance sheet date. For other portfolios the present value calculation is adjusted for credit risk by calculating the expected loss over the estimated life of the loan based on various parameters including probability of default and loss given default and level of collateralization. The fair value of corporate lending portfolios is estimated by discounting a projected margin over expected maturities using parameters derived from the current market values of collateralized loan obligation ("CLO") transactions collateralized with loan portfolios that are similar to the Group's corporate lending portfolio.

Securities purchased under resale agreements, securities borrowed, securities sold under repurchase agreements and securities loaned – Fair value is derived from valuation techniques by discounting future cash flows using the appropriate credit risk-adjusted discount rate. The credit risk-adjusted discount rate includes consideration of the collateral received or pledged in the transaction. These products are typically short-term and highly collateralized, therefore the fair value is not significantly different to the carrying value.

Long-term debt and trust preferred securities – Fair value is determined from quoted market prices, where available. Where quoted market prices are not available, fair value is estimated using a valuation technique that discounts the remaining contractual cash at a rate at which an instrument with similar characteristics could be issued at the balance sheet date.

Estimated fair value of financial instruments not carried at fair value on the balance sheet1

	Dec 31, 2018				
in € m.	Carrying value	Fair value	Quoted prices in active market (Level 1)	Valuation technique observable parameters (Level 2)	Valuation technique unobservable parameters (Level 3)
Financial assets:					
Cash and central bank balances	188,731	188,731	188,731	0	0
Interbank balances (w/o central banks)	8,881	8,881	78	8,804	0
Central bank funds sold and securities purchased under resale agreements	8,222	8,223	0	8,223	0
Securities borrowed	3,396	3,396	0	3,396	0
Loans	400,297	395,900	0	10,870	385,029
Securities held to maturity	0	0	0	0	0
Other financial assets	80,089	80,193	850	79,343	1
Financial liabilities:					
Deposits	564,405	564,637	516	563,850	272
Central bank funds purchased and securities sold under repurchase agreements	4,867	4,867	0	4,867	0
Securities loaned	3,359	3,359	0	3,359	0
Other short-term borrowings	14,158	14,159	0	14,159	0
Other financial liabilities	100,683	100,683	1,816	98,866	1
Long-term debt	152,083	149,128	0	140,961	8,167
Trust preferred securities	3,168	3,114	0	3,114	0

	Dec 31, 2017				
in € m.	Carrying value	Fair value	Quoted prices in active market (Level 1)	Valuation technique observable parameters (Level 2)	Valuation technique unobservable parameters (Level 3)
Financial assets:					
Cash and central bank balances	225,655	225,655	225,655	0	0
Interbank balances (w/o central banks)	9,265	9,265	76	9,189	0
Central bank funds sold and securities purchased under resale agreements	9,971	9,973	0	9,973	0
Securities borrowed	16,732	16,732	0	16,732	0
Loans	401,699	403,842	0	24,643	379,199
Securities held to maturity	3,170	3,238	3,238	0	0
Other financial assets	88,936	88,939	0	88,939	0

Financial liabilities:					
Deposits	580,812	580,945	2,108	578,837	(0)
Central bank funds purchased and securities sold under repurchase agreements	18,105	18,103	0	18,103	0
Securities loaned	6,688	6,688	0	6,688	0
Other short-term borrowings	18,411	18,412	0	18,412	0
Other financial liabilities2	116,101	116,101	1,875	114,226	0
Long-term debt	159,715	161,829	0	152,838	8,991
Trust preferred securities	5,491	5,920	0	5,920	0

[1] Amounts generally presented on a gross basis, in line with the Group's accounting policy regarding offsetting of financial instruments as described in Note 1 "Significant Accounting Policies and Critical Accounting Estimates".

2Restatement undertaken represents pure reclass from Note 14 "Fair Value of Financial Instruments not carried at Fair Value" to Note 13 "Financial Instruments carried at Fair Value".

Loans – The difference between fair value and carrying value arose predominantly due to an increase in expected default rates and reduction in liquidity as implied from market pricing since initial recognition. These reductions in fair value are offset by an increase in fair value due to interest rate movements on fixed rate instruments.

Long-term debt and trust preferred securities – The difference between fair value and carrying value is due to the effect of changes in the rates at which the Group could issue debt with similar maturity and subordination at the balance sheet date compared to when the instrument was issued.

15 – Financial Assets Available for Sale

in € m.	Dec 31, 2018	Dec 31, 2017
Debt securities:		
German government	N/A	8,131
U.S. Treasury and U.S. government agencies	N/A	8,092
U.S. local (municipal) governments	N/A	2,436
Other foreign governments	N/A	19,275
Corporates	N/A	6,775
Other asset-backed securities	N/A	1
Mortgage-backed securities, including obligations of U.S. federal agencies	N/A	11
Other debt securities	N/A	359
Total debt securities	N/A	45,081
Equity securities:		
Equity shares	N/A	897
Investment certificates and mutual funds	N/A	97
Total equity securities	N/A	994

Other equity interests	N/A	636
Loans	N/A	2,685
Total financial assets available for sale	N/A	49,397

Please also refer to Note 7 “Net Gains (Losses) on Financial Assets Available for Sale” of this report.

16 – Financial assets at fair value through other comprehensive income

in € m.	Dec 31, 2018	Dec 31, 2017
Securities purchased under resale agreement	1,097	N/A
Debt securities:		
German government	7,705	N/A
U.S. Treasury and U.S. government agencies	13,118	N/A
U.S. local (municipal) governments	101	N/A
Other foreign governments	18,152	N/A
Corporates	5,606	N/A
Other asset-backed securities	27	N/A
Mortgage-backed securities, including obligations of U.S. federal agencies	103	N/A
Other debt securities	181	N/A
Total debt securities	44,993	N/A
Loans	5,092	N/A
Total financial assets at fair value through other comprehensive income	51,182	N/A

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17 – Financial Instruments Held to Maturity

In the first quarter of 2016, the Group began to use the Held to Maturity category to more appropriately present income and capital volatility in its banking book. In addition to managing the Group’s existing banking book exposure to interest rates, this accounting classification supports certain of the Group’s asset liability management objectives, e.g. maturity transformation.

The Group reclassified € 3.2 billion of securities held Available for Sale to Held to Maturity investments effective January 4, 2016. All reclassified assets are high quality Government, supranational and agency bonds and are managed by Group Treasury as part of the Group’s Strategic Liquidity Reserve.

Carrying values and fair values of financial assets reclassified from Available for Sale to Held to Maturity

	Dec 31, 2018		Dec 31, 2017	
in € m.	Carrying value (CV)	Fair Value (FV)	Carrying value (CV)	Fair Value (FV)
Debt securities reclassified:				
G7 Government bonds	N/A	N/A	423	434
Other Government, supranational and agency	N/A	N/A	2,747	2,804

bonds				
Total financial assets reclassified to Held-to-Maturity	N/A	N/A	3,170	3,238

18 – Equity Method Investments

Investments in associates and jointly controlled entities are accounted for using the equity method of accounting.

The Group holds interests in 65 (2017: 77) associates and 13 (2017: 13) jointly controlled entities. Two associates are considered to be material to the Group.

Significant investments as of December 31, 20181

Investment	Principal place of business	Nature of relationship	Ownership percentage
Huarong Rongde Asset Management Company Limited	Beijing, China	Strategic Investment	40.7 %
Harvest Fund Management Co., Ltd.	Shanghai, China	Strategic Investment	30.0 %

1The Group has significant influence over these investees through its holding percentage and representation on the board seats.

Summarized financial information on Huarong Rongde Asset Management Company Limited1

in € m.	Dec 31, 2017	Dec 31, 2016
Total net revenues	197	193
Net income	157	146
Other comprehensive income	(19)	(2)
Total comprehensive income2	138	143

in € m.	Dec 31, 2017	Dec 31, 2016
Total assets	7,058	5,243
Total liabilities	5,579	4,052
Noncontrolling Interest	739	534
Net assets of the equity method investee	740	657

1Due to the difference in reporting timelines for the Group and Huarong Rongde Asset Management Company Limited Equity method accounting was performed for December 2018 based on December 2017 PRC GAAP audited financials and for December 2017 based on December 2016 PRC GAAP audited financials.

2The Group received dividends from Huarong Rongde Asset Management Company Limited of € 17 million during the reporting period 2018 (2017: € 23 million)

Reconciliation of total net assets of Huarong Rongde Asset Management Company Limited to the Group’s carrying amount1

in € m.	Dec 31, 2017	Dec 31, 2016
Net assets of the equity method investee	740	657
Group's ownership percentage on the investee's equity	40.7 %	40.7 %
Group's share of net assets	301	268
Goodwill	0	0
Intangible Assets	0	0
Other adjustments	(17)	(22)
Carrying amount2	284	246

1Due to the difference in reporting timelines for the Group and Huarong Rongde Asset Management Company Limited Equity method accounting was performed for December 2018 based on December 2017 PRC GAAP audited financials and for December 2017 based on December 2016 PRC GAAP audited financials.

2There is no impairment loss in 2018 and 2017

Summarized financial information on Harvest Fund Management Co., Ltd.

in € m.	Dec 31, 20181	Dec 31, 20172
Total net revenues	597	537
Net income	162	152
Other comprehensive income	1	(1)
Total comprehensive income3	163	150

in € m.	Dec 31, 2018	Dec 31, 2017
Total assets	1,123	1,448
Total liabilities	398	853
Noncontrolling Interest	45	24
Net assets of the equity method investee	681	571

1December 2018 numbers are based on 2018 unaudited financials

2December 2017 numbers are based on 2017 audited financials

3The Group received dividends from Harvest Fund Management Co., Ltd. of € 12 million during the reporting period 2018 (2017: € 7 million)

Reconciliation of total net assets of Harvest Fund Management Co., Ltd. to the Group’s carrying amount

in € m.	Dec 31, 20181	Dec 31, 20172
Net assets of the equity method investee	681	571
Group's ownership percentage on the investee's equity	30 %	30 %
Group's share of net assets	204	171
Goodwill	17	16
Intangible Assets	14	14
Other adjustments	1	4
Carrying amount3	236	205

1December 2018 numbers are based on 2018 unaudited financials

2December 2017 numbers are based on 2017 audited financials

3There is no impairment loss in 2018 (€ 1 million in 2017)

Aggregated financial information on the Group’s share in associates and joint ventures that are individually immaterial

in € m.	Dec 31, 2018	Dec 31, 2017
Carrying amount of all associates that are individually immaterial to the Group	359	415
Aggregated amount of the Group's share of profit (loss) from continuing operations	30	35
Aggregated amount of the Group's share of post-tax profit (loss) from discontinued operations	0	0
Aggregated amount of the Group's share of other comprehensive income	(8)	(33)
Aggregated amount of the Group's share of total comprehensive income	22	2

19 – Offsetting Financial Assets and Financial Liabilities

The Group is eligible to present certain financial assets and financial liabilities on a net basis on the balance sheet pursuant to criteria described in Note 1 “Significant Accounting Policies and Critical Accounting Estimates: Offsetting Financial Instruments”.

The following tables provide information on the impact of offsetting on the consolidated balance sheet, as well as the financial impact of netting for instruments subject to an enforceable master netting arrangement or similar agreement as well as available cash and financial instrument collateral.

Assets

	Dec 31, 2018						
				Amounts not set off on the balance sheet			
in € m.	Gross amounts of financial assets	Gross amounts set off on the balance sheet	Net amounts of financial assets presented on the balance sheet	Impact of Master Netting Agreements	Cash collateral	Financial instrument collateral[1]	Net amount

Central bank funds sold and securities purchased under resale agreements (enforceable)	8,194	(2,629)	5,565	0	0	(5,565)	0
Central bank funds sold and securities purchased under resale agreements (non-enforceable)	2,656	0	2,656	0	0	(2,169)	488
Securities borrowed (enforceable)	3,157	0	3,157	0	0	(3,055)	102
Securities borrowed (non-enforceable)	239	0	239	0	0	(239)	0
Financial assets at fair value through profit or loss (enforceable)	435,306	(73,286)	362,020	(250,476)	(39,006)	(63,733)	8,805
Of which: Positive market values from derivative financial instruments (enforceable)	324,348	(19,269)	305,080	(250,231)	(38,731)	(6,682)	9,436
Financial assets at fair value through profit or loss (non-enforceable)	211,323	0	211,323	0	(1,858)	(12,013)	197,452
Of which: Positive market values from derivative financial instruments (non-enforceable)	14,978	0	14,978	0	(1,858)	(1,277)	11,843
Total financial assets at fair value through profit or loss	646,629	(73,286)	573,344	(250,476)	(40,864)	(75,746)	206,257
Loans at amortized cost	400,297	0	400,297	0	(13,505)	(39,048)	347,743
Other assets	107,633	(14,189)	93,444	(29,073)	(522)	(92)	63,757
Of which: Positive market values from derivatives qualifying for hedge accounting (enforceable)	3,451	(423)	3,028	(2,347)	(520)	(92)	69
Remaining assets subject to netting	1,097	0	1,097	0	0	(621)	475
Remaining assets not subject to netting	268,338	0	268,338	0	(227)	(1,540)	266,571
Total assets	1,438,241	(90,104)	1,348,137	(279,550)	(55,118)	(128,075)	885,394

1Excludes real estate and other non-financial instrument collateral.

Liabilities

	Dec 31, 2018						
				Amounts not set off on the balance sheet			
in €	Gross amounts of financial liabilities	Gross amounts set off on the balance sheet	Net amounts of financial liabilities presented on the balance sheet	Impact of Master Netting Agreements	Cash collateral	Financial instrument collateral	Net amount
Deposits	564,405	0	564,405	0	0	0	564,405
Central bank funds purchased and securities sold under repurchase agreements (enforceable)	7,145	(3,677)	3,468	0	0	(3,468)	0
Central bank funds purchased and securities sold under repurchase agreements (non-enforceable)	1,399	0	1,399	0	0	(1,140)	259
Securities loaned (enforceable)	3,164	0	3,164	0	0	(3,164)	0
Securities loaned (non-enforceable)	195	0	195	0	0	(164)	31
Financial liabilities at fair value through profit or loss (enforceable)	399,625	(71,469)	328,156	(251,495)	(25,232)	(40,935)	10,493
Of which: Negative market values from derivative financial instruments (enforceable)	309,401	(18,978)	290,423	(250,908)	(25,232)	(4,805)	9,478
Financial liabilities at fair value through profit or loss (non-enforceable)	87,524	0	87,524	0	(2,301)	(11,268)	73,955
Of which: Negative market values from derivative financial instruments (non-enforceable)	11,064	0	11,064	0	(1,494)	(573)	8,996
Total financial liabilities at fair value through profit or loss	487,149	(71,469)	415,680	(251,495)	(27,533)	(52,204)	84,448

Other liabilities	132,470	(14,957)	117,513	(42,260)	(73)	(158)	75,022
Of which: Negative market values from derivatives qualifying for hedge accounting (enforceable)	2,537	(615)	1,922	(1,670)	(71)	(158)	23
Remaining liabilities not subject to netting	173,577	0	173,577	0	0	0	173,577
Total liabilities	1,369,503	(90,104)	1,279,400	(293,755)	(27,606)	(60,297)	897,742

Assets

	Dec 31, 2017						
				Amounts not set off on the balance sheet			
in € m.	Gross amounts of financial assets	Gross amounts set off on the balance sheet	Net amounts of financial assets presented on the balance sheet	Impact of Master Netting Agreements	Cash collateral	Financial instrument collateral[1]	Net amount
Central bank funds sold and securities purchased under resale agreements (enforceable)	8,136	(455)	7,681	0	0	(7,675)	7
Central bank funds sold and securities purchased under resale agreements (non-enforceable)	2,290	0	2,290	0	0	(2,239)	51
Securities borrowed (enforceable)	14,987	0	14,987	0	0	(14,093)	894
Securities borrowed (non-enforceable)	1,744	0	1,744	0	0	(1,661)	83
Financial assets at fair value through profit or loss							
Trading assets	185,127	(465)	184,661	0	(81)	(86)	184,495
Positive market values from derivative financial instruments (enforceable)	363,859	(18,237)	345,622	(285,421)	(41,842)	(7,868)	10,490
Positive market values from derivative financial instruments (non-enforceable)	15,410	0	15,410	0	(1,811)	(1,276)	12,323
	125,869	(64,003)	61,865	(728)	(773)	(56,410)	3,954

Financial assets designated at fair value through profit or loss (enforceable)							
Financial assets designated at fair value through profit or loss (non-enforceable)	29,411	0	29,411	0	0	(20,534)	8,876
Total financial assets at fair value through profit or loss	719,676	(82,706)	636,970	(286,149)	(44,508)	(86,174)	220,138
Loans	401,699	0	401,699	0	(12,642)	(40,775)	348,282
Other assets	112,023	(10,531)	101,491	(29,854)	(569)	(94)	70,975
of which: Positive market values from derivatives qualifying for hedge accounting (enforceable)	3,859	(706)	3,153	(2,461)	(565)	(94)	33
Remaining assets not subject to netting	307,869	0	307,869	0	(390)	(70)	307,409
Total assets	1,568,425	(93,692)	1,474,732	(316,003)	(58,109)	(152,782)	947,839

1Excludes real estate and other non-financial instrument collateral.

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Liabilities

	Dec 31, 2017						
				Amounts not set off on the balance sheet			
in €	Gross amounts of financial liabilities	Gross amounts set off on the balance sheet	Net amounts of financial liabilities presented on the balance sheet	Impact of Master Netting Agreements	Cash collateral	Financial instrument collateral	Net amount
Deposits	581,873	0	581,873	0	0	0	581,873
Central bank funds purchased and securities sold under repurchase agreements (enforceable)	13,318	(455)	12,863	0	0	(12,863)	0
Central bank funds purchased and securities sold under repurchase agreements (non-enforceable)	5,242	0	5,242	0	0	(4,985)	257
	6,688	0	6,688	0	0	(6,688)	0

Securities loaned (enforceable)							
Securities loaned (non-enforceable)	0	0	0	0	0	0	0
Financial liabilities at fair value through profit or loss							
Trading liabilities	72,106	(643)	71,462	0	0	0	71,462
Negative market values from derivative financial instruments (enforceable)	347,496	(17,928)	329,568	(286,720)	(25,480)	(6,124)	11,244
Negative market values from derivative financial instruments (non-enforceable)	13,158	0	13,158	0	(1,913)	(615)	10,630
Financial liabilities designated at fair value through profit or loss (enforceable)	104,594	(63,360)	41,234	(728)	0	(40,506)	0
Financial liabilities designated at fair value through profit or loss (non-enforceable)	23,214	0	23,214	0	1,111	(13,646)	10,679
Total financial liabilities at fair value through profit or loss	560,568	(81,932)	478,636	(287,448)	(26,282)	(60,891)	104,015
Other liabilities	143,514	(11,306)	132,208	(44,815)	(31)	(87)	87,275
of which: Negative market values from derivatives qualifying for hedge accounting (enforceable)	1,841	(547)	1,294	(1,162)	(31)	(87)	15
Remaining liabilities not subject to netting	189,122	0	189,122	0	0	0	189,122
Total liabilities	1,500,326	(93,692)	1,406,633	(332,263)	(26,314)	(85,514)	962,542

The column ‘Gross amounts set off on the balance sheet’ discloses the amounts offset in accordance with all the criteria described in Note 1 “Significant Accounting Policies and Critical Accounting Estimates: Offsetting Financial Instruments”.

The column ‘Impact of Master Netting Agreements’ discloses the amounts that are subject to master netting agreements but were not offset because they did not meet the net settlement/simultaneous settlement criteria; or because the rights of set off are conditional upon the default of the counterparty only. The amounts presented for other assets and other liabilities include cash margin receivables and payables respectively.

The columns ‘Cash collateral’ and ‘Financial instrument collateral’ disclose the cash and financial instrument collateral

amounts received or pledged in relation to the total amounts of assets and liabilities, including those that were not offset.

Non-enforceable master netting agreements or similar agreements refer to contracts executed in jurisdictions where the rights of set off may not be upheld under the local bankruptcy laws.

The cash collateral received against the positive market values of derivatives and the cash collateral pledged towards the negative mark-to-market values of derivatives are booked within the ‘Other liabilities’ and ‘Other assets’ balances respectively.

The Cash and Financial instrument collateral amounts disclosed reflect their fair values. The rights of set off relating to the cash and financial instrument collateral are conditional upon the default of the counterparty.

20 – Loans

For 2018, we provide information following the IFRS 9 accounting standard, while 2017 numbers are based on the IAS 39 accounting rules and are presented in the old format. Since the accounting requirements have changed significantly, numbers are not comparable. In previous years only Loans classified at amortized cost under IAS 39 were considered. Now the entire loan book is presented, including Loans classified at amortized cost, loans mandatory at fair value through profit and loss and loans at fair value through other consolidated income. For further information please refer to chapter “IFRS 9 Transition Impact Analysis” in Note 2 “Recently Adopted and New Accounting Pronouncements” to the consolidated financial statement.

The below table gives an overview of our loan exposure by industry, allocated based on the NACE code of the counterparty. NACE (Nomenclature des Activités Économiques dans la Communauté Européenne) is a standard European industry classification system. Current year table provides further breakdown on industry to increase the transparency.

Loans by industry classification

in € m.	Dec 31, 2018
Agriculture, forestry and fishing	655
Mining and quarrying	3,699
Manufacturing	30,966
Electricity, gas, steam and air conditioning supply	3,555
Water supply, sewerage, waste management and remediation activities	895
Construction	4,421
Wholesale and retail trade, repair of motor vehicles and motorcycles	21,871
Transport and storage	6,548
Accommodation and food service activities	2,094
Information and communication	5,281
Financial and insurance activities	93,886
Real estate activities	35,153
Professional, scientific and technical activities	7,020
Administrative and support service activities	7,921

Public administration and defense, compulsory social security	10,752
Education	698
Human health services and social work activities	3,618
Arts, entertainment and recreation	951
Other service activities	5,328
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	188,494
Activities of extraterritorial organizations and bodies	25
Gross loans	433,832
(Deferred expense)/unearned income	254
Loans less (deferred expense)/unearned income	433,578
Less: Allowance for loan losses	4,247
Total loans	429,331

in € m.	Dec 31, 2017
Financial intermediation	52,204
Manufacturing	27,478
of which:	
Basic metals and fabricated metal products	4,211
Electrical and optical equipment	3,386
Transport equipment	3,374
Chemicals and chemical products	3,623
Machinery and equipment	3,191
Food products	2,907
Households (excluding mortgages)	36,524
Households – mortgages	150,205
Public sector	13,711
Wholesale and retail trade	19,252
Commercial real estate activities	29,247
Lease financing	384
Fund management activities	18,708
Other	58,167
of which:	
Renting of machinery and other business activities	26,559
Transport, storage and communication	9,243
Mining and quarrying of energy-producing materials	2,553
Electricity, gas and water supply	3,552
Gross loans	405,879
(Deferred expense)/unearned income	259
Loans less (deferred expense)/unearned income	405,621

Less: Allowance for loan losses	3,921
Total loans	401,699

21 – Allowance for Credit Losses

The allowance for credit losses consists of an allowance for loan losses and an allowance for off-balance sheet positions.

Development of allowance for credit losses for financial assets at amortized cost

	Dec 31, 2018				
	Allowance for Credit Losses3				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Balance, beginning of year	462	494	3,638	3	4,596
Movements in financial assets including new business	(132)	215	440	(17)	507
Transfers due to changes in creditworthiness	199	(137)	(62)	N/M	0
Changes due to modifications that did not result in derecognition	N/M	N/M	N/M	N/M	N/M
Changes in models	0	0	0	0	0
Financial assets that have been derecognized during the period[2]	(6)	(17)	(972)	0	(995)
Recovery of written off amounts	0	0	172	0	172
Foreign exchange and other changes	(14)	(54)	30	17	(21)
Balance, end of reporting period	509	501	3,247	3	4,259
Provision for Credit Losses excluding country risk1	66	78	379	(17)	507

1Movements in financial assets including new business, transfers due to changes in creditworthiness and changes in models add up to Provision for Credit Losses excluding country risk.

[2] This position includes charge offs of allowance for credit losses.

[3] Allowance for credit losses does not include allowance for country risk amounting to € 6 million as of December 31, 2018.

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Allowance for credit losses for financial assets at fair value through OCI1

	Dec 31, 2018				
	Allowance for Credit Losses				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Fair Value through OCI	11	1	0	(0)	13

1Allowance for credit losses against financial assets at fair value through OCI were almost unchanged at very low levels (€ 12 million at the beginning of year 2018 and € 13 million as of December 31, 2018, respectively). Due to

immateriality, we do not provide any details on the year-over-year development.

Development of allowance for credit losses for Off-balance sheet positions

	Dec 31, 2018				
	Allowance for Credit Losses2				
in € m.	Stage 1	Stage 2	Stage 3	Stage 3 POCI	Total
Balance, beginning of year	117	36	119	0	272
Movements including new business	(0)	31	(13)	0	18
Transfers due to changes in creditworthiness	2	(0)	(2)	N/M	0
Changes in models	N/M	N/M	N/M	N/M	N/M
Foreign exchange and other changes	14	6	(20)	0	(0)
Balance, end of reporting period	132	73	84	0	289
Provision for Credit Losses excluding country risk1	1	31	(15)	0	18

1The above table breaks down the impact on provision for credit losses from movements in financial assets including new business, transfers due to changes in creditworthiness and changes in models.

2Allowance for credit losses does not include allowance for country risk amounting to € 5 million as of December 31, 2018.

Breakdown of the movements in the Group's allowance for loan losses (as previously reported under IAS 39)

	2017			2016		
in € m.	Individually assessed	Collectively assessed	Total	Individually assessed	Collectively assessed	Total
Allowance, beginning of year	2,071	2,475	4,546	2,252	2,776	5,028
Provision for loan losses	299	253	552	743	604	1,347
Net charge-offs:	(487)	(532)	(1,019)	(894)	(870)	(1,764)
Charge-offs	(541)	(605)	(1,146)	(979)	(972)	(1,951)
Recoveries	54	73	127	85	101	187
Other Changes	(117)	(41)	(158)	(30)	(35)	(65)
Allowance, end of year	1,766	2,155	3,921	2,071	2,475	4,546

Activity in the Group's allowance for off-balance sheet positions (contingent liabilities and lending commitments), (as previously reported under IAS 39)

	2017			2016		
in € m.	Individually assessed	Collectively assessed	Total	Individually assessed	Collectively assessed	Total
Allowance, beginning of year	162	183	346	144	168	312
	(23)	(4)	(27)	24	12	36

Provision for off-balance sheet positions						
Usage	0	0	0	0	0	0
Other changes	(18)	(16)	(34)	(5)	3	(2)
Allowance, end of year	122	163	285	162	183	346

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22 – Transfer of Financial Assets, Assets Pledged and Received as Collateral

The Group enters into transactions in which it transfers financial assets held on the balance sheet and as a result may either be eligible to derecognize the transferred asset in its entirety or must continue to recognize the transferred asset to the extent of any continuing involvement, depending on certain criteria. These criteria are discussed in Note 1 “Significant Accounting Policies and Critical Accounting Estimates”.

Where financial assets are not eligible to be derecognized, the transfers are viewed as secured financing transactions, with any consideration received resulting in a corresponding liability. The Group is not entitled to use these financial assets for any other purposes. The most common transactions of this nature entered into by the Group are repurchase agreements, securities lending agreements and total return swaps, in which the Group retains substantially all of the associated credit, equity price, interest rate and foreign exchange risks and rewards associated with the assets as well as the associated income streams.

Information on asset types and associated transactions that did not qualify for derecognition

in € m.	Dec 31, 2018	Dec 31, 2017[1]
Carrying amount of transferred assets		
Trading securities not derecognized due to the following transactions:		
Repurchase agreements	33,980	43,025
Securities lending agreements	41,621	58,076
Total return swaps	1,835	2,390
Other	6,589	12,661
Total trading securities	84,025	116,153
Other trading assets	69	71
Non-trading financial assets mandatory at fair value through profit or loss	1,289	N/A
Financial assets available for sale	N/A	711
Financial assets at fair value through other comprehensive income	4,286	N/A
Loans at amortized cost2	408	131
Total	90,076	117,066
Carrying amount of associated liabilities	46,218	51,937

1Prior year numbers have been restated following reassessments of certain repurchase transactions.

2Loans where the associated liability is recourse only to the transferred assets had a carrying value and fair value of € 0 million at December 31, 2018 and € 108 million at December 31, 2017. The associated liabilities had the same carrying value and fair value which resulted in a net position of 0.

Carrying value of assets transferred in which the Group still accounts for the asset to the extent of its continuing involvement

in € m.	Dec 31, 2018	Dec 31, 2017
Carrying amount of the original assets transferred		
Trading securities	759	0
Financial assets designated at fair value through profit or loss	306	291
Non-trading financial assets mandatory at fair value through profit or loss	386	N/A
Financial assets available for sale	N/A	386
Carrying amount of the assets continued to be recognized		
Trading securities	35	0
Financial assets designated at fair value through profit or loss	15	15
Non-trading financial assets mandatory at fair value through profit or loss	43	N/A
Financial assets available for sale	N/A	96
Carrying amount of associated liabilities	117	54

The Group could retain some exposure to the future performance of a transferred asset either through new or existing contractual rights and obligations and still be eligible to derecognize the asset. This ongoing involvement will be recognized as a new instrument which may be different from the original financial asset that was transferred. Typical transactions include retaining senior notes of non-consolidated securitizations to which originated loans have been transferred; financing arrangements with structured entities to which the Group has sold a portfolio of assets; or sales of assets with credit-contingent swaps. The Group's exposure to such transactions is not considered to be significant as any substantial retention of risks associated with the transferred asset will commonly result in an initial failure to derecognize. Transactions not considered to result in an ongoing involvement include normal warranties on fraudulent activities that could invalidate a transfer in the event of legal action, qualifying pass-through arrangements and standard trustee or administrative fees that are not linked to performance.

The impact on the Group's Balance Sheet of on-going involvement associated with transferred assets derecognized in full

	Dec 31,2018			Dec 31,2017		
in € m.	Carrying value	Fair value	Maximum Exposure to Loss[1]	Carrying value	Fair value	Maximum Exposure to Loss[1]
Loans at amortized cost						
Securitization notes	372	372	372	270	270	270
Other	14	14	14	13	13	13
Total Loans at amortized cost	385	385	385	284	284	284
Financial assets held at Fair Value through the P&L						
Securitization notes	22	22	22	0	0	0
Non-standard Interest Rate, cross-currency or inflation-linked swap	5	5	5	36	36	36

Total Financial assets held at Fair Value through the P&L	27	27	27	36	36	36
Financial assets at fair value through other comprehensive income:						
Securitization notes	112	112	112	0	0	0
Other	0	0	0	0	0	0
Total Financial assets at fair value through other comprehensive income	112	112	112	0	0	0
Total financial assets representing on-going involvement	524	524	524	320	320	320
Financial liabilities held at Fair Value through P&L						
Non-standard Interest Rate, cross-currency or inflation-linked swap	61	61	0	67	67	0
Total financial liabilities representing on-going involvement	61	61	0	67	67	0

1The maximum exposure to loss is defined as the carrying value plus the notional value of any undrawn loan commitments not recognized as liabilities.

The impact on the Group's Statement of Income of on-going involvement associated with transferred assets derecognized in full

	Dec 31,2018			Dec 31,2017		
in € m.	Year-to-date P&L	Cumulative P&L	Gain/(loss) on disposal	Year-to-date P&L	Cumulative P&L	Gain/(loss) on disposal
Securitization notes	9	13	11	3	3	791
Non-standard Interest Rate, cross-currency or inflation-linked swap	21	268	0	46	510	0
Net gains/(losses) recognized from on-going involvement in derecognized assets	30	281	11	49	513	79

1Typically, sales of assets into securitization vehicles were of assets that were classified as Fair Value through P&L, therefore any gain or loss on disposal is immaterial.

The Group pledges assets primarily as collateral against secured funding and for repurchase agreements, securities borrowing agreements as well as other borrowing arrangements and for margining purposes on OTC derivative liabilities. Pledges are generally conducted under terms that are usual and customary for standard securitized borrowing contracts and other transactions described.

Carrying value of the Group's assets pledged as collateral for liabilities or contingent liabilities1

in € m.	Dec 31, 2018	Dec 31, 2017[2]
Financial assets at fair value through profit or loss	41,816	54,134

Financial assets at fair value through other comprehensive income	4,274	N/A
Financial assets available for sale	N/A	6,469
Loans	75,641	71,404
Other	1,364	417
Total	123,095	132,423

[1] Excludes assets pledged as collateral from transactions that do not result in liabilities or contingent liabilities.

[2] Prior period results have been restated.

Total assets pledged to creditors available for sale or repledge1

in € m.	Dec 31, 2018	Dec 31, 2017[2]
Financial assets at fair value through profit or loss	45,640	71,278
Financial assets at fair value through other comprehensive income	3,201	N/A
Financial assets available for sale	N/A	0
Loans	11	0
Total	48,851	71,278

[1] Includes assets pledged as collateral from transactions that do not result in liabilities or contingent liabilities.

[2] Prior period results have been restated.

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The Group receives collateral primarily in reverse repurchase agreements, securities lending agreements, derivatives transactions, customer margin loans and other transactions. These transactions are generally conducted under terms that are usual and customary for standard secured lending activities and the other transactions described. The Group, as the secured party, has the right to sell or re-pledge such collateral, subject to the Group returning equivalent securities upon completion of the transaction. This right is used primarily to cover short sales, securities loaned and securities sold under repurchase agreements.

Fair Value of collateral received

in € m.	Dec 31, 2018	Dec 31, 2017[1]
Securities and other financial assets accepted as collateral	292,474	366,312
thereof:		
Collateral sold or repledged	240,365	308,970

[1] Prior period results have been restated.

23 – Property and Equipment

in € m.	Owner occupied properties	Furniture and equipment	Leasehold improvements	Construction-in-progress	Total
Cost of acquisition:					

Balance as of January 1, 2017	1,516	2,406	2,820	240	6,982
Changes in the group of consolidated companies	0	(8)	(1)	0	(9)
Additions	12	165	117	191	485
Transfers	18	75	191	(288)	(4)
Reclassifications (to)/from “held for sale”	(61)	0	0	0	(61)
Disposals	96	97	291	0	484
Exchange rate changes	(3)	(67)	(92)	(4)	(166)
Balance as of December 31, 2017	1,387	2,473	2,743	139	6,743
Changes in the group of consolidated companies	0	141	(2)	0	139
Additions	11	150	155	150	465
Transfers	(8)	(4)	106	(147)	(53)
Reclassifications (to)/from “held for sale”	(478)	(30)	(27)	(2)	(538)
Disposals	134	291	144	0	569
Exchange rate changes	1	164	29	1	195
Balance as of December 31, 2018	778	2,602	2,860	142	6,382
Accumulated depreciation and impairment:					
Balance as of January 1, 2017	572	1,720	1,886	0	4,178
Changes in the group of consolidated companies	0	(8)	(1)	0	(9)
Depreciation	37	211	193	0	441
Impairment losses	15	3	2	0	19
Reversals of impairment losses	0	(1)	0	0	(1)
Transfers	1	17	(22)	0	(4)
Reclassifications (to)/from “held for sale”	(0)	0	0	0	(0)
Disposals	44	90	284	0	418
Exchange rate changes	(1)	(54)	(72)	0	(128)
Balance as of December 31, 2017	579	1,800	1,702	0	4,080
Changes in the group of consolidated companies	(0)	28	(1)	0	27
Depreciation	28	206	197	0	430
Impairment losses	3	3	3	0	9
Reversals of impairment losses	37	0	0	0	37

Transfers	(13)	48	(5)	0	30
Reclassifications (to)/from “held for sale”	(215)	(40)	(22)	0	(277)
Disposals	17	281	128	0	426
Exchange rate changes	1	99	24	0	125
Balance as of December 31, 2018	328	1,862	1,770	0	3,960
Carrying amount:					
Balance as of December 31, 2017	809	673	1,041	139	2,663
Balance as of December 31, 2018	450	740	1,090	142	2,421

Impairment losses on property and equipment are recorded within general and administrative expenses for the income statement.

The carrying value of items of property and equipment on which there is a restriction on sale was € 42 million and € 40 million as of December 31, 2018 and December 31, 2017, respectively.

Commitments for the acquisition of property and equipment were € 273 million at year-end 2018 and € 41 million at year-end 2017.

24 – Leases

The Group is lessee under lease arrangements covering property and equipment.

Finance Lease Commitments

Most of the Group’s finance lease arrangements are made under usual terms and conditions.

Net Carrying Value of Leasing Assets Held under finance leases

in € m.	Dec 31, 2018	Dec 31, 2017
Land and buildings	28	14
Furniture and equipment	0	4
Other	0	0
Net carrying value	28	18

Future Minimum Lease Payments Required under the Group’s Finance Leases

in € m.	Dec 31, 2018	Dec 31, 2017
Future minimum lease payments:		
Not later than one year	19	8
Later than one year and not later than five years	34	20
Later than five years	65	70

Total future minimum lease payments	118	98
Less: Future interest charges	91	70
Present value of finance lease commitments	27	28
Future minimum lease payments to be received	5	0
Contingent rent recognized in the income statement[1]	0	0

1The contingent rent is based on market interest rates, such as three months EURIBOR; below a certain rate the Group receives a rebate.

Operating Lease Commitments

The Group leases the majority of its offices and branches under long-term agreements. Most of the lease contracts are made under usual terms and conditions, which means they include options to extend the lease by a defined amount of time, price adjustment clauses and escalation clauses in line with general office rental market conditions. However, the lease agreements do not include any clauses that impose any restriction on the Group's ability to pay dividends, engage in debt financing transactions or enter into further lease agreements.

Future Minimum Lease Payments Required under the Group's Operating Leases

in € m.	Dec 31, 2018	Dec 31, 2017
Future minimum rental payments:		
Not later than one year	707	684
Later than one year and not later than five years	2,077	1,979
Later than five years	3,480	1,901
Total future minimum rental payments	6,264	4,564
Less: Future minimum rentals to be received	20	58
Net future minimum rental payments	6,244	4,506

As of December 31, 2018, the total future minimum rental payments included € 441 million for the Group headquarters in Frankfurt am Main that was sold and leased back on December 1, 2011. The Group entered into a 181 months leaseback arrangement for the entire facility in connection with the transaction, which also includes the option to extend the lease for an additional 5 year period up to 2031.

In 2018, the rental payments for lease and sublease agreements amounted to € 747 million. This included charges of € 769 million for minimum lease payments and € 20 million related to sublease rentals received.

25 – Goodwill and Other Intangible Assets

Goodwill

Changes in Goodwill

The changes in the carrying amount of goodwill, as well as gross amounts and accumulated impairment losses of goodwill, for the years ended December 31, 2018, and December 31, 2017, are shown below by cash-generating units ("CGU"). As of January 1, 2016, the structure of the primary CGUs had been changed as a result of the reorganization of business operations under an amended segment structure. In the second quarter of 2017 and in accordance with the

strategy announcement made on March 5, 2017, the Group's business operations were reorganized under a new divisional structure, which also reconfigured the existing Global Markets, Corporate Finance and Global Transaction Banking businesses into a single division, Corporate & Investment Bank (CIB). A review of CIB confirmed the previous assessment of two separate CGUs. Consequently, the former primary CGUs "Global Markets" and "Corporate & Investment Banking" have been grouped as "Sales & Trading" (S&T) and "Global Transaction Banking & Corporate Finance" (GTB & CF). Please also refer to Note 4, "Business Segments and Related Information" for more information regarding changes in the presentation of segment disclosures.

Goodwill allocated to cash-generating units

in € m.	Sales & Trading	Global Transaction Banking & Corporate Finance	Private and Commercial Clients	Postbank	Wealth Manage-ment	Asset Manage-ment	Others	Total
Balance as of January 1, 2017	0	532	0	0	564	3,006	1	4,103
Goodwill acquired during the year	0	0	0	0	0	0	0	0
Purchase accounting adjustments	0	0	0	0	0	0	0	0
Transfers	6	(6)	0	0	0	0	0	0
Reclassification from (to) "held for sale"	0	(3)	0	0	0	0	0	(3)
Goodwill related to dispositions without being classified as "held for sale"	0	0	0	0	0	(6)	0	(6)
Impairment losses1	(6)	0	0	0	0	0	0	(6)
Exchange rate changes/other	0	(52)	0	0	(22)	(231)	0	(306)
Balance as of December 31, 2017	0	471	0	0	541	2,768	1	3,782
Gross amount of goodwill	2,780	1,485	1,077	2,086	541	3,232	1	11,203
Accumulated impairment losses	(2,780)	(1,014)	(1,077)	(2,086)	0	(464)	0	(7,422)
Balance as of January 1, 2018	0	471	0	0	541	2,768	1	3,782
Goodwill acquired during the year	0	0	0	0	0	0	0	0
Purchase accounting adjustments	0	0	0	0	0	0	0	0

Transfers	0	0	0	0	0	0	0	0
Reclassification from (to) “held for sale”	0	0	0	0	(4)	0	0	(4)
Goodwill related to dispositions without being classified as “held for sale”	0	0	0	0	0	0	0	0
Impairment losses1	0	0	0	0	0	0	0	0
Exchange rate changes/other	0	18	0	0	5	74	0	98
Balance as of December 31, 2018	0	489	0	0	543	2,843	1	3,876
Gross amount of goodwill	2,889	1,539	1,076	2,086	543	3,314	1	11,449
Accumulated impairment losses	(2,889)	(1,051)	(1,076)	(2,086)	0	(471)	0	(7,573)

1Impairment losses of goodwill are recorded as impairment of goodwill and other intangible assets in the income statement.

In addition to the primary CGUs, the segment CIB includes goodwill resulting from the acquisition of a nonintegrated investment which is not allocated to the respective segment’ primary CGU. Such goodwill is summarized as “Others” in the table above.

Changes in goodwill for both 2017 and 2018 mainly reflected exchange rate fluctuations, predominantly related to the translation of goodwill held in USD.

In 2016, changes in goodwill mainly included impairments of € 785 million in Sales & Trading (S&T) (€ 285 million) and Asset Management (€ 500 million). The impairment in S&T was the result of a transfer of certain businesses from Asset Management to S&T in the second quarter 2016. The transfer resulted in the reassignment of € 285 million of goodwill from Asset Management based on relative values in accordance with IFRS. The subsequent impairment review of S&T led to an impairment loss of € 285 million of the reassigned goodwill. The goodwill impairment in Asset Management was recorded in the fourth quarter 2016 in relation to the sale of the Abbey Life business and the formation of a disposal group held for sale. Immediately before its initial classification as a disposal group, the carrying amounts of all assets and liabilities included in the Abbey Life disposal group were measured and recognized in accordance with applicable IFRS. With the sale of Abbey Life to close for an amount lower than its carrying amount, the proportion of Asset Management CGU goodwill attributable to the Abbey Life business was not expected to be recovered upon sale of the disposal group. Accordingly, the allocated goodwill amount of € 500 million as well as other intangible assets (value of business acquired, VOBA) of € 515 million included in the disposal group were considered impaired and written-off through Impairment of goodwill and other intangible assets.

Goodwill Impairment Test

For the purposes of impairment testing, goodwill acquired in a business combination is allocated to CGUs. On the basis as described in Note 1 “Significant Accounting Policies and Critical Accounting Estimates”, the Group’s primary CGUs are as outlined above. “Other” goodwill is tested individually for impairment on the level of each of the

nonintegrated investments. Goodwill is tested for impairment annually in the fourth quarter by comparing the recoverable amount of each goodwill-carrying CGU with its carrying amount. In addition, in accordance with IAS 36, the Group tests goodwill whenever a triggering event is identified. The recoverable amount is the higher of a CGU's fair value less costs of disposal and its value in use.

The annual goodwill impairment tests conducted in 2018 and 2017 did not result in an impairment loss on the Group's primary goodwill-carrying CGUs as the recoverable amounts of these CGUs were higher than the respective carrying amounts.

A review of the Group's strategy or certain political or global risks for the banking industry such as a return of the European sovereign debt crisis, uncertainties regarding the implementation of already adopted regulation and the introduction of legislation that is already under discussion as well as a slowdown of GDP growth may negatively impact the performance forecasts of certain of the Group's CGUs and, thus, could result in an impairment of goodwill in the future.

Carrying Amount

The carrying amount of a primary CGU is derived using a capital allocation model based on the Shareholders' Equity Allocation Framework of the Group (please refer to Note 4, "Business Segments and Related Information" for more details). The allocation uses the Group's total equity at the date of valuation, including Additional Tier 1 Notes ("AT1 Notes"), which constitute unsecured and subordinated notes of Deutsche Bank and which are classified as Additional equity components in accordance with IFRS. Total equity is adjusted for specific effects related to nonintegrated investments, which are tested separately for impairment as outlined above, and for an add-on adjustment for goodwill attributable to noncontrolling interests.

Recoverable Amount

The Group determines the recoverable amounts of its primary CGUs on the basis of the higher of value in use and fair value less costs of disposal (Level 3 of the fair value hierarchy). It employs a discounted cash flow (DCF) model, which reflects the specifics of the banking business and its regulatory environment. The model calculates the present value of the estimated future earnings that are distributable to shareholders after fulfilling the respective regulatory capital requirements. The recoverable amounts also include the fair value of the AT1 Notes, allocated to the primary CGUs consistent to their treatment in the carrying amount.

The DCF model uses earnings projections and respective capitalization assumptions based on five-year financial plans as well as longer term expectations on the impact of regulatory developments, which are discounted to their present value. Estimating future earnings and capital requirements involves judgment and the consideration of past and current performances as well as expected developments in the respective markets, and in the overall macroeconomic and regulatory environments. Earnings projections beyond the initial five-year period are, where applicable, adjusted to derive a sustainable level and the cash flow to equity is assumed to increase by or converge towards a constant long-term growth rate of up to 3.1 % (2017: 3.2 %). This is based on projected revenue forecasts of the CGUs as well as expectations for the development of gross domestic product and inflation, and is captured in the terminal value.

Key Assumptions and Sensitivities

Key Assumptions: The DCF value of a CGU is sensitive to the earnings projections, to the discount rate (cost of equity) applied and, to a much lesser extent, to the long-term growth rate. The discount rates applied have been determined based on the capital asset pricing model and comprise a risk-free interest rate, a market risk premium and a factor covering the systematic market risk (beta factor). The values for the risk-free interest rate, the market risk

premium and the beta factors are determined using external sources of information. CGU-specific beta factors are determined based on a respective group of peer companies. Variations in all of these components might impact the discount rates.

Primary goodwill-carrying cash-generating units

	Discount rate (post-tax)	
	2018	2017
Global Transaction Banking & Corporate Finance	8.8 %	8.8 %
Wealth Management	9.0 %	9.1 %
Asset Management	9.7 %	10.0 %

Management determined the values for the key assumptions in the following table based on a combination of internal and external analysis. Estimates for efficiency and the cost reduction program are based on progress made to date and scheduled future projects and initiatives.

Primary goodwill-carrying cash-generating unit	Description of key assumptions	Uncertainty associated with key assumptions and potential events/circumstances that could have a negative effect
Wealth Management	Strategy continuously monitored to reflect key market trends and developments including global wealth creation and concentration, digitalization, aging population, transfer to next generation, product trends (e.g., ESG) as well as competitor activity and benchmarking Growth plans supported by continuous	Major industry threats, i.e., market and exchange rate volatility, significant technological developments, geopolitical uncertainty Investors holding assets out of the markets, a retreat to cash or simpler, lower fee products, and reduced trading activity Business/execution risks, i.e., under achievement of net new money targets from market uncertainty, franchise instability, adverse developments, loss of high quality relationship managers Cost savings following efficiency gains and expected IT/ process improvements not realized to the extent planned

strengthening of our risk and control functions

Multi-year organic investment program to expand our front-office staff focused in key growth markets where we have a distinctive and attractive client offering

Continued focus on expanding business with high net worth and ultra-high net worth clients via a more segmented approach

Building out of global investment advisory solutions as well as increasing revenues from collaboration between divisions (esp. CIB)

Continued deployment of balance sheet for WM

	lending proposition	
	Targeted investments in enhancing client experience through new digital offering, efficient on-boarding, broad product offering as well as approaching clients with a more nuanced client service model	
	Benefit from cost savings coming through re-organization of our product and coverage teams into three regions (Americas, Europe, Emerging Markets)	
Asset Management	Deliver strong investment product performance	Challenging market environment and volatility unfavorable to our investment strategies
		Unfavorable margin development and adverse competition levels in key markets and products beyond expected levels
	Expand product suite in growth areas (e.g. alternatives, multi assets, passive, ESG investment schemes)	Business/execution risks, e.g., under achievement of net flow targets from market uncertainty, loss of high quality client facing employees, unfavorable investment performance, lower than expected efficiency gains
		Uncertainty around regulation and its potential implications not yet anticipated

while consolidating non-core strategies

Consistent net flows leveraging market share leadership in Germany and the rest of Europe, while expanding coverage in Asia Pacific and focused growth in the Americas

Diversification of intermediary coverage towards high growth channels and deployment of digital solutions to serve new channels

Further efficiency through improved core operating processes, platform optimization and product rationalization

Anticipation of further headwinds in the asset management

	industry as a result of the changing regulatory environment	
Global Transaction Banking & Corporate Finance	GTB	Generic
	Expectation to benefit from positive interest rate development in EU and the U.S. starting 2019 (largely U.S.), with increasing impacts in outer plan years	Macro environment remains challenging, particularly in Europe
		Risk from the exit process of the U.K. from the European Union
		Potential adverse macroeconomic and geopolitical developments impacting trade volumes, interest rates and foreign exchange movements
		GTB
		Further potential margin compression
		DB funding costs remaining higher
		Potential DB driven resource constraints limiting growth
	Invest in technology transformation of core architecture (scale & client experience; security & controls) and build liquidity / collateral / risk management platforms	Compression of CTB budgets
		CF
		Lower than expected Corporate Finance fee pool development
		Deterioration of global credit
	Build-out product enhancements and offering; improve client wallet penetration internationally	
	Liquidity and deposit initiatives, specifically in	

Cash management

Continued Trade flow momentum and growth in structured trade book

Improve client coverage across products (aligned to overall strategy of the newly created Institutional & Treasury coverage)

CF

Plan assumes slightly lower global revenue pool in 2019 compared to 2018, then modest increases in outer years

DB expected to gain back market share across products post implementation of strategic updates in 2018

Build on momentum in market share growth in

2018 in leveraged finance

IG refinancing opportunity (maturity walls in 2019) with outstanding IG debt levels still high

Opportunities to regain / win market share in:

Cross border business, where DB has been historically strong, but lost momentum in 2018

Financial sponsors (Global capital markets), where DB gained share in 2018

Sensitivities : In order to test the resilience of the recoverable amount, key assumptions used in the DCF model (for example, the discount rate and the earnings projections) are sensitized. Management believes that no reasonable possible changes in key assumptions could cause an impairment loss.

Other Intangible Assets

Changes of other intangible assets by asset classes for the years ended December 31, 2018, and December 31, 2017

	Purchased intangible assets	Internally generated intangible	Total other intangible

								assets	assets
	Unamortized			Amortized				Amortized	
in € m.	Retail investment management agreements	Other	Total unamortized purchased intangible assets	Customer-related intangible assets	Contract-based intangible assets	Software and other	Total amortized purchased intangible assets	Software	
Cost of acquisition/ manufacture:									
Balance as of January 1, 2017	1,094	440	1,534	1,431	70	871	2,372	6,235	10,140
Additions	0	0	0	15	0	48	63	1,360	1,423
Changes in the group of consolidated companies	0	0	0	0	0	(35)	(35)	(171)	(206)
Disposals	0	0	0	0	0	21	21	121	142
Reclassifications from (to) “held for sale”	0	0	0	(6)	0	0	(6)	0	(6)
Transfers	0	(0)	(0)	1	0	50	51	(42)	9
Exchange rate changes	(131)	(1)	(132)	(77)	(0)	(12)	(89)	(237)	(457)
Balance as of December 31, 2017	963	440	1,402	1,364	70	901	2,335	7,024	10,761
Additions	0	0	0	12	0	44	56	1,242	1,298
Changes in the group of consolidated companies	0	0	0	0	0	(0)	(0)	0	(0)
Disposals	0	0	0	0	0	126	126	725	851
Reclassifications from (to) “held for sale”	0	0	0	0	0	(7)	(7)	(20)	(27)
Transfers	0	2	2	(3)	0	(213)	(215)	190	(24)
Exchange rate changes	48	0	48	10	0	5	15	102	165
Balance as of December 31, 2018	1,010	441	1,451	1,384	70	603	2,058	7,814	11,322
Accumulated amortization and impairment:									
	276	424	700	1,363	65	715	2,143	2,418	5,261

Balance as of January 1, 2017									
Amortization for the year	0	0	0	34	4	27	65	870	9351
Changes in the group of consolidated companies	0	0	0	0	0	(35)	(35)	(171)	(206)
Disposals	0	0	0	0	0	19	19	81	99
Reclassifications from (to) “held for sale”	0	0	0	(4)	0	0	(4)	0	(4)
Impairment losses	0	15	15	0	0	0	0	42	572
Reversals of impairment losses	0	0	0	0	0	0	0	0	0
Transfers	0	0	0	0	0	41	41	(35)	6
Exchange rate changes	(33)	(0)	(33)	(72)	(0)	(12)	(84)	(129)	(246)
Balance as of December 31, 2017	243	439	682	1,321	69	718	2,108	2,914	5,704
Amortization for the year	0	0	0	21	1	40	61	1,034	1,0953
Changes in the group of consolidated companies	0	0	0	0	0	(0)	(0)	0	(0)
Disposals	0	0	0	0	0	125	125	724	850
Reclassifications from (to) “held for sale”	0	0	0	0	0	(7)	(7)	(20)	(27)
Impairment losses	0	0	0	0	0	0	0	42	424
Reversals of impairment losses	0	0	0	0	0	0	0	0	0
Transfers	0	0	0	6	0	(136)	(129)	139	10
Exchange rate changes	12	0	12	10	0	5	14	57	83
Balance as of December 31, 2018	255	439	694	1,358	70	494	1,922	3,442	6,057
Carrying amount:									

As of December 31, 2017	719	1	720	43	1	183	227	4,110	5,057
As of December 31, 2018	755	2	757	26	0	109	136	4,372	5,265

1The € 935 million were included in general and administrative expenses.

2Of which € 42 million were related to the impairment of self-developed software, recorded in general and administrative expenses, and € 15 million referring to the impairment of a non-amortizing trade-mark intangible asset which is included under impairment of goodwill and other intangible asset.

3The € 1.1 billion were included in general and administrative expenses.

4The € 42 million were related to the impairment of self-developed software, recorded in general and administrative expenses.

Amortizing Intangible Assets

In 2018, amortizing other intangible assets increased by a net € 171 million. This was in particular driven by additions to internally generated intangible assets of € 1.2 billion resulting from the capitalization of expenses incurred in conjunction with the Group's development of own-used software. Offsetting were amortization expenses of € 1.1 billion, mostly for the scheduled consumption of capitalized software (€ 1.1 billion). The reassessment of current platform software as well as software under construction led to the impairment of self-developed software (€ 42 million). Furthermore, the weakening of the Euro against major currencies accounted for positive exchange rate changes of € 82 million increasing the net book value of amortizing intangible assets.

In 2017, amortizing other intangible assets increased by a net € 291 million. This was mainly driven by additions to internally generated intangible assets of € 1.4 billion, offset by amortization expenses of € 935 million, in particular for the scheduled consumption of capitalized software (€ 897 million). The reassessment of current platform software as well as software under construction led to the impairment of self-developed software (€ 42 million). Furthermore, the strengthening of the Euro accounted for negative exchange rate changes of € 113 million reducing the net book value of amortizing intangible assets.

In 2016, amortizing other intangible assets decreased by a net € 327 million. Main components of this development included increases due to additions to internally generated intangible assets of € 1.5 billion, which represent the capitalization of expenses incurred in conjunction with the Group's development of own-used software. These were offset by amortization expenses of € 815 million, mostly related to the scheduled asset consumption of self-developed software (€ 679 million), and impairment charges of € 580 million, mainly reflecting the write-off of the value of business acquired (VOBA; € 515 million) as a consequence of the Abbey Life disposal (Asset Management). Furthermore, the reassessment of current platform software as well as software under construction, led to the writedown of self-developed software (€ 60 million). In advance of the sale of the NCOU legacy investment in Maher Terminals' Port Elizabeth operation in the fourth quarter 2016, its reclassification to the held-for-sale category in the third quarter 2016 had led to a net reduction of € 497 million in contract-based and trade name other intangible assets.

Other intangible assets with finite useful lives are generally amortized over their useful lives based on the straight-line method.

Useful lives of other amortized intangible assets by asset class

	Useful lives in years
Internally generated intangible assets:	
Software	up to 10
Purchased intangible assets:	
Customer-related intangible assets	up to 20
Contract-based intangible assets	up to 8
Other	up to 80

Unamortized Intangible Assets

Within this asset class, the Group recognizes certain contract-based and marketing-related intangible assets, which are deemed to have an indefinite useful life.

In particular, the asset class comprises the below detailed investment management agreements related to retail mutual funds and certain trademarks. Due to the specific nature of these intangible assets, market prices are ordinarily not observable and, therefore, the Group values such assets based on the income approach, using a post-tax DCF-methodology.

Retail investment management agreements: These assets, amounting to € 755 million, relate to the Group's U.S. retail mutual fund business and are allocated to the Asset Management CGU. Retail investment management agreements are contracts that give DWS Group investments the exclusive right to manage a variety of mutual funds for a specified period. Since these contracts are easily renewable, the cost of renewal is minimal, and they have a long history of renewal, these agreements are not expected to have a foreseeable limit on the contract period. Therefore, the rights to manage the associated assets under management are expected to generate cash flows for an indefinite period of time. This intangible asset was recorded at fair value based upon a valuation provided by a third party at the date of acquisition of Zurich Scudder Investments, Inc. in 2002.

The recoverable amount of the asset of € 755 million (2017: € 719 million) was calculated as fair value less costs of disposal using the multi-period excess earnings method and the fair value measurement was categorized as Level 3 in the fair value hierarchy. The key assumptions in determining the fair value less costs of disposal include the asset mix, the flows forecast, the effective fee rate and discount rate as well as the terminal value growth rate. The discount rates (cost of equity) applied in the calculation were 10.0 % in 2018 and 11.0 % in 2017. The terminal value growth rate applied for 2018 is up to 4.0 % compared to 4.0 % in 2017. The reviews of the valuation for the years 2018 and 2017 neither resulted in any impairment nor a reversal of prior impairments.

Trademarks: The other unamortized intangible assets had included the Postbank (allocated to CGU Postbank) and the Sal. Oppenheim (allocated to CGU WM) trademarks, which were both acquired in 2010. The Postbank trademark was initially recognized in 2010 at € 382 million. In finalizing the purchase price allocation in 2011, the fair value of the Postbank trademark increased to € 410 million. The Sal. Oppenheim trademark was recognized at € 27 million. Since both trademarks were expected to generate cash flows for an indefinite period of time, they were classified as unamortized intangible assets. Both trademarks were recorded at fair value at the acquisition date, based on third party valuations. The recoverable amounts were calculated as the fair value less costs of disposal of the trademarks based on the income approach using the relief-from-royalty method. Reflecting the change in strategic intent and the expected deconsolidation of Postbank, the Postbank trademark (€ 410 million) was fully written off in the third quarter 2015.

Following a review of the valuation model for the Sal. Oppenheim trademark, a write-down of € 6 million was recorded in the fourth quarter 2015. The discontinuation of its use outside the German market led to a further write-down of € 6 million recorded in the fourth quarter 2016. As the Group had announced on October 26, 2017 its intention to integrate the Sal. Oppenheim franchise into Deutsche Bank during 2018 and to no longer maintain the Sal. Oppenheim brand, the book value of the trademark (€ 15 million) was considered impaired and fully written off in the fourth quarter 2017.

26 – Non-Current Assets and Disposal Groups Held for Sale

Within the balance sheet, non-current assets and disposal groups held for sale are included in other assets and other liabilities.

in € m.	Dec 31, 2018	Dec 31, 2017
Cash, due and deposits with banks, Central bank funds sold and securities purchased under resale agreements	8	0
Financial assets at fair value through profit or loss	3	0
Financial assets available for sale	0	4
Loans	2,564	0
Property and equipment	62	15
Other assets	42	26
Total assets classified as held for sale	2,679	45
Deposits, Central bank funds purchased and securities sold under resale agreements	874	0
Financial liabilities at fair value through profit or loss	4	0
Long-term debt	0	0
Other liabilities	364	16
Total liabilities classified as held for sale	1,242	16

As of December 31, 2018 and December 31, 2017, no unrealized gains (losses) relating to non-current assets classified as held for sale were recognized directly in accumulated other comprehensive income (loss) (net of tax).

Sale of Portuguese Private & Commercial Bank business

On March 27, 2018, the Group announced that it has entered into an agreement to sell its local Private & Commercial Bank (PCB) business in Portugal to ABANCA Corporación Bancaria S.A. (“ABANCA”). Accordingly and at the end of the first quarter 2018, the business was classified as a disposal group held for sale. The valuation of the unit resulted in the recognition of a pretax loss of € (53) million which was recorded in other income (€ (40) million) and general and administrative expense (€ (13) million) of PCB in the first quarter 2018. With the transaction, Deutsche Bank continues to execute its strategy to sharpen its focus and reduce complexity. The transaction remains subject to regulatory approvals and other conditions. The parties are aiming to close the transaction in the first half of 2019.

Disposal of Polish Private & Commercial Bank business

Following the announcement made on December 14, 2017 that Deutsche Bank had entered into an agreement to sell its Polish Private & Commercial Banking ("PCB") business from Deutsche Bank Polska S.A. ("DB Polska"), excluding its foreign currency denominated retail mortgage portfolio, together with DB Securities S.A., to Santander Bank Polska S.A. ("Santander Bank Polska", former Bank Zachodni WBK S.A.), the Group obtained all material outstanding regulatory approvals on July 17, 2018 to proceed with the designated transaction. Accordingly, in the third quarter 2018 the respective business was classified as a disposal group held for sale. Before its classification as a disposal group held for sale, the Group had revalued the designated disposal unit and recorded a pre-tax loss of € (157) million included in PCB's other income of the fourth quarter 2017. Updating the revaluation of the unit prior to its disposal in 2018 led to additional net year-to-date pretax charges of € (17) million recorded in PCB's net revenues for 2018.

The sale is in line with the Group's effort to continue to sharpen its focus and reduce complexity. Santander Bank Polska is part of the Santander Group, with Banco Santander S.A. being its parent company. The transaction was subject to approvals of the Polish FSA, other regulatory approvals, corporate consents and other conditions and closed in the fourth quarter 2018.

At closing of the transaction, the declaration of backing issued by Deutsche Bank AG in favor of DB Polska was terminated with regard to the liabilities included in the divested business. The declaration of backing issued in favor of DB Polska continues for the remaining business.

Disposals in 2017

Division	Disposal	Financial impact1	Date of the disposal
Corporate & Investment Bank	On June 5, 2017, the Group announced the completion of the sale of its Argentine subsidiary Deutsche Bank S.A. to Banco Comafi S.A. With outstanding substantial regulatory approvals received in May 2017, the entity had been classified as a disposal group held for sale prior to its disposal in June 2017.	The disposal resulted in a pre-tax loss on sale of € 190 million, including the realization of a currency translation adjustment, which was recorded in 2017 and mainly included in C&A.	Second quarter 2017
Asset Management	In the fourth quarter 2016, the Group had classified its fund administration and custody business of Sal. Oppenheim Luxembourg as a disposal group held for sale. The transaction was subject to customary closing conditions and regulatory approvals and was completed on December 1, 2017.	Up until its disposal, the revaluation of the unit resulted in an additional impairment loss of € 5 milion recorded in Other income of 2017.	Fourth quarter 2017

1Impairment losses and reversals of impairment losses are included in Other income.

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27 – Other Assets and Other Liabilities

in € m.	Dec 31, 2018	Dec 31, 2017
Other assets:		
Brokerage and securities related receivables		

Cash/margin receivables	42,827	46,519
Receivables from prime brokerage	3	12,638
Pending securities transactions past settlement date	3,654	3,929
Receivables from unsettled regular way trades	20,191	19,930
Total brokerage and securities related receivables	66,675	83,015
Debt Securities held to collect	5,184	N/A
Accrued interest receivable	2,536	2,374
Assets held for sale	2,679	45
Other	16,371	16,057
Total other assets	93,444	101,491

in € m.	Dec 31, 2018	Dec 31, 2017
Other liabilities:		
Brokerage and securities related payables		
Cash/margin payables	55,475	58,865
Payables from prime brokerage	15,495	25,042
Pending securities transactions past settlement date	2,228	2,562
Payables from unsettled regular way trades	17,510	20,274
Total brokerage and securities related payables	90,708	106,742
Accrued interest payable	2,486	2,623
Liabilities held for sale	1,242	16
Other	23,078	22,827
Total other liabilities	117,513	132,208

For further details on the assets and liabilities held for sale, please refer to Note 26 “Non-Current Assets and Disposal Groups Held for Sale”.

28 – Deposits

in € m.	Dec 31, 2018	Dec 31, 2017
Noninterest-bearing demand deposits	221,746	226,339
Interest-bearing deposits		
Demand deposits	126,280	133,280
Time deposits	130,039	133,952
Savings deposits	86,340	88,303
Total interest-bearing deposits	342,659	355,534
Total deposits	564,405	581,873

29 – Provisions

Movements by Class of Provisions

in € m.	Operational Risk	Civil Litigation	Regulatory Enforcement	Re-structuring	Other1	Total2
Balance as of January 1, 2017	309	2,014	5,607	741	952	9,622
Changes in the group of consolidated companies	0	(5)	(0)	(1)	5	(1)
New provisions	84	745	306	601	847	2,584
Amounts used	53	1,611	3,576	458	763	6,461
Unused amounts reversed	49	134	711	182	118	1,194
Effects from exchange rate fluctuations/Unwind of discount	(15)	(86)	(575)	(4)	(38)	(718)
Transfers	(2)	193	(153)	(0)	3	41
Balance as of January 1, 2018	275	1,115	897	696	889	3,873
Changes in the group of consolidated companies	0	0	0	1	(2)	(2)
New provisions	27	334	125	427	765	1,677
Amounts used	54	673	364	344	862	2,296
Unused amounts reversed	41	160	206	185	364	956
Effects from exchange rate fluctuations/Unwind of discount	5	42	41	(1)	(1)	87
Transfers	2	25	6	(9)	9	33
Balance as of December 31, 2018	215	684	499	585	433	2,416

1Figures have been restated to reflect the reclassification of € 1.0 billion and € 1.1 billion from Provisions to Deposits in the Group's consolidated balance sheet as of January 1, 2017 and January 1, 2018, respectively. See Note 1 "Significant Accounting Policies and Critical Accounting Estimates" for more details on the change in accounting policy impacting Home Savings Contracts.

2For the remaining portion of provisions as disclosed on the consolidated balance sheet, please see Note 21 "Allowance for Credit Losses", in which allowances for credit related off-balance sheet positions are disclosed.

Classes of Provisions

Operational Risk provisions arise out of operational risk and exclude civil litigation and regulatory enforcement provisions, which are presented as separate classes of provisions. Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. The definition used for the purposes of determining operational provisions differs from the risk management definition, as it excludes risk of loss resulting from civil litigation and regulatory enforcement matters. For risk management purposes, operational risk includes legal risk, as payments to customers, counterparties and regulatory bodies in civil litigations or regulatory enforcement matters constitute loss events for operational shortcomings, but excludes business and reputational risk.

Civil Litigation provisions arise out of current or potential claims or proceedings alleging non-compliance with contractual or other legal or regulatory responsibilities, which have resulted or may result in demands from customers, counterparties or other parties in civil litigations.

Regulatory Enforcement provisions arise out of current or potential claims or proceedings alleging non-compliance with legal or regulatory responsibilities, which have resulted or may result in an assessment of fines or penalties by governmental regulatory agencies, self-regulatory organizations or other enforcement authorities.

Restructuring provisions arise out of restructuring activities. The Group aims to enhance its long-term competitiveness through major reductions in costs, duplication and complexity in the years ahead. For details see Note 10 “Restructuring”.

Other provisions include several specific items arising from a variety of different circumstances, including the provision for the reimbursement of loan processing fees, deferred sales commissions, provisions for bank levies and mortgage repurchase demands.

Provisions and Contingent Liabilities

The Group recognizes a provision for potential loss only when there is a present obligation arising from a past event that is probable to result in an economic outflow that can be reliably estimated. Where a reliable estimate cannot be made for such an obligation, no provision is recognized and the obligation is deemed a contingent liability. Contingent liabilities also include possible obligations for which the possibility of future economic outflow is more than remote but less than probable. Where a provision has been taken for a particular claim, no contingent liability is recorded; for matters or sets of matters consisting of more than one claim, however, provisions may be recorded for some claims, and contingent liabilities (or neither a provision nor a contingent liability) may be recorded for others.

The Group operates in a legal and regulatory environment that exposes it to significant litigation risks. As a result, the Group is involved in litigation, arbitration and regulatory proceedings and investigations in Germany and in a number of jurisdictions outside Germany, including the United States. In recent years, regulation and supervision in a number of areas have increased, and regulators, governmental bodies and others have sought to subject financial services providers to increasing oversight and scrutiny, which in turn has led to additional regulatory investigations and enforcement actions which are often followed by civil litigation. This trend has accelerated markedly as a result of the global financial crisis.

In determining for which of the claims the possibility of a loss is probable, or less than probable but more than remote, and then estimating the possible loss for those claims, the Group takes into consideration a number of factors, including but not limited to the nature of the claim and its underlying facts, the procedural posture and litigation history of each case, rulings by the courts or tribunals, the Group’s experience and the experience of others in similar cases (to the extent this is known to the Group), prior settlement discussions, settlements by others in similar cases (to the extent this is known to the Group), available indemnities and the opinions and views of legal counsel and other experts.

The provisions the Group has recognized for civil litigation and regulatory enforcement matters as of December 31, 2018 and January 1, 2018 are set forth in the table above. For some matters for which the Group believes an outflow of funds is probable, no provisions were recognized as the Group could not reliably estimate the amount of the potential outflow.

For the matters for which a reliable estimate can be made, the Group currently estimates that, as of December 31, 2018, the aggregate future loss of which the possibility is more than remote but less than probable is approximately € 2.5 billion for civil litigation matters (December 31, 2017: € 2.4 billion) and € 0.2 billion for regulatory

enforcement matters (December 31, 2017: € 0.3 billion). These figures include matters where the Group's potential liability is joint and several and where the Group expects any such liability to be paid by a third party. For other significant civil litigation and regulatory enforcement matters, the Group believes the possibility of an outflow of funds is more than remote but less than probable but the amount is not reliably estimable, and accordingly such matters are not included in the contingent liability estimates. For still other significant civil litigation and regulatory enforcement matters, the Group believes the possibility of an outflow of funds is remote and therefore has neither recognized a provision nor included them in the contingent liability estimates.

This estimated possible loss, as well as any provisions taken, is based upon currently available information and is subject to significant judgment and a variety of assumptions, variables and known and unknown uncertainties. These uncertainties may include inaccuracies in or incompleteness of the information available to the Group, particularly at the preliminary stages of matters, and assumptions by the Group as to future rulings of courts or other tribunals or the likely actions or positions taken by regulators or adversaries may prove incorrect. Moreover, estimates of possible loss for these matters are often not amenable to the use of statistical or other quantitative analytical tools frequently used in making judgments and estimates, and are subject to even greater degrees of uncertainty than in many other areas where the Group must exercise judgment and make estimates. The estimated possible loss, as well as any provisions taken, can be and often are substantially less than the amount initially requested by regulators or adversaries or the maximum potential loss that could be incurred were the matters to result in a final adjudication adverse to the Group. Moreover, in several regions in which the Group operates, an adversary often is not required to set forth the amount it is seeking, and where it is, the amount may not be subject to the same requirements that generally apply to pleading factual allegations or legal claims.

The matters for which the Group determines that the possibility of a future loss is more than remote will change from time to time, as will the matters as to which a reliable estimate can be made and the estimated possible loss for such matters. Actual results may prove to be significantly higher or lower than the estimate of possible loss in those matters where such an estimate was made. In addition, loss may be incurred in matters with respect to which the Group believed the likelihood of loss was remote. In particular, the estimated aggregate possible loss does not represent the Group's potential maximum loss exposure for those matters.

The Group may settle litigation or regulatory proceedings or investigations prior to a final judgment or determination of liability. It may do so to avoid the cost, management efforts or negative business, regulatory or reputational consequences of continuing to contest liability, even when the Group believes it has valid defenses to liability. It may also do so when the potential consequences of failing to prevail would be disproportionate to the costs of settlement. Furthermore, the Group may, for similar reasons, reimburse counterparties for their losses even in situations where it does not believe that it is legally compelled to do so.

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Current Individual Proceedings

Set forth below are descriptions of civil litigation and regulatory enforcement matters or groups of matters for which the Group has taken material provisions, or for which there are material contingent liabilities that are more than remote, or for which there is the possibility of material business or reputational risk; similar matters are grouped together and some matters consist of a number of proceedings or claims. The disclosed matters include matters for which the possibility of a loss is more than remote but for which the Group cannot reliably estimate the possible loss. Sets of matters are presented in English-language alphabetical order based on the titles the Group has used for them.

Danske Bank Estonia Investigations. Deutsche Bank has received requests for information from regulatory and law

enforcement agencies concerning the Bank's correspondent banking relationship with Danske Bank, including the Bank's historical processing of correspondent banking transactions on behalf of customers of Danske Bank's Estonia branch prior to cessation of the correspondent banking relationship with that branch in 2015. Deutsche Bank is providing information to and otherwise cooperating with the investigating agencies. The Bank is also conducting an internal investigation into these matters, including of whether any violations of law, regulation or policy occurred and the effectiveness of the related internal control environment.

The Group has not established a provision or contingent liability with respect to this matter.

FX Investigations and Litigations . Deutsche Bank has received requests for information from certain regulatory and law enforcement agencies globally who investigated trading in, and various other aspects of, the foreign exchange market. Deutsche Bank cooperated with these investigations. Relatedly, Deutsche Bank has conducted its own internal global review of foreign exchange trading and other aspects of its foreign exchange business.

On October 19, 2016, the US Commodity Futures Trading Commission (CFTC), Division of Enforcement issued a letter ("CFTC Letter") notifying Deutsche Bank that the CFTC Division of Enforcement "is not taking any further action at this time and has closed the investigation of Deutsche Bank" regarding foreign exchange. As is customary, the CFTC Letter states that the CFTC Division of Enforcement "maintains the discretion to decide to reopen the investigation at any time in the future." The CFTC Letter has no binding impact on other regulatory and law enforcement agency investigations regarding Deutsche Bank's foreign exchange trading and practices, which remain pending.

On December 7, 2016, it was announced that Deutsche Bank reached an agreement with CADE, the Brazilian antitrust enforcement agency, to settle an investigation into conduct by a former Brazil-based Deutsche Bank trader. As part of that settlement, Deutsche Bank paid a fine of BRL 51 million and agreed to continue to comply with the CADE's administrative process until it is concluded. This resolves CADE's administrative process as it relates to Deutsche Bank, subject to Deutsche Bank's continued compliance with the settlement terms.

On February 13, 2017, the US Department of Justice (DOJ), Criminal Division, Fraud Section, issued a letter ("DOJ Letter") notifying Deutsche Bank that the DOJ has closed its criminal inquiry "concerning possible violations of federal criminal law in connection with the foreign exchange markets." As is customary, the DOJ Letter states that the DOJ may reopen its inquiry if it obtains additional information or evidence regarding the inquiry. The DOJ Letter has no binding impact on other regulatory and law enforcement agency investigations regarding Deutsche Bank's foreign exchange trading and practices, which remain pending.

On April 20, 2017, it was announced that Deutsche Bank AG, DB USA Corporation and Deutsche Bank AG New York Branch reached an agreement with the Board of Governors of the Federal Reserve System to settle an investigation into Deutsche Bank's foreign exchange trading and practices. Under the terms of the settlement, Deutsche Bank entered into a cease-and-desist order, and agreed to pay a civil monetary penalty of US$ 137 million. In addition, the Federal Reserve ordered Deutsche Bank to "continue to implement additional improvements in its oversight, internal controls, compliance, risk management and audit programs" for its foreign exchange business and other similar products, and to periodically report to the Federal Reserve on its progress.

On June 20, 2018, it was announced that Deutsche Bank AG and Deutsche Bank AG New York Branch reached an agreement with the New York State Department of Financial Services (DFS) to settle an investigation into Deutsche Bank's foreign exchange trading and sales practices. Under the terms of the settlement, Deutsche Bank entered into a consent order, and agreed to pay a civil monetary penalty of US$ 205 million. In addition, the DFS ordered Deutsche Bank to continue to implement improvements in its oversight, internal controls, compliance, risk management and

audit programs for its foreign exchange business, and to periodically report to the DFS on its progress.

Investigations conducted by certain other regulatory agencies are ongoing, and Deutsche Bank has cooperated with these investigations.

On August 6, 2018, the US District Court for the Southern District of New York issued a final order approving Deutsche Bank's US$190 million settlement and plaintiffs' dismissal with prejudice of the consolidated action (In re Foreign Exchange Benchmark Rates Antitrust Litigation). The consolidated action was brought on behalf of a putative class of over-the-counter traders and a putative class of central-exchange traders, who are domiciled in or traded in the United States or its territories, and alleged illegal agreements to restrain competition with respect to and to manipulate both benchmark rates and spot rates, particularly the spreads quoted on those spot rates. On July 10, 2018, the US Court of Appeals for the Second Circuit affirmed the district court's dismissal of Doris Sue Allen v. Bank of America, et al ., a putative class action that tracked the allegations in the consolidated action and asserted that such purported conduct gave rise to, and resulted in a breach of, defendants' fiduciary duties under the US Employment Retirement Income Security Act of 1974. On September 6, 2018, the US District Court for the Southern District of New York denied Axiom Investment Advisors, LLC's ("Axiom") motion for class certification in Axiom v. Deutsche Bank AG . Axiom's motion for voluntary dismissal with prejudice was granted on January 18, 2019. This putative class action alleged that Deutsche Bank rejected FX orders placed over electronic trading platforms through the application of a function referred to as "Last Look" and that these orders were later filled at prices less favorable to putative class members. One US putative class action remains pending against Deutsche Bank. Filed on September 26, 2016, amended on March 24, 2017, and later consolidated with a similar action that was filed on April 28, 2017, the "Indirect Purchasers" action (Contant, et al. v. Bank of America Corp., et al.) tracks the allegations in the consolidated action and asserts that such purported conduct injured "indirect purchasers" of FX instruments. These claims are brought pursuant to the Sherman Act and various states' consumer protection statutes. On March 15, 2018, the court granted Deutsche Bank's motion to dismiss this action. Plaintiffs filed a motion to replead and proposed an amended complaint on April 5, 2018, which Deutsche Bank opposed. On October 25, 2018, the US District Court for the Southern District of New York granted plaintiffs' motion and a second amended complaint was filed on November 28, 2018. Discovery has commenced in the Indirect Purchasers action. Filed on November 7, 2018, Allianz, et al. v. Bank of America Corporation, et al. , was brought on an individual basis by a group of asset managers who opted out of the settlement in the consolidated action. Plaintiffs filed an amended complaint on March 1, 2019. Deutsche Bank's response to that complaint is due on April 1, 2019. Limited discovery has commenced pending resolution of defendants' motion to dismiss.

Deutsche Bank also has been named as a defendant in two Canadian class proceedings brought in the provinces of Ontario and Quebec. Filed on September 10, 2015, these class actions assert factual allegations similar to those made in the consolidated action in the United States and seek damages pursuant to the Canadian Competition Act as well as other causes of action. Plaintiffs in the Ontario action have moved for class certification and completed service of their class certification motion record on June 23, 2017. Deutsche Bank has opposed class certification, and a hearing on the class certification motion is scheduled for June 10 to 14, 2019.

Deutsche Bank has also been named as a defendant in two putative class actions filed in Israel. Filed in September 2018, these actions assert factual allegations similar to those made in the consolidated action in the United States and seek damages pursuant to Israeli antitrust law as well as other causes of action. These actions are in preliminary stages.

The Group has not disclosed whether it has established a provision or contingent liability with respect to these matters because it has concluded that such disclosure can be expected to prejudice seriously their outcome.

Interbank and Dealer Offered Rates Matters. Regulatory and Law Enforcement Matters. Deutsche Bank has responded to requests for information from, and cooperated with, various regulatory and law enforcement agencies, in connection with industry-wide investigations concerning the setting of the London Interbank Offered Rate (LIBOR), Euro Interbank Offered Rate (EURIBOR), Tokyo Interbank Offered Rate (TIBOR) and other interbank and/or dealer offered rates.

As previously reported, Deutsche Bank paid € 725 million to the European Commission pursuant to a settlement agreement dated December 4, 2013 in relation to anticompetitive conduct in the trading of interest rate derivatives.

Also as previously reported, on April 23, 2015, Deutsche Bank entered into separate settlements with the DOJ, the CFTC, the UK Financial Conduct Authority (FCA), and the New York State Department of Financial Services (DFS) to resolve investigations into misconduct concerning the setting of LIBOR, EURIBOR, and TIBOR. Under the terms of these agreements, Deutsche Bank agreed to pay penalties of US$ 2.175 billion to the DOJ, CFTC and DFS and GBP 226.8 million to the FCA. As part of the resolution with the DOJ, DB Group Services (UK) Limited (an indirectly-held, wholly-owned subsidiary of Deutsche Bank) pled guilty to one count of wire fraud in the US District Court for the District of Connecticut and Deutsche Bank entered into a Deferred Prosecution Agreement with a three year term pursuant to which it agreed (among other things) to the filing of an Information in the US District Court for the District of Connecticut charging Deutsche Bank with one count of wire fraud and one count of price fixing in violation of the Sherman Act. On April 23, 2018, the Deferred Prosecution Agreement expired, and the US District Court for the District of Connecticut subsequently dismissed the criminal Information against Deutsche Bank. The fines referred to above, which include a US$ 150 million fine paid in April 2017 following the March 28, 2017 sentencing of DB Group Services (UK) Limited, have been paid in full and do not form part of the Bank's provisions.

As previously reported, on March 20, 2017, Deutsche Bank paid CHF 5.4 million to the Swiss Competition Commission (WEKO) pursuant to a settlement agreement in relation to Yen LIBOR.

On October 25, 2017, Deutsche Bank entered into a settlement with a working group of US state attorneys general resolving their interbank offered rate investigation. Among other conditions, Deutsche Bank agreed to make a settlement payment of US$ 220 million. The settlement amount has been paid in full and does not form part of the Bank's provisions.

Other investigations of Deutsche Bank concerning the setting of various interbank and/or dealer offered rates remain ongoing.

The Group has not disclosed whether it has established a provision or contingent liability with respect to the remaining investigations because it has concluded that such disclosure can be expected to prejudice seriously their outcome.

Overview of Civil Litigations. Deutsche Bank is party to 45 US civil actions concerning alleged manipulation relating to the setting of various interbank and/or dealer offered rates which are described in the following paragraphs, as well as single actions pending in each of the UK, Israel and Argentina. Most of the civil actions, including putative class actions, are pending in the US District Court for the Southern District of New York (SDNY), against Deutsche Bank and numerous other defendants. All but four of the US civil actions were filed on behalf of parties who allege losses as a result of manipulation relating to the setting of US dollar LIBOR. The four civil actions pending against Deutsche Bank that do not relate to US dollar LIBOR are also pending in the SDNY, and include one consolidated action concerning Pound Sterling (GBP) LIBOR, one action concerning Swiss franc (CHF) LIBOR, one action concerning two Singapore Dollar (SGD) benchmark rates, the Singapore Interbank Offered Rate (SIBOR) and the Swap Offer Rate (SOR), and one action concerning the Canadian Dealer Offered Rate (CDOR).

Claims for damages for all 45 of the US civil actions discussed have been asserted under various legal theories, including violations of the US Commodity Exchange Act, federal and state antitrust laws, the US Racketeer

Influenced and Corrupt Organizations Act, and other federal and state laws. The Group has not disclosed whether it has established a provision or contingent liability with respect to these matters because it has concluded that such disclosure can be expected to prejudice seriously their outcome.

US dollar LIBOR . With three exceptions, all of the US civil actions concerning US dollar LIBOR are being coordinated as part of a multidistrict litigation (the "US dollar LIBOR MDL") in the SDNY. In light of the large number of individual cases pending against Deutsche Bank and their similarity, the civil actions included in the US dollar LIBOR MDL are now subsumed under the following general description of the litigation pertaining to all such actions, without disclosure of individual actions except when the circumstances or the resolution of an individual case is material to Deutsche Bank.

Following a series of decisions in the US dollar LIBOR MDL between March 2013 and December 2016 narrowing their claims, plaintiffs are currently asserting antitrust claims, claims under the US Commodity Exchange Act and state law fraud, contract, unjust enrichment and other tort claims. The court has also issued decisions dismissing certain plaintiffs' claims for lack of personal jurisdiction and on statute of limitations grounds.

On December 20, 2016, the district court issued a ruling dismissing certain antitrust claims while allowing others to proceed. Multiple plaintiffs have filed appeals of the district court's December 20, 2016 ruling to the US Court of Appeals for the Second Circuit, and those appeals are proceeding in parallel with the ongoing proceedings in the district court. Briefing of the appeals is complete.

On July 13, 2017, Deutsche Bank executed a settlement agreement in the amount of US$ 80 million with plaintiffs to resolve a putative class action pending as part of the US dollar LIBOR MDL asserting claims based on alleged transactions in Eurodollar futures and options traded on the Chicago Mercantile Exchange (Metzler Investment GmbH v. Credit Suisse Group AG). The settlement agreement was submitted to the court for preliminary approval on October 11, 2017. The settlement amount is already fully reflected in existing litigation provisions and no additional provisions have been taken for this settlement. The settlement agreement is subject to further review and approval by the court.

On February 6, 2018, Deutsche Bank executed a settlement agreement in the amount of US$ 240 million with plaintiffs to resolve a putative class action pending as part of the US dollar LIBOR MDL asserting claims based on alleged transactions in US dollar LIBOR-linked financial instruments purchased over the counter directly from LIBOR panel banks (Mayor & City Council of Baltimore v. Credit Suisse AG). The agreement was submitted to the court for approval, and the court granted final approval of the settlement on October 25, 2018. Accordingly, the action is not included in the total number of actions above. The settlement amount, which Deutsche Bank has paid, is no longer reflected in Deutsche Bank's litigation provisions.

Plaintiff in one of the non-MDL cases proceeding in the SDNY moved to amend its complaint following a dismissal of its claims. On March 20, 2018, the court denied plaintiff's motion for leave to amend and entered judgment in the action, closing the case. Plaintiff has appealed the court's decision, and briefing of the appeal is complete.

On January 15 and 31, 2019, plaintiffs filed two putative class action complaints in the SDNY against several financial institutions, alleging that the defendants, members of the panel of banks that provided US dollar LIBOR submissions, the organization that administers LIBOR, and their affiliates, conspired to suppress US dollar LIBOR submissions from February 1, 2014 through the present. These actions were subsequently consolidated. A third putative class action complaint was filed on March 4, 2019. These actions are not part of the US dollar LIBOR MDL.

There is a further UK civil action regarding US dollar LIBOR brought by the US Federal Deposit Insurance Corporation, in which a claim for damages has been asserted pursuant to Article 101 of The Treaty on the Functioning of the European Union, Section 2 of Chapter 1 of the UK Competition Act 1998 and US state laws. Deutsche Bank is defending this action.

A further class action regarding LIBOR, EURIBOR and TIBOR has been filed in Israel seeking damages for losses incurred by Israeli individuals and entities. Deutsche Bank is contesting service and jurisdiction.

Yen LIBOR and Euroyen TIBOR. On July 21, 2017, Deutsche Bank executed a settlement agreement in the amount of US$ 77 million with plaintiffs to resolve two putative class actions pending in the SDNY alleging manipulation of Yen LIBOR and Euroyen TIBOR (Laydon v. Mizuho Bank, Ltd. and Sonterra Capital Master Fund Ltd. v. UBS AG). The agreement was submitted to the court for approval, and the court granted final approval of the settlement on December 7, 2017. Accordingly, these two actions are not included in the total number of actions above. The settlement amount, which Deutsche Bank paid on August 1, 2017, is no longer reflected in Deutsche Bank's litigation provisions.

EURIBOR. On May 10, 2017, Deutsche Bank executed a settlement agreement in the amount of US$ 170 million with plaintiffs to resolve a putative class action pending in the SDNY alleging manipulation of EURIBOR (Sullivan v. Barclays PLC). The agreement was submitted to the court for approval, and the court granted final approval of the settlement on May 18, 2018. Accordingly, the action is not included in the total number of actions above. The settlement amount, which Deutsche Bank has paid, is no longer reflected in Deutsche Bank's litigation provisions.

GBP LIBOR. A putative class action alleging manipulation of the Pound Sterling (GBP) LIBOR remains pending in the SDNY. On December 21, 2018, the court partially granted defendants' motions to dismiss the action, dismissing all claims against Deutsche Bank. On January 22, 2019, the plaintiffs moved for partial reconsideration of the court's decision; that motion is fully briefed.

CHF LIBOR. A putative class action alleging manipulation of the Swiss Franc (CHF) LIBOR remains pending in the SDNY. It is the subject of fully briefed motions to dismiss.

SIBOR and SOR. A putative class action alleging manipulation of the Singapore Interbank Offered Rate (SIBOR) and Swap Offer Rate (SOR) remains pending in the SDNY. On October 25, 2018, the plaintiff filed a third amended complaint, which is the subject of a fully briefed motion to dismiss. On December 26, 2018, plaintiff moved the court for leave to file a fourth amended complaint; that motion is fully briefed.

CDOR. A putative class action alleging manipulation of the Canadian Dealer Offered Rate (CDOR) is pending in the SDNY. On March 14, 2019, the court granted defendants' motions to dismiss the amended complaint, dismissing all actions against Deutsche Bank.

Investigations Into Referral Hiring Practices and Certain Business Relationships. Certain regulators and law enforcement authorities in various jurisdictions, including the US Securities and Exchange Commission and the DOJ, are investigating, among other things, Deutsche Bank's compliance with the US Foreign Corrupt Practices Act and other laws with respect to the Bank's hiring practices related to candidates referred by clients, potential clients and government officials, and the Bank's engagement of finders and consultants. Deutsche Bank is responding to and continuing to cooperate with these investigations. Certain regulators in other jurisdictions have also been briefed on these investigations. The Group has recorded a provision with respect to certain of these regulatory investigations. The Group has not disclosed the amount of this provision because it has concluded that such disclosure can be expected to

prejudice seriously the outcome of these regulatory investigations. Based on the facts currently known, it is not practicable at this time for the Bank to predict the timing of a resolution.

Kirch. The public prosecutor's office in Munich (Staatsanwaltschaft München I) has conducted and is currently conducting criminal investigations in connection with the Kirch case inter alia with regard to former Deutsche Bank Management Board members. The Kirch case involved several civil proceedings between Deutsche Bank AG and Dr. Leo Kirch as well as media companies controlled by him. The key issue was whether an interview given by Dr. Rolf Breuer, then Spokesman of Deutsche Bank's Management Board, in 2002 with Bloomberg television, during which Dr. Breuer commented on Dr. Kirch's (and his companies') inability to obtain financing, caused the insolvency of the Kirch companies. In February 2014, Deutsche Bank and the Kirch heirs reached a comprehensive settlement, which has ended all legal disputes between them.

The allegations of the public prosecutor are that the relevant former Management Board members failed to correct in a timely manner factual statements made by Deutsche Bank's litigation counsel in submissions filed in one of the civil cases between Kirch and Deutsche Bank AG before the Munich Higher Regional Court and the Federal Court of Justice, after allegedly having become aware that such statements were not correct, and/or made incorrect statements in such proceedings, respectively.

On April 25, 2016, following the trial before the Regional Court Munich regarding the main investigation involving Jürgen Fitschen and four other former Management Board members, the Regional Court acquitted all of the accused, as well as the Bank, which was a secondary participant in such proceedings. On April 26, 2016, the public prosecutor filed an appeal. An appeal is limited to a review of legal errors rather than facts. On October 18, 2016, a few weeks after the written judgment was served, the public prosecutor provided notice that it will uphold its appeal only with respect to former Management Board members Jürgen Fitschen, Dr. Rolf Breuer and Dr. Josef Ackermann and that it will withdraw its appeal with respect to former Management Board members Dr. Clemens Börsig and Dr. Tessen von Heydebreck for whom the acquittal thereby becomes binding. On January 24, 2018, the Attorney General's Office applied to convene an oral hearing before the Federal Supreme Court to decide about the Munich public prosecutor's appeal.

The other investigations by the public prosecutor (which also deal with attempted litigation fraud in the Kirch civil proceedings) are ongoing. Deutsche Bank is fully cooperating with the Munich public prosecutor's office.

The Group does not expect these proceedings to have significant economic consequences for it and has not recorded a provision or contingent liability with respect thereto.

Mortgage-Related and Asset-Backed Securities Matters and Investigation. Regulatory and Governmental Matters. Deutsche Bank, along with certain affiliates (collectively referred in these paragraphs to as "Deutsche Bank"), have received subpoenas and requests for information from certain regulators and government entities, including members of the Residential Mortgage-Backed Securities Working Group of the US Financial Fraud Enforcement Task Force, concerning its activities regarding the origination, purchase, securitization, sale, valuation and/or trading of mortgage loans, residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), collateralized debt obligations (CDOs), other asset-backed securities and credit derivatives. Deutsche Bank is cooperating fully in response to those subpoenas and requests for information.

On December 23, 2016, Deutsche Bank announced that it reached a settlement-in-principle with the DOJ to resolve potential claims related to its RMBS business conducted from 2005 to 2007. The settlement became final and was announced by the DOJ on January 17, 2017. Under the settlement, Deutsche Bank paid a civil monetary penalty of US$ 3.1 billion and agreed to provide US$ 4.1 billion in consumer relief.

In September 2016, Deutsche Bank received administrative subpoenas from the Maryland Attorney General seeking information concerning Deutsche Bank's RMBS and CDO businesses from 2002 to 2009. On June 1, 2017, Deutsche Bank and the Maryland Attorney General reached a settlement to resolve the matter for US$ 15 million in cash and US$ 80 million in consumer relief (to be allocated from the overall US$ 4.1 billion consumer relief obligation agreed to as part of Deutsche Bank's settlement with the DOJ).

The Group has recorded provisions with respect to some of the outstanding regulatory investigations but not others, a portion of which relates to the consumer relief being provided under the DOJ settlement. The Group has not disclosed the amount of these provisions because it has concluded that such disclosure can be expected to prejudice seriously the resolution of these matters.

Issuer and Underwriter Civil Litigation . Deutsche Bank has been named as defendant in numerous civil litigations brought by private parties in connection with its various roles, including issuer or underwriter, in offerings of RMBS and other asset-backed securities. These cases, described below, allege that the offering documents contained material misrepresentations and omissions, including with regard to the underwriting standards pursuant to which the underlying mortgage loans were issued, or assert that various representations or warranties relating to the loans were breached at the time of origination. The Group has recorded provisions with respect to several of these civil cases, but has not recorded provisions with respect to all of these matters. The Group has not disclosed the amount of these provisions because it has concluded that such disclosure can be expected to prejudice seriously the resolution of these matters.

Deutsche Bank is a defendant in a class action relating to its role as one of the underwriters of six RMBS offerings issued by Novastar Mortgage Corporation. No specific damages are alleged in the complaint. The lawsuit was brought by plaintiffs representing a class of investors who purchased certificates in those offerings. The parties reached a settlement to resolve the matter for a total of US$ 165 million, a portion of which was paid by the Bank. On August 30, 2017, FHFA/Freddie Mac filed an objection to the settlement and shortly thereafter appealed the district court's denial of their request to stay settlement approval proceedings, which appeal was resolved against FHFA/Freddie Mac. The court approved the settlement on March 7, 2019 over FHFA/Freddie Mac's objections. The parties have 60 days from entry of the order to file an appeal.

Deutsche Bank is a defendant in three actions related to RMBS offerings brought by the US Federal Deposit Insurance Corporation (FDIC) as receiver for: (a) Colonial Bank (alleging no less than US$ 213 million in damages against all defendants), (b) Guaranty Bank (alleging no less than US$ 901 million in damages against all defendants), and (c) Citizens National Bank and Strategic Capital Bank (alleging an unspecified amount in damages against all defendants). In each of these actions, the appellate courts reinstated claims previously dismissed on statute of limitations grounds and petitions for rehearing and certiorari to the US Supreme Court were denied. In the case concerning Colonial Bank, on June 21, 2017, the FDIC filed a second amended complaint, which defendants moved to dismiss on September 7, 2017. On March 2, 2018, the court granted in part and denied in part defendants' motion to dismiss. In the case concerning Guaranty Bank, on September 14, 2017, the court granted in part Deutsche Bank's motion for summary judgment regarding the proper method of calculating pre-judgment interest. On August 31, 2018, the court vacated the March 2019 trial date. On September 27, 2018, the court ordered that the case must go to mediation before January 11, 2019, and that it is stayed in the meantime. The parties engaged in mediation on November 27, 2018. No settlement was reached during the mediation. The court re-opened the case and, on January 2, 2019, set a trial date of August 26, 2019. In the case concerning Citizens National Bank and Strategic Capital Bank, on July 31, 2017, the FDIC filed a second amended complaint, which defendants moved to dismiss on September 14, 2017. The case is stayed pending resolution of defendants' motion to dismiss.

Deutsche Bank is a defendant in an action brought by Royal Park Investments (as purported assignee of claims of a special-purpose vehicle created to acquire certain assets of Fortis Bank) alleging common law claims related to the purchase of RMBS. The complaint did not specify the amount of damages sought. On April 17, 2017, the court dismissed the complaint, and on February 13, 2018, the plaintiff filed its appeal. On October 9, 2018, the dismissal was affirmed by the appellate court. Plaintiff filed a motion for leave to appeal to the New York Court of Appeals on November 8, 2018. Defendants filed an opposition on November 21, 2018, which completed the briefing. On January 15, 2019, the New York Court of Appeals denied the motion.

In June 2014, HSBC, as trustee, brought an action in New York state court against Deutsche Bank to revive a prior action, alleging that Deutsche Bank failed to repurchase mortgage loans in the ACE Securities Corp. 2006-SL2 RMBS offering. The revival action was stayed during the pendency of an appeal of the dismissal of a separate action wherein HSBC, as trustee, brought an action against Deutsche Bank alleging breaches of representations and warranties made by Deutsche Bank concerning the mortgage loans in the same offering. On March 29, 2016, the court dismissed the revival action, and on April 29, 2016, plaintiff filed a notice of appeal. Plaintiff's appeal has been adjourned to the appellate court's September 2019 term.

Deutsche Bank is a defendant in two cases brought initially by RMBS investors and subsequently by HSBC, as trustee, in New York state court. The cases allege breaches of loan-level representations and warranties in the ACE Securities Corp. 2006-FM1 and ACE Securities Corp. 2007-ASAP1 RMBS offerings, respectively. Both cases were dismissed on statute of limitations grounds by the trial court on March 28, 2018. Plaintiff has appealed the dismissals, which appeals remain pending.

In the actions against Deutsche Bank solely as an underwriter of other issuers' RMBS offerings, Deutsche Bank has contractual rights to indemnification from the issuers, but those indemnity rights may in whole or in part prove effectively unenforceable where the issuers are now or may in the future be in bankruptcy or otherwise defunct.

Trustee Civil Litigation . Deutsche Bank is a defendant in civil lawsuits brought by various groups of investors concerning its role as trustee of certain RMBS trusts. The actions generally allege claims for breach of contract, breach of fiduciary duty, breach of the duty to avoid conflicts of interest, negligence and/or violations of the US Trust Indenture Act of 1939, based on the trustees' alleged failure to perform adequately certain obligations and/or duties as trustee for the trusts.

Two putative class actions brought by a group of investors, including funds managed by BlackRock Advisors, LLC, PIMCO-Advisors, L.P., and others recently were settled. One of these putative class actions was pending in the Superior Court of California until the court dismissed the action with prejudice on January 11, 2019. The second putative class action was pending in the US District Court for the Southern District of New York and was dismissed with prejudice on December 6, 2018. Deutsche Bank was also a defendant in a lawsuit brought by the Western and Southern Life Insurance Company and five related entities, but on September 28, 2017, plaintiffs filed a notice of voluntary dismissal of their claims.

Deutsche Bank is currently a defendant in six separate civil lawsuits – two putative class actions and four individual lawsuits.

The putative class actions were brought by Royal Park Investments SA/NV, concern 10 trusts, and are pending in the US District Court for the Southern District of New York.

In the first case, which plaintiff filed on June 18, 2014, plaintiff alleges that the trusts suffered total realized collateral losses of more than US$ 3.1 billion, although the complaint does not specify a damage amount. On March 29, 2018, the court issued an order denying plaintiff's renewed motion for class certification, and on August 7, 2018, the court of appeals denied plaintiff's motion for leave to immediately appeal the denial of class certification. On September 28, 2018, the court denied plaintiff's motion seeking permission to prove liability and damages using a statistical sample of

the loans at issue in the case. Discovery is ongoing. On August 4, 2017, Royal Park filed a separate, additional class action complaint against the trustee asserting claims for breach of contract, unjust enrichment, conversion, breach of trust, equitable accounting and declaratory and injunctive relief arising out of the payment from trust funds of the trustee's legal fees and expenses in the other, ongoing Royal Park litigation. On August 13, 2018, the court stayed the action pending resolution of the underlying Royal Park litigation and denied the trustee's motion to dismiss without prejudice to its refiling once the stay is lifted.

The four individual lawsuits include actions by (a) the National Credit Union Administration Board ("NCUA"), as an investor in 37 trusts, which allegedly suffered total realized collateral losses of US$ 8.5 billion; (b) certain CDOs (collectively, "Phoenix Light") that hold RMBS certificates issued by 43 RMBS trusts, and seeking "hundreds of millions of dollars in damages"; (c) Commerzbank AG, as an investor in 50 RMBS trusts, seeking recovery for alleged "hundreds of millions of dollars in losses;" and (d) IKB International, S.A. in Liquidation and IKB Deutsche Industriebank AG (collectively, "IKB"), as an investor in 30 RMBS trusts, seeking more than US$ 268 million of damages. In the NCUA case, NCUA notified the court on August 31, 2018 that it was dismissing claims relating to 60 out of the 97 trusts originally at issue; NCUA's motion for leave to amend its complaint and Deutsche Bank's motion to dismiss the complaint if the court grants NCUA's motion for leave to amend are fully briefed as of December 19, 2018. In the Phoenix Light case, the plaintiffs filed an amended complaint on September 27, 2017, and the trustees filed an answer to the complaint on November 13, 2017. On December 7, 2018, the parties filed motions for summary judgment. In the Commerzbank case, the plaintiff filed an amended complaint on November 30, 2017, and the trustees filed an answer to the complaint on January 29, 2018. On December 7, 2018, the parties filed motions for summary judgment. In the IKB case, the court heard oral argument on the trustee's motion to dismiss on May 3, 2017, but has not yet issued a decision. On June 20, 2017, the IKB plaintiffs stipulated to the dismissal with prejudice of all claims asserted against Deutsche Bank concerning four trusts. Discovery is ongoing.

The Group has established contingent liabilities and provisions with respect to certain of these matters but the Group has not disclosed the amounts because it has concluded that such disclosure can be expected to prejudice seriously the outcome of these matters.

Postbank Voluntary Public Takeover Offer. On September 12, 2010, Deutsche Bank announced the decision to make a voluntary takeover offer for the acquisition of all shares in Deutsche Postbank AG (Postbank). On October 7, 2010, the Bank published the official offer document. In its takeover offer, Deutsche Bank offered Postbank shareholders consideration of € 25 for each Postbank share. The takeover offer was accepted for a total of approximately 48.2 million Postbank shares.

In November 2010, a former shareholder of Postbank, Effecten-Spiegel AG, which had accepted the takeover offer, brought a claim against Deutsche Bank alleging that the offer price was too low and was not determined in accordance with the applicable law of the Federal Republic of Germany. The plaintiff alleges that Deutsche Bank had been obliged to make a mandatory takeover offer for all shares in Postbank, at the latest, in 2009. The plaintiff avers that, at the latest in 2009, the voting rights of Deutsche Post AG in Postbank had to be attributed to Deutsche Bank AG pursuant to Section 30 of the German Takeover Act. Based thereon, the plaintiff alleges that the consideration offered by Deutsche Bank AG for the shares in Postbank in the 2010 voluntary takeover offer needed to be raised to € 57.25 per share.

The Regional Court Cologne (Landgericht) dismissed the claim in 2011 and the Cologne appellate court dismissed the appeal in 2012. The Federal Court set aside the Cologne appellate court's judgment and referred the case back to the appellate court. In its judgment, the Federal Court stated that the appellate court had not sufficiently considered the plaintiff's allegation that Deutsche Bank AG and Deutsche Post AG "acted in concert" in 2009.

Starting in 2014, additional former shareholders of Postbank, who accepted the 2010 tender offer, brought similar claims as Effecten-Spiegel AG against Deutsche Bank which are pending with the Regional Court Cologne and the Higher Regional Court of Cologne, respectively. On October 20, 2017, the Regional Court Cologne handed down a decision granting the claims in a total of 14 cases which were combined in one proceeding. The Regional Court Cologne took the view that Deutsche Bank was obliged to make a mandatory takeover offer already in 2008 so that the appropriate consideration to be offered in the takeover offer should have been € 57.25 per share. Taking the consideration paid into account, the additional consideration per share owed to shareholders which have accepted the takeover offer would thus amount to € 32.25. Deutsche Bank appealed this decision and the appeal has been assigned to the 13th Senate of the Higher Regional Court of Cologne, which also is hearing the appeal of Effecten-Spiegel AG.

On November 8, 2017, a hearing took place before the Higher Regional Court of Cologne in the Effecten-Spiegel case. In that hearing, the Higher Regional Court indicated that it disagreed with the conclusions of the Regional Court Cologne and took the preliminary view that Deutsche Bank was not obliged to make a mandatory takeover offer in 2008 or 2009. Initially the Higher Regional Court resolved to announce a decision on December 13, 2017. However, this was postponed to February 2018 because the plaintiff challenged the three members of the 13th Senate of the Higher Regional Court of Cologne for alleged prejudice. The challenge was rejected by the Higher Regional Court of Cologne at the end of January 2018. In February 2018, the court granted a motion by Effecten-Spiegel AG to re-open the hearing.

The Higher Regional Court informed the parties by notice dated February 19, 2019 that it has doubts that an acting in concert can be based on the contractual clauses which the Regional Court Cologne found to be sufficient to assume an acting in concert (and to grant the plaintiffs' claims in October 2017). Against this background, the Higher Regional Court resolved to take further evidence and to call a number of witnesses in both cases who shall be heard from October 30, 2019 until at least December 11, 2019 in weekly hearings. The individuals to be heard include current and former board members of Deutsche Bank, Deutsche Post AG and Postbank as well as other persons involved in the Postbank transaction. The court further informed the parties that it is considering to request from Deutsche Bank the production of relevant transaction documents. The hearings to take evidence initially scheduled for March 27, 2019 and (as a precautionary measure) April 3 and May 29, 2019 were canceled.

Stefan Krause, a former Deutsche Bank Management Board member, (who is to testify on request of the plaintiffs) has invoked the right to refuse to give testimony because in February 2018 a law firm representing some plaintiffs in the above-mentioned civil actions had filed a criminal complaint with the public prosecutor in Frankfurt am Main against certain Deutsche Bank personnel alleging that they engaged in fraudulent conduct in connection with the takeover offer. However, the competent public prosecutors rejected opening proceedings. The Higher Regional Court Cologne has set March 20, 2019 as the date for a hearing on the legality of the refusal to testify in court.

Deutsche Bank has been served with a large number of additional lawsuits filed against Deutsche Bank shortly before the end of 2017, almost all of which are now pending with the Regional Court Cologne. Some of the new plaintiffs allege that the consideration offered by Deutsche Bank AG for the shares in Postbank in the 2010 voluntary takeover should be raised to € 64.25 per share.

The claims for payment against Deutsche Bank in relation to these matters total almost € 700 million (excluding interest).

The Group has established a contingent liability with respect to these matters but the Group has not disclosed the amount of this contingent liability because it has concluded that such disclosure can be expected to prejudice seriously the outcome of these matters.

Further Proceedings Relating to the Postbank Takeover. In September 2015, former shareholders of Postbank filed in the Regional Court Cologne shareholder actions against Postbank to set aside the squeeze-out resolution taken in the shareholders meeting of Postbank in August 2015. Among other things, the plaintiffs allege that Deutsche Bank was subject to a suspension of voting rights with respect to its shares in Postbank based on the allegation that Deutsche Bank failed to make a mandatory takeover offer at a higher price in 2009. The squeeze out is final and the proceeding itself has no reversal effect, but may result in damage payments. The claimants in this proceeding refer to legal arguments similar to those asserted in the Effecten-Spiegel proceeding described above. In a decision on October 20, 2017, the Regional Court Cologne declared the squeeze-out resolution to be void. The court, however, did not rely on a suspension of voting rights due to an alleged failure of Deutsche Bank to make a mandatory takeover offer, but argued that Postbank violated information rights of Postbank shareholders in Postbank's shareholders meeting in August 2015. Postbank has appealed this decision.

The legal question of whether Deutsche Bank had been obliged to make a mandatory takeover offer for all Postbank shares prior to its 2010 voluntary takeover may also impact two pending appraisal proceedings (Spruchverfahren). These proceedings were initiated by former Postbank shareholders with the aim to increase the cash compensation offered in connection with the squeeze-out of Postbank shareholders in 2015 and the cash compensation offered and annual guaranteed dividend paid in connection with the execution of a domination and profit and loss transfer agreement (Beherrschungs- und Gewinnabführungsvertrag) between DB Finanz-Holding AG (now DB Beteiligungs-Holding GmbH) and Postbank in 2012. The Regional Court Cologne issued resolutions indicating that it is inclined to consider a potential obligation of Deutsche Bank to make a mandatory takeover offer for Postbank at an offer price of € 57.25 when determining the adequate cash compensation in the appraisal proceedings. The cash compensation paid in connection with the domination and profit and loss transfer agreement was € 25.18 and was accepted for approximately 0.5 million shares. The squeeze-out compensation paid in 2015 was € 35.05 and approximately 7 million shares were squeezed-out.

The Group has not disclosed whether it has established a provision or contingent liability with respect to this matter because it has concluded that such disclosure can be expected to prejudice seriously its outcome.

Russia/UK Equities Trading Investigation. Deutsche Bank has investigated the circumstances around equity trades entered into by certain clients with Deutsche Bank in Moscow and London that offset one another. The total volume of transactions reviewed is significant. Deutsche Bank's internal investigation of potential violations of law, regulation and policy and into the related internal control environment has concluded, and Deutsche Bank has assessed the findings identified during the investigation; to date it has identified certain violations of Deutsche Bank’s policies and deficiencies in Deutsche Bank's control environment. Deutsche Bank has advised regulators and law enforcement authorities in several jurisdictions (including Germany, Russia, the UK and the United States) of this investigation. Deutsche Bank has taken disciplinary measures with regards to certain individuals in this matter.

On January 30 and 31, 2017, the DFS and the FCA announced settlements with the Bank related to their investigations into this matter. The settlements conclude the DFS and the FCA’s investigations into the Bank’s anti-money laundering (AML) control function in its investment banking division, including in relation to the equity trading described above. Under the terms of the settlement agreement with the DFS, Deutsche Bank entered into a consent order, and agreed to pay civil monetary penalties of US$ 425 million and to engage an independent monitor for a term of up to two years. Under the terms of the settlement agreement with the FCA, Deutsche Bank agreed to pay civil monetary penalties of approximately GBP 163 million. On May 30, 2017, the Federal Reserve announced its settlement with the Bank resolving this matter as well as additional AML issues identified by the Federal Reserve. Deutsche Bank paid a penalty of US$ 41 million. Deutsche Bank also agreed to retain independent third parties to assess its Bank Secrecy Act/AML program and review certain foreign correspondent banking activity of its subsidiary Deutsche Bank Trust

Company Americas. The Bank is also required to submit written remediation plans and programs.

Deutsche Bank continues to cooperate with regulators and law enforcement authorities, including the DOJ which has its own ongoing investigation into these securities trades. The Group has recorded a provision with respect to the remaining investigation. The Group has not disclosed the amount of this provision because it has concluded that such disclosure can be expected to prejudice seriously the outcome of this matter.

Sovereign, Supranational and Agency Bonds (SSA) Investigations and Litigations. Deutsche Bank has received inquiries from certain regulatory and law enforcement authorities, including requests for information and documents, pertaining to SSA bond trading. Deutsche Bank is cooperating with these investigations.

On December 20, 2018, the European Commission sent a Statement of Objections to Deutsche Bank regarding a potential breach of EU antitrust rules in relation to secondary market trading of SSA bonds denominated in US dollars. The sending of a Statement of Objections is a step in the European Commission's investigation and does not prejudge the outcome of the investigation. Deutsche Bank has proactively cooperated with the European Commission in this matter and as a result has been granted immunity. In accordance with the European Commission's guidelines, Deutsche Bank does not expect a financial penalty.

Deutsche Bank is a defendant in several putative class action complaints filed in the US District Court for the Southern District of New York by alleged direct and indirect market participants claiming violations of antitrust law and common law related to alleged manipulation of the secondary trading market for SSA bonds. Deutsche Bank has reached an agreement to settle the actions by direct market participants for the amount of US$48.5 million and has recorded a provision in the same amount. The settlement is subject to court approval. The action filed on behalf of alleged indirect market participants is in its early stages.

Deutsche Bank is also a defendant in putative class actions filed on November 7, 2017 and December 5, 2017 in the Ontario Superior Court of Justice and Federal Court of Canada, respectively, claiming violations of antitrust law and the common law relating to alleged manipulation of secondary trading of SSA bonds. The complaints rely on allegations similar to those in the US class actions involving SSA bond trading, and seek compensatory and punitive damages. The cases are in their early stages.

Deutsche Bank was named as a defendant in several putative class action complaints filed in the US District Court for the Southern District of New York alleging violations of US antitrust law and a claim for unjust enrichment relating to Mexican government bond trading. The case is in its early stages.

Deutsche Bank has also been named as a defendant in four putative class action complaints filed in February and March 2019 in the US District Court for the Southern District of New York alleging violations of antitrust law and common law related to alleged manipulation of the secondary trading market for US Agency bonds. These cases are in the early stages.

Other than as noted above, the Group has not disclosed whether it has established provisions or contingent liabilities with respect to the matters referred to above because it has concluded that such disclosure can be expected to prejudice seriously their outcome.

Trust Preferred Securities Litigation. Deutsche Bank and certain of its affiliates and former officers are the subject of a consolidated putative class action, filed in the United States District Court for the Southern District of New York, asserting claims under the federal securities laws on behalf of persons who purchased certain trust preferred securities

issued by Deutsche Bank and its affiliates between October 2006 and May 2008. In a series of opinions, the court dismissed all claims as to four of the six offerings at issue, but allowed certain alleged omissions claims relating to the November 2007 and February 2008 offerings to proceed. The district court limited claims relating to the two offerings remaining in the case to alleged failures (i) to disclose "any known trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income from continuing operations" and (ii) to disclose "the most significant factors that make the offering speculative or risky" pursuant to Items 303 and 503 of Regulation S-K. Defendants have served Answers denying all wrongdoing. On October 2, 2018, the district court certified a plaintiff class as to both offerings. Merits discovery is ongoing.

The Group has not disclosed whether it has established a provision or contingent liability with respect to this matter because it has concluded that such disclosure can be expected to prejudice seriously its outcome.

US Treasury Securities Investigations and Litigations. Deutsche Bank has received inquiries from certain regulatory and law enforcement authorities, including requests for information and documents, pertaining to US Treasuries auctions, trading, and related market activity. Deutsche Bank is cooperating with these investigations.

Deutsche Bank's subsidiary Deutsche Bank Securities Inc. (DBSI) was a defendant in several putative class actions alleging violations of US antitrust law, the US Commodity Exchange Act and common law related to the alleged manipulation of the US Treasury securities market. These cases have been consolidated in the Southern District of New York. On November 16, 2017, plaintiffs filed a consolidated amended complaint, which did not name DBSI as a defendant. On December 11, 2017, the court dismissed DBSI from the class action without prejudice.

The Group has not disclosed whether it has established a provision or contingent liability with respect to these matters because it has concluded that such disclosure can be expected to prejudice seriously their outcome.

30 – Credit related Commitments and Contingent Liabilities

Irrevocable lending commitments and lending related contingent liabilities

In the normal course of business the Group regularly enters into irrevocable lending commitments, including fronting commitments as well as contingent liabilities consisting of financial and performance guarantees, standby letters of credit and indemnity agreements on behalf of its customers. Under these contracts the Group is required to perform under an obligation agreement or to make payments to the beneficiary based on third party's failure to meet its obligations. For these instruments it is not known to the Group in detail if, when and to what extent claims will be made. In the event that the Group has to pay out cash in respect of its fronting commitments, the Group would immediately seek reimbursement from the other syndicate lenders. The Group considers all the above instruments in monitoring the credit exposure and may require collateral to mitigate inherent credit risk. If the credit risk monitoring provides sufficient perception about a loss from an expected claim, a provision is established and recorded on the balance sheet.

The following table shows the Group's revocable lending commitments, irrevocable lending commitments and lending related contingent liabilities without considering collateral or provisions. It shows the maximum potential utilization of the Group in case all these liabilities entered into must be fulfilled. The table therefore does not show the expected future cash flows from these liabilities as many of them will expire without being drawn and arising claims will be honored by the customers or can be recovered from proceeds of arranged collateral.

Irrevocable lending commitments and lending related contingent liabilities

in € m.	Dec 31, 2018	Dec 31, 2017
Irrevocable lending commitments	167,722	158,253
Revocable lending commitments	44,327	45,867
Contingent liabilities	51,605	48,212
Total	263,654	252,331

Other commitments and other contingent liabilities

The following table shows the Group's other irrevocable commitments and other contingent liabilities without considering collateral or provisions. It shows the maximum potential utilization of the Group in case all these liabilities entered into must be fulfilled. The table therefore does not show the expected future cash flows from these liabilities as many of them will expire without being drawn and arising claims will be honored by the customers or can be recovered from proceeds of arranged collateral.

Other commitments and other contingent liabilities

in € m.	Dec 31, 2018	Dec 31, 2017
Other commitments	130	82
Other contingent liabilities	74	5
Total	204	86

Government Assistance

In the course of its business, the Group regularly applies for and receives government support by means of Export Credit Agency ("ECA") guarantees covering transfer and default risks for the financing of exports and investments into Emerging Markets and to a lesser extent, developed markets for Structured Trade & Export Finance and short- and medium-term Trade Finance business. Almost all export-oriented states have established such ECAs to support their domestic exporters. The ECAs act in the name and on behalf of the government of their respective country and are either constituted directly as governmental departments or organized as private companies vested with the official mandate of the government to act on its behalf. Terms and conditions of such ECA guarantees are broadly similar due to the fact that most of the ECAs act within the scope of the Organization for Economic Cooperation and Development ("OECD") consensus rules. The OECD consensus rules, an intergovernmental agreement of the OECD member states, define benchmarks intended to ensure that a fair competition between different exporting nations will take place.

In some countries dedicated funding programs with governmental support are offered for ECA-covered financings. The Group makes use of such programs to assist its clients in the financing of exported goods and services. In certain financings, the Group also receives government guarantees from national and international governmental institutions as collateral to support financings in the interest of the respective governments. The majority of such ECA guarantees received by the Group were issued either by the Euler-Hermes Kreditversicherungs-AG acting on behalf of the Federal Republic of Germany, by the Korean Export Credit Agencies (Korea Trade Insurance Corporation and The Export-Import Bank of Korea) acting on behalf of the Republic of Korea or by Chinese Export Credit Agency (China Export & Insurance Corporation (Sinosure)) acting on behalf of the People's Republic of China.

Irrevocable payment commitments with regard to levies

Irrevocable payment commitments related to bank levy according to Bank Recovery and Resolution Directive (BRRD), the Single Resolution Fund (SRF) and the German statutory deposit protection amounted to € 595.1 million as of December 31, 2018, and to € 412.3 million as of December 31, 2017.

31 – Other Short-Term Borrowings

in € m.	Dec 31, 2018	Dec 31, 2017
Other short-term borrowings:		
Commercial paper	2,752	5,274
Other	11,406	13,137
Total other short-term borrowings	14,158	18,411

32 – Long-Term Debt and Trust Preferred Securities

Long-Term Debt by Earliest Contractual Maturity

in € m.	Due in 2019	Due in 2020	Due in 2021	Due in 2022	Due in 2023	Due after 2023	Total Dec 31, 2018	Total Dec 31, 2017
Senior debt:								
Bonds and notes:								
Fixed rate	16,275	10,510	18,483	6,949	6,898	18,779	77,894	76,285
Floating rate	8,002	4,540	5,347	3,553	2,321	6,732	30,495	33,210
Subordinated debt:								
Bonds and notes:								
Fixed rate	2,057	1,135	0	0	30	2,075	5,297	5,493
Floating rate	24	180	0	0	1,202	14	1,420	1,738
Other	20,958	6,263	1,335	557	1,087	6,777	36,977	42,988
Total long-term debt	47,317	22,627	25,164	11,060	11,538	34,377	152,083	159,715

The Group did not have any defaults of principal, interest or other breaches with respect to its liabilities in 2018 and 2017.

Trust Preferred Securities1

in € m.	Dec 31, 2018	Dec 31, 2017
Fixed rate	2,194	4,462
Floating rate	975	1,030
Total trust preferred securities	3,168	5,491

1Perpetual instruments, redeemable at specific future dates at the Group’s option.

33 – Maturity Analysis of the earliest contractual undiscounted cash flows of Financial Liabilities

	Dec 31, 2018				
in € m.	On demand	Due within 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years
Noninterest bearing deposits	221,746	0	0	0	0
Interest bearing deposits	126,416	137,089	47,258	21,683	12,059
Trading liabilities1	59,922	0	0	0	0
Negative market values from derivative financial instruments1	301,487	0	0	0	0
Financial liabilities designated at fair value through profit or loss	16,438	25,838	7,895	2,760	5,724
Investment contract liabilities2	0	0	512	0	0
Negative market values from derivative financial instruments qualifying for hedge accounting3	0	609	502	505	306
Central bank funds purchased	252	0	0	0	0
Securities sold under repurchase agreements	3,151	963	508	1	0
Securities loaned	3,358	3	0	0	0
Other short-term borrowings	11,067	2,258	1,622	0	0
Long-term debt	3	34,449	16,268	80,028	36,085
Trust preferred securities	0	36	3,306	0	0
Other financial liabilities	96,573	2,762	1,201	369	60
Off-balance sheet loan commitments	167,722	0	0	0	0
Financial guarantees	22,502	0	0	0	0
Total4	1,030,639	204,008	79,073	105,346	54,234

1Trading liabilities and derivatives not qualifying for hedge accounting balances are recorded at fair value. The Group believes that this best represents the cash flow that would have to be paid if these positions had to be closed out. Trading liabilities and derivatives not qualifying for hedge accounting balances are shown within “on demand” which Group’s management believes most accurately reflects the short-term nature of trading activities. The contractual maturity of the instruments may however extend over significantly longer periods.

2These are investment contracts where the policy terms and conditions result in their redemption value equaling fair value.

3Derivatives designated for hedge accounting are recorded at fair value and are shown in the time bucket at which the hedged relationship is expected to terminate.

4The balances in the table do not agree to the numbers in the Group’s balance sheet as the cash flows included in the table are undiscounted. This analysis represents the worst case scenario for the Group if the Group was required to repay all liabilities earlier than expected. The Group believes that the likelihood of such an event occurring is remote.

	Dec 31, 2017				
in € m.	On demand	Due within 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years
Noninterest bearing deposits	226,339	0	0	0	0
Interest bearing deposits	133,378	146,204	45,816	19,194	12,510
Trading liabilities1	71,457	0	0	0	0
Negative market values from derivative financial instruments1	342,726	0	0	0	0
Financial liabilities designated at fair value through profit or loss	29,207	29,360	4,847	2,599	5,951
Investment contract liabilities2	0	0	574	0	0
Negative market values from derivative financial instruments qualifying for hedge accounting3	0	69	336	672	218
Central bank funds purchased	174	83	0	0	0
Securities sold under repurchase agreements	14,152	2,525	1,348	491	23
Securities loaned	6,684	3	0	0	1
Other short-term borrowings	11,859	2,326	3,600	0	0
Long-term debt	4	7,409	41,820	78,063	41,926
Trust preferred securities	0	1,710	3,328	688	0
Other financial liabilities	112,961	3,483	554	373	4
Off-balance sheet loan commitments	153,700	0	0	0	0
Financial guarantees	19,883	0	0	0	0
Total4	1,122,525	193,172	102,223	102,080	60,632

1Trading liabilities and derivatives not qualifying for hedge accounting balances are recorded at fair value. The Group believes that this best represents the cash flow that would have to be paid if these positions had to be closed out. Trading liabilities and derivatives not qualifying for hedge accounting balances are shown within “on demand” which Group’s management believes most accurately reflects the short-term nature of trading activities. The contractual maturity of the instruments may however extend over significantly longer periods. .

2These are investment contracts where the policy terms and conditions result in their redemption value equaling fair value.

3Derivatives designated for hedge accounting are recorded at fair value and are shown in the time bucket at which the hedged relationship is expected to terminate.

4The balances in the table do not agree to the numbers in the Group’s balance sheet as the cash flows included in the table are undiscounted. This analysis represents the worst case scenario for the Group if the Group was required to repay all liabilities earlier than expected. The Group believes that the likelihood of such an event occurring is remote.

Additional Notes

34 – Common Shares

Common Shares

Deutsche Bank's share capital consists of common shares issued in registered form without par value. Under German law, each share represents an equal stake in the subscribed capital. Therefore, each share has a nominal value of € 2.56, derived by dividing the total amount of share capital by the number of shares.

Number of shares	Issued and fully paid	Treasury shares	Outstanding
Common shares, January 1, 2017	1,379,273,131	(203,442)	1,379,069,689
Shares issued under share-based compensation plans	0	0	0
Capital increase	687,500,000	0	687,500,000
Shares purchased for treasury	0	(490,690,358)	(490,690,358)
Shares sold or distributed from treasury	0	490,522,710	490,522,710
Common shares, December 31, 2017	2,066,773,131	(371,090)	2,066,402,041
Shares issued under share-based compensation plans	0	0	0
Capital increase	0	0	0
Shares purchased for treasury	0	(372,179,750)	(372,179,750)
Shares sold or distributed from treasury	0	371,206,696	371,206,696
Common shares, December 31, 2018	2,066,773,131	(1,344,144)	2,065,428,987

There are no issued ordinary shares that have not been fully paid.

Shares purchased for treasury mainly consist of shares purchased with the intention of being resold in the short-term as well as held by the Group for a period of time. In addition, the Group has bought back shares for equity compensation purposes. All such transactions were recorded in shareholders' equity and no revenues and expenses were recorded in connection with these activities. Treasury stock held as of year-end will mainly be used for future share-based compensation.

Authorized Capital

The Management Board is authorized to increase the share capital by issuing new shares for cash consideration. As of December 31, 2018, Deutsche Bank AG had authorized but unissued capital of € 2,560,000,000 which may be issued in whole or in part until April 30, 2022. Further details are governed by Section 4 of the Articles of Association.

Authorized capital	Consideration	Pre-emptive rights	Expiration date
€ 512,000,000	Cash	May be excluded pursuant to Section 186 (3) sentence 4 of the Stock Corporation Act and may be excluded insofar as it is necessary to grant pre-emptive rights to the holders of option rights, convertible bonds and convertible participatory rights	April 30, 2022
€ 2,048,000,000	Cash	May be excluded insofar as it is necessary to grant pre-emptive rights to the holders of option rights, convertible bonds and convertible participatory rights.	April 30, 2022

Conditional Capital

The Management Board is authorized to issue once or more than once, participatory notes that are linked with conversion rights or option rights and/or convertible bonds and/or bonds with warrants. The participatory notes, convertible bonds or bonds with warrants may also be issued by affiliated companies of Deutsche Bank AG. For this purpose share capital was increased conditionally upon exercise of these conversion and/or exchange rights or upon mandatory conversion.

Conditional capital	Purpose of conditional capital	Expiration date
€ 512,000,000	May be used if holders of conversion or option rights that are linked with participatory notes or convertible bonds or bonds with warrants make use of their conversion or option rights or holders with conversion obligations of convertible participatory notes or convertible bonds fulfill their obligation to convert.	April 30, 2022
€ 51,200,000	May be used to fulfill options that are awarded on or before the expiration date and will only be used to the extent that holders of issued options make use of their right to receive shares and shares are not delivered out of treasury shares	April 30, 2022

Dividends

The following table presents the amount of dividends proposed or declared for the years ended December 31, 2018, 2017 and 2016, respectively.

	2018 (proposed)[1]	2017	2016[2]
Cash dividends declared (in € m.)	227,000,000	227,000,000	227,000,000
Cash dividends declared per common share (in €)	0.11	0.11	0.11

1Cash dividends for 2018 is based on the number of shares issued as of December 31, 2018.

2Dividends for 2016 and 2015 were approved by the annual general meeting in 2017 and were paid simultaneously in 2017.

No dividends have been declared since the balance sheet date.

35 – Employee Benefits

Share-Based Compensation Plans

The Group made grants of share-based compensation under the DB Equity Plan. This plan represents a contingent right to receive Deutsche Bank common shares after a specified period of time. The award recipient is not entitled to receive dividends during the vesting period of the award.

The share awards granted under the terms and conditions of the DB Equity Plan may be forfeited fully or partly if the recipient voluntarily terminates employment before the end of the relevant vesting period. Vesting usually continues

after termination of employment in cases such as redundancy or retirement.

In countries where legal or other restrictions hinder the delivery of shares, a cash plan variant of the DB Equity Plan was used for granting awards.

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The following table sets forth the basic terms of these share plans:

Grant year(s)	Deutsche Bank Equity Plan	Vesting schedule	Eligibility
2018	Annual Award (CIB)1	1/4: 12 months2	Select employees as
		1/4: 24 months2	annual performance-based
		1/4: 36 months2	compensation
		1/4: 48 months2	
	Annual Award (non-CIB)1	1/3: 12 months2	Select employees as
		1/3: 24 months2	annual performance-based
		1/3: 36 months2	compensation
	Annual Award	1/5: 12 months2	Members of Management Board
	(Senior Management)1	1/5: 24 months2	or of Senior Management
		1/5: 36 months2	
		1/5: 48 months2	
		1/5: 60 months2	
	Retention/New Hire	Individual specification	Select employees to attract and retain the best talent
	Annual Award – Upfront	Vesting immediately at grant3	Regulated employees
2017	Annual Award1	1/4: 12 months4	Select employees as
		1/4: 24 months4	annual performance-based
		1/4: 36 months4	compensation
		1/4: 48 months4	
		Or cliff vesting after 54 months4	Members of Management Board or of Senior Leadership Cadre
	Retention/New Hire	Individual specification	Select employees to attract and retain the best talent
	Annual Award – Upfront	Vesting immediately at grant3	Regulated employees
	Key Retention Plan (KRP)5	1/2: 50 months6	Material Risk Takers (MRTs)
		1/2: 62 months6	
		Cliff vesting after 43 months	Non-Material Risk Takers (non-MRTs)

2016	Annual Award	1/4: 12 months4 1/4: 24 months4 1/4: 36 months4 1/4: 48 months4 Or cliff vesting after 54 months4	Select employees as annual performance-based compensation Members of Management Board or of Senior Leadership Cadre
	Retention/New Hire	Individual specification	Select employees to attract and retain the best talent
	Annual Award – Upfront	Vesting immediately at grant3	Regulated employees
	Key Position Award (KPA)7	Cliff-vesting after 4 years3	Select employees as annual retention
2015/ 2014	Annual Award	1/3: 12 months4 1/3: 24 months4 1/3: 36 months4 Or cliff vesting after 54 months4	Select employees as annual performance-based compensation Members of Management Board or of Senior Leadership Group
	Retention/New Hire	Individual specification	Select employees to attract and retain the best talent
	Annual Award – Upfront	Vesting immediately at grant8	Regulated employees

1For employees of certain legal entities, deferred equity is replaced with restricted shares due to local regulatory requirements.

2For members of the Management Board or the Senior Management and all other InstVV-regulated employees a further retention period of twelve months applies.

3 For all regulated employees share delivery takes place after a further retention period of twelve months. For awards granted in 2018 this is only applicable to InstVV MRTs.

4For members of the Management Board or of the Senior Leadership Cadre and all other regulated employees a further retention period of six months applies.

5The Key Retention Plan (KRP) is referenced as the “Retention Award Program” in the Bank’s Compensation Report. Equity-based awards granted under this program in January 2017 are subject to an additional share price hurdle, meaning this award proportion only vests in the event that the Bank’s share price reaches a certain share target price prior to vesting.

6For Material Risk Takers (MRTs) share delivery takes place after a further retention period of twelve months.

7A predefined proportion of the individual’s KPA is subject to an additional share price hurdle, meaning this award proportion only vests in the event that the Bank’s share price reaches a certain share target price prior to vesting.

8For members of the Management Board share delivery takes place after a retention period of three years. For all other regulated employees share delivery takes place after a retention period of six months.

Furthermore, the Group offers a broad-based employee share ownership plan entitled Global Share Purchase Plan ("GSPP"). The GSPP offers employees in specific countries the opportunity to purchase Deutsche Bank shares in monthly installments over one year. At the end of the purchase cycle, the bank matches the acquired stock in a ratio of one to one up to a maximum of ten free shares, provided that the employee remains at Deutsche Bank Group for another year. In total, about 12,450 staff from 20 countries enrolled in the tenth cycle that began in November 2018.

The Group has other local share-based compensation plans, none of which, individually or in the aggregate, are material to the consolidated financial statements.

The following table shows the outstanding share award units as of the respective dates, which represent a contingent right to receive Deutsche Bank common shares after a specified period of time. It also includes the grants under the cash plan variant of the DB Equity Plan.

	Share units (in thousands)	Weighted-average grant date fair value per unit
Balance as of December 31, 2016	90,292	€ 20.22
Balance as of December 31, 2017	137,541	€ 14.78
Balance as of December 31, 2018	153,117	€ 11.15

Share-based payment transactions resulting in a cash payment give rise to a liability, which amounted to approximately € 12 million, € 23 million and € 15 million for the years ended December 31, 2018, 2017 and 2016, respectively.

As of December 31, 2018, the grant volume of outstanding share awards was approximately € 1.7 billion. Thereof, € 1.2 billion had been recognized as compensation expense in the reporting year or prior to that. Hence, compensation expense for deferred share-based compensation not yet recognized amounted to € 0.5 billion as of December 31, 2018.

In addition to the amounts shown in the table above, approximately 4.4 and 9.1 million shares were issued to plan participants in February and March 2019, resulting from the vesting of DB Equity Plan awards granted in prior years (thereof 0.16 million units for February and 0.16 million units for March 2019 vesting cycles under the cash plan variant of this DB Equity Plan).

DWS Share-Based Plans (cash-settled)

In September 2018 one-off IPO related awards under the DWS Stock Appreciation Rights (SAR) Plan was granted to all DWS Group staff and in addition there were awards for a limited number of DWS senior managers under the DWS Equity (PSU) Plan.

The DWS SAR Plan represents a contingent right to receive a cash payment equal to any appreciation (or gain) in the value of a set number of notional DWS Shares over a fixed period of time. This award does not provide any entitlement to receive DWS Shares, voting rights or dividends associated with them.

The DWS Equity Plan is a phantom share plan representing a contingent right to receive a cash payment by referencing to the value of DWS Shares during a specified period of time.

The award recipient for any share-based compensation plan is not entitled to receive dividends during the vesting period of the award.

The share awards granted under the terms and conditions of any share-based compensation plan are forfeited fully or partly if the recipient voluntarily terminates employment before the end of the relevant vesting period. Vesting usually continues after termination of employment in cases such as redundancy or retirement.

The following table set forth the basic terms of the DWS share-based plans:

Grant year(s)	Award Type	Vesting schedule	Eligibility
2018 DWS Equity Plan	Retention/New Hire	Individual Specification	Select employees to attract and retain the best talent
	PSU Award (one-off IPO related award)1	For MRTs: 1/3: March 20223 1/3: March 2023 1/3: March 2024	Select Senior Managers
2018 DWS SAR Plan	SAR Award (one-off IPO related award)2	For non-MRTs: June 1, 20215 For MRTs: March 1, 20233	All DWS employees4

1The award and the number of units is subject to the achievement of pre-defined targets (Average Net flows (NNA)2019-2020 and FY 2020 Adjusted CIR (Cost Income Ratio) measured December 2020.

2The award is subject to a positive IBIT of DWS Group December 2019.

3Depending on their individual regulatory status, a 6 months retention period (AIFMD/UCITS MRTs) or a 12-months retention period (InstVV MRTs) applies after vesting.

4Unless the employee received PSU Award.

5Following vesting / retention period a 4-year exercise period applies.

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As of December 31, 2018, the grant volume of outstanding share awards was approximately € 23 million. Thereof, € 4 million has been recognized as compensation expense in the reporting year since the award date. Hence, compensation expense for deferred share-based compensation not yet recognized is approximately € 19 million which is dependent on future share price development.

The fair value of the awards have been measured using the Black-Scholes formula. Service and non-market performance conditions attached to the arrangements were not taken into account in measuring fair value. The inputs used in the measurement of the fair values at grant date and measurement date of the awards were as follows:

	Grant date 15 September 2018	Measurement date 31 December 2018	Grant date 15 September 2018	Measurement date 31 December 2018
	PSU	PSU	SAR	SAR
Units	1,272	1,248	2,224	2,192
Fair value	€ 14.56	€ 14.18	€ 3.95	€ 3.35
Share price	€ 23.75	€ 23.37	€ 23.75	€ 23.37
Exercise price	N/A	N/A	€ 24.65	€ 24.65
Expected volatility (weighted-average, in %)	36	35	36	35
	5	5	6	6

Expected life (weighted-average, in years)				
Expected dividends (in % of income)	65	65	65	65
Risk-free interest rate (based on government funds, in %)	0	0	0	0

Given the short timeframe since the IPO of DWS Group, the expected volatility of the DWS share price has been based on an evaluation of the historical volatility for a comparable peer group over the preceding 5-year period. The expected dividend level is linked to the latest DWS Group communication.

In addition, the DWS Equity Plan has performance conditions which will determine the nominal amount which can ultimately vest under the award. These performance conditions are linked to the DWS Group strategy, specifically with regards to the target for net inflows and the adjusted cost income ratio, which will be tested prior to vesting in March 2021.

Post-employment Benefit Plans

Nature of Plans

The Group sponsors a number of post-employment benefit plans on behalf of its employees, both defined contribution plans and defined benefit plans. The Group's plans are accounted for based on the nature and substance of the plan. Generally, for defined benefit plans the value of a participant's accrued benefit is based on each employee's remuneration and length of service; contributions to defined contribution plans are typically based on a percentage of each employee's remuneration. The rest of this note focuses predominantly on the Group's defined benefit plans.

The Group's defined benefit plans are primarily described on a geographical basis, reflecting differences in the nature and risks of benefits, as well as in the respective regulatory environments. In particular, the requirements set by local regulators can vary significantly and determine the design and financing of the benefit plans to a certain extent. Key information is also shown based on participant status, which provides a broad indication of the maturity of the Group's obligations.

	Dec 31, 2018				
in € m.	Germany	UK	U.S.	Other	Total
Defined benefit obligation related to					
Active plan participants	4,599	593	337	623	6,152
Participants in deferred status	2,210	2,286	500	97	5,093
Participants in payment status	5,144	989	500	242	6,875
Total defined benefit obligation	11,953	3,868	1,337	962	18,120
Fair value of plan assets	10,877	4,884	1,074	892	17,727
Funding ratio (in %)	91 %	126 %	80 %	93 %	98 %

	Dec 31, 2017				
in € m.	Germany	UK	U.S.	Other	Total
Defined benefit obligation related to					
Active plan participants	4,823	688	363	640	6,514
Participants in deferred status	2,196	2,583	536	93	5,408

Participants in payment status	5,071	905	502	246	6,724
Total defined benefit obligation	12,090	4,176	1,401	979	18,646
Fair value of plan assets	11,003	5,202	1,091	915	18,211
Funding ratio (in %)	91 %	125 %	78 %	93 %	98 %

The majority of the Group's defined benefit plan obligations relate to Germany, the United Kingdom and the United States. Within the other countries, the largest obligation relates to Switzerland. In Germany and some continental European countries, post-employment benefits are usually agreed on a collective basis with respective employee works councils, unions or their equivalent. The Group's main pension plans are governed by boards of trustees, fiduciaries or their equivalent.

Post-employment benefits can form an important part of an employee's total remuneration. The Group's approach is that their design shall be attractive to employees in the respective market, but sustainable for the Group to provide over the longer term. At the same time, the Group tries to limit its risks related to provision of such benefits. Consequently the Group has moved to offer defined contribution plans in many locations over recent years.

In the past the Group typically offered pension plans based on final pay prior to retirement. These types of benefits still form a significant part of the pension obligations for participants in deferred and payment status. Currently, in Germany and the United States, the main defined benefit pension plans for active staff are cash account type plans where the Group credits an annual amount to individual accounts based on an employee's current salary. Dependent on the plan rules, the accounts increase either at a fixed interest rate or participate in market movements of certain underlying investments to limit the investment risk for the Group. Sometimes, in particular in Germany, there is a guaranteed benefit amount within the plan rules, e.g. payment of at least the amounts contributed. Upon retirement, beneficiaries may usually opt for a lump sum or for conversion of the accumulated account balance into an annuity. This conversion is often based on market conditions and mortality assumptions at retirement. In the past, the main defined benefit pension plan in the United Kingdom was redesigned for active employees still eligible to the plan to reduce the overall long-term risk exposure to the Group. Furthermore recent changes to pension legislation and taxation in the UK continued to cause increased take-up of cash options and transfer values out of the defined benefit pension plans.

The Group also sponsors retirement and termination indemnity plans in several countries, as well as some post-employment medical plans for a number of current and retired employees, mainly in the United States. The post-employment medical plans typically pay fixed percentages of medical expenses of eligible retirees after a set deductible has been met. In the United States, once a retiree is eligible for Medicare, the Group contributes to a Health Reimbursement Account and the retiree is no longer eligible for the Group's medical program. The Group's total defined benefit obligation for post-employment medical plans was € 192 million and € 196 million at December 31, 2018 and December 31, 2017, respectively. In combination with the benefit structure, these plans represent limited risk for the Group, given the nature and size of the post-retirement medical plan liabilities of € 192 million versus the size of the Group's balance sheet at year end 2018.

The following amounts of expected benefit payments from the Group's defined benefit plans include benefits attributable to employees' past and estimated future service, and include both amounts paid from the Group's external pension trusts and paid directly by the Group in respect of unfunded plans.

in € m.	Germany	UK	U.S.	Other	Total
Actual benefit payments 2018	437	176	114	76	803
Benefits expected to be paid 2019	439	115	81	66	701
Benefits expected to be paid 2020	448	92	76	59	675

Benefits expected to be paid 2021	460	98	82	59	699
Benefits expected to be paid 2022	480	106	82	61	729
Benefits expected to be paid 2023	498	116	86	60	760
Benefits expected to be paid 2024 – 2028	2,747	694	455	321	4,217
Weighted average duration of defined benefit obligation (in years)	14	22	11	12	15

Multi-employer Plans

In Germany, the Group is a member of the BVV Versicherungsverein des Bankgewerbes a.G. (BVV) together with other financial institutions. The BVV offers retirement benefits to eligible employees in Germany as a complement to post-employment benefit promises of the Group. Both employers and employees contribute on a regular basis to the BVV. The BVV provides annuities of a fixed amount to individuals on retirement and increases these fixed amounts if surplus assets arise within the plan. According to legislation in Germany, the employer is ultimately liable for providing the benefits to its employees. An increase in benefits may also arise due to additional obligations to retirees for the effects of inflation. BVV is a multi-employer defined benefit plan. However, in line with industry practice, the Group accounts for it as a defined contribution plan since insufficient information is available to identify assets and liabilities relating to the Group's current and former employees, primarily because the BVV does not fully allocate plan assets to beneficiaries nor to member companies. According to the BVV's disclosures, there is no current deficit in the plan that may affect the amount of future Group contributions. Furthermore, any plan surplus emerging in the future will be distributed to the plan members, hence it cannot reduce future Group contributions. In June 2016, the BVV's Annual General Meeting approved a reduction in benefits from future contributions for certain groups of employees. Similar to other participating companies, the Group committed to make up for reduced benefit levels by increasing contributions to the BVV from January 1, 2017. A corresponding labor agreement has been signed with the German works council.

The Group's expenses for defined contribution plans also include annual contributions by DB Privat- und Firmenkundenbank AG to the pension fund for postal civil servants in Germany. Responsibility for the liability for these benefits lies with the German government.

Governance and Risk

The Group maintains a Pensions Risk Committee to oversee its pension and related risks on a global basis. This Committee meets quarterly, reports directly to the Senior Executive Compensation Committee and is supported by the Pensions Operating Committee.

Within this context, the Group develops and maintains guidelines for governance and risk management, including funding, asset allocation and actuarial assumption setting. In this regard, risk management means the management and control of risks for the Group related to market developments (e.g., interest rate, credit spread, price inflation), asset investment, regulatory or legislative requirements, as well as monitoring demographic changes (e.g., longevity). Especially during and after acquisitions or changes in the external environment (e.g., legislation, taxation), topics such as the general plan design or potential plan amendments are considered. Any plan changes follow a process requiring approval by Group Human Resources. To the extent that pension plans are funded, the assets held mitigate some of the liability risks, but introduce investment risk.

In the Group's key pension countries, the Group's largest post-employment benefit plan risk exposures relate to potential changes in credit spreads, interest rates, price inflation and longevity, although these have been partially mitigated through the investment strategy adopted.

Overall, the Group seeks to minimize the impact of pensions on the Group's financial position from market movements, subject to balancing the trade-offs involved in financing post-employment benefits, regulatory capital and constraints from local funding or accounting requirements. The Group measures its pension risk exposures on a regular basis using specific metrics developed by the Group for this purpose.

Funding

The Group maintains various external pension trusts to fund the majority of its defined benefit plan obligations. The Group's funding policy is to maintain coverage of the defined benefit obligation by plan assets within a range of 90 % to 100 % of the obligation, subject to meeting any local statutory requirements. The Group has also determined that certain plans should remain unfunded, although their funding approach is subject to periodic review, e.g. when local regulations or practices change. Obligations for the Group's unfunded plans are accrued on the balance sheet.

For most of the externally funded defined benefit plans there are local minimum funding requirements. The Group can decide on any additional plan contributions, with reference to the Group's funding policy. There are some locations, e.g. the United Kingdom, where the trustees and the Bank jointly agree contribution levels. In most countries the Group expects to receive an economic benefit from any plan surpluses of plan assets compared to defined benefit obligations, typically by way of reduced future contributions. Given the broadly fully funded position and the investment strategy adopted in the Group's key funded defined benefit plans, any minimum funding requirements that may apply are not expected to place the Group under any material adverse cash strain in the short term. With reference to the Group's funding policy, the Group considers not re-claiming benefits paid from the Group's assets as an equivalent to making cash contributions into the external pension trusts during the year.

For post-retirement medical plans, the Group accrues for obligations over the period of employment and pays the benefits from Group assets when the benefits become due.

Actuarial Methodology and Assumptions

December 31 is the measurement date for all plans. All plans are valued by independent qualified actuaries using the projected unit credit method. A Group policy provides guidance to local actuaries to ensure consistency globally on setting actuarial assumptions which are finally determined by the Group's Pensions Operating Committee. Senior management of the Group is regularly informed of movements and changes in key actuarial assumptions.

The key actuarial assumptions applied in determining the defined benefit obligations at December 31 are presented below in the form of weighted averages.

	Dec 31, 2018				Dec 31, 2017			
	Germany	UK	U.S.1	Other	Germany	UK	U.S.1	Other
Discount rate (in %)	1.7 %	2.7 %	4.2 %	2.6 %	1.7 %	2.5 %	3.5 %	2.5 %
Rate of price inflation (in %)	1.6 %	3.5 %	2.2 %	1.9 %	1.8 %	3.5 %	2.2 %	2.0 %
Rate of nominal increase in future	2.1 %	4.0 %	2.3 %	2.9 %	2.3 %	4.5 %	2.3 %	3.1 %

compensation levels (in %)								
Rate of nominal increase for pensions in payment (in %)	1.5 %	3.3 %	2.2 %	1.0 %	1.7 %	3.3 %	2.2 %	1.1 %
Assumed life expectancy at age 65								
For a male aged 65 at measurement date	20.0	23.5	22.2	21.8	19.3	23.6	22.2	21.7
For a female aged 65 at measurement date	23.6	25.4	23.7	24.1	23.3	25.4	23.7	24.1
For a male aged 45 at measurement date	22.8	24.8	23.7	23.3	21.9	24.9	23.8	23.1
For a female aged 45 at measurement date	25.8	26.8	25.2	25.6	25.8	26.9	25.2	25.6
Mortality tables applied	Richttafeln Heubeck 2018G	SAPS (S2) Light with CMI 2017 projections	RP2014 White-collar with MP2018 projections	Country specific tables	Richttafeln Heubeck 2005G	SAPS (S1) Light with CMI 2016 projections	RP2014 White-collar with MP 2017 projections	Country specific tables

1Cash balance interest crediting rate in line with the 30-year US government bond yield.

For the Group's most significant plans in the key countries, the discount rate used at each measurement date is set based on a high quality corporate bond yield curve – derived based on bond universe information sourced from reputable third-party index and data providers and rating agencies – reflecting the timing, amount and currency of the future expected benefit payments for the respective plan. For longer durations where limited bond information is available, reasonable yield curve extrapolation methods are applied using respective actual swap rates and credit spread assumptions. Consistent discount rates are used across all plans in each currency zone, based on the assumption applicable for the Group's largest plan(s) in that zone. For plans in the other countries, the discount rate is based on high quality corporate or government bond yields applicable in the respective currency, as appropriate at each measurement date with a duration broadly consistent with the respective plan's obligations.

In 2017 the Group moved to a more standardized, simpler approach to set its discount rate used to value its defined benefit plans in the Eurozone; similar approaches are generally accepted and are already used for the Group's other major pension plans in the United Kingdom and the United States. The refinement resulted in no change in the discount rate and so no effect on the Group's Consolidated Statement of Comprehensive Income in 2017.

The price inflation assumptions in the eurozone and the United Kingdom are set with reference to market measures of inflation based on inflation swap rates in those markets at each measurement date. For other countries, the price inflation assumptions are typically based on long term forecasts by Consensus Economics Inc.

The assumptions for the increases in future compensation levels and for increases to pensions in payment are developed separately for each plan, where relevant. Each is set based on the price inflation assumption and reflecting the Group's reward structure or policies in each market, as well as relevant local statutory and plan-specific requirements.

Among other assumptions, mortality assumptions can be significant in measuring the Group's obligations under its defined benefit plans. These assumptions have been set in accordance with current best practice in the respective countries. Future potential improvements in longevity have been considered and included where appropriate.

The valuation of the defined benefit obligation for the German plans as of December 31, 2018 are based for the first time on the Heubeck 2018G mortality tables. The tables reflect the latest statistics of the statutory German social security pension system and of the Federal Statistical Office.

Reconciliation in Movement of Liabilities and Assets – Impact on Financial Statements

	2018				
in € m.	Germany	UK	U.S.	Other	Total
Change in the present value of the defined benefit obligation:					
Balance, beginning of year	12,090	4,176	1,401	979	18,646
Defined benefit cost recognized in Profit & Loss					
Current service cost	204	30	17	45	296
Interest cost	203	104	49	23	379
Past service cost and gain or loss arising from settlements	(33)	18	0	(1)	(16)
Defined benefit cost recognized in Other Comprehensive Income					
Actuarial gain or loss arising from changes in financial assumptions	(135)	(187)	(89)	(23)	(434)
Actuarial gain or loss arising from changes in demographic assumptions	981	(48)	(3)	(2)	45
Actuarial gain or loss arising from experience	(38)	(7)	11	4	(30)
Cash flow and other changes					
Contributions by plan participants	3	0	0	16	19
Benefits paid	(437)	(176)	(114)	(76)	(803)
Payments in respect to settlements	0	0	0	(11)	(11)
Acquisitions/Divestitures	(2)	0	0	0	(2)
Exchange rate changes	0	(42)	65	8	31
Other	0	0	0	0	0
Balance, end of year	11,953	3,868	1,337	962	18,120
thereof:					
Unfunded	0	10	193	112	315

Funded	11,953	3,858	1,144	850	17,805
Change in fair value of plan assets:					
Balance, beginning of year	11,003	5,202	1,091	915	18,211
Defined benefit cost recognized in Profit & Loss					
Interest income	187	130	38	20	375
Defined benefit cost recognized in Other Comprehensive Income					
Return from plan assets less interest income	(351)	(218)	(53)	(33)	(655)
Cash flow and other changes					
Contributions by plan participants	3	0	0	16	19
Contributions by the employer	473	0	52	33	558
Benefits paid2	(437)	(175)	(102)	(53)	(767)
Payments in respect to settlements	0	0	0	(12)	(12)
Acquisitions/Divestitures	(1)	0	0	(1)	(2)
Exchange rate changes	0	(53)	52	7	6
Other	0	0	0	0	0
Plan administration costs	0	(2)	(4)	0	(6)
Balance, end of year	10,877	4,884	1,074	892	17,727
Funded status, end of year	(1,076)	1,016	(263)	(70)	(393)
Change in irrecoverable surplus (asset ceiling)					
Balance, beginning of year	0	0	0	(44)	(44)
Interest cost	0	0	0	0	0
Changes in irrecoverable surplus	0	0	0	20	20
Exchange rate changes	0	0	0	(1)	(1)
Balance, end of year	0	0	0	(25)	(25)
Net asset (liability) recognized	(1,076)	1,016	(263)	(95)	(418)3

1 Resulting predominantly from updated mortality assumptions (Heubeck 2018G instead of Heubeck 2005G)

2For funded plans only.

3 Thereof € 1,097 million recognized in Other assets and € 1,515 million in Other liabilities.

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	2017				
in € m.	Germany	UK	U.S.	Other	Total
Change in the present value of the defined benefit obligation:					
Balance, beginning of year	11,978	4,496	1,548	1,091	19,113
Defined benefit cost recognized in Profit & Loss					
Current service cost	213	34	21	50	318
Interest cost	202	114	56	25	397
Past service cost and gain or loss arising from settlements	34	4	0	(11)	27
Defined benefit cost recognized in Other Comprehensive Income					

Actuarial gain or loss arising from changes in financial assumptions	76	(43)	65	3	101
Actuarial gain or loss arising from changes in demographic assumptions	0	(16)	(6)	(11)	(33)
Actuarial gain or loss arising from experience	(3)	(17)	5	(9)	(24)
Cash flow and other changes					
Contributions by plan participants	3	0	0	15	18
Benefits paid	(413)	(245)	(99)	(83)	(840)
Payments in respect to settlements	0	0	0	(26)	(26)
Acquisitions/Divestitures	0	0	0	0	0
Exchange rate changes	0	(151)	(189)	(63)	(403)
Other	0	0	0	(2)	(2)
Balance, end of year	12,090	4,176	1,401	979	18,646
thereof:					
Unfunded	2	12	195	116	325
Funded	12,088	4,164	1,206	863	18,321
Change in fair value of plan assets:					
Balance, beginning of year	10,975	5,352	1,219	973	18,519
Defined benefit cost recognized in Profit & Loss					
Interest income	187	135	44	22	388
Defined benefit cost recognized in Other Comprehensive Income					
Return from plan assets less interest income	(187)	144	32	32	21
Cash flow and other changes					
Contributions by plan participants	3	0	0	15	18
Contributions by the employer	438	0	31	22	491
Benefits paid1	(413)	(244)	(86)	(63)	(806)
Payments in respect to settlements	0	0	0	(26)	(26)
Acquisitions/Divestitures	0	0	0	0	0
Exchange rate changes	0	(183)	(147)	(58)	(388)
Other	0	0	0	(1)	(1)
Plan administration costs	0	(2)	(2)	(1)	(5)
Balance, end of year	11,003	5,202	1,091	915	18,211
Funded status, end of year	(1,087)	1,026	(310)	(64)	(435)
Change in irrecoverable surplus (asset ceiling)					
Balance, beginning of year	0	0	0	0	0
Interest cost	0	0	0	0	0
Changes in irrecoverable surplus	0	0	0	(46)	(46)
Exchange rate changes	0	0	0	2	2
Balance, end of year	0	0	0	(44)	(44)
Net asset (liability) recognized	(1,087)	1,026	(310)	(108)	(479)2

1For funded plans only

2Thereof € 1,113 million recognized in Other assets and € 1,592 million in Other liabilities.

There are no reimbursement rights for the Group.

Investment Strategy

The Group's investment objective is to protect the Group from adverse impacts of its defined benefit pension plans on key financial metrics. In the past, the primary focus has been on protecting the plans' IFRS funded status in the case of adverse market scenarios. Recently there has been a shift in the investment strategy in selected markets to balance competing key financial metrics. Investment managers manage pension assets in line with investment mandates or guidelines as agreed with the pension plans' trustees and investment committees.

For key defined benefit plans for which the Bank aims to protect the IFRS funded status, the Group applies a liability driven investment (LDI) approach. Risks from mismatches between fluctuations in the present value of the defined benefit obligations and plan assets due to capital market movements are minimized, subject to balancing relevant trade-offs. This is achieved by allocating plan assets closely to the market risk factor exposures of the pension liability to interest rates, credit spreads and inflation. Thereby, plan assets broadly reflect the underlying risk profile and currency of the pension obligations. For pension plans where the LDI approach may impact adversely other key financial metrics, the Group deviates from this primary investment strategy. For example, in 2015, the Group started to adjust the investment strategy for the German main pension plan assets by reducing the interest rate and credit spread hedges. The Group closely monitors this divergence from the primary investment strategy and has put in place governance mechanisms to ensure a regular review of the deviation from the LDI approach.

Where the desired hedging level for market risks cannot be achieved with physical instruments (i.e. corporate and government bonds), derivatives are employed. Derivative overlays mainly include interest rate, inflation swaps and credit default swaps. Other instruments are also used, such as interest rate futures and options. In practice, a completely hedged approach is impractical, for instance because of insufficient market depth for ultra-long-term corporate bonds, as well as liquidity and cost considerations. Therefore, plan assets contain further asset categories to create long-term return enhancement and diversification benefits such as equity, real estate, high yield bonds or emerging markets bonds.

Plan asset allocation to key asset classes

The following table shows the asset allocation of the Group's funded defined benefit plans to key asset classes, i.e. exposures include physical securities in discretely managed portfolios and underlying asset allocations of any commingled funds used to invest plan assets.

Asset amounts in the following table include both "quoted" (i.e. Level 1 assets in accordance with IFRS 13 – amounts invested in markets where the fair value can be determined directly from prices which are quoted in active, liquid markets) and "other" (i.e. Level 2 and 3 assets in accordance with IFRS 13) assets.

	Dec 31, 2018					Dec 31, 2017				
in € m.	Germany	UK	U.S.	Other	Total	Germany	UK	U.S.	Other	Total
Cash and cash equivalents	1,138	715	(12)	77	1,918	1,260	419	26	74	1,779
Equity instruments1	1,148	571	107	60	1,886	1,265	582	118	68	2,033

Investment-grade bonds2										
Government	1,975	699	428	153	3,255	2,212	1,167	367	161	3,907
Non-government bonds	5,196	2,805	405	217	8,623	5,189	2,447	472	175	8,283
Non-investment-grade bonds										
Government	175	0	1	19	195	177	0	0	14	191
Non-government bonds	166	80	14	22	282	610	70	20	37	737
Structured products	39	6	52	16	113	41	402	51	26	520
Insurance	0	0	0	16	16	0	0	0	27	27
Alternatives										
Real estate	285	52	0	58	395	232	117	0	56	405
Commodities	53	0	0	0	53	48	24	0	0	72
Private equity	54	0	0	11	65	58	0	0	0	58
Other3	1,419	22	0	243	1,684	788	36	0	274	1,098
Derivatives (Market Value)										
Interest rate	(192)	129	13	(6)	(56)	(191)4	148	37	(4)	(10)
Credit	13	0	82	0	95	(155)	(1)	0	(1)	(157)
Inflation	(608)	(194)	0	5	(797)	(544)4	(210)	0	6	(748)
Foreign exchange	14	(1)	0	1	14	10	1	0	2	13
Other	2	0	(16)	0	(14)	3	0	0	0	3
Total fair value of plan assets	10,877	4,884	1,074	892	17,727	11,003	5,202	1,091	915	18,211

1Allocation of equity exposure is broadly in line with the typical index in the respective market, e.g. the equity portfolio's benchmark of the UK retirement benefit plans is the MSCI All Countries World Index.

2Investment-grade means BBB and above. Average credit rating exposure for the Group's main plans is around A.

3 Amongst others this position contains commingled funds which could not be segregated into the other asset categories. In particular the increase from 2017 to 2018 is caused by such positions.

4 Comparative 2017 figures have been changed retrospectively to be in line with the current assignment of assets to the derivative categories.

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The following table sets out the Group's funded defined benefit plan assets only invested in "quoted" assets, i.e. Level 1 assets in accordance with IFRS 13.

	Dec 31, 2018					Dec 31, 2017				
in € m.	Germany	UK	U.S.	Other	Total	Germany	UK	U.S.	Other	Total
Cash and cash equivalents	1,162	30	(16)	40	1,216	1,251	22	24	28	1,325
Equity instruments1	1,015	571	107	49	1,742	1,154	582	118	58	1,912
Investment-grade bonds2										

Government	1,013	695	423	52	2,183	1,190	1,163	362	73	2,788
Non-government bonds	0	0	0	0	0	0	0	0	0	0
Non-investment-grade bonds										
Government	0	0	0	2	2	1	0	0	0	1
Non-government bonds	0	0	0	0	0	0	0	0	0	0
Structured products	0	0	0	0	0	0	0	0	0	0
Insurance	0	0	0	0	0	0	0	0	0	0
Alternatives										
Real estate	0	0	0	0	0	0	0	0	0	0
Commodities	0	0	0	0	0	0	0	0	0	0
Private equity	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Derivatives (Market Value)										
Interest rate	0	0	(17)	0	(17)	1	0	6	0	7
Credit	0	0	0	0	0	0	(1)	0	0	(1)
Inflation	0	0	0	0	0	0	0	0	0	0
Foreign exchange	0	(1)	0	0	(1)	0	1	0	0	1
Other	2	0	0	0	2	3	0	0	0	3
Total fair value of quoted plan assets	3,192	1,295	497	143	5,127	3,600	1,767	510	159	6,036

1Allocation of equity exposure is broadly in line with the typical index in the respective market, e.g. the equity portfolio's benchmark of the UK retirement benefit plans is the MSCI All Countries World Index.

2Investment-grade means BBB and above. Average credit rating exposure for the Group's main plans is around A.

The following tables show the asset allocation of the "quoted" and "other" defined benefit plan assets by key geography in which they are invested.

	Dec 31, 2018						
in € m.	Germany	United Kingdom	United States	Other Eurozone	Other developed countries	Emerging markets	Total
Cash and cash equivalents	141	701	65	953	29	29	1,918
Equity instruments	252	108	708	360	363	95	1,886
Government bonds (investment-grade and above)	870	574	474	650	249	438	3,255
Government bonds (non-investment-grade)	0	0	0	4	24	167	195
Non-government bonds (investment-grade and above)	718	2,129	2,023	2,9841	657	112	8,623
Non-government bonds (non-investment-grade)	4	65	13	186	5	9	282
Structured products	38	21	52	2	0	0	113
Subtotal	2,023	3,598	3,335	5,139	1,327	850	16,272

Share (in %)	12	22	20	32	8	5	100
Other asset categories							1,455
Fair value of plan assets							17,727

1Majority of this amount relates to bonds of French, Dutch and Italian corporate bonds.

	Dec 31, 2017						
in € m.	Germany	United Kingdom	United States	Other Eurozone	Other developed countries	Emerging markets	Total
Cash and cash equivalents	294	126	96	1,204	16	43	1,779
Equity instruments	349	83	802	317	336	146	2,033
Government bonds (investment-grade and above)	1,057	1,087	397	627	253	486	3,907
Government bonds (non-investment-grade)	0	0	0	9	23	159	191
Non-government bonds (investment-grade and above)	575	1,890	2,196	2,6071	906	109	8,283
Non-government bonds (non-investment-grade)	4	44	20	640	19	10	737
Structured products	41	422	51	1	5	0	520
Subtotal	2,320	3,652	3,562	5,405	1,558	953	17,450
Share (in %)	13	21	20	31	9	5	100
Other asset categories							761
Fair value of plan assets							18,211

1Majority of this amount relates to bonds of French, Dutch and Italian corporate bonds.

Plan assets include derivative transactions with Group entities with a negative market value of around € 692 million and € 737 million at December 31, 2018 and December 31, 2017, respectively. There is neither a material amount of securities issued by the Group nor other claims on Group assets included in the fair value of plan assets. The plan assets do not include any real estate which is used by the Group.

In addition, the Group estimates and allows for uncertain income tax positions which may have an impact on the Group's plan assets. Significant judgment is required in making these estimates and the Group's final net liabilities may ultimately be materially different.

Key Risk Sensitivities

The Group's defined benefit obligations are sensitive to changes in capital market conditions and actuarial assumptions. Sensitivities to capital market movements and key assumption changes are presented in the following table. Each market risk factor or assumption is changed in isolation. Sensitivities of the defined benefit obligations are approximated using geometric extrapolation methods based on plan durations for the respective assumption. Duration is a risk measure that indicates the broad sensitivity of the obligations to a change in an underlying assumption and provides a reasonable approximation for small to moderate changes in those assumptions.

For example, the discount rate duration is derived from the change in the defined benefit obligation to a change in the discount rate based on information provided by the local actuaries of the respective plans. The resulting duration is used to estimate the remeasurement liability loss or gain from changes in the discount rate. For other assumptions, a similar approach is used to derive the respective sensitivity results.

For defined benefit pension plans, changes in capital market conditions will impact the plan obligations via actuarial assumptions – mainly discount rate and price inflation rate – as well as the plan assets. Where the Group applies a LDI approach, the Bank's overall exposure to changes is reduced. Consequently, to aid understanding of the Group's risk exposures related to key capital market movements, the net impact of the change in the defined benefit obligations and plan assets due to a change of the related market risk factor or underlying actuarial assumption is shown; for sensitivities to changes in actuarial assumptions that do not impact the plan assets, only the impact on the defined benefit obligations is shown.

Asset-related sensitivities are derived for the Group's major plans by using risk sensitivity factors determined by the Group's Market Risk Management function. These sensitivities are calculated based on information provided by the plans' investment managers and extrapolated linearly to reflect the approximate change of the plan assets' market value in case of a change in the underlying risk factor.

The sensitivities illustrate plausible variations over time in capital market movements and key actuarial assumptions. The Group is not in a position to provide a view on the likelihood of these capital market or assumption changes. While these sensitivities illustrate the overall impact on the funded status of the changes shown, the significance of the impact and the range of reasonable possible alternative assumptions may differ between the different plans that comprise the aggregated results. Even though plan assets and plan obligations are sensitive to similar risk factors, actual changes in plan assets and obligations may not fully offset each other due to imperfect correlations between market risk factors and actuarial assumptions. Caution should be used when extrapolating these sensitivities due to non-linear effects that changes in capital market conditions and key actuarial assumptions may have on the overall funded status. Any management actions that may be taken to mitigate the inherent risks in the post-employment defined benefit plans are not reflected in these sensitivities.

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	Dec 31, 2018				Dec 31, 2017			
in € m.	Germany	UK	U.S.	Other	Germany	UK	U.S.	Other
Discount rate (–50 bp):								
(Increase) in DBO	(840)	(430)	(40)	(50)	(875)	(465)	(40)	(55)
Expected increase in plan assets1	235	435	35	20	215	505	35	25
Expected net impact on funded status (de-) increase	(605)	5	(5)	(30)	(660)	40	(5)	(30)
Discount rate (+50 bp):								
Decrease in DBO	785	385	25	50	810	420	30	50
Expected (decrease) in plan assets1	(235)	(435)	(35)	(20)	(215)	(505)	(35)	(25)
Expected net impact on funded status (de-) increase	550	(50)	(10)	30	595	(85)	(5)	25
Credit spread (–50 bp):								
(Increase) in DBO	(840)	(430)	(75)	(55)	(875)	(465)	(85)	(60)
Expected increase in plan assets1	220	125	20	10	150	125	20	10
	(620)	(305)	(55)	(45)	(725)	(340)	(65)	(50)

Expected net impact on funded status (de-) increase								
Credit spread (+50 bp):								
Decrease in DBO	785	385	70	50	810	420	80	55
Expected (decrease) in plan assets1	(220)	(125)	(20)	(10)	(150)	(125)	(20)	(10)
Expected net impact on funded status (de-) increase	565	260	50	40	660	295	60	45
Rate of price inflation (–50 bp):2								
Decrease in DBO	335	325	0	20	345	345	0	20
Expected (decrease) in plan assets1	(190)	(270)	0	(10)	(180)	(310)	0	(10)
Expected net impact on funded status (de-) increase	145	55	0	10	165	35	0	10
Rate of price inflation (+50 bp):2								
(Increase) in DBO	(345)	(360)	0	(20)	(360)	(375)	0	(25)
Expected increase in plan assets1	190	270	0	10	180	310	0	10
Expected net impact on funded status (de-) increase	(155)	(90)	0	(10)	(180)	(65)	0	(15)
Rate of real increase in future compensation levels (–50 bp):								
Decrease in DBO, net impact on funded status	60	10	0	10	70	15	0	15
Rate of real increase in future compensation levels (+50 bp):								
(Increase) in DBO, net impact on funded status	(60)	(10)	0	(15)	(70)	(15)	0	(15)
Longevity improvements by 10 %:3								
(Increase) in DBO, net impact on funded status	(295)	(110)	(25)	(10)	(305)	(130)	(25)	(15)

1Expected changes in the fair value of plan assets contain the simulated impact from the biggest plans in Germany, the UK, the U.S., Channel Islands, Switzerland and Belgium which cover over 99 % of the total fair value of plan assets. The fair value of plan assets for other plans is assumed to be unchanged for this presentation.

2Incorporates sensitivity to changes in pension benefits to the extent linked to the price inflation assumption.

3Estimated to be equivalent to an increase of around 1 year in overall life expectancy.

Expected cash flows

The following table shows expected cash flows for post-employment benefits in 2019, including contributions to the Group's external pension trusts in respect of funded plans, direct payment to beneficiaries in respect of unfunded plans, as well as contributions to defined contribution plans.

	2019
in € m.	Total

Expected contributions to	
Defined benefit plan assets	500
BVV	65
Pension fund for Postbank's postal civil servants	85
Other defined contribution plans	280
Expected benefit payments for unfunded defined benefit plans	30
Expected total cash flow related to post-employment benefits	960

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Expense of employee benefits

The following table presents a breakdown of specific expenses according to the requirements of IAS 19 and IFRS 2.

in € m.	2018	2017	2016
Expenses for defined benefit plans:			
Service cost	280	345	272
Net interest cost (income)	4	9	(11)
Total expenses defined benefit plans	284	354	261
Expenses for defined contribution plans:			
BVV	62	66	50
Pension fund for Postbank’s postal civil servants	88	93	95
Other defined contribution plans	271	281	284
Total expenses for defined contribution plans	421	440	429
Total expenses for post-employment benefit plans	705	794	690
Employer contributions to mandatory German social security pension plan	236	243	237
Expenses for share-based payments, equity settled1	560	535	620
Expenses for share-based payments, cash settled1	1	22	3
Expenses for cash retention plans1	481	363	487
Expenses for severance payments2	137	94	149

1Including expenses for new hire awards and the acceleration of expenses not yet amortized due to the discontinuation of employment including those amounts which are recognized as part of the Group’s restructuring expenses.

2Excluding the acceleration of expenses for deferred compensation awards not yet amortized.

36 – Income Taxes

in € m.	2018	2017	2016
Current tax expense (benefit):			
Tax expense (benefit) for current year	733	874	881
Adjustments for prior years	(20)	(145)	(23)
Total current tax expense (benefit)	713	729	858

Deferred tax expense (benefit):			
Origination and reversal of temporary difference, unused tax losses and tax credits	316	(113)	(276)
Effect of changes in tax law and/or tax rate	(6)	1,437	(3)
Adjustments for prior years	(34)	(90)	(33)
Total deferred tax expense (benefit)	276	1,234	(312)
Total income tax expense (benefit)	989	1,963	546

Income tax expense in 2016 includes policyholder tax attributable to policyholder earnings amounting to an income tax expense of € 23 million.

Total current tax expense includes benefits from previously unrecognized tax losses, tax credits and deductible temporary differences, which reduced the current tax by € 5 million in 2017 and by € 7 million in 2016.

Total deferred tax expense includes benefits from previously unrecognized tax losses (tax credits/deductible temporary differences) and the reversal of previous write-downs of deferred tax assets and expenses arising from write-downs of deferred tax assets, which increased the deferred tax expense by € 253 million in 2018 and by € 163 million in 2017. In 2016 these effects increased the deferred tax benefit by € 38 million.

Difference between applying German statutory (domestic) income tax rate and actual income tax expense/(benefit)

in € m.	2018	2017	2016
Expected tax expense (benefit) at domestic income tax rate of 31.3% (31.3% for 2017 and 31.3% for 2016)	416	384	(254)
Foreign rate differential	8	(37)	(38)
Tax-exempt gains on securities and other income	(209)	(431)	(599)
Loss (income) on equity method investments	(19)	(21)	(19)
Nondeductible expenses	340	540	1,074
Impairments of goodwill	0	0	250
Changes in recognition and measurement of deferred tax assets1	253	159	(45)
Effect of changes in tax law and/or tax rate	(6)	1,437	(3)
Effect related to share-based payments	133	14	66
Effect of policyholder tax	0	0	23
Other1	73	(82)	91
Actual income tax expense (benefit)	989	1,963	546

1Current and deferred tax expense/(benefit) relating to prior years are mainly reflected in the line items “Changes in recognition and measurement of deferred tax assets” and “Other”.

The Group is under continuous examinations by tax authorities in various jurisdictions. “Other” in the preceding table includes the effects of these examinations by the tax authorities.

The domestic income tax rate, including corporate tax, solidarity surcharge, and trade tax, used for calculating deferred tax assets and liabilities was 31.3 % for 2018, 2017 and 2016.

Income taxes charged or credited to equity (other comprehensive income/additional paid in capital)

in € m.	2018	2017	2016
Actuarial gains/losses related to defined benefit plans	18	(23)	344
Net fair value gains (losses) attributable to credit risk related to financial liabilities designated as at fair value through profit or loss	(8)	0	0
Financial assets available for sale:			
Unrealized net gains/losses arising during the period	0	4	20
Net gains/losses reclassified to profit or loss	0	99	81
Financial assets mandatory at fair value through other comprehensive income:			
Unrealized net gains/losses arising during the period	48	0	0
Realized net gains/losses arising during the period (reclassified to profit or loss)	86	0	0
Derivatives hedging variability of cash flows:			
Unrealized net gains/losses arising during the period	1	4	(14)
Net gains/losses reclassified to profit or loss	0	42	1
Other equity movement:			
Unrealized net gains/losses arising during the period	91	2	(71)
Net gains/losses reclassified to profit or loss	2	(5)	100
Income taxes (charged) credited to other comprehensive income	238	123	461
Other income taxes (charged) credited to equity	1	73	93

Major components of the Group's gross deferred tax assets and liabilities

in € m.	Dec 31, 20181	Dec 31, 20171
Deferred tax assets:		
Unused tax losses	2,934	2,985
Unused tax credits	160	387
Deductible temporary differences:		
Trading activities, including derivatives	2,986	3,514
Employee benefits, including equity settled share based payments	2,140	2,208
Loans and borrowings, including allowance for loans	795	1,015
Fair value OCI (IFRS 9)	33	5
Intangible Assets	119	119
Accrued interest expense	1,133	180
Other assets	886	759
Other provisions	180	271
Other liabilities	21	42
Total deferred tax assets pre offsetting	11,387	11,485
Deferred tax liabilities:		
Taxable temporary differences:		
Trading activities, including derivatives	3,038	3,794
Employee benefits, including equity settled share based payments	312	266
Loans and borrowings, including allowance for loans	345	144
Fair value OCI (IFRS 9)	52	89

Intangible Assets	453	336
Other assets	344	270
Other provisions	85	83
Other liabilities	40	50
Total deferred tax liabilities pre offsetting	4,669	5,032

1Following the IFRS 9 introduction the presentation was changed and a more granular break down related to the type of temporary differences is provided. Comparatives were adjusted accordingly.

Deferred tax assets and liabilities, after offsetting

in € m.	Dec 31, 2018	Dec 31, 2017
Presented as deferred tax assets	7,230	6,799
Presented as deferred tax liabilities	512	346
Net deferred tax assets	6,718	6,453

The change in the balance of deferred tax assets and deferred tax liabilities does not equal the deferred tax expense/(benefit). This is due to (1) deferred taxes that are booked directly to equity, (2) the effects of exchange rate changes on tax assets and liabilities denominated in currencies other than euro, (3) the acquisition and disposal of entities as part of ordinary activities and (4) the reclassification of deferred tax assets and liabilities which are presented on the face of the balance sheet as components of other assets and liabilities.

Items for which no deferred tax assets were recognized

in € m.	Dec 31, 2018[1]	Dec 31, 2017[1]
Deductible temporary differences	(9)	(34)
Not expiring	(5,738)	(4,875)
Expiring in subsequent period	(52)	(19)
Expiring after subsequent period	(289)	(450)
Unused tax losses	(6,079)	(5,344)
Expiring after subsequent period	0	(11)
Unused tax credits	(1)	(12)

1Amounts in the table refer to deductible temporary differences, unused tax losses and tax credits for federal income tax purposes.

Deferred tax assets were not recognized on these items because it is not probable that future taxable profit will be available against which the unused tax losses, unused tax credits and deductible temporary differences can be utilized.

As of December 31, 2018 and December 31, 2017, the Group recognized deferred tax assets of € 6.5 billion and € 5.9 billion, respectively, that exceed deferred tax liabilities in entities which have suffered a loss in either the current or preceding period. This is based on management's assessment that it is probable that the respective entities will have taxable profits against which the unused tax losses, unused tax credits and deductible temporary differences can be utilized. Generally, in determining the amounts of deferred tax assets to be recognized, management uses historical profitability information and, if relevant, forecasted operating results, based upon approved business plans, including a review of the eligible carry-forward periods, tax planning opportunities and other relevant considerations.

As of December 31, 2018 and December 31, 2017, the Group had temporary differences associated with the Group's parent company's investments in subsidiaries, branches and associates and interests in joint ventures of € 27 million and € 72 million respectively, in respect of which no deferred tax liabilities were recognized.

37 – Derivatives

Derivative financial instruments and hedging activities

Derivative contracts used by the Group include swaps, futures, forwards, options and other similar types of contracts. In the normal course of business, the Group enters into a variety of derivative transactions for sales, market-making and risk management purposes. The Group's objectives in using derivative instruments are to meet customers' risk management needs and to manage the Group's exposure to risks.

In accordance with the Group's accounting policy relating to derivatives and hedge accounting as described in Note 1 "Significant Accounting Policies and Critical Accounting Estimates", all derivatives are carried at fair value in the balance sheet regardless of whether they are held for trading or non-trading purposes.

Derivatives held for sales and market-making purposes

Sales and market-making

The majority of the Group's derivatives transactions relate to sales and market-making activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Market-making involves quoting bid and offer prices to other market participants, enabling revenue to be generated based on spreads and volume.

Risk management

The Group uses derivatives in order to reduce its exposure to market risks as part of its asset and liability management. This is achieved by entering into derivatives that hedge specific portfolios of fixed rate financial instruments and forecast transactions as well as strategic hedging against overall balance sheet exposures. The Group actively manages interest rate risk through, among other things, the use of derivative contracts. Utilization of derivative financial instruments is modified from time to time within prescribed limits in response to changing market conditions, as well as to changes in the characteristics and mix of the related assets and liabilities.

Derivatives qualifying for hedge accounting

The Group applies hedge accounting if derivatives meet the specific criteria described in Note 1 "Significant Accounting Policies and Critical Accounting Estimates".

In fair value hedge relationship, the Group uses primarily interest rate swaps and options, in order to protect itself against movements in the fair value of fixed-rate financial instruments due to movements in market interest rates. In a cash flow hedge relationship, the Group uses interest rate swaps in order to protect itself against exposure to variability in interest rates. The Group enters into foreign exchange forwards and swaps for hedges of translation adjustments resulting from translating the financial statements of net investments in foreign operations into the

reporting currency of the parent at period end spot rates.

The Group assesses and measures hedge effectiveness of a hedging relationship based on the change in the fair value or cash flows of the derivative hedging instrument relative to the change in the fair value or cash flows of the hedged item attributable to the hedged risk. Potential sources of ineffectiveness can be attributed to differences between hedging instruments and hedged items:

- Mismatches in the terms of hedged items and hedging instruments, for example the frequency and timing of when interest rates are reset, frequency of payment and callable features.
- Difference in the discounting rate applied to the hedged item and the hedging instrument, taking into consideration differences in the reset frequency of the hedged item and hedging instrument.
- Derivatives used as hedging instrument with a non-zero fair value at inception date of the hedging relationship, resulting in mismatch in terms with the hedged item.

Interest rate risk

The Group uses interest rate swaps and options to manage its exposure to interest rate risk by modifying the re-pricing characteristics of existing and/or forecasted assets and liabilities, including funding and investment activities. The interest rate swaps and options are designated in either a fair value hedge or a cash flow hedge. For fair value hedges, the Group uses interest rate swaps and options contracts to manage the fair value movements of fixed rate financial instruments due to changes in benchmark interest. For cash flow hedges, we use interest rate swaps to manage the exposure to cash flow variability of our variable rate instruments as a result of changes in benchmark interest rates.

The Group manages its interest rate risk exposure on portfolio basis with frequent changes in the portfolio due to the origination of new loans and bonds, repayments of existing loans and bonds, issuance of new funding liabilities and repayment of existing funding liabilities. Accordingly, a dynamic hedging accounting approach is adopted for the portfolio, in which individual hedge relationships are designated and de-designated on a more frequent basis (e.g. on a monthly basis).

Foreign exchange risk

The Group manages its foreign currency risk (including U.S. dollar and British pound) from investments in foreign operation through net investment hedges using a combination of foreign exchange forwards and swaps as hedging instruments.

As the investments in foreign operations are only hedged to the extent of the notional amount of the hedging derivative instrument the Group generally does not expect to incur significant ineffectiveness on hedges of net investments in foreign operations.

Fair value hedge accounting

Derivatives held as fair value hedges

	Dec 31, 2018			2018	Dec 31, 2017	
in € m.	Assets	Liabilities	Nominal amount	Fair Value changes used for hedge effectiveness	Assets	Liabilities

Derivatives held as fair value hedges	5,462	975	156,025	(557)	5,936	562

in € m.	2018 Hedge ineffectiveness
Result of fair value hedges	37

Financial instruments designated as fair value hedges

	Dec 31, 2018						2018
	Carrying amount of Financial instruments designated as fair value hedges		Accumulated amount of fair value hedge adjustments - Total		Accumulated amount of fair value hedge adjustments - Terminated hedge relationships		Fair Value changes used for hedge effectiveness
in € m.	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	
Financial assets at fair value through other comprehensive income	16,900	0	326	0	(35)	0	(31)
Loans at amortized cost	8,794	0	59	0	1	0	118
Long-term debt	0	87,356	0	2,292	0	369	506
Other Assets/ Liabilities	0	0	0	0	0	0	0

For the years ended December 31, 2018, 2017 and 2016, a loss of € 0.6 billion, a loss of € 1.6 billion and a loss of € 0.6 billion, respectively, were recognized on the hedging instruments. For the same periods, the results on the hedged items, which were attributable to the hedged risk, were a gain of € 0.6 billion, a gain of € 1.3 billion and a gain of € 1.0 billion.

Cash flow hedge accounting

Derivatives held as cash flow hedges

	Dec 31, 2018			2018	Dec 31, 2017	
in € m.	Assets	Liabilities	Nominal amount	Fair Value changes used for hedge effectiveness	Assets	Liabilities
Derivatives held as cash flow hedges	29	1	3,689	(0)	37	3

Periods when hedged cash flows are expected to occur and when they are expected to affect the income statement

in € m.	Within 1 year	1–3 years	3–5 years	Over 5 years
As of December 31, 2017				
Cash inflows from assets	28	18	0	0
Cash outflows from liabilities	0	0	13	0
Net cash flows 2017	28	18	(13)	0

Cash flow hedge balances

in € m.	Dec 31, 2018	Dec 31, 2017	Dec 31, 2016
Reported in Equity1	25	28	198
thereof relates to terminated programs	0	0	0
Gains (losses) posted to equity for the year ended	(3)	(34)	62
Gains (losses) removed from equity for the year ended	0	136	2
thereof relates to terminated programs	0	0	0
Changes of hedged item's value used for hedge effectiveness	0	0	0
Ineffectiveness recorded within P&L	0	0	(17)

1Reported in equity refers to accumulated other comprehensive income as presented in the consolidated balance sheet.

As of December 31, 2018 the longest term cash flow hedge matures in 2022.

The financial instruments designated as cash flow hedges are recognized as Loans at amortized cost in the Group's consolidated balance sheet.

Net investment hedge accounting

Derivatives held as net investment hedges

	Dec 31, 2018			2018	Dec 31, 2017	
in € m.	Assets	Liabilities	Nominal amount	Fair Value changes used for hedge effectiveness	Assets	Liabilities
Derivatives held as net investment hedges	718	1,710	43,456	(1,380)	612	904

	2018	
in € m.	Fair value changes recognised in Equity1	Hedge ineffectiveness
Result of net investment hedges	1,742	(345)

[1] Reported in equity refers to accumulated other comprehensive income as presented in the consolidated balance sheet

For the years ended December 31, 2018, 2017 and 2016, losses of € 345 million, € 348 million and € 437 million, respectively, were recognized due to hedge ineffectiveness which includes the forward point element of the hedging instruments.

Profile of derivatives held as net investment hedges

in € m.	Within 1 year	1–3 years	3–5 years	Over 5 years
As of December 31, 2018				
Nominal amount Foreign exchange forwards	28,808	110	13	0
Nominal amount Foreign exchange swaps	3,972	5,601	1,982	2,970
Total	32,780	5,711	1,995	2,970

The Group uses a combination a rolling foreign exchange forward strategy and a static foreign currency swap hedging strategy. For the year ended December 31, 2018 the average foreign currency rate for the Group's foreign currency Euro/USD swap portfolio was 0.82.

38 – Related Party Transactions

Parties are considered to be related if one party has the ability to directly or indirectly control the other party or exercise significant influence over the other party in making financial or operational decisions. The Group's related parties include:

- key management personnel, close family members of key management personnel and entities which are controlled, significantly influenced by, or for which significant voting power is held by key management personnel or their close family members,
- subsidiaries, joint ventures and associates and their respective subsidiaries, and
- post-employment benefit plans for the benefit of Deutsche Bank employees.

Transactions with Key Management Personnel

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of Deutsche Bank, directly or indirectly. The Group considers the members of the Management Board and of the Supervisory Board of the parent company to constitute key management personnel for purposes of IAS 24.

Compensation expense of key management personnel

in € m.	2018	2017	2016
Short-term employee benefits	41	39	40
Post-employment benefits	10	10	9
Other long-term benefits	2	7	7
Termination benefits	32	3	0
Share-based payment	2	22	12
Total	87	81	68

The above table does not contain compensation that employee representatives and former board members on the Supervisory Board have received. The aggregated compensation paid to such members for their services as employees of Deutsche Bank or status as former employees (retirement, pension and deferred compensation) amounted to € 1.1 million as of December 31, 2018, € 1.1 million as of December 31, 2017 and € 1.1 million as of December 31, 2016.

Among the Group's transactions with key management personnel as of December 31, 2018 were loans and commitments of € 45 million and deposits of € 34 million. As of December 31, 2017, the Group's transactions with key management personnel were loans and commitments of € 48 million and deposits of € 123 million.

In addition, the Group provides banking services, such as payment and account services as well as investment advice, to key management personnel and their close family members.

Transactions with Subsidiaries, Joint Ventures and Associates

Transactions between Deutsche Bank AG and its subsidiaries meet the definition of related party transactions. If these transactions are eliminated on consolidation, they are not disclosed as related party transactions. Transactions between the Group and its associated companies and joint ventures and their respective subsidiaries also qualify as related party transactions.

Transactions for subsidiaries, joint ventures and associates are presented combined in below table as these are not material individually.

Loans

in € m.	2018	2017
Loans outstanding, beginning of year	256	297
Movement in loans during the period1	(21)	(26)
Changes in the group of consolidated companies	0	(1)
Exchange rate changes/other	(7)	(15)
Loans outstanding, end of year2	228	256
Other credit risk related transactions:		
Allowance for loan losses	0	0
Provision for loan losses	0	0
Guarantees and commitments	3	9

1 Net impact of loans issued and loans repayment during the year is shown as “Movement in loans during the period”.

2 Loans past due were € 0 million as of December 31, 2018 and € 0 million as of December 31, 2017. For the total loans the Group held collateral of € 14 million and € 14 million as of December 31, 2018 and December 31, 2017, respectively.

Deposits

in € m.	2018	2017
Deposits outstanding, beginning of year	67	87
Movement in deposits during the period1	2	(15)
Changes in the group of consolidated companies	0	(0)
Exchange rate changes/other	(0)	(4)
Deposits outstanding, end of year	68	67

1Net impact of deposits received and deposits repaid during the year is shown as “Movement in deposits during the period”.

Other Transactions

Trading assets and positive market values from derivative financial transactions with associated companies amounted to € 2 million as of December 31, 2018 and € 6 million as of December 31, 2017. Trading liabilities and negative market values from derivative financial transactions with associated companies amounted to € 0 million as of December 31, 2018 and € 0 million as of December 31, 2017.

Other transactions with related parties also reflected the following:

TradeWeb Markets: In the first quarter 2018, the Group ceased to have significant influence over its equity method investment in TradeWeb Markets LLC and recognized a remeasurement gain of € 84 million equal to the difference between the fair value and the carrying amount of the investment.

Transactions with Pension Plans

Under IFRS, certain post-employment benefit plans are considered related parties. The Group has business relationships with a number of its pension plans pursuant to which it provides financial services to these plans, including investment management services. The Group's pension funds may hold or trade Deutsche Bank shares or securities.

Transactions with related party pension plans

in € m.	2018	2017
Equity shares issued by the Group held in plan assets	1	0
Other assets	0	0
Fees paid from plan assets to asset managers of the Group	24	25
Market value of derivatives with a counterparty of the Group	(692)	(737)
Notional amount of derivatives with a counterparty of the Group	7,325	10,150

39 – Information on Subsidiaries

Composition of the Group

Deutsche Bank AG is the direct or indirect holding company for the Group's subsidiaries.

The Group consists of 707 (2017: 845) consolidated entities, thereof 251 (2017: 305) consolidated structured entities. 506 (2017: 612) of the entities controlled by the Group are directly or indirectly held by the Group at 100 % of the ownership interests (share of capital). Third parties also hold ownership interests in 201 (2017: 233) of the consolidated entities (noncontrolling interests). As of December 31, 2017 and 2018, one subsidiary has material noncontrolling interests. Noncontrolling interests for all other subsidiaries are neither individually nor cumulatively material to the Group.

Subsidiaries with significant non-controlling interests

	Dec 31, 2018	Dec 31, 2017
DWS Group GmbH & Co. KGaA		
Proportion of ownership interests and voting rights held by non-controlling interests	20.51 %	0 %
Place of business	Global	Global

in € m	Dec 31, 2018	Dec 31, 2017

Net income attributable to non-controlling interests	58	0
Accumulated non-controlling interests of the subsidiary	1,355	0
Dividends paid to non-controlling interests	0	0
Summarized financial information:		
Total assets	10,694	11,226
Total liabilities	4,155	4,860
Total net revenues	2,259	2,509
Net income (loss)	391	634
Total comprehensive income (loss), net of tax	589	604

Significant restrictions to access or use the Group's assets

Statutory, contractual or regulatory requirements as well as protective rights of noncontrolling interests might restrict the ability of the Group to access and transfer assets freely to or from other entities within the Group and to settle liabilities of the Group.

Since the Group did not have any material noncontrolling interests at the balance sheet date, any protective rights associated with these did not give rise to significant restrictions.

The following restrictions impact the Group's ability to use assets:

- The Group has pledged assets to collateralize its obligations under repurchase agreements, securities financing transactions, collateralized loan obligations and for margining purposes for OTC derivative liabilities.
- The assets of consolidated structured entities are held for the benefit of the parties that have bought the notes issued by these entities.
- Regulatory and central bank requirements or local corporate laws may restrict the Group's ability to transfer assets to or from other entities within the Group in certain jurisdictions.

Restricted assets

	Dec 31, 2018		Dec 31, 2017	
in € m.	Total assets	Restricted assets	Total assets	Restricted assets
Interest-earning deposits with banks	176,022	188	210,481	772
Financial assets at fair value through profit or loss	573,344	48,320	636,970	58,210
Financial assets available for sale	N/A	N/A	49,397	9,915
Financial assets at fair value through other comprehensive income	51,182	4,375	N/A	N/A
Loans at amortized cost	400,297	76,573	401,699	71,971
Other	147,293	1,991	176,186	13,594
Total	1,348,137	131,447	1,474,732	154,462

The table above excludes assets that are not encumbered at an individual entity level but which may be subject to restrictions in terms of their transferability within the Group. Such restrictions may be based on local connected lending requirements or similar regulatory restrictions. In this situation, it is not feasible to identify individual balance sheet items that cannot be transferred. This is also the case for regulatory minimum liquidity requirements. The Group

identifies the volume of liquidity reserves in excess of local stress liquidity outflows. The aggregate amount of such liquidity reserves that are considered restricted for this purpose is € 34.9 billion as of December 31, 2018 (as of December 31, 2017: € 23.5 billion).

40 – Structured Entities

Nature, purpose and extent of the Group's interests in structured entities

The Group engages in various business activities with structured entities which are designed to achieve a specific business purpose. A structured entity is one that has been set up so that any voting rights or similar rights are not the dominant factor in deciding who controls the entity. An example is when voting rights relate only to administrative tasks and the relevant activities are directed by contractual arrangements.

A structured entity often has some or all of the following features or attributes:

- Restricted activities;
- A narrow and well defined objective;
- Insufficient equity to permit the structured entity to finance its activities without subordinated financial support;
- Financing in the form of multiple contractually linked instruments to investors that create concentrations of credit or other risks (tranches).

The principal uses of structured entities are to provide clients with access to specific portfolios of assets and to provide market liquidity for clients through securitizing financial assets. Structured entities may be established as corporations, trusts or partnerships. Structured entities generally finance the purchase of assets by issuing debt and equity securities that are collateralized by and/or indexed to the assets held by the structured entities. The debt and equity securities issued by structured entities may include tranches with varying levels of subordination.

Structured entities are consolidated when the substance of the relationship between the Group and the structured entities indicate that the structured entities are controlled by the Group, as discussed in Note 1 "Significant Accounting Policies and Critical Accounting Estimates".

Consolidated structured entities

The Group has contractual arrangements which may require it to provide financial support to the following types of consolidated structured entities.

Securitization vehicles

The Group uses securitization vehicles for funding purchase of diversified pool of assets. The Group provides financial support to these entities in the form of liquidity facility. As of December 31, 2018, and December 31, 2017, there were no outstanding loan commitments to these entities.

Funds

The Group may provide funding and liquidity facility or guarantees to funds consolidated by the group. As of December 31, 2018 and December 31, 2017, the notional value of the liquidity facilities and guarantees provided by the group to such funds was € 3.0 billion and € 7.2 billion, respectively.

Unconsolidated structured entities

These are entities which are not consolidated because the Group does not control them through voting rights, contract, funding agreements, or other means. The extent of the Group's interests to unconsolidated structured entities will vary depending on the type of structured entities.

Below is a description of the Group's involvements in unconsolidated structured entities by type.

Repackaging and investment entities

Repackaging and investment entities are established to meet clients' investment needs through the combination of securities and derivatives. These entities are not consolidated by the Group because the Group does not have power to influence the returns obtained from the entities. These entities are usually set up to provide a certain investment return pre-agreed with the investor, and the Group is not able to change the investment strategy or return during the life of the transaction.

Third party funding entities

The Group provides funding to structured entities that hold a variety of assets. These entities may take the form of funding entities, trusts and private investment companies. The funding is collateralized by the asset in the structured entities. The group's involvement involves predominantly both lending and loan commitments.

The vehicles used in these transactions are controlled by the borrowers where the borrowers have the ability to decide whether to post additional margin or collateral in respect of the financing. In such cases, where borrowers can decide to continue or terminate the financing, the borrowers will consolidate the vehicle.

Securitization Vehicles

The Group establishes securitization vehicles which purchase diversified pools of assets, including fixed income securities, corporate loans, and asset-backed securities (predominantly commercial and residential mortgage-backed securities and credit card receivables). The vehicles fund these purchases by issuing multiple tranches of debt and equity securities, the repayment of which is linked to the performance of the assets in the vehicles.

The Group often transfers assets to these securitization vehicles and provides financial support to these entities in the form of liquidity facilities.

The Group also invests and provides liquidity facilities to third party sponsored securitization vehicles.

The securitization vehicles that are not consolidated into the Group are those where the Group does not hold the power or ability to unilaterally remove the servicer or special servicer who has been delegated power over the activities of the entity.

Funds

The Group establishes structured entities to accommodate client requirements to hold investments in specific assets. The Group also invests in funds that are sponsored by third parties. A group entity may act as fund manager, custodian or some other capacity and provide funding and liquidity facilities to both group sponsored and third party funds. The funding provided is collateralized by the underlying assets held by the fund.

The Group does not consolidate funds when Deutsche Bank is deemed agent or when another third party investor has the ability to direct the activities of the fund.

Other

These are Deutsche Bank sponsored or third party structured entities that do not fall into any criteria above. These entities are not consolidated by the Group when the Group does not hold power over the decision making of these entities.

Income derived from involvement with structured entities

The Group earns management fees and, occasionally, performance-based fees for its investment management service in relation to funds. Interest income is recognized on the funding provided to structured entities. Any trading revenue as a result of derivatives with structured entities and from the movements in the value of notes held in these entities is recognized in ‘Net gains/losses on financial assets/liabilities held at fair value through profit and loss’.

Interests in unconsolidated structured entities

The Group’s interests in unconsolidated structured entities refer to contractual and non-contractual involvement that exposes the Group to variability of returns from the performance of the structured entities. Examples of interests in unconsolidated structured entities include debt or equity investments, liquidity facilities, guarantees and certain derivative instruments in which the Group is absorbing variability of returns from the structured entities.

Interests in unconsolidated structured entities exclude instruments which introduce variability of returns into the structured entities. For example, when the Group purchases credit protection from an unconsolidated structured entity whose purpose and design is to pass through credit risk to investors, the Group is providing the variability of returns to the entity rather than absorbing variability. The purchased credit protection is therefore not considered as an interest for the purpose of the table below.

Maximum Exposure to unconsolidated structured entities

The maximum exposure to loss is determined by considering the nature of the interest in the unconsolidated structured entity. The maximum exposure for loans and trading instruments is reflected by their carrying amounts in the consolidated balance sheet. The maximum exposure for derivatives and off-balance sheet commitments such as guarantees, liquidity facilities and loan commitments under IFRS 12, as interpreted by the Group, is reflected by the notional amounts. Such amounts or their development do not reflect the economic risks faced by the Group because they do not take into account the effects of collateral or hedges nor the probability of such losses being incurred. At December 31, 2018, the notional related to the positive and negative replacement values of derivatives and off-balance sheet commitments were € 372 billion, € 1,311 billion and € 17 billion respectively. At December 31, 2017, the notional related to the positive and negative replacement values of derivatives and off-balance sheet commitments were € 327 billion, € 1,146 billion and € 28 billion (comparatives adjusted) respectively.

Size of structured entities

The Group provides a different measure for size of structured entities depending on their type. The following measures have been considered as appropriate indicators for evaluating the size of structured entities:

- Funds – Net asset value or assets under management where the Group holds fund units and notional of derivatives when the Group's interest comprises of derivatives.
- Securitizations – notional of notes in issue when the Group derives its interests through notes its holds and notional of derivatives when the Group's interests is in the form of derivatives.
- Third party funding entities – Total assets in entities
- Repackaging and investment entities – Fair value of notes in issue

For Third party funding entities, size information is not publicly available, therefore the Group has disclosed the greater of the collateral the Group has received/pledged or the notional of the exposure the Group has to the entity.

The following table shows, by type of structured entity, the carrying amounts of the Group's interests recognized in the consolidated statement of financial position as well as the maximum exposure to loss resulting from these interests. It also provides an indication of the size of the structured entities. The carrying amounts presented below do not reflect the true variability of returns faced by the Group because they do not take into account the effects of collateral or hedges.

Carrying amounts and size relating to Deutsche Bank's interests

	Dec 31, 2018				
in € m.	Repacka- ging and Investment Entities	Third Party Funding Entities	Securiti- zations	Funds	Total
Assets					
Cash and central bank balances	0	0	0	0	0
Interbank balances (w/o central banks)	1	14	0	28	43
Central bank funds sold and securities purchased under resale agreements	0	508	8	1,397	1,913
Securities Borrowed	0	0	0	461	461
Total financial assets at fair value through profit or loss	342	4,578	5,956	77,166	88,041
Trading assets	244	3,480	4,567	9,297	17,587
Positive market values (derivative financial instruments)	98	571	122	6,516	7,308
Non-trading financial assets mandatory at fair value through profit or loss	0	0	0	0	0
Financial assets designated at fair value through profit or loss	0	526	1,266	61,353	63,145
Financial assets at fair value through other comprehensive income	0	286	240	832	1,358
Financial assets available for sale	N/A	N/A	N/A	N/A	N/A
Loans at amortized cost	220	40,552	27,322	8,370	76,464

Other assets	5	519	216	10,464	11,203
Total assets	568	46,456	33,741	98,719	179,483
Liabilities					
Total financial liabilities at fair value through profit or loss	102	56	3	15,482	15,644
Negative market values (derivative financial instruments)	102	56	3	15,482	15,644
Other short-term borrowings	0	0	0	6,596	6,596
Total liabilities	102	56	3	22,078	22,240
Off-balance sheet exposure	0	4,363	9,524	3,028	16,915
Total	466	50,762	43,261	79,668	174,158
Size of structured entity	2,514	60,525	284,181	2,970,958	

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	Dec 31, 2017				
in € m.	Repacka- ging and Investment Entities	Third Party Funding Entities	Securiti- zations	Funds	Total
Assets					
Cash and central bank balances	0	0	0	0	0
Interbank balances (w/o central banks)	63	0	0	270	333
Central bank funds sold and securities purchased under resale agreements	105	229	18	1,827	2,178
Securities Borrowed	0	13	0	11,065	11,078
Total financial assets at fair value through profit or loss	569	4,057	5,445	60,057	70,128
Trading assets	349	3,490	5,130	12,380	21,349
Positive market values (derivative financial instruments)	175	553	105	8,670	9,504
Non-trading financial assets mandatory at fair value through profit or loss	N/A	N/A	N/A	N/A	N/A
Financial assets designated at fair value through profit or loss	44	13	210	39,007	39,275
Financial assets at fair value through other comprehensive income	N/A	N/A	N/A	N/A	N/A
Financial assets available for sale	0	1,039	384	730	2,153
Loans at amortized cost	146	37,352	18,533	18,050	74,081
Other assets	50	192	173	21,087	21,502
Total assets	934	42,882	24,552	113,085	181,453
Liabilities					

Total financial liabilities at fair value through profit or loss	120	73	41	13,486	13,720
Negative market values (derivative financial instruments)	120	73	41	13,486	13,720
Other short-term borrowings	0	0	0	9,533	9,533
Total liabilities	120	73	41	23,019	23,253
Off-balance sheet exposure	0	10,079	9,256	8,3771	27,7121
Total	814	52,888	33,767	98,4431	185,9121
Size of structured entity	6,833	90,664	281,826	2,181,810	

1The comparatives have been adjusted.

Trading assets –Total trading assets as of December 31, 2018 and December 31, 2017 of € 17.6 billion and € 21.3 billion are comprised primarily of € 4.6 billion and € 5.1 billion in Securitizations and € 9.3 billion and € 12.4 billion in Funds structured entities respectively. The Group's interests in securitizations are collateralized by the assets contained in these entities. Where the Group holds fund units these are typically in regards to market making in funds or otherwise serve as hedges for notes issued to clients. Moreover the credit risk arising from loans made to Third party funding structured entities is mitigated by the collateral received.

Financial assets designated at fair value through profit or loss – Reverse repurchase agreements to Funds comprise the majority of the interests in this category and are collateralized by the underlying securities.

Loans – Loans as of December 31, 2018 and December 31, 2017 consist of € 76.5 billion and € 74.1 billion investment in securitization tranches and financing to Third party funding entities. The Group's financing to Third party funding entities is collateralized by the assets in those structured entities.

Other assets – Other assets as of December 31, 2018 and December 31, 2017 of € 11.2 billion and € 21.5 billion, respectively, consist primarily of prime brokerage receivables and cash margin balances.

Pending Receivables – Pending Receivable balances are not included in this disclosure note due to the fact that these balances arise from typical customer supplier relationships out of e.g. brokerage type activities and their inherent volatility would not provide users of the financial statements with effective information about Deutsche Bank's exposures to structured entities.

Financial Support

Deutsche Bank did not provide non-contractual support during the year to unconsolidated structured entities.

Sponsored Unconsolidated Structured Entities where the Group has no interest as of December 31, 2018 and December 31, 2017.

As a sponsor, the Group is involved in the legal set up and marketing of the entity and supports the entity in different ways, namely:

- transferring assets to the entities
- providing seed capital to the entities
- providing operational support to ensure the entity's continued operation

- providing guarantees of performance to the structured entities.

The Group is also deemed a sponsor for a structured entity if market participants would reasonably associate the entity with the Group. Additionally, the use of the Deutsche Bank name for the structured entity indicates that the Group has acted as a sponsor.

The gross revenues from sponsored entities where the Group did not hold an interest as of December 31, 2018 and December 31, 2017 were € (220) million and € 56 million respectively. Instances where the Group does not hold an interest in an unconsolidated sponsored structured entity include cases where any seed capital or funding to the structured entity has already been repaid in full to the Group during the year. This amount does not take into account the impacts of hedges and is recognized in Net gains/losses on financial assets/liabilities at fair value through profit and loss. The aggregated carrying amounts of assets transferred to sponsored unconsolidated structured entities in 2018 were € 4.1 billion for securitization and € 2.4 billion for repackaging and investment entities. In 2017, they were € 2.1 billion for securitization and € 26 million for repackaging and investment entities.

41 – Current and Non-Current Assets and Liabilities

Asset and liability line items by amounts recovered or settled within or after one year

Asset items as of December 31, 2018

	Amounts recovered or settled		Total
in € m.	within one year	after one year	Dec 31, 2018
Cash and central bank balances	188,691	40	188,732
Interbank balances (w/o central banks)	8,282	599	8,881
Central bank funds sold and securities purchased under resale agreements	5,861	2,361	8,222
Securities borrowed	3,396	0	3,396
Financial assets at fair value through profit or loss	536,367	36,977	573,344
Financial assets at fair value through other comprehensive income	16,725	34,457	51,182
Financial assets available for sale	N/A	N/A	N/A
Equity method investments	0	879	879
Loans at amortized cost	110,828	289,468	400,297
Securities held to maturity	N/A	N/A	N/A
Property and equipment	0	2,421	2,421
Goodwill and other intangible assets	0	9,141	9,141
Other assets	82,588	10,856	93,444
Assets for current tax	396	574	970
Total assets before deferred tax assets	953,134	387,774	1,340,907
Deferred tax assets			7,230
Total assets			1,348,137

Liability items as of December 31, 2018

in € m.	Amounts recovered or settled within one year	Amounts recovered or settled after one year	Total Dec 31, 2018
Deposits	531,700	32,705	564,405
Central bank funds purchased and securities sold under repurchase agreements	4,866	1	4,867
Securities loaned	3,359	0	3,359
Financial liabilities at fair value through profit or loss	410,409	5,271	415,680
Other short-term borrowings	14,158	0	14,158
Other liabilities	115,511	2,002	117,513
Provisions	2,711	0	2,711
Liabilities for current tax	286	658	944
Long-term debt	47,317	104,766	152,083
Trust preferred securities	3,168	0	3,168
Total liabilities before deferred tax liabilities	1,133,485	145,403	1,278,887
Deferred tax liabilities			512
Total liabilities			1,279,400

Asset items as of December 31, 2017

in € m.	Amounts recovered or settled within one year	Amounts recovered or settled after one year	Total Dec 31, 2017
Cash and central bank balances	225,537	118	225,655
Interbank balances (w/o central banks)	8,681	585	9,265
Central bank funds sold and securities purchased under resale agreements	9,216	755	9,971
Securities borrowed	16,710	22	16,732
Financial assets at fair value through profit or loss	623,075	13,895	636,970
Financial assets available for sale	9,882	39,514	49,397
Equity method investments	0	866	866
Loans	113,190	288,510	401,699
Securities held to maturity	0	3,170	3,170
Property and equipment	0	2,663	2,663
Goodwill and other intangible assets	0	8,839	8,839
Other assets	95,383	6,108	101,491
Assets for current tax	840	375	1,215
Total assets before deferred tax assets	1,102,514	365,419	1,467,933
Deferred tax assets			6,799
Total assets			1,474,732

Liability items as of December 31, 2017

in € m.	Amounts recovered or settled within one year	Amounts recovered or settled after one year	Total Dec 31, 2017
Deposits	550,987	30,886	581,873

Central bank funds purchased and securities sold under repurchase agreements	17,591	515	18,105
Securities loaned	6,688	1	6,688
Financial liabilities at fair value through profit or loss	473,165	5,471	478,636
Other short-term borrowings	18,411	0	18,411
Other liabilities	127,388	4,820	132,208
Provisions	4,158	0	4,158
Liabilities for current tax	366	635	1,001
Long-term debt	46,403	113,313	159,715
Trust preferred securities	4,825	666	5,491
Total liabilities before deferred tax liabilities	1,249,981	156,306	1,406,287
Deferred tax liabilities			346
Total liabilities			1,406,633

42 – Events after the Reporting Period

After the reporting date no material events occurred which had a significant impact on our results of operations, financial position and net assets.

43 – Regulatory capital Information

General definitions

The calculation of our regulatory capital incorporates the capital requirements following the “Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms” (Capital Requirements Regulation or “CRR”) and the “Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms” (Capital Requirements Directive 4 or “CRD 4”) as implemented into German law. The information in this section as well as in the section “Development of risk-weighted Assets” is based on the regulatory principles of consolidation.

This section refers to the capital adequacy of the group of entities consolidated for banking regulatory purposes pursuant to the CRR and the German Banking Act (“Kreditwesengesetz” or “KWG”). Therein not included are insurance companies or companies outside the finance sector.

The total regulatory capital pursuant to the effective regulations as of year-end 2018 comprises Tier 1 and Tier 2 (T2) capital. Tier 1 capital is subdivided into Common Equity Tier 1 (CET 1) capital and Additional Tier 1 (AT1) capital.

Common Equity Tier 1 (CET 1) capital consists primarily of common share capital (reduced by own holdings) including related share premium accounts, retained earnings (including losses for the financial year, if any) and accumulated other comprehensive income, subject to regulatory adjustments (i.e. prudential filters and deductions). Prudential filters for CET 1 capital, according to Articles 32 to 35 CRR, include (i) securitization gains on sale, (ii) cash flow hedges and changes in the value of own liabilities, and (iii) additional value adjustments. CET 1 capital deductions comprise (i) intangible assets, (ii) deferred tax assets that rely on future profitability, (iii) negative amounts resulting from the calculation of expected loss amounts, (iv) net defined benefit pension fund assets, (v) reciprocal cross holdings in the capital of financial sector entities and, (vi) significant and non-significant investments in the

capital (CET 1, AT1, T2) of financial sector entities above certain thresholds. All items not deducted (i.e., amounts below the threshold) are subject to risk-weighting.

Additional Tier 1 (AT1) capital consists of AT1 capital instruments and related share premium accounts as well as noncontrolling interests qualifying for inclusion in consolidated AT1 capital, and during the transitional period grandfathered instruments eligible under earlier frameworks. To qualify as AT1 capital under CRR/CRD 4, instruments must have principal loss absorption through a conversion to common shares or a write-down mechanism allocating losses at a trigger point and must also meet further requirements (perpetual with no incentive to redeem; institution must have full dividend/coupon discretion at all times, etc.).

Tier 2 (T2) capital comprises eligible capital instruments, the related share premium accounts and subordinated long-term debt, certain loan loss provisions and noncontrolling interests that qualify for inclusion in consolidated T2 capital. To qualify as T2 capital, capital instruments or subordinated debt must have an original maturity of at least five years. Moreover, eligible capital instruments may inter alia not contain an incentive to redeem, a right of investors to accelerate repayment, or a credit sensitive dividend feature.

Capital instruments that no longer qualify as AT1 or T2 capital under the CRR/CRD 4 fully loaded rules are subject to grandfathering rules during the transitional period and are phased out from 2013 to 2022 with their recognition capped at 40 % in 2018 and the cap decreasing by 10 % every year.

Capital instruments

Our Management Board received approval from the 2017 Annual General Meeting to buy back up to 206.7 million shares before the end of April 2022. Thereof 103.3 million shares can be purchased by using derivatives, this includes 41.3 million derivatives with a maturity exceeding 18 months. During the period from the 2017 Annual General Meeting until the 2018 Annual General Meeting (May 24, 2018), 22.8 million shares have been purchased, of which 4.4 million shares through exercise of call options. The shares purchased were used for equity compensation purposes in the same period or are to be used in the upcoming period so that the number of shares held in Treasury from buybacks was 1.3 million as of the 2018 Annual General Meeting.

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The 2018 Annual General Meeting granted our Management Board the approval to buy back up to 206.7 million shares before the end of April 2023. Thereof 103.3 million shares can be purchased by using derivatives, this includes 41.3 million derivatives with a maturity exceeding 18 months. These authorizations substitute the authorizations of the previous year. During the period from the 2018 Annual General Meeting until December 31, 2018, 9.3 million shares were purchased. The shares purchased are to be used in the upcoming period so that the number of shares held in Treasury from buybacks was 1.2 million as of December 31, 2018.

Since the 2017 Annual General Meeting, and as of December 31, 2018, authorized capital available to the Management Board is € 2,560 million (1,000 million shares). As of December 31, 2018, the conditional capital against cash stands at € 512 million (200 million shares). Additional conditional capital for equity compensation amounts to € 51.2 million (20 million shares). Further the 2018 Annual General Meeting authorized the issuance of participatory notes and other Hybrid Debt Securities that fulfill the regulatory requirements to qualify as Additional Tier 1 capital with an equivalent value of € 8.0 billion.

Our legacy Hybrid Tier 1 capital instruments (substantially all noncumulative trust preferred securities) are not recognized under fully loaded CRR/CRD 4 rules as Additional Tier 1 capital, mainly because they have no write-down or equity conversion feature. However, they are recognized as Additional Tier 1 capital under CRR/CRD 4 transitional provisions and can still be recognized as Tier 2 capital under the fully loaded CRR/CRD 4 rules. During

the transitional phase-out period the maximum recognizable amount of Additional Tier 1 instruments from Basel 2.5 compliant issuances as of December 31, 2012 will be reduced at the beginning of each financial year by 10 % or € 1.3 billion, through 2022. For December 31, 2018, this resulted in eligible Additional Tier 1 instruments of € 7.6 billion (i.e. € 4.6 billion newly issued AT1 Notes plus € 3.0 billion of legacy Hybrid Tier 1 instruments recognizable during the transition period). € 3.0 billion of the legacy Hybrid Tier 1 instruments can still be recognized as Tier 2 capital under the fully loaded CRR/CRD 4 rules. Additional Tier 1 instruments recognized under fully loaded CRR/CRD 4 rules amounted to € 4.6 billion as of December 31, 2018. In 2018, the bank has redeemed one legacy Hybrid Tier 1 instrument with a notional of U.S. $ 2.0 billion and an eligible equivalent amount of € 1.6 billion and another legacy Hybrid Tier 1 instrument with a notional of € 1.0 billion and an eligible equivalent amount of € 1.0 billion. The first redemption was already derecognized from regulatory Additional Tier 1 capital in 2017 with the effective date of the call-permission by the ECB.

The total of our Tier 2 capital instruments as of December 31, 2018 recognized during the transition period under CRR/CRD 4 was € 6.2 billion. As of December 31, 2018, there were no legacy Hybrid Tier 1 instruments that are counted as Tier 2 capital under transitional rules. The gross notional value of the Tier 2 capital instruments was € 7.5 billion. Tier 2 instruments recognized under fully loaded CRR/CRD 4 rules amounted to € 9.2 billion as of December 31, 2018 (including the € 3.0 billion legacy Hybrid Tier 1 capital instruments only recognizable as Additional Tier 1 capital during the transitional period). In 2018, the bank has redeemed one Tier 2 capital instrument with a notional of JPY 21.0 billion and an eligible equivalent amount of € 0.1 billion and another Tier 2 capital instrument with a notional of JPY 3.0 billion and an eligible equivalent amount of € 0.0 billion. These redemptions were already derecognized from regulatory Tier 2 capital in 2017 with the effective date of the call-permission by the ECB.

Minimum capital requirements

Failure to meet minimum capital requirements can result in supervisory measures such as restrictions of profit distributions or limitations on certain businesses such as lending. We complied with the regulatory capital adequacy requirements in 2018.

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Details on regulatory capital

Own Funds Template (incl. RWA and capital ratios)

	Dec 31, 2018	Dec 31, 2017
in € m.	CRR/CRD 41	CRR/CRD 4
Common Equity Tier 1 (CET 1) capital: instruments and reserves		
Capital instruments, related share premium accounts and other reserves2	45,515	45,195

Retained earnings	16,297	17,977
Accumulated other comprehensive income (loss), net of tax	382	660
Independently reviewed interim profits net of any foreseeable charge or dividend3	0	(751)
Other2	846	33
Common Equity Tier 1 (CET 1) capital before regulatory adjustments	63,041	63,114
Common Equity Tier 1 (CET 1) capital: regulatory adjustments		
Additional value adjustments (negative amount)	(1,504)	(1,204)
Other prudential filters (other than additional value adjustments)	(329)	(74)
Goodwill and other intangible assets (net of related tax liabilities) (negative amount)	(8,566)	(6,715)
Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liabilities where the conditions in Art. 38 (3) CRR are met) (negative amount)	(2,758)	(2,403)
	(367)	(408)

Negative amounts resulting from the calculation of expected loss amounts4		
Defined benefit pension fund assets (negative amount)	(1,111)	(900)
Direct, indirect and synthetic holdings by an institution of own CET 1 instruments (negative amount)	(25)	(117)
Direct, indirect and synthetic holdings by the institution of the CET 1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above the 10 % / 15 % thresholds and net of eligible short positions) (negative amount)	0	0
Deferred tax assets arising from temporary differences (net of related tax liabilities where the conditions in Art. 38 (3) CRR are met) (amount above the 10 % / 15 % thresholds) (negative amount)	0	0

Other regulatory adjustments5	(895)	(485)
Total regulatory adjustments to Common Equity Tier 1 (CET 1) capital	(15,555)	(12,306)
Common Equity Tier 1 (CET 1) capital	47,486	50,808
Additional Tier 1 (AT1) capital: instruments		
Capital instruments and the related share premium accounts	4,676	4,676
Amount of qualifying items referred to in Art. 484 (4) CRR and the related share premium accounts subject to phase out from AT1	3,009	3,904
Additional Tier 1 (AT1) capital before regulatory adjustments	7,685	8,579
Additional Tier 1 (AT1) capital: regulatory adjustments		
Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)	(80)	(26)
Residual amounts deducted from AT1 capital with regard to deduction from CET 1 capital during the transitional period pursuant to Art.	N/M	(1,730)

472 CRR		
Other regulatory adjustments	0	0
Total regulatory adjustments to Additional Tier 1 (AT1) capital	(80)	(1,756)
Additional Tier 1 (AT1) capital	7,604	6,823
Tier 1 capital (T1 = CET 1 + AT1)	55,091	57,631
Tier 2 (T2) capital	6,202	6,384
Total capital (TC = T1 + T2)	61,292	64,016
Total risk-weighted assets	350,432	343,316
Capital ratios		
Common Equity Tier 1 capital ratio (as a percentage of risk-weighted assets)	13.6	14.8
Tier 1 capital ratio (as a percentage of risk-weighted assets)	15.7	16.8
Total capital ratio (as a percentage of risk-weighted assets)	17.5	18.6

N/M – Not meaningful

[1] With effect from January 1, 2018, the CRR/CRD 4 “transitional” (or “phase-in”) rules under which CET 1 regulatory adjustments were phased in have reached a rate of 100 %, together with the 100 % phase-out rate of minority interest only recognizable under the transitional rules.

2Our IPO of DWS led to a € 0.9 billion CET 1 contribution which is reflected in ‘Capital instruments, related share premium accounts and other reserves’ at € 0.1 billion and minority interest in ‘Other’ at € 0.8 billion.

3 No interim profits to be recognized as per ECB Decision (EU) 2015/656 in accordance with the Article 26(2) of Regulation (EU) No 575/2013 (ECB/2015/4).

4 Based on Article 159 CRR and recent guidance provided by EBA (Q&A 2017_3426) published on January 18, 2019 only unearned credit spread additional value adjustments are used as specific credit risk adjustments.

5 Includes € 0.6 billion capital deduction effective from January 2018 onwards, based on ECB guidance and following the EBA Guidelines on irrevocable payment commitments related to the Single Resolution Fund and the Deposit Guarantee Scheme. Further includes capital deduction of € 0.3 billion that was imposed on Deutsche Bank effective from October 2016 onwards based on a notification by the ECB pursuant to Article 16(1)(c) and 16(2)(d) of Regulation (EU) No 1024/2013.

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Reconciliation of shareholders' equity to regulatory capital

	CRR/CRD 4	
in € m.	Dec 31, 2018	Dec 31, 2017
Total shareholders' equity per accounting balance sheet1	62,495	63,174
Deconsolidation/Consolidation of entities	(33)	(58)
Of which:		
Additional paid-in capital	(12)	(6)
Retained earnings	(150)	(228)
Accumulated other comprehensive income (loss), net of tax	130	176
Total shareholders' equity per regulatory balance sheet	62,462	63,116
Minority Interests (amount allowed in consolidated CET 1)1	846	33
Accrual for dividend and AT1 coupons2	(267)	0
Reversal of deconsolidation/consolidation of the position Accumulated other comprehensive income (loss), net of tax, during transitional period	0	(35)
Common Equity Tier 1 (CET 1) capital before regulatory adjustments	63,041	63,114
Additional value adjustments	(1,504)	(1,204)
Other prudential filters (other than additional value adjustments)	(329)	(74)
Regulatory adjustments relating to unrealized gains and losses pursuant to Art. 467 and 468 CRR	0	(144)
Goodwill and other intangible assets (net of related tax liabilities)	(8,566)	(6,715)
Deferred tax assets that rely on future profitability	(2,758)	(2,403)
Defined benefit pension fund assets	(1,111)	(900)
Direct, indirect and synthetic holdings by the institution of the CET 1 instruments of financial sector entities where the institution has a significant investment in those entities	0	0
Other regulatory adjustments	(1,287)	(866)
Common Equity Tier 1 capital	47,486	50,808

[1] Our IPO of DWS led to a € 0.9 billion CET 1 contribution which is reflected in the 'Total shareholders' equity per accounting balance sheet' at € 0.1 billion and 'Minority interests' at € 0.8 billion.

[2] No interim profits to be recognized as per ECB Decision (EU) 2015/656 in accordance with the Article 26(2) of Regulation (EU) No 575/2013 (ECB/2015/4).

Capital management

Our Treasury function manages solvency, capital adequacy, leverage and bail-in capacity ratios at Group level and locally in each region, as applicable. Treasury implements our capital strategy, which itself is developed by the Group Risk Committee and approved by the Management Board. Treasury, directly or through the Group Asset and Liability Committee, which has been established in the first half of the year 2018, manages, among other things, issuance and repurchase of shares and capital instruments, hedging of capital ratios against foreign exchange swings, setting capacities for key financial resources, design of shareholders' equity allocation, and regional capital planning. We are fully committed to maintaining our sound capitalization both from an economic and regulatory perspective. We continuously monitor and adjust our overall capital demand and supply in an effort to achieve an appropriate balance of the economic and regulatory considerations at all times and from all perspectives. These perspectives include book equity based on IFRS accounting standards, regulatory and economic capital as well as specific capital requirements from rating agencies.

Treasury manages the issuance and repurchase of capital instruments, namely Common Equity Tier 1, Additional Tier 1 and Tier 2 capital instruments as well as TLAC/MREL eligible debt instruments. Treasury constantly monitors the market for liability management trades. Such trades represent a countercyclical opportunity to create Common Equity Tier 1 capital by buying back our issuances below par.

Our core currencies are Euro, US Dollar, Chinese Renminbi and Pound Sterling. Treasury manages the sensitivity of our capital ratios against swings in core currencies. The capital invested into our foreign subsidiaries and branches in the other non-core currencies is largely hedged against foreign exchange swings. Treasury determines which currencies are to be hedged, develops suitable hedging strategies in close cooperation with Risk Management and finally executes these hedges.

Resource limit setting

Usage of key financial resources is influenced through the following governance processes and incentives.

Target resource capacities are reviewed in our annual strategic plan in line with our CET 1 and Leverage Ratio ambitions. In a quarterly process, the Group Asset and Liability Committee, which insofar as it replaced the Group Risk Committee as decision body, approves divisional resource limits for Total Capital Demand and leverage exposure that are based on the strategic plan but adjusted for market conditions and the short-term outlook. Limits are enforced through a close monitoring process and an excess charging mechanism.

Overall regulatory capital requirements are principally driven by either our CET 1 ratio (solvency) or leverage ratio (leverage) requirements, whichever is the more binding constraint. For the internal capital allocation, the combined contribution of each segment to the Group's Common Equity Tier 1 ratio, the Group's Leverage ratio and the Group's Capital Loss under Stress are weighted to reflect their relative importance and level of constraint to the Group. Contributions to the Common Equity Tier 1 ratio and the Leverage ratio are measured through Risk-Weighted Assets (RWA) and Leverage Ratio Exposure (LRE) assuming full implementation of CRR/CRD 4 rules. The Group's Capital Loss under Stress is a measure of the Group's overall economic risk exposure under a defined stress scenario. In our performance measurement, our methodology also applies different rates for the cost of equity for each of the business segments, reflecting in a more differentiated way the earnings volatility of the individual business models. This enables improved performance management and investment decisions.

Regional capital plans covering the capital needs of our branches and subsidiaries across the globe are prepared on an annual basis and presented to the Group Investment Committee. Most of our subsidiaries are subject to legal and regulatory capital requirements. In developing, implementing and testing our capital and liquidity, we fully take such legal and regulatory requirements into account.

Further, Treasury is represented on the Investment Committee of the largest Deutsche Bank pension fund which sets the investment guidelines for this fund. This representation is intended to ensure that pension assets are aligned with pension liabilities, thus protecting our capital base.

44 – Condensed Deutsche Bank AG (Parent Company only) Financial Information

Condensed Statement of Income

in € m.	2018	2017	2016
Interest income, excluding dividends from subsidiaries	16,326	15,339	14,247
Dividends received from subsidiaries:			
Bank subsidiaries	2,511	1,185	1,042
Nonbank subsidiaries	2,064	1,962	2,935
Interest expense	9,700	9,575	7,947
Net interest and dividend income	11,201	8,912	10,278
Provision for credit losses	102	675	872
Net interest and dividend income after provision for credit losses	11,099	8,237	9,406
Noninterest income:			
Commissions and fee income	3,223	3,721	4,145
Net gains (losses) on financial assets/liabilities at fair value through profit or loss	1,436	2,789	1,791
Other income (loss)1	(344)	(744)	(606)
Total noninterest income	4,315	5,766	5,330
Noninterest expenses:			
Compensation and benefits	4,921	5,123	5,137
General and administrative expenses	6,070	6,347	7,524
Services provided by (to) affiliates, net	1,670	1,426	1,263
Impairment of goodwill and other intangible assets	0	6	14
Total noninterest expenses	12,661	12,902	13,938
Income (loss) before income taxes	2,753	1,101	797
Income tax expense (benefit)	(122)	(90)	161
Net income (loss) attributable to Deutsche Bank shareholders and additional equity components	2,875	1,191	636

1Includes net gains (losses) on financial assets mandatory at fair value through other comprehensive income (in 2017 and 2016 on financial assets available for sale) and impairments/write-ups on investments in subsidiaries.

Condensed Statement of Comprehensive Income

in € m.	2018	2017	2016
Net income (loss) attributable to Deutsche Bank shareholders and additional equity components	2,875	1,191	636
Other comprehensive income (loss), net of tax	102	(2,486)	360
Total comprehensive income (loss), net of tax	2,977	(1,295)	996

Condensed Balance Sheet

in € m.	Dec 31, 2018	Dec 31, 2017
Assets:		
Cash and central bank balances:	140,841	176,661
Interbank balances (w/o central banks):		
Bank subsidiaries	19,543	27,110
Other	5,037	5,801
Central bank funds sold, securities purchased under resale agreements, securities borrowed:		
Bank subsidiaries	1,135	4,170
Nonbank subsidiaries	39,415	36,287
Other	8,454	10,497
Financial assets at fair value through profit or loss:		
Bank subsidiaries	5,573	6,508
Nonbank subsidiaries	3,973	5,010
Other	492,156	550,182
Financial assets at fair value through other comprehensive income	38,450	0
Financial assets available for sale	0	28,441
Investments in associates	288	290
Investment in subsidiaries:		
Bank subsidiaries	20,155	12,242
Nonbank subsidiaries	28,117	36,170
Loans:		
Bank subsidiaries	31,393	37,974
Nonbank subsidiaries	47,156	52,687
Other	150,153	151,912
Other assets:		
Bank subsidiaries	3,352	1,480
Nonbank subsidiaries	16,427	11,145
Other	77,570	90,263
Total assets	1,129,187	1,244,828
Liabilities and equity:		
Deposits:		
Bank subsidiaries	64,413	81,504
Nonbank subsidiaries	19,745	20,562
Other	287,444	307,162

Central bank funds purchased, securities sold under repurchase agreements and securities loaned:		
Bank subsidiaries	654	640
Nonbank subsidiaries	35,587	29,129
Other	7,491	16,766
Financial liabilities at fair value through profit or loss:		
Bank subsidiaries	5,078	5,423
Nonbank subsidiaries	2,461	2,531
Other	378,940	439,264
Other short-term borrowings:		
Bank subsidiaries	158	195
Nonbank subsidiaries	2,414	424
Other	13,672	17,766
Other liabilities:		
Bank subsidiaries	1,447	851
Nonbank subsidiaries	10,020	8,067
Other	100,413	107,830
Long-term debt	134,872	144,998
Total liabilities	1,064,808	1,183,113
Total shareholders' equity	59,704	57,039
Additional equity components	4,675	4,675
Total equity	64,379	61,715
Total liabilities and equity	1,129,187	1,244,828

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Condensed Statement of Cash Flows

in € m.	2018	2017	2016
Net cash provided by (used in) operating activities	(47,850)	40,931	25,873
Cash flows from investing activities:			
Proceeds from:			
Sale of financial assets at fair value through other comprehensive income	11,592	N/A	N/A
Maturities of financial assets at fair value through other comprehensive income	23,572	N/A	N/A
Sale of debt securities held to collect at amortized cost	93	N/A	N/A
Maturities of debt securities held to collect at amortized cost	58	N/A	N/A
Sale of financial assets available for sale	N/A	7,627	22,205
Maturities of financial assets available for sale	N/A	3,433	4,530
Maturities of securities held to maturity	N/A	0	0
Sale of equity method investments	5	65	12
Sale of property and equipment	13	39	8
Purchase of:			
Financial assets at fair value through other comprehensive income	(34,586)	N/A	N/A

Debt Securities held to collect at amortized cost	(129)	N/A	N/A
Financial assets available for sale	N/A	(9,741)	(15,150)
Securities held to maturity	N/A	0	0
Investments in associates	0	0	(11)
Property and equipment	(212)	(261)	(284)
Net change in investments in subsidiaries	289	(2,222)	(1,619)
Other, net	(1,024)	(1,129)	(1,360)
Net cash provided by (used in) investing activities	(329)	(2,189)	8,331
Cash flows from financing activities:			
Issuances of subordinated long-term debt	10	865	792
Repayments and extinguishments of subordinated long-term debt	(253)	(45)	(102)
Issuances of trust preferred securities	0	0	1
Repayments and extinguishments of trust preferred securities	0	0	(2)
Common shares issued	0	8,037	0
Purchases of treasury shares	(4,119)	(7,912)	(5,256)
Sale of treasury shares	3,925	7,471	4,979
Additional Equity Components (AT1) issued	0	0	0
Purchases of Additional Equity Components (AT1)	(123)	(149)	(129)
Sale of Additional Equity Components (AT1)	120	160	124
Coupon on additional equity components, pre tax	(315)	(335)	(333)
Cash dividends paid	(227)	(392)	0
Net cash provided by (used in) financing activities	(982)	7,700	74
Net effect of exchange rate changes on cash and cash equivalents	1,243	(3,499)	187
Net increase (decrease) in cash and cash equivalents	(47,918)	42,943	34,465
Cash and cash equivalents at beginning of period	187,759	144,816	110,351
Cash and cash equivalents at end of period	139,841	187,759	144,816
Net cash provided by (used in) operating activities include			
Income taxes paid (received), net	(224)	258	(974)
Interest paid	9,793	9,563	7,871
Interest received	19,660	15,308	14,346
Dividends received	2,957	4,0981	1,8001
Cash and cash equivalents comprise			
Cash and central bank balances (not included Interest-earning time deposits with central banks)	127,871	175,463	119,213
Interbank balances (w/o central banks)	11,970	12,296	25,603
Total	139,841	187,759	144,816

1 Prior year data adjusted due to refinement in the methodology.

Parent Company's Long-Term Debt by Remaining Maturities

By remaining maturities	Due in 2019	Due in 2020	Due in 2021	Due in 2022	Due in 2023	Due after 2023	Total Dec 31, 2018	Total Dec 31, 2017

in € m.								
Senior debt:								
Bonds and notes:								
Fixed rate	13,916	7,502	14,632	6,227	5,960	13,815	62,053	59,517
Floating rate	8,061	4,540	5,339	3,553	2,321	6,844	30,658	33,142
Subordinated debt								
Bonds and notes:								
Fixed rate	3,239	1,135	0	0	0	2,858	7,232	9,769
Floating rate	0	180	0	0	1,202	476	1,858	1,934
Other	20,809	2,206	1,324	490	838	7,404	33,072	40,636
Total long-term debt	46,025	15,563	21,295	10,271	10,321	31,396	134,872	144,998

45 – SEC Registered Trust Preferred Securities

Deutsche Bank AG has, via two subsidiaries, issued “trust preferred” securities that are listed on the New York Stock Exchange. In each such transaction, a Delaware statutory business trust (the “Trust”) issues trust preferred securities (the “Trust Preferred Securities”) in a public offering in the United States. All the proceeds from the sale of the Trust Preferred Securities are invested by the Trust in the Class B Preferred Securities (the “Class B Preferred Securities”) of a wholly-owned subsidiary of Deutsche Bank AG organized in the form of a limited liability company (the “LLC”). The LLC uses all the proceeds from the sale of the Class B Preferred Securities to the Trust to purchase a debt obligation from Deutsche Bank AG (the “Debt Obligation”). The distributions on the Class B Preferred Securities match those of the Trust Preferred Securities. The Trust Preferred Securities and the Class B Preferred Securities pay distributions quarterly in arrears and are redeemable only upon the occurrence of certain events specified in the documents governing the terms of those securities. Subject to limited exceptions, the Class B Preferred Securities generally could not be redeemed until at least ten years after their issuance. The Trust Preferred Securities and the Class B Preferred Securities are each subject to a full and unconditional subordinated guarantee of Deutsche Bank AG. These subordinated guarantees are general and unsecured obligations of Deutsche Bank AG and rank, both as to payment and in liquidation of Deutsche Bank AG, junior in priority of payment to all current and future indebtedness of Deutsche Bank AG and on parity in priority of payment with the most senior preference shares, if any, of Deutsche Bank AG.

Issuances of SEC Registered Trust Preferred Securities

Trust	LLC	Issuance Date	Next Redemption Date	Parent Long-term Debt1
Deutsche Bank Contingent Capital Trust II	Deutsche Bank Contingent Capital LLC II	May 23, 2007	May 23, 2019	€ 699 million
Deutsche Bank Contingent Capital Trust V	Deutsche Bank Contingent Capital LLC V	May 9, 20082	March 30, 2019	€ 1,210 million

1Amount of long term-debt of the Parent Company represented by the Debt Obligations issued by Deutsche Bank AG to the applicable LLC and amount of Trust Preferred Securities of Deutsche Bank AG Consolidated represented by the Trust Preferred Securities issued by the respective Trust as of December 31, 2018.

1. On March 30, 2010 Deutsche Bank AG additionally issued an amount of U.S.$ 120 million.

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Risks in Financial Reporting

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Report of Independent Registered Public Accounting Firm

To the Supervisory Board of Deutsche Bank Aktiengesellschaft

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Deutsche Bank Aktiengesellschaft and subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes, and the specific disclosures described in Note 1 to the consolidated financial statements as being part of the financial statements (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 15, 2019 expressed an unqualified opinion on the effectiveness of the Company’s internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Group has changed its method of accounting for financial instruments in 2018 due to the adoption of International Financial Reporting Standard 9 Financial Instruments.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

KPMG AG Wirtschaftsprüfungsgesellschaft

We or our predecessor firms have served as the Company's and its predecessor companies' auditor since 1952.

Frankfurt am Main, Germany March 15, 2019

Confirmations

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Independent Auditor's Report

Report on the Audit of the Consolidated Financial Statements and of the Group Management Report

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Responsibility Statement by the Management Board

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Corporate Governance Statement according to Sections 289f and 315d of the German Commercial Code/

Corporate Governance Report

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All information presented in this Corporate Governance Statement according to §§ 289f, 315d German Commercial Code / Corporate Governance Report is shown as of February 15, 2019.

Management Board and Supervisory Board

Management Board

The Management Board of Deutsche Bank AG is responsible for the management of the company in accordance with the law, the Articles of Association of Deutsche Bank AG and the Terms of Reference for the Management Board with the objective of creating sustainable value in the interests of the company. It considers the interests of shareholders, employees and other company-related stakeholders. The members of the Management Board are collectively responsible for managing the bank’s business. The Management Board, as the Group Management Board, manages Deutsche Bank Group in accordance with uniform guidelines; it exercises general control over all Group companies.

The Management Board decides on all matters prescribed by law and the Articles of Association and ensures compliance with the legal requirements and internal guidelines (compliance). It also takes the necessary measures to ensure that adequate internal guidelines are developed and implemented. The Management Board's responsibilities include, in particular, the bank’s strategic management and direction, the allocation of resources, financial accounting and reporting, control and risk management, as well as a properly functioning business organization and corporate control. The Management Board decides on the appointments to the senior management level below the Management Board and, in particular, on the appointment of Global Key Function Holders. In appointing people to management functions in the Group, the Management Board takes diversity into account and strives, in particular, to achieve an appropriate representation of women.

The Management Board works closely together with the Supervisory Board in a cooperative relationship of trust and for the benefit of the company. The Management Board reports to the Supervisory Board at a minimum within the scope prescribed by law or administrative guidelines, in particular on all issues with relevance for the Group concerning strategy, the intended business policy, planning, business development, risk situation, risk management, staff development, reputation and compliance.

A comprehensive presentation of the duties, responsibilities and procedures of our Management Board are specified in its Terms of Reference, the current version of which is available on our website (www.db.com/ir/en/documents.htm).

Personnel changes to the Management Board and the current members of the Management

Frank Kuhnke was appointed member of the Management Board with effect from January 1, 2019, for a three-year period.

In the 2018 financial year, the following members of the Management Board left the Management Board:

- On April 8, 2018: Management Board Chairman John Cryan.
- At the end of May 24, 2018: Kimberly Hammonds and Dr. Marcus Schenck.
- As of December 31, 2018: Nicolas Moreau.

In the following, information is provided on the current members of the Management Board. The information includes the year in which they were born, year in which they were first appointed and year in which their term expires as well as their current positions and area of responsibility according to the current Business Allocation Plan for the Management Board. Also specified are their other board mandates or directorships outside of Deutsche Bank Group as well as all memberships in legally prescribed supervisory boards or other comparable domestic of foreign supervisory bodies of commercial enterprises. The members of our Management Board have generally undertaken not to assume chairmanships of supervisory boards of companies outside Deutsche Bank Group.

Christian Sewing
Year of birth: 1970
First appointed: 2015
Term expires: 2022

Christian Sewing became a member of our Management Board on January 1, 2015, and was President from March 5, 2017 to April 8, 2018. He was appointed Chairman of the Management Board with effect from April 8, 2018 and is responsible on the Management Board according to its Business Allocation Plan for, among other things, Communications & Corporate Social Responsibility (CSR) and Group Audit as well as the bank's business in the Americas Region. Furthermore he took on responsibility for Asset Management (AM) and the EMEA Region as of October 2018. From May to December 2018 our Chief Operating Officer reported to him. Previously, from September 1, 2017 to April 2018, he was Co-Head of Private & Commercial Bank (including Postbank), together with Frank Strauß. Mr. Sewing was also our Regional CEO for Germany until May 2018.

Prior to assuming his role on the Management Board, Mr. Sewing was Global Head of Group Audit and held a number of positions before that in Risk, including Deputy Chief Risk Officer (from 2012 to 2013) and Chief Credit Officer (from 2010 to 2012) of Deutsche Bank.

From 2005 until 2007, Mr. Sewing was a member of the Management Board of Deutsche Genossenschafts-Hypothekenbank.

Before graduating with a diploma from the Bankakademie Bielefeld and Hamburg, Mr. Sewing completed a bank apprenticeship at Deutsche Bank in 1989.

Mr. Sewing does not have any external directorships subject to disclosure.

Until May 25, 2018 Mr. Sewing was Chairman of the Supervisory Board of Deutsche Bank Privat- und Geschäftskunden AG as well as member of the Supervisory Board of Deutsche Postbank AG. Since May 25, 2018 he is Chairman of the Supervisory Board of DB Privat- und Firmenkundenbank AG.

Garth Ritchie
Year of birth: 1968
First appointed: 2016
Term expires: 2023

Garth Ritchie became a member of our Management Board on January 1, 2016, and was appointed President as of April 8, 2018. He was Co-Head of our Corporate & Investment Bank, together with Dr. Marcus Schenck, from July 2017 to May 2018, and has been its sole Head since May 2018. Mr. Ritchie is responsible for the UK & Ireland Region and was also our Regional CEO for the UK & Ireland until October 2018 for this region. From May to

October 2018, he was responsible for the EMEA Region. He remains the Senior Manager SMF21 (FCA-designated senior management function for an EEA Branch) and is expected to become a SMF7 (Group Entity Senior Manager) upon authorization of Deutsche Bank AG London as a Third Country Branch.

Mr. Ritchie joined Deutsche Bank in 1996 and became Co-Head of Equities in the Corporate Banking & Securities Business Division in 2009 and its sole Head in 2010. He held various positions in trading and derivatives for over two decades.

Prior to joining Deutsche Bank, Mr. Ritchie held positions at Fergusson Brothers and First National Bank of South Africa.

He holds a Bachelor of Commerce in Finance and Economics from the University of Port Elizabeth (South Africa).

Mr. Ritchie does not have any external directorships subject to disclosure and no other memberships in legally prescribed supervisory boards or other comparable domestic of foreign supervisory bodies of commercial enterprises.

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Karl von Rohr
Year of birth: 1965
First appointed: 2015
Term expires: 2023

Karl von Rohr became a member of our Management Board on November 1, 2015, and was appointed President as of April 8, 2018. He is our Chief Administrative Officer and is responsible for the functions Legal and Group Governance as well as Human Resources. Furthermore, he has been our Regional CEO for Germany since May 2018.

Mr. von Rohr joined Deutsche Bank in 1997. From 2013 to 2015 he was Global Chief Operating Officer, Regional Management. Prior to this, he was Head of Human Resources for Deutsche Bank in Germany and member of the Management Board of Deutsche Bank Privat- und Geschäftskunden AG. During his time at Deutsche Bank, he has held various senior management positions in other divisions in Germany and Belgium.

He studied law at the universities of Bonn (Germany), Kiel (Germany), Lausanne (Switzerland) and at Cornell University (U.S.A.).

Mr. von Rohr was a member of the following Supervisory Boards until July 6, 2018: BVV Versicherungsverein des Bankgewerbes a.G. and BVV Versorgungskasse des Bankgewerbes e.V. Furthermore he was until May 25, 2018 member of the Supervisory Board of Deutsche Postbank AG.

Since March 3, 2018 Mr. von Rohr is Chairman of the Supervisory Board of DWS Group GmbH & Co. KGaA.

Frank Kuhnke
Year of birth: 1967
First appointed: 2019
Term expires: 2021

Frank Kuhnke became a member of our Management Board on January 1, 2019. He is our Chief Operating Officer and is responsible for the Chief Information Office, the Chief Security Office, Data Management, Digital Strategy & Innovation, Corporate Services and Operations CIB, as well as Client Data Services.

He joined Deutsche Bank in 1986 and was appointed as Deutsche Bank's Chief Operating Officer (COO) in April 2018. From January 2016 until April 2018 he was Divisional Control Officer, Chief Administrative Officer and Head of Operations of the Private & Commercial Bank. Prior to that Mr. Kuhnke was Divisional Control Officer for Deutsche Asset & Wealth Management. From 2012 until 2015 he worked in Deutsche Bank's Non-Core Operations Unit, at first as Chief Risk Officer, later as Chief Operating Officer. Between 2008 and 2012 he held management positions in Risk, based in London. During his career, he has worked across several business divisions and infrastructure functions in Tokyo, New York and Germany and has run global organizations within Deutsche Bank Group.

Before graduating with a diploma from Bank Akademie Lüneburg, Mr. Kuhnke completed a bank apprenticeship at Deutsche Bank.

Mr. Kuhnke does not have any external directorships subject to disclosure.

He is Member of the Supervisory Board of Deutsche Bank Società per Azioni.

Stuart Lewis
Year of birth: 1965
First appointed: 2012
Term expires: 2020

Stuart Lewis became a member of our Management Board on June 1, 2012. He is our Chief Risk Officer and is responsible for, among other things, the functions managing Credit Risk, Non-Financial Risk, Market Risk and Liquidity Risk as well as for further Risk-Infrastructure units.

He joined Deutsche Bank in 1996. Prior to assuming his current role, Mr. Lewis was Deputy Chief Risk Officer and subsequently Chief Risk Officer of the Corporate & Investment Bank from 2010 to 2012. Between 2006 and 2010 he was Chief Credit Officer.

Before joining Deutsche Bank in 1996, he worked at Credit Suisse and Continental Illinois National Bank in London.

He studied at the University of Dundee, where he obtained an LLB (Hons), and he holds an LLM from the London School of Economics. He also attended the College of Law, Guildford.

Mr. Lewis does not have any external directorships subject to disclosure.

He is Chairman of the Advisory Council of DEUKONA Versicherungs-Vermittlungs-GmbH and Chairman of the Supervisory Board of Deutsche Bank Società per Azioni.

Sylvie Matherat
Year of birth: 1962
First appointed: 2015
Term expires: 2023

Sylvie Matherat became a member of our Management Board on November 1, 2015. She is our Chief Regulatory Officer and in this function she is responsible for the areas Compliance, Anti-Financial Crime (AFC), as well as Government & Regulatory Affairs. Since May 2018, she has also been responsible for the Business Selection and

Conflicts Office.

Ms. Matherat joined Deutsche Bank from Banque de France where she was Deputy Director General and responsible for regulation and financial stability issues, payment and settlement infrastructures, banking services, and the Target 2 Securities project. Ms. Matherat previously held various positions at the banking supervisory authority and in the private sector.

She studied public law and finance at the Institut d'Études Politiques de Paris, France, and holds a Master's degree in law and political sciences. In 2014 she was awarded the Légion d'Honneur.

Ms. Matherat does not have any external directorships subject to disclosure.

She is Member of the Board of Directors of DB USA Corporation and since March 3, 2018 Member of the Supervisory Board of DWS Group GmbH & Co. KGaA.

James von Moltke
Year of birth: 1969
First appointed: 2017
Term expires: 2020

James von Moltke became a member of our Management Board on July 1, 2017. He is our Chief Financial Officer and in this function he is responsible for, among other things, Finance, Group Tax, Group Treasury, Investor Relations, as well as Corporate M&A & Corporate Investments.

Before Mr. von Moltke joined Deutsche Bank he served as Treasurer of Citigroup. He started his career at Credit Suisse First Boston in London in 1992. In 1995, he joined J.P. Morgan, working at the bank for 10 years in New York and Hong Kong. After next working at Morgan Stanley in New York for four years, where he led the Financial Technology advisory team globally, Mr. von Moltke joined Citigroup as Head of Corporate M&A in 2009. Three years later he became the US-bank's Global Head of Financial Planning.

He holds a Bachelor of Arts degree from New College, University of Oxford.

Mr. von Moltke has been a member of the following Supervisory Boards since July 6, 2018: BVV Versicherungsverein des Bankgewerbes a.G. and BVV Versorgungskasse des Bankgewerbes e.V.

Werner Steinmüller
Year of birth: 1954
First appointed: 2016
Term expires: 2020

Werner Steinmüller became a member of our Management Board on August 1, 2016. He is our Regional CEO Asia Pacific.

Mr. Steinmüller joined Deutsche Bank in 1991. He was Head of Global Transaction Banking from 2004 to 2016, Chief Opera-ting Officer (COO) of Global Transaction Banking from 2003 to 2004, Head of the Global Banking Division Europe from 1998 to 2003, and Co-Head of Corporate Finance Germany from 1996 to 1998.

Prior to joining Deutsche Bank, he worked at Citibank from 1979 to 1991.

He holds a Diploma in Business Administration and Mechanical Engineering from TU Darmstadt.

Mr. Steinmüller does not have any external directorships subject to disclosure.

Mr. Steinmüller was until May 25, 2018 Chairman of the Supervisory Board of Deutsche Postbank AG. Since May 25, 2018 Mr. Steinmüller is member of the Supervisory Board of DB Privat- und Firmenkundenbank AG.

Frank Strauß
Year of birth: 1970
First appointed: 2017
Term expires: 2020

Frank Strauß became a member of our Management Board on September 1, 2017. He was Co-Head of our Private & Commercial Bank (including Postbank), together with Christian Sewing, until April 8, 2018, and has been its sole Head since then. Mr. Strauß was also responsible for Postbank (including integration matters) until May 25, 2018.

Having completed training to become a bank officer in Iserlohn, Mr. Strauß moved to Frankfurt in 1995, where he held various management positions at Deutsche Bank and Deutsche Bank 24, its former subsidiary. From 2002 onwards he coordinated European operations in the bank's Private & Business Clients division. In 2005 he took over responsibility for developing the bank's Asian operations in Mumbai and Beijing. One year later he was appointed Head of Private & Business Clients Germany. In July 2011 he moved to Postbank, where he became the Management Board member responsible for sales, before assuming the role of Chairman of the Management Board one year later.

He completed a bank apprenticeship at Deutsche Bank in Iserlohn between 1989 and 1992.

Mr. Strauß does not have any external directorships subject to disclosure.

He was until May 25, 2018 Chairman of the Management Board of Deutsche Postbank AG. Since May 25, 2018 Mr. Strauß is Chairman of the Management Board of DB Privat- und Firmenkundenbank AG.

Supervisory Board

The Supervisory Board of Deutsche Bank AG appoints, supervises and advises the Management Board and is directly involved in decisions of fundamental importance to the bank. It works together closely with the Management Board in a cooperative relationship of trust and for the benefit of the company. The Supervisory Board decides on the appointment and dismissal of members of the Management Board including long-term succession planning for the Management Board based on proposals of the Chairman's Committee while taking into account recommendations of the Nomination Committee. Based on proposals of the Compensation Control Committee, the Supervisory Board determines the total compensation of the individual members of the Management Board resolves on the compensation system for the Management Board and reviews it regularly.

In accordance with Section 9 (1) of the Articles of Association, the members of the Supervisory Board are elected for the period until the conclusion of the General Meeting which adopts the resolutions concerning the ratification of the acts of management for the fourth financial year following the beginning of the term of office. Here, the financial year in which the term of office begins is not taken into account. For the election of shareholder representatives, the General Meeting may establish that the terms of office of individual members may begin or end on differing dates.

The internal organization of the Supervisory Board and its committees as well as the tasks and profiles of the individual members are subject to specific statutory and regulatory requirements that further specify and supplement the corporate-law regulations concerning corporate governance. Such requirements are founded on, among other things, the German Banking Act (Kreditwesengesetz), the Remuneration Ordinance for Institutions (Institutsvergütungsverordnung), the guidelines of the European Banking Authority and the administrative practices of the European Central Bank as our supervisory authority. In individual cases, these are in contradiction to the recommendations of the German Corporate Governance Code ("Code") and, in such case, this may lead to a statement of exceptions in our Declaration of Conformity.

The Supervisory Board receives reports from the Management Board at least within the scope prescribed by law or administrative guidelines, in particular on all issues of relevance for the Group concerning strategy, intended business policy, planning, business development, risk situation, risk management, staff development, reputation and compliance. Furthermore, Group Audit informs the Audit Committee regularly, and in the case of severe deficiencies without undue delay, of any serious deficiencies identified and of any deficiencies that have not yet been remediated. The Chairman of the Supervisory Board is informed accordingly of any serious findings against the members of the Management Board. The Supervisory Board and Management Board adopted an Information Regime, which specifies not only the reporting to the Supervisory Board but also rules relating to the Supervisory Board's enquiries and requests for information from employees of the company, as well as the exchange of information in connection with preparations for the meetings and between the meetings.

The Chairman of the Supervisory Board plays a crucial role in the proper functioning of the Supervisory Board and has a leadership role in this. He can issue internal guidelines and principles concerning the Supervisory Board's internal organization and communications, the coordination of the work within the Supervisory Board and the Supervisory Board's interaction with the Management Board. Between meetings, the Chairman of the Supervisory Board, and, if expedient, the chairpersons of the Supervisory Board committees, maintain regular contact with the Management Board, especially with the Chairman of the Management Board, and deliberate with him on issues of Deutsche Bank Group's strategy, planning, the development of its business, risk situation, risk management, governance, compliance, technical-organizational resources and material litigation cases. The Chairman of the Supervisory Board and – within their respective functional responsibility – the chairpersons of the Supervisory Board committees are informed without delay by the Chairman of the Management Board or by the respectively responsible Management Board member about important events of material significance for the assessment of the situation, development and management of Deutsche Bank Group. The Chairman of the Supervisory Board engages in discussions with investors on Supervisory Board-related topics when necessary and regularly informs the Supervisory Board of the substance of such discussions.

The types of business that require the approval of the Supervisory Board to be transacted are specified in Section 13 of the Articles of Association of Deutsche Bank AG. The Supervisory Board meets, if required, without the Management Board. After due consideration and insofar as materially appropriate, the Supervisory Board, or any of its committees, may, in order to perform their tasks, consult auditors, legal advisors and other internal or external advisors. In performing their tasks, the Chairman of the Supervisory Board, the chairpersons of the standing committees and the Supervisory Board members are supported by the Office of the Supervisory Board, which is independent of the Management Board.

In 2018, a total of 54 meetings of the Supervisory Board and its committees took place. In addition, there was joint attendance and participation to address agenda items with a cross-committee relevance.

The duties, procedures and committees of the Supervisory Board are specified in its Terms of Reference. The current version is available on the Deutsche Bank website (www.db.com/ir/en/documents.htm).

Members of the Supervisory Board

The Supervisory Board of Deutsche Bank AG has 20 members. In accordance with the German Co-Determination Act (Mitbestimmungsgesetz), it comprises an equal number of shareholder representatives and employee representatives.

The suitability of each individual member to perform their mandate is assessed both internally and externally by the regulatory authorities, determined and monitored continuously. The suitability assessment covers the expertise, reliability and time availability of the individual members. In addition, there is an assessment of the knowledge, skills and experience of the Supervisory Board as a whole that are necessary for it to perform its control function. Passing the suitability assessment and the continual suitability of the Supervisory Board member during the entire mandate with Deutsche Bank AG are mandatory regulatory prerequisites for the performance of their work.

The members representing our shareholders were elected at the General Meeting on May 24, 2018. In departure from this, Dr. Paul Achleitner was first elected at the General Meeting on May 31, 2012, Dr. Gerhard Eschelbeck and Professor Dr. Stefan Simon were elected at the General Meeting on May 18, 2017 and Katherine Garrett-Cox and Richard Meddings were elected at the General Meeting on May 19, 2016. The election of employee representatives took place on April 26, 2018.

Dina Dublon was elected at the General Meeting on May 24, 2018, for the period until the close of July 31, 2018, and left the Supervisory Board on this date. In her place, Professor Dr. Norbert Winkeljohann was elected member of the Supervisory Board at the General Meeting on May 24, 2018, for the period starting from August 1, 2018.

The following table shows information on the current members of our Supervisory Board. The information includes the years in which the members were born, the years in which they were first elected or appointed, the years when their terms expire, their principal occupations as well as their memberships on other companies' supervisory boards, other non-executive directorships and other positions. Representatives of the employees are indicated with an asterisk (*).

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Member	Principal occupation	Supervisory board memberships and other directorships
Dr. Paul Achleitner Year of birth: 1956 First elected: 2012 Term expires: 2022	Chairman of the Supervisory Board, Deutsche Bank AG	Bayer AG; Daimler AG; Henkel AG & Co. KGaA (member of the Shareholders' Committee)
Ludwig Blomeyer-Bartenstein* Year of birth: 1957 First elected: 2018 Term expires: 2023	Spokesman of the Management and Head of the Market Region Bremen, Deutsche Bank AG	Frowein & Co. Beteiligungs AG; Bürgschaftsbank Bremen GmbH (member of the Board of Directors)
Frank Bsirske*	Chairman,	RWE AG (Deputy Chairman); Deutsche Postbank AG, Deputy Chairman until May 2018); DB Privat- und Firmenkundenbank AG

Year of birth: 1952 First elected: 2013 Term expires: 2023	trade union ver.di (Vereinte Dienstleistungsgewerkschaft)	(since May 2018); Kreditanstalt für Wiederaufbau (member of the Board of Supervisory Directors until December 2018); innogy SE (Deputy Chairman)
Mayree Carroll Clark Year of birth: 1957 First elected: 2018 Term expires: 2023	Managing Partner, Eachwin Capital LP	Ally Financial, Inc.; Regulatory Data Corp., Inc.; Taubman Centers, Inc.
Jan Duscheck* Year of birth: 1984 Appointed by the court: 2016 Term expires: 2023	Head of national working group Banking, trade union ver.di (Vereinte Dienstleistungsgewerkschaft)	No memberships or directorships subject to disclosure
Dr. Gerhard Eschelbeck Year of birth: 1965 First elected: 2017 Term expires: 2022	Vice President Security & Privacy Engineering, Google Inc.	Onapsis Inc. (Member of the Board of Directors) (since January 2019)
Katherine Garrett-Cox Year of birth: 1967 First elected: 2011 Term expires: 2021	Managing Director and Chief Executive Officer, Gulf International Bank (UK) Ltd.	No memberships or directorships subject to disclosure
Timo Heider* Year of birth: 1975 First elected: 2013 Term expires: 2023	Chairman of the General Staff Council of BHW Bausparkasse AG / Postbank Finanzberatung AG, Chairman of the General Staff Council of BHW Kreditservice GmbH; Deputy Chairman of the Group Staff Council of Deutsche Bank AG	Deutsche Postbank AG (until May 2018); BHW Bausparkasse AG (Deputy Chairman); Pensionskasse der BHW Bausparkasse AG VVaG (Deputy Chairman)
Martina Klee* Year of birth: 1962 First elected: 2008 Term expires: 2023	Deputy Chairperson of the Staff Council PWCC Center Frankfurt, Deutsche Bank AG	Sterbekasse für die Angestellten der Deutsche Bank-Gruppe VVaG
Henriette Mark* Year of birth: 1957 First elected: 2003 Term expires: 2023	Chairperson of the Combined Staff Council Southern Bavaria; Member of the General Staff Council and member of the Group Staff Council of Deutsche Bank	No memberships or directorships subject to disclosure

Richard Meddings Year of birth: 1958 Appointed by the court: 2015 Term expires: 2021	Executive Chairman of the Board, TSB Bank PLC	HM Treasury (until September 2018); TSB Bank PLC (Non-Executive Chairman of the Board until September 2018); Jardine Lloyd Thompson Group PLC (Non-Executive Director)
Gabriele Platscher* Year of birth: 1957 First elected: 2003 Term expires: 2023	Chairperson of the Staff Council Niedersachsen Ost, Deutsche Bank	BVV Versicherungsverein des Bankgewerbes a.G. (Deputy Chairperson); BVV Versorgungskasse des Bankgewerbes e.V. (Deputy Chairperson); BVV Pensionsfonds des Bankgewerbes AG (Deputy Chairperson)
Detlef Polaschek* Year of birth: 1960 First elected: 2018 Term expires: 2023	Deputy Chairman of the Supervisory Board; Member of the General Staff Council; Chairman of the Staff Council Niederrhein und Ruhrgebiet Mitte/Ost, Deutsche Bank	No memberships of directorships subject to disclosure
Bernd Rose* Year of birth: 1967 First elected: 2013 Term expires: 2023	Chairman of the General Staff Council of Postbank Filialvertrieb AG; Member of the Group Staff Council and European Staff Council of Deutsche Bank	Deutsche Postbank AG (until May 2018); DB Privat- und Firmenkunden AG (since December 2018); Postbank Filialvertrieb AG; ver.di Vermögensverwaltungsgesellschaft m.b.H. (Deputy Chairman)
Gerd Alexander Schütz Year of birth: 1967 First elected: 2017 Term expires: 2023	Member of the Management Board, C-QUADRAT Investment AG	MyBucks S.A. (Non-Executive Chairman of the Board of Directors) (until February 2018)
Prof. Dr. Stefan Simon Year of birth: 1969 Appointed by the court: 2016 Term expires: 2022	Self-employed attorney at law with his own law firm, SIMON GmbH	Leop. Krawinkel GmbH & Co. KG (Chairman of the Advisory Council)
Stephan Szukalski* Year of birth: 1967 First elected: 2013** Re-elected: 2018 Term expires: 2023	Federal Chairman German Association of Bank Employees (Deutscher Bankangestellten-Verband e.V. (DBV))	No memberships or directorships subject to disclosure
John Alexander Thain		

Year of birth: 1955 First elected: 2018 Term expires: 2023		Uber Technologies, Inc. (Member of the Board of Directors); Enjoy Technology Inc. (Member of the Board of Directors)
Michele Trogni Year of birth: 1965 First elected: 2018 Term expires: 2023		Morneau Shepell Inc. (Member of the Board of Directors); Capital Markets Gateway Inc. (Chairperson of the Board of Directors) (since July 2018); Global Atlantic Financial Group Ltd. (Non-Executive Director) (since August 2018)
Professor Dr. Norbert Winkeljohann Year of birth: 1957 First elected: 2018 Term expires: 2023	Self-employed corporate consultant, Norbert Winkeljohann Advisory & Investments	Bayer AG; Heristo AG (Chairman); Georgsmarienhütte Holding GmbH; Sievert AG (Chairman since January 2019)

*Employees representatives.

** Mr. Szukalski was a member of the Supervisory Board from May 23, 2013 to November 30, 2015.

Objectives for the composition of the Supervisory Board, Profile of Requirements and status of implementation

The Supervisory Board established objectives for its composition in October 2010 and last amended them as specified in the following in February 2018. While taking into account the requirements of Section 5.4.1 (2) sentence 1 of the German Corporate Governance Code (the “Code”), the Supervisory Board adopted a Profile of Requirements at its meeting on October 26, 2017 and confirmed it at its meeting on July 26, 2018.

The Supervisory Board shall be composed in such a way that its members as a whole possess the knowledge, abilities and expert experience to properly complete its tasks and the members in their entirety of the Supervisory Board and the Audit Committee must be familiar with the banking sector. In particular, the Supervisory Board members should have sufficient time to perform their mandates. The composition of the Supervisory Board should ensure the Supervisory Board’s qualified control of and advice for the Management Board of an internationally operating, broadly positioned bank and should preserve the reputation of Deutsche Bank Group among the public. In this regard, in particular, attention should be placed on the integrity, personality, willingness to perform, professionalism and independence of the individuals proposed for election. The objective is for the Supervisory Board as a whole to have all of the knowledge and experience considered to be essential while taking into account the activities of Deutsche Bank Group.

The Supervisory Board, as a whole, must possess the expertise required to effectively monitor and advise the Management Board in its management of Deutsche Bank AG and Deutsche Bank Group – also with regard to the observance of the relevant bank supervisory regulations.

As set out in the Profile of Requirements each Supervisory Board member must have an understanding of the fields of expertise specified below that is appropriate for the size and complexity of Deutsche Bank AG. Experts shall have profound expertise in the individual fields.

The fields of expertise include, in particular, the fields listed below:

- Knowledge in the areas of banking, financial services, financial markets and the financial industry, including the home market and the bank's key markets outside Europe
- Knowledge of the relevant clients for the bank, the market expectations and the operational environment
- Risk management (investigation, assessment, mitigation, management and control of financial and non-financial risks, capital and liquidity management, shareholdings)
- Accounting (according to International Financial Reporting Standards (IFRS) and the German Commercial Code (HGB)) and audits of annual financial statements (financial experts: these members of the Supervisory Board must fulfill the requirements as "financial experts" as such term is defined by the implementation rules of the U.S. Securities and Exchange Commission (SEC) issued pursuant to Section 407 of the Sarbanes-Oxley Act of 2002 and by Section 100 of the German Stock Corporation Act)
- Corporate and social responsibility, including reporting
- Taxation
- Internal audit
- Compliance and internal controls
- Strategic planning, business and risk strategies as well as their implementation
- Digitalization
- Information technology (IT), IT systems and IT security
- Regulatory framework and legal requirements, in particular, knowledge of the legal systems relevant for the bank
- Knowledge of the social, political and regulatory expectations in the home market
- Selection procedure for management body members and assessment of their suitability
- Governance and corporate culture
- Human resources and staff management
- Compensation and compensation systems (compensation expert)
- Management of a large, international regulated company
- Internal organization of the bank

Furthermore, consideration is to be given to the amendments to the current version of the Business Allocation Plan for the Management Board of Deutsche Bank AG as well as to the requirements and expectations of the regulatory authorities.

In addition the Supervisory Board shall have an adequate number of independent members and shall not have more than two former members of the Management Board of Deutsche Bank AG. Under the premise that the performance of the Supervisory Board mandate in itself by the representatives of the employees cannot be reason to doubt fulfillment of the independence criteria according to Section 5.4.2 of the German Corporate Governance Code, the Supervisory Board shall have a total of at least sixteen members that are independent within the meaning of the Code. In any event, the Supervisory Board shall be composed such that the number of independent members, within the meaning of Section 5.4.2, among the shareholder representatives will be at least six. The members of the Supervisory Board may not exercise functions on a management body of, or perform advisory duties, at major competitors. Important and not just temporary conflicts of interest with respect to a member of the Supervisory Board should lead to a termination of the mandate. Members of the Supervisory Board may not hold more than the allowed number of

supervisory board mandates according to Section 25d of the German Banking Act (KWG) or mandates in supervisory bodies of companies which have similar requirements.

There is a regular maximum age limit of 70. In well-founded, individual cases, a Supervisory Board member may be elected or appointed for a period that extends at the latest until the end of the fourth Annual General Meeting that takes place after he or she has reached the age of 70. This age limit was taken into account in the election proposals to the recent General Meetings and shall also be taken into account for the next Supervisory Board elections or subsequent appointments for Supervisory Board positions that become vacant. In October 2015, the Supervisory Board resolved that for members of the Supervisory Board to be elected or appointed in future, the length of each individual Supervisory Board membership shall not, as a rule, exceed 15 years.

The Supervisory Board respects diversity when proposing members for appointment to the Supervisory Board. In light of the international operations of Deutsche Bank, care should be taken that the Supervisory Board has an appropriate number of members with long-term international experience. Currently, the professional careers or private lives of eight members of the Supervisory Board are centered outside Germany. Furthermore, all of the shareholder representatives on the Supervisory Board have several years of international experience from their current or former activities as management board members or CEOs or a comparable executive function of corporations or organizations with international operations. In these two ways, the Supervisory Board believes the international activities of the company are sufficiently taken into account. The objective is to retain the currently existing international profile. The resumes of the members of the Supervisory Board are published on Deutsche Bank's website (www.db.com/ir/en/supervisory-board.htm).

For the election proposals to the General Meeting, the Supervisory Board takes into account the recommendations of the Nomination Committee and the legal requirements according to which the Supervisory Board shall be composed of at least 30 % women and at least 30 % men. Special importance has already been attached to an appropriate consideration of women in the selection process since the Supervisory Board elections in 2008. In reviewing potential candidates for a new election or subsequent appointments to Supervisory Board positions that have become vacant, qualified women shall be included in the selection process and shall be appropriately considered in the election proposals. For many years now, at least 30 % of the Supervisory Board members have been women and, since 2013, 30 % of the shareholder representatives have been women. Currently, six Supervisory Board members are women, i.e. 30 % of all members. The Supervisory Board strives to maintain this number. It should be taken into account that the Supervisory Board can only influence the composition of the Supervisory Board through its election proposals to the General Meeting.

The Supervisory Board believes that it complies with the specified concrete objectives regarding its composition and the Profile of Requirements. The members of the Supervisory Board as a whole possess the knowledge, ability and expert experience to properly complete their tasks. Diversity is appropriately taken into account. Further details in this context are given in the "Diversity Concept", which is also part of this Corporate Governance Statement / Corporate Governance Report.

In accordance with Section 5.4.2 of the German Corporate Governance Code, the Supervisory Board determined that it has what it considers to be an adequate number of independent members among the shareholder representatives. These are namely: Dr. Paul Achleitner, Mayree Carroll Clark, Dr. Gerhard Eschelbeck, Katherine Garrett-Cox, Richard Meddings, Professor Dr. Stefan Simon, John Alexander Thain, Michele Trogni and Professor Dr. Norbert Winkeljohann. Currently, the Supervisory Board does not consider Gerd Alexander Schütz independent due to his role as a representative of the large shareholder HNA. The Supervisory Board considers all of its members representing employees independent within the meaning of the Code, except for Henriette Mark and Gabriele Platscher, as their length of Supervisory Board membership in each case exceeds the regular limit of 15 years.

Some members of the Supervisory Board are, or were last year, in high-ranking positions at other companies that Deutsche Bank has business relations with. Business transactions with these companies are conducted under the same

conditions as those between unrelated third parties. These transactions, in our opinion, do not affect the independence of the Supervisory Board members involved.

Standing Committees

The Supervisory Board has established the following eight standing committees. To the extent required, the committees coordinate their work and consult each other on an ad hoc basis. The committee chairpersons report regularly to the Supervisory Board on the work of the committees. The Report of the Supervisory Board in the Annual Report 2018 provides information on the concrete work of the committees over the preceding year.

Chairman's Committee: It is responsible for, in particular: preparing the meetings of the Supervisory Board and handling current business between meetings of the Supervisory Board; preparing for decisions by the Supervisory Board on the appointment and dismissal of members of the Management Board, including long-term succession planning for the Management Board, while taking into account the recommendations of the Nomination Committee; concluding, amending and terminating employment and pension contracts in consideration of the plenary Supervisory Board's sole authority to decide on the compensation of the members of the Management Board and in consideration of the recommendations of the Compensation Control Committee taking note of and, where necessary, expressing an opinion on contracts and/or amendments to contracts for a General Manager (Generalbevollmächtigter) of Deutsche Bank AG who is designated as an intended member of the Management Board; handling other contractual business with active and former members of the Management Board pursuant to Section 112 of the German Stock Corporation Act; and approving Management Board members' mandates, honorary offices or special tasks outside of Deutsche Bank Group, while taking the recommendations of the Nomination Committee into account. The Chairman's Committee is also responsible for: approving the hand-over of confidential internal data concerning a Management Board member in consultation with the Chairman of the Management Board and/or the Chief Risk Officer, unless they have a conflict of interests; approving contracts with Supervisory Board members pursuant to Section 114 of the German Stock Corporation Act; preparing for decisions of the Supervisory Board in the field of corporate governance, deciding in the Supervisory Board's stead on an adjustment of the annual Declaration of Conformity to changed actual circumstances and verifying compliance with the Declaration of Conformity. Its tasks also include: taking note of and, where necessary, expressing an opinion on the Supervisory Board's and its committees' costs for consultations with auditors, experts, legal advisors and other external advisors; as well as preparing recommendations for decisions of the Supervisory Board on pursuing claims for damages or taking other measures against incumbent or former members of the Management Board. As and when necessary, the Chairman's Committee draws on the expertise of the Chair of the Integrity Committee.

The Chairman's Committee held nine meetings in 2018.

The current members of the Chairman's Committee are Dr. Paul Achleitner (Chairman), Frank Bsirske, Detlef Polaschek and Professor Dr. Stefan Simon.

Nomination Committee: It is responsible for, in particular, supporting the Supervisory Board in identifying candidates to fill a position on the bank's Management Board. In doing so, the Nomination Committee takes into account the balance and diversity of the knowledge, skills and experience of all members of the Management Board, prepares a job description with a candidate profile, and states the time commitment Furthermore, it is responsible in particular for drawing up an objective to promote the representation of the under-represented gender on the Supervisory Board as well as a strategy for achieving this and the regular assessment, to be performed at least once a year, of the structure, size, composition and performance of the Management Board and of the Supervisory Board and making recommendations regarding this to the Supervisory Board. The Nomination Committee supports the Supervisory Board in drawing up guidelines for the individual and collective assessment of the professional qualifications,

personal reliability and time availability of the members of the Management Board and Supervisory Board ("Suitability Guideline") as well as in monitoring the effectiveness of the Suitability Guideline. Furthermore, the Nomination Committee also supports the Supervisory Board in the regular assessment, to be performed at least once a year, of the knowledge, skills and experience of the individual members of the Management Board and Supervisory Board as well as of the respective body collectively in the assessment of the members of the Management Board and Supervisory Board in all other cases pursuant to the requirements of the Suitability Guideline; and in the review of the Management Board's principles for selecting and appointing persons to the upper management levels as well as the recommendations made to the Management Board in this respect. The shareholder representatives on the Nomination Committee prepare the Supervisory Board's proposals for the election or appointment of new shareholder representatives to the Supervisory Board. In this context, they take into account the Profile of Requirements for the Supervisory Board, the criteria specified by the Supervisory Board for its composition as well as the balance and diversity of the knowledge, skills and experience of all members of the Supervisory Board, prepare a job description with a candidate profile, and state the time commitment.

The Nomination Committee held six meetings in 2018.

The current members of the Nomination Committee are Dr. Paul Achleitner (Chairman), Frank Bsirske, Detlef Polaschek, Gerd Alexander Schütz and Professor Dr. Stefan Simon.

Audit Committee: It supports the Supervisory Board in particular in monitoring the financial reporting process, and it can submit recommendations or suggestions to the Supervisory Board on ensuring the integrity of the financial reporting process. Furthermore, the Audit Committee supports the Supervisory Board in monitoring the effectiveness of the risk management system, particularly of the internal control system and the internal audit system, the auditing of the financial statements, especially with regard to the auditor's independence and the additional services provided by the auditor, and the Management Board's prompt remediation – through suitable measures – of the deficiencies identified by the auditor and bank-internal control functions based on internal and external audits, in particular relating to weaknesses in risk controls, as well as non-compliance with policies, laws and regulatory requirements. The Committee is entitled to inspect all business documentation of the bank, including the business information stored on data carriers. The Audit Committee pre-reviews the annual and consolidated financial statements and management reports as well as the separate non-financial report and the separate consolidated non-financial report, if they were prepared. It discusses the audit reports with the auditor and prepares the decisions of the Supervisory Board on establishing the annual financial statements and the approval of the consolidated financial statements as well as the resolution proposal on the appropriation of distributable profit. The Audit Committee submits corresponding recommendations to the Supervisory Board. It also provides support to the Supervisory Board with regard to engaging any external assurances for the non-financial statement and the consolidated non-financial statement or for the separate non-financial report and separate consolidated non-financial report. It discusses important changes to the audit and accounting methods. The Audit Committee also discusses the quarterly financial statements and the report on the limited review of the quarterly financial statements with the Management Board and the auditor prior to their publication. Furthermore, the Audit Committee submits proposals to the Supervisory Board for the appointment of the auditor and prepares the proposal of the Supervisory Board to the General Meeting for the election of the auditor. The Audit Committee advises the Supervisory Board on issuing the audit mandate to the auditor elected by the General Meeting, submits proposals to the Supervisory Board for the auditor's remuneration and can specify areas of focus for the audit. It supports the Supervisory Board in monitoring the independence, qualifications and efficiency of the auditor as well as the rotation of the members of the audit team. Mandates for non-audit-related services given to the auditor or to companies to which the auditor is related in legal, economic or personnel terms need the prior consent of the Audit Committee (in this context, see also the Principal Accountant Fees and Services section in this Corporate Governance Statement / Corporate Governance Report). The Audit Committee issues guidelines for the employment of staff – including former staff – of the auditor by the company. It arranges to be informed regularly about the work done by Group Audit, the effectiveness of the internal audit system and in particular about its annual audit plan the

focal areas of its auditing activity and on the results of its audits. The Audit Committee is responsible, in particular, for receiving and handling the quarterly, annual and ad hoc reports of Group Audit. The Management Board informs the Audit Committee about special audits, substantial complaints and other exceptional measures on the part of German and foreign bank regulatory authorities. The Committee regularly obtains reports on the receipt and handling of complaints from employees of the bank and its subsidiaries, from shareholders of Deutsche Bank AG and from third parties. In particular complaints concerning accounting, internal accounting controls, auditing and other financial reporting matters must be submitted to the Committee without undue delay. Reports concerning compliance matters are presented at the meetings of the Committee on a regular basis. The Chairman of the Audit Committee is entitled, in addition to the Chairman of the Supervisory Board, to obtain information directly from the Head of Compliance. The Audit Committee is responsible for acknowledging communications about significant reductions in the Compliance budget and for taking receipt of and handling the report, which is made at least once a year by the Head of Compliance (Compliance Report). Furthermore, the Committee is entitled to obtain, through its Chairman, information in connection with its tasks from the auditor, the Management Board, the Head of Group Audit and – with the prior consent of the Management Board – senior managers of the bank reporting directly to the Management Board.

The Audit Committee held seven meetings in 2018.

The current members of the Audit Committee are Professor Dr. Norbert Winkeljohann (Chairman), Dr. Paul Achleitner, Katherine Garrett-Cox, Henriette Mark, Gabriele Platscher, Detlef Polaschek, Bernd Rose and Professor Dr. Stefan Simon.

Risk Committee: It advises the Supervisory Board on overall risk appetite and risk strategy, and monitors the implementation of the stated risk appetite and risk strategy by the senior management level. The Risk Committee monitors the material aspects of the rating and valuation processes. In undertaking this responsibility, it receives reports from the Management Board about the operations of the bank’s rating systems and about material changes or exceptions to established policies that will materially impact the operations of the bank’s rating systems. The Risk Committee receives reports from the Management Board which are appropriate to monitor whether the material financial products and services offered by the bank as well as the conditions in the client business are in line with the bank’s business model and risk structure. If this is not the case, the Risk Committee requests proposals from the Management Board on how the financial products and services as well as the conditions in the client business could be structured to bring them into line with the bank’s business model and risk structure, and monitors their implementation. On the basis of the reports received from the Management Board, the Risk Committee assesses the risks associated with the financial products and services and takes into account the alignment between the prices assigned to and the profits gained from these products and services. The Risk Committee examines whether the incentives set by the compensation system take into consideration the company's risk, capital and liquidity structure as well as the likelihood and timing of earnings. The Risk Committee also performs all of the tasks assigned to it by law or regulatory authorities. It handles loans which require a resolution by the Supervisory Board pursuant to law or our Articles of Association. In this context, it approves, among other things, the acquisition of participations as defined by Section 13 (1) d) of the Articles of Association of Deutsche Bank AG, insofar as the value of the participation does not exceed € 1.5 billion and the participation will probably not remain in the bank’s full or partial possession for more than twelve months. If this period is exceeded, the Chairperson of the Committee informs the Supervisory Board without delay and obtains its approval. The Risk Committee determines the nature, scope, format and frequency of the information which the Management Board is required to submit on strategy and risks. The Chairperson of the Risk Committee is entitled to obtain, in connection with its activities, information directly from the Management Board and the Head of Group Audit. At the meetings of the Risk Committee, the Management Board reports on credit, market, liquidity, operational, litigation and reputational risks. The Management Board also reports on risk strategy, credit portfolios, loans requiring Supervisory Board approval pursuant to law or our Articles of Association, questions of

capital resources and matters of special importance due to the risks they entail (for additional information on the disclosure of the risk management objectives and policies for individual risk categories, please see the Risk Report of the Annual Report).

The Risk Committee held six meetings in 2018.

The current members of the Risk Committee are Mayree Carroll Clark (Chairperson), Dr. Paul Achleitner, Ludwig Blomeyer-Bartenstein, Jan Duscheck, Stephan Szukalski, Michele Trogni and Professor Dr. Norbert Winkeljohann.

Integrity Committee: It continually advises and monitors the Management Board with regard to whether management ensures the economically sound, sustainable development of the company while observing the principles of sound, responsible management, fulfilling the company's social responsibilities and protecting the natural resources of the environment (environmental, social and governance (ESG) issues), and to whether the business management is aligned to these values with the objective of a holistic corporate culture. The Integrity Committee monitors the Management Board's measures that ensure the company's compliance with legal requirements, authorities' regulations and the company's own in-house policies (preventive compliance control). It regularly reviews the bank's Code of Conduct and Code of Ethics for Senior Financial Officers to foster conduct on the part of company employees that is exemplary in every way, both within and outside the company, and that such conduct is not just aligned to the formal compliance with statutory requirements. It supports on request the Risk Committee in monitoring and analyzing the legal and reputational risks that are material to the bank. For this purpose, it advises the Management Board on how to generate awareness of the importance of such risks. It supports on request the preparation of the Chairman's Committee's recommendations for Supervisory Board decisions on pursuing recourse claims or taking other measures against current or former members of the Management Board and these are presented by its Chairperson to the Chairman's Committee. Furthermore, the Integrity Committee supports the Supervisory Board in the monitoring of the litigation cases with the highest risk and other material cases.

The Integrity Committee held six meetings in 2018.

The current members of the Integrity Committee are Professor Dr. Stefan Simon (Chairman), Dr. Paul Achleitner, Ludwig Blomeyer-Bartenstein, Katherine Garrett-Cox, Timo Heider and Gabriele Platscher.

Compensation Control Committee: It supports the Supervisory Board in the appropriate structuring of the compensation systems for the members of the Management Board. It also monitors the appropriate structure of the compensation systems for the Management Board members and employees and, in particular, the appropriate structure of the compensation for the heads of the risk control function and compliance function and for the employees who have a material influence on the bank's overall risk profile. The Compensation Control Committee supports the Supervisory Board in monitoring the process to identify risk takers in accordance with Section 18 (2) of the Remuneration Ordinance for Institutions (InstitutsVergV) and Group risk takers in accordance with Section 27 (2) sentence 1 of the Remuneration Ordinance for Institutions (InstitutsVergV) as well as the appropriate structure of the compensation systems for the company's employees. The Committee assesses the effects of the compensation systems on risk, capital and liquidity management, while ensuring that the compensation systems are aligned to the business strategy focused on the banks sustainable development, to the risk strategies derived from this and to the compensation strategies at the company and Group levels. It prepares the Supervisory Board's resolutions on the compensation of the Management Board, considering, in particular, the effects of the resolutions on the company's risks and risk management. The long-term interests of shareholders, investors and other stakeholders as well as the public interest are also taken into account. It also prepares the Supervisory Board's resolutions on setting the total amount of variable compensation for the members of the Management Board in accordance with Section 45 (2)

sentence 1 No. 5a of the German Banking Act (KWG) in consideration of Section 7 of the Ordinance for Remuneration in Financial Institutions (InstitutsVergV) and on setting the appropriate compensation parameters, targets for contributions to performance, payment and deferral periods as well as the conditions for a full forfeiture or partial reduction of variable compensation. It also checks regularly, at least annually, whether the adopted specifications are still appropriate. Furthermore, it checks, as part of its support to the Supervisory Board in monitoring the appropriate structure of the compensation systems for employees, regularly, but at least annually, in particular, whether the total amount of variable compensation has been set in accordance with Section 45 (2) sentence 1 No. 5a of the German Banking Act (KWG) in consideration of Section 7 of the Remuneration Ordinance for Institutions (InstitutsVergV) and whether the specified principles to assess the compensation parameters, contributions to performance as well as the payment and deferral periods, including the conditions for a full forfeiture or partial reduction of the variable compensation, are appropriate. In addition, it supports the Supervisory Board in monitoring whether the internal controls and other relevant areas are properly involved in the structuring of the compensation systems. The Committee is authorized to obtain, via its Chairperson, information relating to the Committee tasks from the Head of Group Audit and from the heads of the organizational units responsible for structuring the compensation systems.

The Compensation Control Committee held five meetings in 2018.

The current members of the Compensation Control Committee are Dr. Paul Achleitner (Chairman), Frank Bsirske, Detlef Polaschek and Professor Dr. Stefan Simon.

Strategy Committee: The Committee, which was established by resolution of the Supervisory Board on May 23, 2018, supports the Supervisory Board in fulfilling its oversight responsibilities relating to the bank's strategy. It advises and monitors the Management Board with regard to the definition of business strategies geared to the sustainable development of the bank and the establishment of processes for planning, implementing, assessing and adjusting the business strategy. It oversees the Management Board's work on the strategic perspective, direction and development of the strategy for Deutsche Bank Group and its business divisions, the Management Board's implementation of the strategic plan and the execution progress against strategic milestones and goals, as well as the Management Board's implementation of major business transformation projects and their execution. It advises the Management Board as to whether the governance, risk appetite, financial and capital planning, liquidity and funding management, control environment and resources can support the bank's strategic objectives, and advises on divestitures and merger and acquisition strategy, including post-transaction performance tracking, as well as on the impact of changes in the competitive environment. Furthermore, the Strategy Committee advises the Management Board in preparation for the Supervisory Board meetings at which the Supervisory Board plenum addresses the company's strategy and prepares the Supervisory Board's decisions on transactions subject to its approval pursuant to Section 13 (1) b) and (1) d) of the Articles of Association.

The Strategy Committee held three meetings in 2018.

The current members of the Strategy Committee are John Alexander Thain (Chairman), Dr. Paul Achleitner, Frank Bsirske, Mayree Carroll Clark, Timo Heider, Henriette Mark, Richard Meddings and Detlef Polaschek.

Technology, Data and Innovation Committee: The Committee, which was established by resolution of the Supervisory Board on May 23, 2018, supports the Supervisory Board in fulfilling its oversight responsibilities relating to the bank's innovation, data and technology environment. It continually advises and monitors the Management Board with regard to the adequate technical and organizational resources and the definition of an adequate plan for IT systems, including their application with generally established standards to the arrangement of the IT systems and the related IT

processes. This includes in particular the oversight over the Management Board's work on the IT strategy and its sustainability outlining the objectives and measures to be taken to achieve these objectives, the IT governance, the information security management, the user access management, the implementation of major IT projects and application development, IT operation, including data backup, outsourcing and other external procurement of IT services, data governance and data strategy, including their implementation, and any other material issues which may arise in connection with the IT systems and services or data quality of Deutsche Bank AG.

The Technology, Data and Innovation Committee held three meetings in 2018.

The current members of the Technology, Data and Innovation Committee are Michele Trogni (Chairperson), Dr. Paul Achleitner, Jan Duscheck, Dr. Gerhard Eschelbeck, Martina Klee and Bernd Rose.

Mediation Committee: In addition to these eight standing committees, the Mediation Committee, which is required by German law, makes proposals to the Supervisory Board on the appointment or dismissal of members of the Management Board in cases where the Supervisory Board is unable to reach a two-thirds majority decision with respect to the appointment or dismissal. The Mediation Committee only meets if necessary.

The Mediation Committee did not hold any meetings in 2018.

The current members of the Mediation Committee are Dr. Paul Achleitner (Chairman), Frank Bsirske, Detlef Polaschek and Professor Dr. Stefan Simon.

Further details regarding the Chairman's Committee, the Nomination Committee, the Audit Committee, the Risk Committee, the Integrity Committee, the Compensation Control Committee, the Strategy Committee and the Technology, Data and Innovation Committee are regulated in separate Terms of Reference. The current versions are available on our website, along with the Terms of Reference for the Supervisory Board (see: www.db.com/ir/en/documents.htm).

Share Plans

For information on our employee share programs, please refer to the additional Note 35 "Employee Benefits" to the Consolidated Financial Statements.

Reporting and Transparency

Directors' Share Ownership

Management Board. For information on the share ownership of the Management Board, please refer to our detailed Compensation Report in the Management Report.

Supervisory Board. The members of our Supervisory Board held the following numbers of our shares and share awards under our employee share plans.

Members of the Supervisory Board	Number of shares	Number of share awards
Dr. Paul Achleitner	0	0
Ludwig Blomeyer-Bartenstein	3,337	5,5821

Frank Bsirske	0	0
Mayree Carroll Clark	40,000	0
Jan Duscheck	0	0
Dr. Gerhard Eschelbeck	0	0
Katherine Garrett-Cox	0	0
Timo Heider	0	0
Martina Klee	2,442	10
Henriette Mark	1,524	0
Richard Meddings	0	0
Gabriele Platscher	1,365	10
Detlef Polaschek	553	10
Bernd Rose	0	0
Gerd Alexander Schütz	0	0
Professor Dr. Stefan Simon	0	0
Stephan Szukalski	0	0
John Alexander Thain	100,000	0
Michele Trogni	15,000	0
Professor Dr. Norbert Winkeljohann	0	0
Total	164,221	5,612

[1] Restricted Equity Awards. Mr. Blomeyer-Bartenstein has an entitlement linked to 5,582 shares through Restricted Equity Awards as part of his variable compensation. Of these awards, 323 are due in 2019 and 5,259 in 2020.

The members of the Supervisory Board held 164,221 shares, amounting to less than 0.01 % of our shares as of February 15, 2019.

As listed in the “Number of share awards” column in the table, the members who are employees of Deutsche Bank hold matching awards granted under the Global Share Purchase Plan, which are scheduled to be delivered to them on November 1, 2019, as well as Restricted Equity Awards (deferred share awards), which are granted to employees with deferred variable compensation. The latter are marked separately in the table, and the further details concerning them as a compensation instrument are reported in the section “Employee Compensation Report”.

As described in the “Management Report: Compensation Report: Compensation System for Supervisory Board Members”, 25 % of each member’s compensation for services as a member of the Supervisory Board for a given prior year is, rather than being paid in cash, converted into notional shares of Deutsche Bank AG in February of the following year. The cash value of the notional shares is paid to the member in February of the year following their departure from the Supervisory Board or the expiration of their term of office, based on the market price of the Deutsche Bank share near the payment date. The table in the section specified above shows the number of notional shares that will be credited in spring 2019 to members of the Supervisory Board as part of their 2018 compensation.

Related Party Transactions

For information on related party transactions please refer to Note 38 “Related Party Transactions“.

Auditing and Controlling

Audit Committee Financial Expert

The Supervisory Board determined that Dr. Paul Achleitner, Katherine Garrett-Cox, Richard Meddings, Professor Dr. Stefan Simon and Professor Dr. Norbert Winkeljohann, who are currently or were members of its Audit Committee until the end of 2018, are "audit committee financial experts", as such term is defined by the implementation rules of the U.S. Securities and Exchange Commission issued pursuant to Section 407 of the Sarbanes-Oxley Act of 2002. These audit committee financial experts are "independent" of the bank, as defined in Rule 10A-3 under the U.S. Securities Exchange Act of 1934. In accordance with the provisions of Sections 107 (4) and 100 (5) of the German Stock Corporation Act (AktG) as well as Section 25d (9) of the German Banking Act (KWG), they have the required expert knowledge in financial accounting and auditing.

Compensation Control Committee Compensation Expert

Pursuant to Section 25d (12) of the German Banking Act (KWG), at least one member of the Compensation Control Committee must have sufficient expertise and professional experience in the field of risk management and risk controlling, in particular, with regard to the mechanisms to align compensation systems to the company's overall risk appetite and strategy and the bank's capital base. The Supervisory Board determined that Dr. Paul Achleitner and Professor Dr. Stefan Simon, members of the Compensation Control Committee, fulfill the requirements of Section 25d (12) of the German Banking Act (KWG) and therefore have the required expertise and professional experience in risk management and risk controlling.

For a description of the experience of the Supervisory Board members mentioned in the two foregoing paragraphs, please see "Corporate Governance Statement/Corporate Governance Report: Management Board and Supervisory Board: Supervisory Board" in the Annual Report 2018.

Values and leadership principles of Deutsche Bank AG and Deutsche Bank Group

Deutsche Bank Group Code of Conduct and Code of Ethics for Senior Financial Officers

Deutsche Bank Group's Code of Conduct sets out Deutsche Banks's purpose, values and beliefs and minimum standards of conduct that we expect all members of our Management Board and employees to follow. These values and standards govern employee interactions with our clients, competitors, business partners, government and regulatory authorities, and shareholders, as well as with other employees. In addition, the Code forms the cornerstone of our policies, which provide guidance on compliance with applicable laws and regulations.

In accordance with Section 406 of the Sarbanes-Oxley Act of 2002, we adopted a Code of Ethics for Senior Financial Officers of Deutsche Bank AG and Deutsche Bank Group with special obligations that apply to our "senior financial officers", which currently consist of Deutsche Bank's Chairman of the Management Board, Chief Financial Officer, Group Controller as well as certain other senior financial officers. There were no amendments or waivers to this Code of Ethics in 2018.

The current versions of the Code of Conduct as well as the Code of Ethics for Senior Financial Officers of Deutsche Bank AG and Deutsche Bank Group are available from Deutsche Bank's website: www.db.com/ir/en/documents.htm.

Corporate Governance at Deutsche Bank AG and Deutsche Bank Group

Deutsche Bank established a Group Governance function to define, implement and monitor the corporate governance framework of Deutsche Bank AG and Deutsche Bank Group and to perform this governance function throughout the Group. Group Governance addresses corporate governance issues in Deutsche Bank AG and Deutsche Bank Group, while focusing closely on clear organizational structures aligned to the key elements of good corporate governance.

Deutsche Bank AG and Deutsche Bank Group are committed to ensuring a corporate governance framework in accordance with international standards and statutory provisions. In support of this objective, Deutsche Bank AG and Deutsche Bank Group have instituted clear corporate governance principles.

Further details on corporate governance are published on Deutsche Bank's website (www.db.com/ir/en/corporate-governance.htm).

Principal accountant fees and services

In accordance with German law, our principal accountant is appointed at our Annual General Meeting based on a recommendation of our Supervisory Board. The Audit Committee of our Supervisory Board prepares such a recommendation. Subsequent to the principal accountant's appointment, the Audit Committee awards the contract and in its sole authority approves the terms and scope of the audit and all audit engagement fees as well as monitors the principal accountant's independence. KPMG AG Wirtschaftsprüfungsgesellschaft was our principal accountant for the 2017 and 2018 fiscal years, respectively.

The table set forth below contains the aggregate fees billed for each of the last two fiscal years by KPMG AG Wirtschaftsprüfungsgesellschaft and the worldwide member firms of KPMG International in each of the following categories: (1) Audit fees, which are fees for professional services for the audit of our annual financial statements or services that are normally provided by the accountant in connection with statutory and regulatory filings or engagements for those fiscal years, (2) Audit-related fees, which are fees for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and are not reported as Audit fees, (3) Tax-related fees, which are fees for professional services rendered for tax compliance, tax consulting and tax planning, and (4) All other fees, which are fees for products and services other than Audit fees, Audit-related fees and Tax-related fees. These amounts include expenses and exclude Value Added Tax (VAT).

Fee category in € m.	2018	2017
Audit fees	60	51
Audit-related fees	12	18
Tax-related fees	5	4
All other fees	1	0
Total fees	78	73

The Audit fees include fees for professional services for the audit of our annual financial statements and consolidated financial statements and do not include the 2017 audit fees for Postbank and its subsidiaries, as the 2017 financials of those entities are not audited by KPMG. The Audit-related fees include fees for other assurance services required by law or regulations, in particular for financial service specific attestation, for quarterly reviews, for spin-off audits and for merger audits, as well as fees for voluntary assurance services, like voluntary audits for internal management purposes and the issuance of comfort letters. Our Tax-related fees include fees for services relating to the preparation and review of tax returns and related compliance assistance and advice, tax consultation and advice relating to Group

tax planning strategies and initiatives and assistance with assessing compliance with tax regulations.

United States law and regulations, and our own policies, generally require that all engagements of our principal accountant be pre-approved by our Audit Committee or pursuant to policies and procedures adopted by it. Our Audit Committee has adopted the following policies and procedures for consideration and approval of requests to engage our principal accountant to perform non-audit services. Engagement requests must in the first instance be submitted to the Accounting Engagement Team. If the request relates to services that would impair the independence of our principal accountant, the request must be rejected. Our Audit Committee has given its pre-approval for specified assurance, financial advisory and tax services, provided the expected fees for any such service do not exceed € 1 million. If the engagement request relates to such specified pre-approved services, it may be approved by the Accounting Engagement Team and must thereafter be reported to the Audit Committee. If the engagement request relates neither to prohibited non-audit services nor to pre-approved non-audit services, it must be forwarded to the Audit Committee for consideration. In addition, to facilitate the consideration of engagement requests between its meetings, the Audit Committee has delegated approval authority to several of its members who are “independent” as defined by the Securities and Exchange Commission and the New York Stock Exchange. Such members are required to report any approvals made by them to the Audit Committee at its next meeting.

Additionally, United States law and regulations permit the pre-approval requirement to be waived with respect to engagements for non-audit services aggregating to no more than five percent of the total amount of revenues we paid to our principal accountant, if such engagements were not recognized by us at the time of engagement and were promptly brought to the attention of our Audit Committee or a designated member thereof and approved prior to the completion of the audit. In 2017 and 2018, the percentage of the total amount of revenues we paid to our principal accountant for non-audit services that was subject to such a waiver was less than 5 % for each year.

Compliance with the German Corporate Governance Code

Declaration pursuant to Section 161 German Stock Corporation Act (AktG) (Declaration of Conformity 2018)

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Statement on the Suggestions of the German Corporate Governance Code

Targets for the proportion of women in management positions/gender quota

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Diversity Concept

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Supplementary Information (Unaudited)

416 Non-GAAP Financial Measures
420 Declaration of Backing
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Non-GAAP Financial Measures

This document and other documents the Group has published or may publish contain non-GAAP financial measures. Non-GAAP financial measures are measures of the Group's historical or future performance, financial position or cash flows that contain adjustments that exclude or include amounts that are included or excluded, as the case may be, from the most directly comparable measure calculated and presented in accordance with IFRS in the Group's financial statements.

Return on Equity Ratios

The Group reports a post-tax return on average shareholders' equity and a post-tax return on average tangible shareholders' equity, each of which is a non-GAAP financial measure.

The post-tax returns on average shareholders' equity and average tangible shareholders' equity are calculated as net income (loss) attributable to Deutsche Bank shareholders as a percentage of average shareholders' equity and average tangible shareholders' equity, respectively.

Net income (loss) attributable to Deutsche Bank shareholders for the segments is a non-GAAP financial measure and is defined as net income (loss) excluding post-tax income (loss) attributable to noncontrolling interests. For the Group, it reflects the reported effective tax rate, which was 74 % for the full year 2018, 160 % for 2017 and (67) % for 2016.

For the segments, the applied tax rate was 28 % for all reported periods in 2018, 33 % for all reported periods in 2017 and 35 % for all reported periods in 2016.

At the Group level, tangible shareholders' equity is shareholders' equity as reported in the consolidated balance sheet excluding goodwill and other intangible assets. Tangible shareholders´ equity for the segments is calculated by deducting goodwill and other intangible assets from shareholders' equity as allocated to the segments, as described in Note 4 "Business Segments and Related Information" to the consolidated financial statements within the section "Measurement of Segment Profit and Loss". Shareholders' equity and tangible shareholders' equity are presented on an average basis.

The Group believes that a presentation of average tangible shareholders' equity makes comparisons to its competitors easier, and refers to this measure in the return on equity ratios presented by the Group. However, average tangible shareholders' equity is not a measure provided for in IFRS, and the Group's ratios based on this measure should not be compared to other companies' ratios without considering differences in the calculations.

The reconciliation of the aforementioned ratios is set forth in the table below:

	2018					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total
Income (loss) before income taxes (IBIT)	530	829	367	–	(396)	1,330
Income tax expense	0	0	0	–	0	(989)
Net Income (loss)	382	597	264	–	(902)	341
Net income (loss) attributable to noncontrolling interests	0	0	0	–	(75)	(75)
Net Income attributable to DB shareholders and additional equity components	382	597	264	–	(976)	267
Average shareholders' equity	43,427	14,514	4,669	–	0	62,610
Add (deduct): Average goodwill and other intangible assets	(3,090)	(2,113)	(3,183)	–	(0)	(8,386)
Average tangible shareholders' equity	40,337	12,401	1,485	–	0	54,224
Post-tax return on average shareholders' equity	1 %	4 %	6 %	–	N/M	0 %
Post-tax return on average tangible shareholders' equity	1 %	5 %	18 %	–	N/M	1 %

	2017					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total
Income (loss) before income taxes (IBIT)	1,096	465	732	–	(1,066)	1,228
Income tax expense	0	0	0	–	0	(1,963)
Net Income (loss)	734	312	490	–	(2,272)	(735)
Net income (loss) attributable to noncontrolling interests	0	0	0	–	(15)	(15)
Net Income attributable to DB shareholders and additional equity components	734	312	490	–	(2,287)	(751)
Average shareholders' equity	44,197	14,943	4,687	–	99	63,926
Add (deduct): Average goodwill and other intangible assets	(2,982)	(2,082)	(3,816)	–	(1)	(8,881)
Average tangible shareholders' equity	41,215	12,861	871	–	98	55,045
Post-tax return on average shareholders' equity	2 %	2 %	10 %	–	N/M	(1) %
Post-tax return on average tangible shareholders' equity	2 %	2 %	56 %	–	N/M	(1) %

	2016					
in € m. (unless stated otherwise)	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total
Income (loss) before income taxes (IBIT)	1,973	1,547	(190)	(3,187)	(952)	(810)
Income tax expense	0	0	0	0	0	(546)
Net Income (loss)	1,290	1,011	(124)	(2,085)	(1,449)	(1,356)
Net income (loss) attributable to	0	0	0	0	(45)	(45)

noncontrolling interests						
Net Income attributable to DB shareholders and additional equity components	1,290	1,011	(124)	(2,085)	(1,495)	(1,402)
Average shareholders' equity	40,312	14,371	4,460	690	2,249	62,082
Add (deduct): Average goodwill and other intangible assets	(2,568)	(1,775)	(4,636)	(3)	(894)	(9,876)
Average tangible shareholders' equity	37,744	12,595	(175)	687	1,355	52,206
Post-tax return on average shareholders' equity	3 %	7 %	(3) %	N/M	N/M	(2) %
Post-tax return on average tangible shareholders' equity	3 %	8 %	71 %	N/M	N/M	(3) %

Adjusted Costs

Adjusted costs is one of the Group's key performance indicators and is a non-GAAP financial measure most directly comparable to the IFRS financial measure noninterest expenses. Adjusted costs is calculated by deducting from noninterest expenses under IFRS (i) impairment of goodwill and other intangible assets, (ii) litigation, (iii) policyholder benefits and claims and (iv) restructuring and severance. Policyholder benefits and claims arose from the Abbey Life Assurance business which was sold in late 2016 and so will not occur in future periods. The Group believes that a presentation of noninterest expenses excluding the impact of these items provides a more meaningful depiction of the costs associated with our operating businesses.

	2018					
in € m.	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total Consolidated
Noninterest expenses	12,372	8,923	1,735	-	431	23,461
Impairment of goodwill and other intangible assets	0	0	0	-	0	0
Litigation provisions	56	(51)	33	-	50	88
Policyholder benefits and claims	0	0	0	-	0	0
Restructuring and severance	339	121	45	-	58	563
Adjusted costs	11,976	8,853	1,657	-	324	22,810

	2017					
in € m.	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total Consolidated
Noninterest expenses	12,892	9,411	1,799	-	593	24,695
Impairment of goodwill and other intangible assets	6	12	3	-	0	21
Litigation provisions	44	53	5	-	112	213
Policyholder benefits and claims	0	0	0	-	0	0
Restructuring and severance	151	399	18	-	2	570
Adjusted costs	12,690	8,947	1,774	-	478	23,891

	2016					
in € m.	Corporate & Investment Bank	Private & Commercial Bank	Asset Management	Non-Core Operations Unit	Corporate & Other	Total Consolidated
Noninterest expenses	13,926	9,104	3,205	2,682	525	29,442
Impairment of goodwill and other intangible assets	285	0	1,021	(49)	(0)	1,256
Litigation provisions	608	56	(0)	1,750	(18)	2,397
Policyholder benefits and claims	0	0	374	0	0	374
Restructuring and severance	390	205	69	23	(5)	681
Adjusted costs	12,643	8,843	1,741	958	549	24,734

Book Value and Tangible Book Value per Basic Share Outstanding

Book value per basic share outstanding and tangible book value per basic share outstanding are non-GAAP financial measures that are used and relied upon by investors and industry analysts as capital adequacy metrics. Book value per basic share outstanding represents the Bank's total shareholders' equity divided by the number of basic shares outstanding at period-end. Tangible book value represents the Bank's total shareholders' equity less goodwill and other intangible assets. Tangible book value per basic share outstanding is computed by dividing tangible book value by period-end basic shares outstanding.

Tangible Book Value

in € m.	2018 increase (decrease)	2017 increase (decrease)

				from 2017		from 2016	
(unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Total shareholders' equity (Book value)	62,495	63,174	59,833	(680)	(1)	3,341	6
Goodwill and other intangible assets	(8,372)1	(8,839)	(8,982)	467	(5)	143	(2)
Tangible shareholders' equity (Tangible book value)	54,122	54,335	50,851	(213)	(0)	3,484	7

1Excludes Goodwill and other intangible assets attributable to partial sale of DWS.

Basic Shares Outstanding

in € m.				2018 increase (decrease) from 2017		2017 increase (decrease) from 2016	
(unless stated otherwise)	2018	2017	2016	in € m.	in %	in € m.	in %
Number of shares	2,066.8	2,066.8	1,545.5	0	0	521.3	33.7
Shares outstanding:							
Treasury shares	(1.3)	(0.4)	(0.2)	(1.0)	N/M	(0.1)	63.5
Vested share awards	39.8	28.5	23.3	11.3	39.5	5.2	22.4
Basic shares outstanding1	2,105.2	2,094.9	1,568.6	10.3	0.5	526.3	33.6
Book value per basic share outstanding in €	29.69	30.16	38.14	(0.47)	(1.6)	(7.98)	(20.9)
Tangible book value per basic share outstanding in €	25.71	25.94	32.42	(0.23)	(0.9)	(6.48)	(20.0)

1The basic shares outstanding have been adjusted for comparative periods in order to reflect the effect of the bonus component of subscription rights issued in April 2017 in connection with the capital increase.

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Fully loaded CRR/CRD 4 Measures

Our regulatory assets, exposures, risk-weighted assets, capital and ratios thereof are calculated for regulatory purposes and are set forth throughout this document under CRR/CRD 4. CRR/CRD 4 provides for "transitional" (or "phase-in") rules, under which capital instruments that are no longer eligible under the new rules are permitted to be phased out as the new rules on regulatory adjustments are phased in, as well as regarding the risk weighting of certain categories of assets.

When referring to Deutsche Bank results according to transitional rules we use the term "CRR/CRD 4". When referring to results according to full application of the final CRR/CRD 4 framework (without consideration of applicable transitional methodology) we use the term "CRR/CRD 4 fully loaded". For the calculation of risk-weighted assets (RWA), CRR/CRD 4 maintained transitional rules that permitted the grandfathering of equity investments at a risk-weight of 100 %. These transitional arrangements have been considered lastly for December 31, 2017 and expired thereafter, resulting in no difference thereafter for RWA under the fully loaded or transitional regime.

Since 2015 the Common Equity Tier 1 (CET 1) minimum capital requirement applicable to the Group is 4.5 % of risk weighted assets. In addition to this minimum capital requirement, various capital buffer requirements were phased in starting 2016 and will become fully effective from 2019 onwards. The development and maintenance of a high quality capital base which should primarily consist of Common Equity Tier 1 reflects one of the core elements of the CRR/CRD 4 framework. Specific regulatory adjustments were subject to transitional rules. For instance, deductions

for deferred tax assets that rely on future profitability or deductions for indirect and synthetic holdings of own instruments and capital instruments issued by financial sector entities were phased in. These phase-in arrangements to the CET 1 were still applicable for December 31, 2017 reporting as the phase-in percentage was at 80 % in 2017. They are not applicable from January 1, 2018 onwards as the phase-in percentage increased to 100 %. At the same time minority interest only recognizable under the transitional rules is now phased out with a 100 % phaseout rate since January 1, 2018.

Transitional arrangements are still applicable for Additional Tier 1 (AT1) and Tier 2 (T2) capital. Capital instruments that no longer qualify as AT1 or T2 capital under the CRR/CRD 4 fully loaded rules are subject to grandfathering rules during the transitional period and are being phased out from 2013 to 2022 with their recognition capped at 50 % in 2017, 40 % in 2018 and the cap decreasing by ten percentage points every year thereafter.

As the final implementation of CRR/CRD 4 may differ from our expectations, and our competitors' assumptions and estimates regarding such implementation may vary, our fully loaded CRR/CRD 4 measures may not be comparable with similarly labelled measures used by our competitors.

We believe that these fully loaded CRR/CRD 4 calculations provide useful information to investors as they reflect our progress against the new regulatory capital standards and as many of our competitors have been describing CRR/CRD 4 calculations on a fully loaded basis.

For descriptions of these fully loaded CRR/CRD 4 measures and the differences from the most directly comparable measures under the CRR/CRD 4 transitional rules, please refer to "Management Report: Risk Report: Risk and Capital Performance: Capital, Leverage Ratio and MREL", in particular the subsections thereof entitled "Development of Regulatory Capital", "Development of Risk-Weighted Assets" and "Leverage Ratio".

Declaration of Backing

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Supplemental Financial Information (Unaudited)

Industry Guide 3 Information

Amounts for 2018, 2017, 2016, 2015 and 2014 are prepared in accordance with IFRS, which is consistent with the Group's Financial Statements.

Financial Condition

Average balance sheet based upon month-end balances

Average balance sheet and interest and similar income	2018			2017			2016		
in € m. (unless stated otherwise)	Average balance	Interest	Average yield/rate	Average balance	Interest	Average yield/rate	Average balance	Interest	Average yield/rate
Assets:1									
Interest-earning deposits with banks:5									
In German offices2	101,124	(406)	(0.40) %	91,135	(346)	(0.38) %	35,145	(55)	(0.16) %
In Non-German offices2	107,079	2,015	1.88 %	102,700	1,257	1.22 %	81,139	613	0.76 %
Total interest-earning deposits with banks	208,203	1,610	0.77 %	193,835	911	0.47 %	116,284	558	0.48 %
Central bank funds sold and securities purchased under resale agreements:5									
In German offices	975	(5)	(0.50) %	3,053	(14)	(0.47) %	10,701	(28)	(0.26) %
In Non-German offices	7,511	220	2.93 %	9,857	291	2.95 %	10,995	349	3.17 %
Total central bank funds sold and securities purchased under resale agreements	8,486	215	2.53 %	12,910	276	2.14 %	21,697	321	1.48 %
Securities borrowed:5									
In German offices	10	0	0.22 %	123	0	(0.19) %	116	0	(0.20) %
In Non-German offices	3,305	29	0.89 %	21,995	(152)	(0.69) %	29,415	(202)	(0.69) %
Total securities borrowed	3,315	29	0.88 %	22,118	(152)	(0.69) %	29,531	(202)	(0.69) %
Interest-earning financial assets at fair value through									

profit or loss:4,6									
In German offices	18,541	355	1.91 %	20,905	378	1.81 %	19,595	432	2.21 %
In Non-German offices	258,953	7,402	2.86 %	256,045	6,870	2.68 %	273,047	8,341	3.05 %
Total interest-earning financial assets at fair value through profit or loss	277,494	7,757	2.80 %	276,949	7,248	2.62 %	292,642	8,773	3.00 %
Financial assets at fair value through OCI:4									
In German offices	10,148	90	0.89 %	N/A	N/A	N/A	N/A	N/A	N/A
In Non-German offices	40,660	927	2.28 %	N/A	N/A	N/A	N/A	N/A	N/A
Total financial assets at fair value through OCI	50,808	1,017	2.00 %	N/A	N/A	N/A	N/A	N/A	N/A
Financial assets available for sale:									
In German offices	N/A	N/A	N/A	16,656	93	0.56 %	18,928	247	1.31 %
In Non-German offices	N/A	N/A	N/A	36,860	1,077	2.92 %	50,523	1,271	2.52 %
Total financial assets available for sale	N/A	N/A	N/A	53,516	1,170	2.19 %	69,450	1,518	2.19 %
Loans at amortized cost:3,4,7									
In German offices	214,858	5,721	2.66 %	213,294	5,798	2.72 %	215,512	6,200	2.88 %
In Non-German offices	180,677	7,269	4.02 %	192,288	6,204	3.23 %	212,204	6,109	2.88 %
Total loans	395,534	12,990	3.28 %	405,583	12,002	2.96 %	427,716	12,309	2.88 %
Securities held to maturity									
In German offices	N/A	N/A	N/A	0	0	0.00 %	0	0	0.00 %
In Non-German offices	N/A	N/A	N/A	2,942	68	2.30 %	2,977	67	2.24 %
Total securities held to maturity	N/A	N/A	N/A	3,188	68	2.12 %	2,977	67	2.24 %
Total other interest-earning assets	46,829	97	0.21 %	53,599	767	1.43 %	72,876	862	1.18 %
Total interest-earning assets	990,670	23,716	2.39 %	1,021,697	22,290	2.18 %	1,033,172	24,206	2.34 %

Cash and due from banks	21,387	26,791	22,865
Noninterest-earning financial assets at fair value through profit or loss:			
In German offices	154,906	190,504	276,265
In Non-German offices	192,110	223,535	289,788
All other assets	95,660	104,809	109,091
Allowance for credit losses	(4,368)	(4,135)	(4,639)
Total assets	1,450,364	1,563,202	1,726,541
% of assets attributable to Non-German offices	62 %	63 %	65 %

Average balance sheet and interest expense	2018			2017			2016		
in € m. (unless stated otherwise)	Average balance	Interest	Average yield/rate	Average balance	Interest	Average yield/rate	Average balance	Interest	Average yield/rate
Liabilities and equity:1									
Interest-bearing deposits:									
In German offices:									
Time deposits	86,690	658	0.76 %	82,596	384	0.46 %	68,924	379	0.55 %
Savings deposits	86,277	417	0.48 %	87,902	572	0.65 %	91,328	591	0.65 %
Demand deposits	42,630	247	0.58 %	38,891	135	0.35 %	40,619	53	0.13 %
Total in German offices	215,596	1,322	0.61 %	209,389	1,091	0.52 %	200,871	1,023	0.51 %
In Non-German offices:									
Time deposits	43,223	1,224	2.83 %	53,338	1,372	2.57 %	55,809	1,196	2.14 %
Savings deposits	664	7	1.11 %	886	8	0.87 %	1,939	15	0.78 %
Demand deposits	82,880	529	0.64 %	90,462	330	0.36 %	107,687	331	0.31 %

Total in Non-German offices	126,767	1,760	1.39 %	144,687	1,710	1.18 %	165,436	1,542	0.93 %
Total interest-bearing deposits	342,363	3,082	0.90 %	354,075	2,800	0.79 %	366,306	2,565	0.70 %
Central bank funds purchased and securities sold under repurchase agreements:5									
In German offices	126	16	12.38 %	122	0	(0.29) %	772	(15)	(1.94) %
In Non-German offices	13,146	347	2.64 %	19,497	407	2.09 %	18,367	245	1.34 %
Total central bank funds purchased and securities sold under repurchase agreements	13,271	363	2.73 %	19,619	407	2.07 %	19,140	230	1.20 %
Securities loaned:5									
In German offices	2	0	(0.11) %	4	0	(0.13) %	5	0	(0.11) %
In Non-German offices	6,244	141	2.26 %	5,536	(75)	(1.35) %	4,117	(32)	(0.77) %
Total securities loaned	6,246	141	2.26 %	5,540	(75)	(1.35) %	4,122	(32)	(0.77) %
Interest-bearing financial liabilities at fair value through profit or loss:6									
In German offices	11,626	197	1.69 %	13,785	240	1.74 %	10,953	150	1.37 %
In Non-German offices	118,221	3,390	2.87 %	120,472	3,800	3.15 %	116,157	3,978	3.42 %
Total interest-bearing financial liabilities at fair value through profit or loss	129,848	3,587	2.76 %	134,258	4,040	3.01 %	127,110	4,128	3.25 %

Other short-term borrowings:5									
In German offices	670	7	1.03 %	571	7	1.26 %	483	14	2.87 %
In Non-German offices	16,985	131	0.77 %	18,601	128	0.69 %	23,557	165	0.70 %
Total other short-term borrowings	17,656	137	0.78 %	19,172	135	0.70 %	24,040	179	0.74 %
Long-term debt and trust preferred securities:5									
In German offices	101,903	817	0.80 %	113,732	1,178	1.04 %	102,711	1,177	1.15 %
In Non-German offices	58,653	1,292	2.20 %	58,174	911	1.57 %	64,418	1,018	1.58 %
Total long-term debt and trust preferred securities	160,556	2,110	1.31 %	171,906	2,089	1.22 %	167,129	2,195	1.31 %
Total other interest-bearing liabilities5,7	75,964	1,104	1.45 %	85,918	516	0.60 %	104,731	233	0.22 %
Total interest-bearing liabilities	745,904	10,524	1.41 %	790,488	9,912	1.25 %	812,578	9,498	1.17 %

Average balance sheet and interest expense	2018			2017			2016		
in € m. (unless stated otherwise)	Average balance	Interest	Average yield/rate	Average balance	Interest	Average yield/rate	Average balance	Interest	Average yield/rate
Noninterest-bearing deposits:6									
In German offices6	199,705			183,938			154,529		
In Non-German offices	24,980			31,401			35,853		
Noninterest-bearing financial liabilities at fair value through profit or loss:									
In German offices	135,163			159,090			240,873		

In Non-German offices	195,094	231,225	303,015
All other noninterest-bearing liabilities	81,083	98,181	112,658
Total shareholders' equity	62,537	63,926	62,082
Additional equity components	4,675	4,672	4,673
Noncontrolling interests	1,225	280	280
Total equity	68,437	68,878	67,036
Total liabilities and equity	1,450,364	1,563,202	1,726,541
% of liabilities attributable to Non-German offices1	48 %	53 %	56 %
Rate spread	0.98 %	0.93 %	1.17 %
Net interest margin (Net interest income to total interest-earning assets):			
In German offices	0.91 %	0.99 %	1.48 %
In Non-German offices	1.57 %	1.32 %	1.40 %
Total	1.33 %	1.21 %	1.42 %

1The allocation of the assets and liabilities between German and Non-German offices are based on the location of the entity which carries the respective asset or liability.

2Interest-earning deposits with banks include interest earning deposit with central bank and interest earning deposit with bank w/o central bank.

3Loans include impaired loans.

4Loans classifications have been significantly impacted by the adoption of IFRS 9. Loans previously classified at amortized cost under IAS 39 are now reported not only in loans at amortized cost, but also in financial assets at fair value through profit or loss and financial assets designated at fair value through other comprehensive income.

5Figures in interest revenue and expense positions are based on net effect of negative interest revenue and expenses. However, negative interest revenue and expenses are reported in ''others'' in interest and similar income and interest expenses, respectively, in Note 5 to the consolidated financial statements.

6Prior period comparatives for interest on interest-earning financial assets at fair value through profit or loss and interest on interest-bearing financial liabilities at fair value through profit or loss have been restated.

7Prior period comparative for 2017 for interest on loan at amortized cost and interest on other interest-bearing liabilities has been restated.

Analysis of changes in interest and similar income and interest expense

	2018 over 2017 due to changes in[1]			2017 over 2016 due to changes in[1]		
in € m.	Net change	Volume	Rate	Net change	Volume	Rate
Interest and similar income:						
Interest-earning deposits with banks:						
German offices	(59)	(39)	(20)	(290)	(154)	(136)
Non-German offices	762	56	707	643	193	450
Total interest-earning deposits with banks	703	16	687	353	39	314
Central bank funds sold and securities purchased under resale agreements:						
German offices	9	10	(1)	13	27	(14)
Non-German offices	(71)	(69)	(2)	(58)	(35)	(23)
Total central bank funds sold and securities purchased under resale agreements	(62)	(58)	(3)	(45)	(7)	(38)
Securities borrowed:						
German offices	0	0	0	0	0	0
Non-German offices	181	49	132	50	51	(1)
Total securities borrowed	181	49	132	50	51	(1)
Financial assets at fair value through profit or loss:						
German offices	(24)	(44)	21	(55)	27	(82)
Non-German offices	532	79	454	(1,502)	(529)	(973)
Total financial assets at fair value through profit or loss	509	34	474	(1,557)	(502)	(1,055)
Financial assets at fair value through OCI:						
German offices	N/A	N/A	N/A	N/A	N/A	N/A
Non-German offices	N/A	N/A	N/A	N/A	N/A	N/A
Total financial assets at fair value through OCI	N/A	N/A	N/A	N/A	N/A	N/A
Financial assets available for sale:						
German offices	N/A	N/A	N/A	(154)	(27)	(128)
Non-German offices	N/A	N/A	N/A	(194)	(378)	185
Total financial assets available for sale	N/A	N/A	N/A	(348)	(405)	57
Loans at amortized cost:						
German offices	(81)	42	(123)	(401)	(63)	(338)
Non-German offices	1,065	(393)	1,458	94	(602)	696
Total loans	985	(351)	1,335	(307)	(666)	358

Securities held to maturity:						
German offices	N/A	N/A	N/A	0	0	0
Non-German offices	N/A	N/A	N/A	1	(1)	2
Total Securities held to maturity	N/A	N/A	N/A	1	(1)	2
Other interest-earning assets	(669)	(86)	(583)	(95)	(255)	160
Total interest and similar income	1,647	(395)	2,043	(1,948)	(1,745)	(203)
Interest expense:						
Interest-bearing deposits:						
German offices	233	33	200	68	44	24
Non-German offices	53	(227)	279	167	(210)	377
Total interest-bearing deposits	286	(194)	480	235	(166)	401
Central bank funds purchased and securities sold under repurchase agreements:						
German offices	16	0	16	15	7	7
Non-German offices	(60)	(152)	92	161	16	146
Total central bank funds purchased and securities sold under repurchase agreements	(44)	(152)	108	176	23	153
Securities loaned:						
German offices	0	0	0	0	0	0
Non-German offices	216	(8)	224	(43)	(14)	(29)
Total securities loaned	216	(8)	224	(43)	(14)	(29)
Financial liabilities at fair value through profit or loss:						
German offices	(43)	(37)	(6)	90	44	46
Non-German offices	(410)	(70)	(340)	(159)	163	(322)
Total financial liabilities at fair value through profit or loss	(452)	(107)	(346)	(69)	207	(276)
Other short-term borrowings:						
German offices	0	1	(1)	(7)	2	(9)
Non-German offices	2	(12)	14	(37)	(34)	(3)
Total other short-term borrowings	2	(11)	12	(44)	(32)	(12)
Long-term debt and trust preferred securities:						
German offices	(365)	(114)	(251)	1	120	(119)
Non-German offices	379	8	371	(107)	(98)	(9)
Total long-term debt and trust preferred securities	14	(107)	120	(106)	22	(128)
Other interest-bearing liabilities	588	(66)	654	285	(49)	334
Total interest expense	608	(644)	1,252	434	(8)	442
Net change in net interest income	1,039	249	790	(2,382)	(1,737)	(645)

1Changes due to combination of volume and rate are allocated proportionally.

Investment Portfolio (Debt Securities at fair value through other comprehensive income)

Fair values of the Group's investment portfolio

in € m.	Dec 31, 2018	Dec 31, 2017	Dec 31, 2016
Debt securities:			
German government	7,705	N/A	N/A
U.S. Treasury and U.S. government agencies	13,118	N/A	N/A
U.S. local (municipal) governments	101	N/A	N/A
Other foreign governments	18,152	N/A	N/A
Corporates	5,606	N/A	N/A
Other asset-backed securities	27	N/A	N/A
Mortgage-backed securities, including obligations of U.S. federal agencies	103	N/A	N/A
Other debt securities	181	N/A	N/A
Total	44,993	N/A	N/A

Fair value, amortized cost and gross unrealized holding gains and losses for the Group's Investment Portfolio

Dec 31, 2018		Gross unrealized holding		
in € m.	Fair value	Gains	Losses	Amortized cost
Debt securities:				
German government	7,705	63	60	7,702
U.S. Treasury and U.S. government agencies	13,118	159	170	13,129
U.S. local (municipal) governments	101	3	8	106
Other foreign governments	18,152	102	82	18,132
Corporates	5,606	34	5	5,578
Other asset-backed securities	27	0	0	27
Mortgage-backed securities, including obligations of U.S. federal agencies	103	0	0	103
Other debt securities	181	1	1	181
Total	44,993	362	326	44,958

The following table presents the fair value, remaining maturities, approximate weighted-average yields (based on amortized cost) and total amortized cost by maturity distribution of the debt security components of the Group's investment portfolio as of December 31, 2018:

	Up to one year		More than one year and up to five years		More than five years and up to ten years		More than ten years		Total	
in € m.	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
German government	1,173	1.2 %	3,734	1.7 %	2,566	1.4 %	232	1.5 %	7,705	1.5 %
U.S. Treasury and U.S.	4,558	1.7 %	6,130	1.9 %	2,430	1.3 %	0	0.0 %	13,118	1.7 %

government agencies										
U.S. local (municipal) governments	0	0.0 %	0	0.0 %	0	0.0 %	101	5.3 %	101	5.3 %
Other foreign governments	3,791	3.1 %	5,937	2.6 %	6,139	1.5 %	474	0.0 %	16,340	2.3 %
Corporates	2,049	0.9 %	2,196	1.3 %	1,216	1.3 %	145	3.3 %	5,606	1.2 %
Other asset-backed securities	0	0.0 %	0	0.0 %	11	0.0 %	17	1.2 %	27	0.7 %
Mortgage-backed securities, including obligations of U.S. federal agencies	0	0.0 %	0	0.0 %	1	0.0 %	102	0.0 %	103	0.0 %
Other debt securities	902	2.1 %	953	3.9 %	120	1.6 %	20	2.9 %	1,993	2.0 %
Total fair value	12,473	2.1 %	18,950	2.1 %	12,481	1.4 %	1,089	1.3 %	44,993	1.9 %
Total amortized cost	12,465		18,975		12,426		1,092		44,958	

Fair values of the Group's investment portfolio (Securities Available for Sale)

in € m.	Dec 31, 2018	Dec 31, 2017	Dec 31, 2016
Debt securities:			
German government	N/A	8,131	9,405
U.S. Treasury and U.S. government agencies	N/A	8,092	7,652
U.S. local (municipal) governments	N/A	2,436	3,261
Other foreign governments	N/A	19,275	23,779
Corporates	N/A	6,775	6,849
Other asset-backed securities	N/A	1	84
Mortgage-backed securities, including obligations of U.S. federal agencies	N/A	11	17
Other debt securities	N/A	359	470
Total debt securities	N/A	45,081	51,516
Equity securities:			
Equity shares	N/A	897	1,027
Investment certificates and mutual funds	N/A	97	122
Total equity securities	N/A	994	1,149
Total	N/A	46,075	52,665

Loans outstanding

For 2018, we provide information following the IFRS 9 accounting standard, while 2017 numbers are based on the IAS 39 accounting rules and are presented in the old format. Since the accounting requirements have changed

significantly, numbers are not comparable. For further information please refer to chapter “IFRS 9 transition impact analysis” in Note 2 “Recently adopted and new accounting pronouncements” to the consolidated financial statements.

With the introduction of IFRS 9, Deutsche Bank reviewed the way its loan book is presented throughout the Annual Report / 20-F. Loan disclosure was expanded, instead of only showing a certain subset of loan products (loans at amortized cost), it was decided to show all loans, regardless of their classification and measurement under IFRS 9.

Analysis of the Group’s loan portfolio by industry sector and by the borrower’s country of domicile (in- or outside Germany)

in € m.	Dec 31, 2018
German:	
Agriculture, forestry and fishing	283
Mining and quarrying	309
Manufacturing	10,604
Electricity, gas, steam and air conditioning supply	779
Water supply, sewerage, waste management and remediation activities	672
Construction	1,392
Wholesale and retail trade, repair of motor vehicles and motorcycles	6,404
Transport and storage	1,656
Accommodation and food service activities	637
Information and communication	1,007
Financial and insurance activities	7,245
Real estate activities	8,169
Professional, scientific and technical activities	4,704
Administrative and support service activities	3,794
Public administration and defense, compulsory social security	6,186
Education	251
Human health services and social work activities	2,710
Arts, entertainment and recreation	302
Other service activities	2,388
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	149,130
Activities of extraterritorial organizations and bodies	0
Total German	208,619
Non-German:	
Agriculture, forestry and fishing	372
Mining and quarrying	3,391
Manufacturing	20,362
Electricity, gas, steam and air conditioning supply	2,776
Water supply, sewerage, waste management and remediation activities	224
Construction	3,029
Wholesale and retail trade, repair of motor vehicles and motorcycles	15,468

Transport and storage	4,893
Accommodation and food service activities	1,457
Information and communication	4,274
Financial and insurance activities	86,641
Real estate activities	26,984
Professional, scientific and technical activities	2,316
Administrative and support service activities	4,127
Public administration and defense, compulsory social security	4,565
Education	447
Human health services and social work activities	908
Arts, entertainment and recreation	649
Other service activities	2,939
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	39,365
Activities of extraterritorial organizations and bodies	25
Total Non-German	225,212
Gross loans	433,832
(Deferred expense)/unearned income	254
Loan less (deferred expense)/unearned income	433,578

in € m.	Dec 31, 2017	Dec 31, 2016[1]	Dec 31, 2015	Dec 31, 2014
German:				
Financial intermediation	4,654	5,048	7,716	6,920
Fund management activities	910	984	778	296
Manufacturing	9,456	8,821	9,357	8,583
Wholesale and retail trade	6,265	5,736	5,736	4,294
Households	139,196	137,078	137,332	137,162
Commercial real estate activities	7,864	7,741	8,178	19,275
Public sector	9,090	11,059	12,846	12,725
Lease financing	296	383	482	723
Other	22,072	20,579	20,085	12,909
Total German	199,804	197,430	202,510	202,888
Non-German:				
Financial intermediation	47,550	44,569	54,023	52,666
Fund management activities	17,798	25,145	25,313	11,842
Manufacturing	18,022	20,470	18,773	17,036
Wholesale and retail trade	12,986	11,008	12,591	11,420
Households	47,533	50,791	62,674	60,817
Commercial real estate activities	21,382	19,627	14,701	16,490
Public sector	4,621	4,682	4,398	5,357

Lease financing	88	178	79	381
Other	36,095	39,643	38,487	31,988
Total Non-German	206,076	216,114	231,039	207,995
Gross loans	405,879	413,544	433,549	410,883
(Deferred expense)/unearned income	259	88	772	58
Loan less (deferred expense)/unearned income	405,621	413,455	432,777	410,825

1Comparatives have been restated to reflect changes in industry sectors.

Loan maturities and sensitivity to changes in interest rates

Analysis of maturities of the Group's loan portfolio (excluding lease financing)

Dec 31, 2018 in € m.	Within 1 year	After one but within 5 years	After 5 years	Total
German:				
Agriculture, forestry and fishing	63	39	181	283
Mining and quarrying	176	94	38	309
Manufacturing	5,466	3,116	2,023	10,604
Electricity, gas, steam and air conditioning supply	295	256	228	779
Water supply, sewerage, waste management and remediation activities	383	54	235	672
Construction	478	157	758	1,392
Wholesale and retail trade, repair of motor vehicles and motorcycles	3,769	1,131	1,504	6,404
Transport and storage	727	540	388	1,656
Accommodation and food service activities	62	101	474	637
Information and communication	292	413	302	1,007
Financial and insurance activities	2,412	2,308	2,525	7,245
Real estate activities	996	1,044	6,129	8,169
Professional, scientific and technical activities	781	946	2,977	4,704
Administrative and support service activities	430	751	2,612	3,794
Public administration and defense, compulsory social security	2,184	2,468	1,534	6,186
Education	12	110	129	251
Human health services and social work activities	272	531	1,907	2,710
Arts, entertainment and recreation	40	37	224	302
Other service activities	952	447	989	2,388
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	7,159	12,016	129,955	149,130
Activities of extraterritorial organizations and bodies	0	0	0	0
Total German	26,950	26,559	155,110	208,619

Non-German:				
Agriculture, forestry and fishing	248	50	74	371
Mining and quarrying	1,231	1,545	615	3,391
Manufacturing	14,107	4,672	1,572	20,350
Electricity, gas, steam and air conditioning supply	577	836	1,363	2,776
Water supply, sewerage, waste management and remediation activities	83	107	33	223
Construction	1,411	860	757	3,028
Wholesale and retail trade, repair of motor vehicles and motorcycles	11,216	2,837	1,411	15,463
Transport and storage	1,336	2,325	1,207	4,869
Accommodation and food service activities	417	739	299	1,456
Information and communication	1,588	2,317	368	4,274
Financial and insurance activities	43,256	33,337	10,049	86,641
Real estate activities	9,118	13,612	4,252	26,982
Professional, scientific and technical activities	826	821	668	2,314
Administrative and support service activities	1,316	1,948	857	4,122
Public administration and defense, compulsory social security	793	1,847	1,925	4,565
Education	191	49	207	447
Human health services and social work activities	169	560	176	904
Arts, entertainment and recreation	257	292	100	648
Other service activities	1,136	955	848	2,939
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	9,313	8,580	21,471	39,364
Activities of extraterritorial organizations and bodies	25	0	1	25
Total Non-German	98,614	78,289	48,251	225,154
Gross loans	125,564	104,847	203,361	433,773
(Deferred expense)/unearned income	22	83	149	254
Loans less (deferred expense)/unearned income	125,543	104,765	203,212	433,519

Volumes of loans in loan portfolio (excluding lease financing) with residual maturities of more than one year from that date

Dec 31,2018 in € m.	After one but within 5 years	After 5 years	Total
Fixed rate loans	34,362	162,488	196,850
Floating or adjustable rate loans	70,485	40,873	111,358
Total	104,847	203,361	308,208

Risk elements

For 2018, we provide information following the IFRS 9 accounting standard, while 2017 numbers are based on the IAS 39 accounting rules. Since the accounting requirements have changed significantly, numbers are not comparable. Therefore 2017 figures are shown in a separate section subsequent to the disclosures under IFRS 9. The main reasons are the broader scope of assets subject to impairment, differences in asset classification as well as in impairment calculation and definition.

For further information please refer to chapter “IFRS 9 transition impact analysis” in Note 2 “Recently adopted and new accounting pronouncements” to the consolidated financial statements.

The following section provides information about certain risk elements included in the amortized cost portfolio intended to address the requirements of SEC Industry Guide 3 while at the same time reflecting the classifications most relevant to how Deutsche Bank Group evaluates the credit quality of its amortized cost portfolio. All stage 3 assets, which are defined as financial assets at amortized cost where known information about possible credit problems of borrowers causes the Group’s management to have serious doubts as to the ability of such borrowers to comply with the present repayment terms, are included in this disclosure of risk elements.

Loans 90 days or more past due and still accruing

Under IFRS 9, all loans 90 days or more past due are classified as credit-impaired and reflected in stage 3. Interest income for credit-impaired loans is recognized in line with IFRS 9.5.4.1 and B 5.4.4. The accretion of the net present value of the written down amount of the loan due to the passage of time is recognized as interest income based on the original effective interest rate of the loan.

Stage 3 financial assets at amortized cost

Breakdown of the Group’s IFRS stage 3 financial assets at amortized cost by region based on the borrower’s country of domicile

in € m.	Dec 31, 2018
Germany	3,391
Western Europe (excluding Germany)	4,615
Eastern Europe	88
North America	574
Central and South America	155
Asia/Pacific	471
Africa	78
Other	43
Total (Stage 3 financial assets at amortized cost)	9,415 [1]

1 of which POCI: € 1,963 million.

Breakdown of the Group’s IFRS stage 3 financial assets at amortized cost by industry sector of the borrower

in € m.	Dec 31, 2018
Agriculture, forestry and fishing	60
Mining and quarrying	147

Manufacturing	849
Electricity, gas, steam and air conditioning supply	77
Water supply, sewerage, waste management and remediation activities	10
Construction	426
Wholesale and retail trade, repair of motor vehicles and motorcycles	594
Transport and storage	539
Accommodation and food service activities	156
Information and communication	46
Financial and insurance activities	1,006
Real estate activities	782
Professional, scientific and technical activities	341
Administrative and support service activities	94
Public administration and defense, compulsory social security	81
Education	8
Human health services and social work activities	14
Arts, entertainment and recreation	14
Other service activities	343
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	3,830
Activities of extraterritorial organizations and bodies	1
Total (Stage 3 financial assets at amortized cost)	9,4151

1 of which POCI: € 1,963 million.

The previous year's figures are stated as reported under IAS 39 – impaired loans.

Interest revenue of financial assets at amortized cost in stage 3

The following table shows the approximate effect on interest revenue of financial assets at amortized cost in stage 3 (excluding POCI). It shows the gross interest income that would have been recorded during the reporting period, if those assets had been current in accordance with their original terms and had been outstanding throughout the reporting period or since their origination, if Deutsche Bank Group only held them for part of the reporting period. It also shows the amount of interest income on those loans that was included in net income for the reporting period.

in € m.	2018
German loans:	
Gross amount of interest that would have been recorded at original rate	47
Less interest, net of reversals, recognized in interest revenue	20
Reduction of interest revenue	26
Non-German loans:	
Gross amount of interest that would have been recorded at original rate	76
Less interest, net of reversals, recognized in interest revenue	26
Reduction of interest revenue	51

Total reduction of interest revenue	77

Forborne assets at amortized costs

For economic or legal reasons we might enter into a forbearance agreement with a borrower who faces or will face financial difficulties in order to ease the contractual obligation for a limited period of time. A case-by-case approach is applied for our corporate clients considering each transaction and client-specific facts and circumstances. For consumer loans we offer forbearances for a limited period of time, in which the total or partial outstanding or future instalments are deferred to a later point in time. However, any amounts not paid, including accrued interest during this period must also be re-paid at a later point in time. Repayment options include distribution over residual tenor, a one-off payment or a tenor extension. Forbearances are restricted and depend on the economic situation of the client, our risk management strategies and local legislation. In case a forbearance agreement is entered into, an impairment measurement is conducted as described below, an impairment charge is taken if necessary and the loan is subsequently recorded as impaired.

In our management and reporting of forborne loans, we follow the EBA definition for forbearances and non-performing loans (Implementing Technical Standards (ITS) on Supervisory reporting on forbearance and non-performing exposures under article 99(4) of Regulation (EU) No 575/2013). Once the conditions mentioned in the ITS are met, we report the loan as being forborne. We remove the loan from our forbearance reporting once the discontinuance criteria in the ITS are met (i.e., the contract is considered performing, a minimum two year probation period has passed, regular payments of more than an insignificant aggregate amount of principal or interest have been made during at least half of the probation period, and none of the exposures to the debtor is more than 30 days past-due at the end of the probation period).

Breakdown of the Group’s forborne loans

in € m.	Dec 31, 2018
Forborne loans	
German	2,295
Non-German	2,546
Total forborne loans	4,8411

1 of which: TDR € 790 million.

Risk elements (previous year’s figures as reported under IAS 39)

The following section provides information about certain risk elements included in the loan portfolio intended to address the requirements of SEC Industry Guide 3 while at the same time reflecting the classifications most relevant to how Deutsche Bank Group evaluates the credit quality of its loan portfolio. All potential problem loans, which are defined as loans where known information about possible credit problems of borrowers causes the Group’s management to have serious doubts as to the ability of such borrowers to comply with the present loan repayment terms, are included in this disclosure of risk elements.

Loans 90 days or more past due and still accruing

Exposure of loans carried at amortized cost which were 90 days or more past due and still accruing

in € m.	Dec 31, 2017	Dec 31, 2016	Dec 31, 2015	Dec 31, 2014
German	321	252	278	499
Non-German	174	190	135	148
Total loans 90 days or more past due and still accruing	495	442	413	647

Impaired loans

Breakdown of the Group's IFRS impaired loans by region based on the borrower's country of domicile

in € m.	Dec 31, 2017	Dec 31, 2016	Dec 31, 2015	Dec 31, 2014
Germany	2,266	2,639	3,004	3,499
Western Europe (excluding Germany)	2,892	3,709	4,337	4,986
Eastern Europe	168	179	255	259
North America	498	496	342	425
Central and South America	70	5	6	3
Asia/Pacific	292	355	178	174
Africa	49	64	26	1
Other	0	2	2	1
Total impaired loans	6,234	7,447	8,151	9,348

Breakdown of the Group's IFRS impaired loans by industry sector of the borrower

in € m.	Dec 31, 2017	Dec 31, 2016	Dec 31, 2015	Dec 31, 2014
Financial intermediation	129	133	169	270
Fund management activities	16	21	33	64
Manufacturing	685	754	765	757
Wholesale and retail trade	521	707	538	591
Households	2,388	2,661	3,263	3,750
Commercial real estate activities	376	422	912	2,048
Public sector	74	19	16	54
Other	2,0461	2,7312	2,456	1,815
Total impaired loans	6,234	7,447	8,151	9,348

1Of which: 'Transportation, storage and communication' - Total Impaired Loans € 808 million/Total Loan loss allowance € 473 million. 'Real estate; renting and business activities' - € 482 million/ € 208 million, 'Construction' - € 378 million/€ 103 million, 'Mining and quarrying' - € 169 million/ € 123 million.

2Of which: 'Transportation, storage and communication' - Total Impaired Loans € 1.1 billion/Total Loan loss allowance €

650 million, ‘Real estate; renting and business activities’ - € 489 million/€ 230 million, ‘Construction’: € 309 million/ € 170 million, ‘Mining and quarrying’ - € 232 million/€ 103 million.

Renegotiated loans

Loans that have been renegotiated in such a way that, for economic or legal reasons related to the borrower’s financial difficulties, we granted a concession to the borrower that we would not otherwise have considered are disclosed and defined as renegotiated loans and are a subset of forborne loans disclosed in the Asset Quality section of the Risk Report.

Breakdown of the Group’s renegotiated loans representing our troubled debt restructurings

in € m.	Dec 31, 2017	Dec 31, 2016	Dec 31, 2015	Dec 31, 2014
Renegotiated loans considered nonimpaired				
German	717	553	520	502
Non-German	288	263	356	448
Total renegotiated loans considered nonimpaired	1,006	816	875	950
Renegotiated loans considered impaired				
German	509	661	942	1,145
Non-German	718	770	876	1,125
Total renegotiated loans considered impaired	1,227	1,430	1,819	2,270
Renegotiated loans				
German	1,226	1,213	1,463	1,647
Non-German	1,007	1,033	1,233	1,573
Total renegotiated loans	2,233	2,246	2,695	3,220

In 2017, renegotiated loans remained stable, decreasing by € 13 million or 1 %.

In 2016, renegotiated loans decreased by € 449 million or 17 % driven mainly by disposal and charge offs of impaired assets in Germany and the UK in NCOU and CIB. This was further complemented by disposals and charge offs of non-impaired assets in non-German region in CIB and AM.

The Group’s renegotiated loans declined by € 525 million or 16 % in 2015 driven by disposals and charge offs of impaired assets in NCOU and Postbank.

2014 renegotiated loans increased by € 588 million compared to 2013. The increase in impaired renegotiated loans of € 421 million was driven by Postbank along with individually assessed items within Germany in NCOU and CIB, which was nearly offset outside Germany due to reductions mainly within NCOU. The increase in non-impaired renegotiated loans in 2014 was again driven by Postbank along with other individually assessed items in Germany.

It should be noted that these renegotiations are not part of a special modification or restructuring program such as the Fannie Mae “Home Affordable Modification Program”. Rather, new terms (for example modification of interest rates, principal amounts, interest due, maturities, etc.) were arranged depending on the requirements of the individual

renegotiation.

Foreign Outstandings

The following tables list only those countries for which the cross-border outstandings exceeded 0.75 % of the Group's total assets as of December 31, 2018, 2017 and 2016. Offsetting of local country claims is done for third party liabilities of the respective foreign offices that represent legal obligations of the foreign offices and for which no payment is guaranteed at locations outside of the country of the office. As of December 31, 2018, there were no outstandings that exceeded 0.75 % of total assets in any country currently facing debt restructuring or liquidity problems that the Group expects would materially impact the country's ability to service its obligations.

	Dec 31, 2018						
in € m. (unless stated otherwise)	Banks and other financial institutions	Governments and Official institutions	Other1	Commit-ments	Net local country claim	Total	in %
United States	9,684	22,272	146,578	12,835	129,905	321,274	23.83
Luxembourg	8,446	7,474	37,708	3,840	6,548	64,015	4.75
France	5,850	7,185	25,098	5,056	–	43,190	3.20
Italy	3,617	12,572	12,875	1,008	5,045	35,117	2.60
Great Britain	3,360	12,480	10,159	4,907	–	30,905	2.29
Spain	3,790	7,927	12,022	1,835	–	25,574	1.90
Switzerland	2,338	4,464	13,516	3,895	1,065	25,277	1.87
Netherlands	1,333	3,998	14,172	5,266	–	24,770	1.84
Ireland	227	1,373	19,290	2,623	1	23,513	1.74
Japan	956	496	12,400	232	–	14,084	1.04
Belgium	3,040	2,426	4,339	1,095	–	10,900	0.81
China	4,470	970	4,618	516	–	10,574	0.78
India	2,135	706	4,822	246	2,511	10,419	0.77
Canada	1,209	309	7,240	1,332	–	10,090	0.75

1Other includes commercial and industrial, insurance and other loans.

	Dec 31, 2017						
in € m. (unless stated otherwise)	Banks and other financial institutions	Governments and Official institutions	Other1	Commit-ments	Net local country claim	Total	in %
United States	15,972	18,597	168,590	9,482	110,721	323,362	21.92
Luxembourg	9,389	9,595	36,990	2,844	6,085	64,903	4.40
Great Britain	4,945	11,522	13,117	4,844	16,974	51,402	3.49
France	4,583	11,197	25,675	8,318	–	49,774	3.37
Italy	6,070	16,149	14,490	1,132	4,470	42,310	2.87
Netherlands	2,309	4,750	14,206	5,050	–	26,316	1.78

Spain	5,590	7,328	10,764	1,010	–	24,692	1.67
Switzerland	2,082	3,392	12,067	4,484	967	22,993	1.56
Ireland	594	2,071	19,387	1,150	2	23,203	1.57
Japan	1,297	264	18,408	262	–	20,231	1.37
Norway	438	259	11,269	490	–	12,457	0.84
China	4,386	793	6,206	635	–	12,020	0.81
Australia	1,571	286	9,493	391	–	11,741	0.80
India	2,584	917	5,497	704	1,960	11,662	0.79
Cayman Islands	57	597	6,292	1,150	3,031	11,127	0.75

1Other includes commercial and industrial, insurance and other loans.

	Dec 31, 2016						
in € m. (unless stated otherwise)	Banks and other financial institutions	Governments and Official institutions	Other1	Commit-ments	Net local country claim	Total	in %
United States	10,252	18,334	149,251	11,548	–	189,385	11.91
Great Britain	5,135	9,344	11,704	4,110	48,050	78,343	4.93
Luxembourg	8,352	10,740	34,945	2,549	18,731	75,316	4.74
Italy	5,377	14,642	9,020	614	22,391	52,044	3.27
France	5,180	10,317	23,627	6,332	–	45,456	2.86
Netherlands	2,595	6,984	13,503	5,102	–	28,184	1.77
Ireland	385	2,541	18,722	850	4	22,502	1.41
Switzerland	2,354	3,760	9,923	3,615	1,412	21,064	1.32
Japan	1,339	525	18,087	281	–	20,232	1.27
Spain	4,594	5,244	6,939	884	–	17,661	1.11
China	4,072	1,528	7,657	562	–	13,820	0.87
India	3,237	650	5,656	191	2,439	12,173	0.77

1Other includes commercial and industrial, insurance and other loans.

IFRS 9 Allowance for credit losses against financial assets at amortized cost

Breakdown of the movements in the Group's allowance for credit losses against financial assets at amortized cost

in € m. (unless stated otherwise)	2018
Balance, beginning of year	4,596
Charge-offs:	
German:	
Agriculture, forestry and fishing	0
Mining and quarrying	0
Manufacturing	(55)
Electricity, gas, steam and air conditioning supply	0

Water supply, sewerage, waste management and remediation activities	0
Construction	(1)
Wholesale and retail trade, repair of motor vehicles and motorcycles	(22)
Transport and storage	(159)
Accommodation and food service activities	(0)
Information and communication	(0)
Financial and insurance activities	(12)
Real estate activities	(1)
Professional, scientific and technical activities	(0)
Administrative and support service activities	(0)
Public administration and defense, compulsory social security	0
Education	0
Human health services and social work activities	0
Arts, entertainment and recreation	0
Other service activities	(4)
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	(121)
Activities of extraterritorial organizations and bodies	0
German total	(375)
Non-German total	(619)
Total charge-offs	(995)
Recoveries:	
German:	
Agriculture, forestry and fishing	0
Mining and quarrying	0
Manufacturing	14
Electricity, gas, steam and air conditioning supply	0
Water supply, sewerage, waste management and remediation activities	0
Construction	1
Wholesale and retail trade, repair of motor vehicles and motorcycles	1
Transport and storage	6
Accommodation and food service activities	0
Information and communication	0
Financial and insurance activities	0
Real estate activities	3
Professional, scientific and technical activities	0
Administrative and support service activities	1
Public administration and defense, compulsory social security	0
Education	0
Human health services and social work activities	0
Arts, entertainment and recreation	0

Other service activities	9
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	65
Activities of extraterritorial organizations and bodies	0
German total	99
Non-German total	73
Total recoveries	172
Net charge-offs	(823)
Provision for loan losses	507
Other changes (i.e., exchange rate changes, changes in the group of consolidated companies)	(21)
Balance, end of year1	4,259
Percentage of total net charge-offs to average loans for the year	0.24 %

[1] Fluctuation rate (Allowance for Credit Losses at end of reporting period/Total Loans at Amortized Costs before deduction of Allowance for Loan Losses at end of reporting period): 0.73 % for 2018,

Allowance for credit losses against financial assets at amortized cost subject to impairment dropped by € 338 million or 7 % in 2018 mainly driven by Stage 3:

Stage 1 allowances increased by € 47 million or 10 % driven by additional provisions in CIB to reflect for a weakening macro-economic outlook as well as a one-off adjustment to the calculation methodology on certain loans on which we hold insurance protection.

Stage 2 allowances remained almost stable.

Stage 3 allowances decreased by € 391 million or 11 % driven by CIB, where charge offs partly related to de-risking activities in our shipping portfolio overcompensated additional provisions.

The following table presents an analysis of the changes in the non-German component of the allowance for credit losses against financial assets at amortized cost. As of December 31, 2018, 57 % of the Group's total allowance was attributable to non-German clients, compared to 60 % at the beginning of the year.

Non-German component of the allowance for credit losses against financial assets at amortized cost

in € m.	2018
Balance, beginning of year	2,760
Provision for loan losses	130
Net charge-offs	(547)
Charge-offs	(619)
Recoveries	73
Other changes (i.e., exchange rate changes, changes in the group of consolidated companies)	91
Balance, end of year	2,434

The following table presents the components of the Group's allowance for credit losses against financial assets at amortized cost by industry of the borrower, and the percentage of its total loan portfolio accounted for by those industry classifications, on the dates specified. The breakdown between German and non-German borrowers is based on the location of the borrowers.

Allowance for credit losses against financial assets at amortized cost by industry of the borrower

in € m. (unless stated otherwise)	Dec 31, 2018	
German:		
Agriculture, forestry and fishing	4	0 %
Mining and quarrying	2	0 %
Manufacturing	127	2 %
Electricity, gas, steam and air conditioning supply	3	0 %
Water supply, sewerage, waste management and remediation activities	4	0 %
Construction	38	0 %
Wholesale and retail trade, repair of motor vehicles and motorcycles	104	1 %
Transport and storage	105	0 %
Accommodation and food service activities	3	0 %
Information and communication	11	0 %
Financial and insurance activities	27	2 %
Real estate activities	53	2 %
Professional, scientific and technical activities	24	1 %
Administrative and support service activities	10	1 %
Public administration and defense, compulsory social security	0	1 %
Education	1	0 %
Human health services and social work activities	7	1 %
Arts, entertainment and recreation	1	0 %
Other service activities	11	1 %
Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use	1,291	34 %
Activities of extraterritorial organizations and bodies	0	0 %
German total	1,825	48 %
Non-German:		
Non-German total	2,434	52 %
Total allowance for loan losses	4,259	

Allowance for loan losses (comparables as reported under IAS 39)

Breakdown of the movements in the Group's allowance for loan losses

in € m. (unless stated otherwise)	2017	2016	2015	2014

Balance, beginning of year	4,546	5,028	5,212	5,589
Charge-offs:				
German:				
Financial intermediation	(1)	(1)	(3)	(1)
Manufacturing	(6)	(49)	(32)	(52)
Wholesale and retail trade	(12)	(10)	(24)	(60)
Households (excluding mortgages)	(149)	(309)	(276)	(167)
Households – mortgages	(53)	(90)	(107)	(142)
Commercial real estate activities	(1)	(6)	(30)	(92)
Public sector	0	(0)	0	0
Other	(68)	(156)	(75)	(59)
German total	(291)	(621)	(547)	(574)
Non-German total	(854)	(1,330)	(708)	(1,076)
Total charge-offs	(1,146)	(1,951)	(1,255)	(1,650)
Recoveries:				
German:				
Financial intermediation	0	0	0	1
Manufacturing	8	6	14	9
Wholesale and retail trade	3	3	3	3
Households (excluding mortgages)	19	22	33	26
Households – mortgages	40	44	39	40
Commercial real estate activities	11	5	7	3
Public sector	0	0	0	0
Other	17	13	14	13
German total	100	94	110	95
Non-German total	27	93	51	46
Total recoveries	127	187	161	141
Net charge-offs	(1,019)	(1,764)	(1,094)	(1,509)
Provision for loan losses	552	1,347	882	1,129
Other changes (i.e., exchange rate changes, changes in the group of consolidated companies)	(158)	(65)	28	4
Balance, end of year1	3,921	4,546	5,028	5,212
Percentage of total net charge-offs to average loans for the year	0.25 %	0.43 %	0.25 %	0.37 %

1Fluctuation rate (Allowance for Loan Losses at end of reporting period/Total Loans before deduction of Allowance for Loan Losses at end of reporting period):

0.97 % for 2017, 1.10 % for 2016, 1.16 % for 2015, 1.12 % for 2014

The Group's allowance for loan losses as of December 31, 2017 was € 3.9 billion, 55 % of which was related to collectively assessed and 45 % to individually assessed loan losses. The reduction in the allowance for loan losses of € 625 million compared to prior year end was driven by € 1.1 billion net charge-offs, partly offset by € 552 million of additional loan loss provisions.

The decrease in our individually assessed loan portfolio mainly resulted from CIB, driven by all portfolios including shipping. Despite the year-over-year reduction, shipping continued to be the main driver of provision for credit losses in 2017, in part related to the re-evaluation of the respective impairment method during the year as discussed in Note 1 “Significant accounting policies and critical accounting estimates” to the consolidated financial statements. A further year-over-year reduction in Private & Commercial Bank was driven by a release in Postbank. The decrease in provisions for our collectively assessed loan portfolio mainly resulted from the non-recurrence of one-off items related to assets reported under NCOU in prior year and further reflected the good portfolio quality and ongoing benign economic environment in PCB.

The decrease in 2017 in net charge-offs of € 745 million compared to 2016 was mainly driven by non-recurrence of net charge offs related to assets reported under NCOU in 2016.

The Group’s allowance for loan losses as of December 31, 2016 was € 4.5 billion, 54 % of which was related to collectively assessed and 46 % to individually assessed loan losses. The reduction in the allowance for loan losses of € 482 million compared to prior year end was driven by € 1.8 billion net charge-offs, partly offset by € 1.3 billion of additional loan loss provisions.

Provision for loan losses increased by € 465 million in 2016 compared to 2015. The increase in our individually assessed portfolio mainly resulted from CIB reflecting the continued market weakness of the shipping sector as well as lower commodity prices in the metals and mining and oil and gas sectors. The increase in provisions for our collectively assessed loan portfolio was mainly driven by NCOU partly relating to higher charges for IAS 39 reclassified assets and partly offset by PCB, among other factors reflecting the good quality of the loan book and the benign economic environment.

The increase in net charge-offs of € 670 million compared to prior year is mainly driven by NCOU caused by IAS 39 reclassified assets along with disposals.

Our allowance for loan losses for IAS 39 reclassified assets, which were reported in NCOU, amounted to € 69 million as of December 31, 2016, representing 2 % of our total allowance for loan losses, down 82 % from the level at the end of 2015 which amounted to € 389 million (8 % of total allowance for loan losses). This reduction was driven by charge offs of € 355 million along with reduction driven by foreign exchange as most IAS 39 reclassified assets are denominated in non-Euro currencies and was partly offset by additional provisions of € 66 million.

Compared to 2015, provision for loan losses for IAS 39 reclassified assets increased by € 110 million mainly related to our European Mortgage Portfolios. Net Charge offs increased by € 242 million mainly driven by the European Mortgage portfolio and one large single booking.

The Group’s allowance for loan losses as of December 31, 2015 was € 5.0 billion, 55 % of which was related to collectively assessed and 45 % to individually assessed loan losses. The reduction in the allowance for loan losses of € 184 million compared to prior year end mainly related to € 1.1 billion net charge-offs largely offset by € 0.9 billion of additional loan loss provisions.

The reduction in 2015 in provisions for loan losses in our individually assessed loan portfolio amounted to € 164 million driven by IAS 39 reclassified assets and other real estate exposures recorded in NCOU, partly offset by higher provisioning in our Shipping and Leveraged Finance Portfolios in CIB. The reduction in our collectively assessed loan portfolio of € 83 million mainly resulted from higher releases related to non-performing loan sales along with an ongoing positive credit environment in Germany and a stabilization of Southern European markets.

The reduction in charge offs of € 415 million compared to 2014 was mainly driven by Postbank and results from high prior year levels caused by a one-off effect due to the alignment of processes.

Our allowance for loan losses for IAS 39 reclassified assets, which were reported in NCOU, amounted to € 389 million at the end of 2015, representing 8 % of our total allowance for loan losses, down 25 % from the level at the end of the prior year which amounted to € 518 million (10 % of total allowance for loan losses). This reduction was driven by net charge offs of € 113 million along with net releases of € 44 million and partly offset by increases related to foreign exchange as most IAS 39 reclassified assets are denominated in non-Euro currencies.

Compared to 2014, provision for loan losses for IAS 39 reclassified assets dropped by € 129 million and net charge-offs increased by € 98 million in 2015. Both changes were partly related to disposals.

The following table presents an analysis of the changes in the non-German component of the allowance for loan losses. As of December 31, 2017, 61 % of the Group's total allowance was attributable to non-German clients compared to 67 % as of December 31, 2016.

Non-German component of the allowance for loan losses

in € m.	2017	2016	2015	2014
Balance, beginning of year	3,057	3,345	3,339	3,612
Provision for loan losses	278	1,004	612	724
Net charge-offs	(828)	(1,238)	(657)	(1,030)
Charge-offs	(854)	(1,330)	(708)	(1,076)
Recoveries	27	93	51	46
Other changes (i.e., exchange rate changes, changes in the group of consolidated companies)	(114)	(54)	51	34
Balance, end of year	2,394	3,057	3,345	3,339

The following table presents the components of the Group's allowance for loan losses by industry of the borrower, and the percentage of its total loan portfolio accounted for by those industry classifications, on the dates specified. The breakdown between German and non-German borrowers is based on the location of the borrowers.

Allowance for loan losses by industry of the borrower

in € m. (unless stated otherwise)	Dec 31, 2017		Dec 31, 2016		Dec 31, 2015		Dec 31, 2014	
German:								
Individually assessed loan loss allowance:								
Financial intermediation	0	1 %	0	1 %	0	1 %	2	1 %
Manufacturing	133	2 %	139	2 %	196	2 %	213	2 %
Households (excluding mortgages)	2	4 %	11	4 %	98	4 %	152	4 %
Households – mortgages	3	30 %	5	29 %	6	27 %	6	29 %
Public sector	0	2 %	0	3 %	0	3 %	0	3 %
Wholesale and retail trade	86	2 %	74	1 %	84	1 %	82	1 %
Commercial real estate activities	59	2 %	45	2 %	48	5 %	78	5 %

Other1	317	6 %	289	5 %	216	3 %	207	4 %
Individually assessed loan loss allowance German total	600		563		647		740	
Collectively assessed loan loss allowance	927		926		1,035		1,133	
German total	1,527	49 %	1,489	48 %	1,683	47 %	1,873	50 %
Non-German:								
Individually assessed loan loss allowance	1,166		1,508		1,604		1,624	
Collectively assessed loan loss allowance	1,228		1,549		1,741		1,715	
Non-German total	2,394	51 %	3,057	52 %	3,345	53 %	3,339	50 %
Total allowance for loan losses	3,921	100 %	4,546	100 %	5,028	100 %	5,212	100 %
Total individually assessed loan loss allowance	1,766		2,071		2,252		2,364	
Total collectively assessed loan loss allowance	2,155		2,475		2,776		2,849	
Total allowance for loan losses	3,921		4,546		5,028		5,212	

1Includes mainly Transportation and Services.

Deposits

The amount of other time deposits in the amount of U.S.$ 100,000 or more in offices in Germany was € 66.9 billion as of December 31, 2018, of which € 22.5 billion had maturities of three months or less, € 14.9 billion had maturities over three months but less than six months, € 13.2 billion had maturities of over six months but less than one year and € 16.4 billion had maturities of over one year. The amount of certificates of deposits in the amount of U.S.$ 100,000 or more in offices in Germany was € 50 million as of December 31, 2018, having maturities of three months or less.

The amount of certificates of deposits and other time deposits in the amount of U.S.$ 100,000 or more issued by non-German offices was € 33.5 billion as of December 31, 2018.

Total deposits by foreign depositors in German offices were € 40.5 billion, € 38.3 billion and € 36.0 billion as of December 31, 2018, 2017 and 2016, respectively.

Return on Equity and Assets

	2018	2017	2016
Return on average shareholders' equity (post-tax)1	0.43%	(1.17)%	(2.26)%
Return on average total assets (post-tax)2	0.02%	(0.05)%	(0.08)%
Equity to assets ratio3	4.32%	4.09%	3.60%
Dividend payout ratio:4			
Basic earnings per share	N/M	N/M	N/M
Diluted earnings per share	N/M	N/M	N/M

N/M – Not meaningful

1Net income (loss) attributable to Deutsche Bank shareholders as a percentage of average shareholders' equity.

2Net income (loss) attributable to Deutsche Bank shareholders as a percentage of average total assets.

3Average shareholders' equity as a percentage of average total assets for each year.

4Dividends paid per share in respect of each year as a percentage of the Group's basic and diluted earnings per share for that year.

Short-Term Borrowings with an original maturity of one year or less

The difference between the period-end and average balances for central bank funds purchased and securities sold under repurchase agreements mainly arises from fluctuating activity with respect to fixed income securities positions within CIB. Intra-quarter trading volume, which increases the monthly averages relative to quarter- and year-end, predominantly comprises financing of short-term positions in highly liquid U.S. Treasuries and Agencies, which is a result of the Bank providing liquidity to the market via market-making activity and is largely driven by client demand. These U.S. Treasury and Agency positions are very low risk and have negligible impact on the firm's liquidity and capital position.

in € m. (unless stated otherwise)	Dec 31, 2018	Dec 31, 2017	Dec 31, 2016
Central bank funds purchased and securities sold under repurchase agreements:			
Balance, end of year	4,867	18,105	25,740
Average balance1	12,869	19,109	20,368
Maximum balance at any month-end	21,281	25,137	27,027
Weighted-average interest rate during the year	2.73%	2.07%	1.20%
Weighted-average interest rate on year-end balance	1.21%	0.58%	0.10%
Securities loaned:			
Balance, end of year	3,359	6,688	3,598
Average balance1	6,209	5,702	3,743
Maximum balance at any month-end	9,036	9,823	8,677
Weighted-average interest rate during the year	2.26%	(1.35)%	(0.77)%
Weighted-average interest rate on year-end balance	1.90%	0.03%	0.10%
Commercial paper:			
Balance, end of year	2,752	5,274	3,219
Average balance1	4,878	4,904	6,754
Maximum balance at any month-end	6,221	5,665	9,370
Weighted-average interest rate during the year	0.39%	0.42%	0.42%
Weighted-average interest rate on year-end balance	0.60%	0.31%	0.72%
Other:			
Balance, end of year	11,406	13,137	14,076
Average balance1	12,714	14,424	16,955
Maximum balance at any month-end	13,907	16,125	19,854
Weighted-average interest rate during the year	0.93%	0.80%	0.88%
Weighted-average interest rate on year-end balance	0.59%	0.40%	0.21%

1 Based upon month-end balances.

Imprint

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