

HSBC HOLDINGS PLC  
Form 6-K  
March 31, 2010

**FORM 6-K**

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**Report of Foreign Private Issuer**

**Pursuant to Rule 13a - 16 or 15d - 16 of  
the Securities Exchange Act of 1934**

For the month of March

**HSBC Holdings plc**

42<sup>nd</sup> Floor, 8 Canada Square, London E14 5HQ, England

(Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F).

Form 20-F  Form 40-F

(Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934).

Yes.....  No

(If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82-.....).

**HSBC HOLDINGS PLC  
CAPITAL AND RISK MANAGEMENT PILLAR 3 DISCLOSURES AS AT 31 DECEMBER 2009**

Certain defined terms

Unless the context requires otherwise, 'HSBC Holdings' means HSBC Holdings plc and 'HSBC' or the 'Group' means HSBC Holdings together with its subsidiaries. Within this document the Hong Kong Special Administrative Region of the People's Republic of China is referred to as 'Hong Kong'. When used in the terms 'shareholders' equity' and 'total shareholders' equity', 'shareholders' means holders of HSBC Holdings ordinary shares and those preference shares classified as equity.

Cautionary statement regarding forward-looking statements

These *Capital and Risk Management Pillar 3 Disclosures as at 31 December 2009 ('Pillar 3 Disclosures 2009')* contain certain forward-looking statements with respect to the financial condition, results of operations and business of HSBC. Statements that are not historical facts, including statements about HSBC's beliefs and expectations, are forward-looking statements. Words such as 'expects', 'anticipates', 'intends', 'plans', 'believes', 'seeks', 'estimates', 'potential' and 'reasonably possible', variations of these words and similar expressions are intended to identify forward-looking statements. These statements are based on current plans, estimates and projections, and therefore undue reliance should not be placed on them. Forward-looking statements speak only as of the date they are made, and it should not be assumed that they have been revised or updated in the light of new information or future events. Written and/or oral forward-looking statements may also be made in the periodic reports to the United States Securities and Exchange Commission, summary financial statements to shareholders, proxy statements, offering circulars and prospectuses, press releases and other written materials, and in oral statements made by HSBC's Directors, officers or employees to third parties, including financial analysts.

Forward-looking statements involve inherent risks and uncertainties. Readers are cautioned that a number of factors could cause actual results to differ, in some instances materially, from those anticipated or implied in any forward-looking statement. These factors include changes in general economic conditions in the markets in which HSBC operates, changes in government policy and regulation and factors specific to HSBC. A more detailed cautionary statement is provided on pages 6 to 7 of the *Annual Report and Accounts 2009*.

## **Introduction**

HSBC is one of the largest banking and financial services organisations in the world, with a market capitalisation of US\$199 billion at 31 December 2009.

Through its subsidiaries and associates, HSBC provides a comprehensive range of banking and related financial services. Headquartered in London, HSBC operates through long-established businesses and has an international network of some 8,000 properties in 88 countries and territories in six geographical regions: Europe; Hong Kong; Rest of Asia-Pacific; the Middle East; North America and Latin America. Previously, the Middle East was reported as part of Rest of Asia-Pacific. Within these regions, a comprehensive range of financial services is offered to personal, commercial, corporate, institutional, investment and private banking clients. Services are delivered primarily by domestic banks, typically with large retail deposit bases, and by consumer finance operations.

Details of the Group's principal activities and its strategic direction can be found on page 12 of the *Annual Report and Accounts 2009*.

## **Basel II**

The United Kingdom ('UK') Financial Services Authority ('FSA') supervises HSBC on a consolidated basis, and therefore receives information on the capital adequacy of, and sets capital requirements for, HSBC as a whole. Individual banking subsidiaries are directly regulated by their local banking supervisors, who set and monitor their capital adequacy requirements.

HSBC calculates capital at a Group level using the Basel II framework of the Basel Committee on Banking Supervision ('Basel Committee'); local regulators are at different stages of implementation and local rules may still be on a Basel I basis, notably in the United States ('US'). In most jurisdictions, non-banking financial subsidiaries are also

subject to the supervision and capital requirements of local regulatory authorities.

Basel II is structured around three 'pillars': minimum capital requirements; supervisory review process; and market discipline. The Capital Requirements Directive ('CRD') implemented Basel II in the European Union ('EU') and the FSA then gave effect to the CRD by including the requirements of the CRD in its own rulebooks.

### **Pillar 3 Disclosures 2009**

Pillar 3 complements the minimum capital requirements and the supervisory review process. Its aim is to encourage market discipline by developing a set of disclosure requirements which allow market participants to assess certain specified information on the scope of application of Basel II, capital, particular risk exposures and risk assessment processes, and hence the capital adequacy of the institution. Disclosures consist of both quantitative and qualitative information and are provided at the consolidated level.

Banks are required to disclose all their material risks as part of the pillar 3 framework. All material and non-proprietary information required by pillar 3 is included in the *Pillar 3 Disclosures 2009*. The FSA permits certain pillar 3 requirements to be satisfied by inclusion within the financial statements. Where this is the case, page references are provided to the relevant sections in the *Annual Report and Accounts 2009*.

### **Future developments**

The regulation and supervision of financial institutions is currently undergoing a period of significant change in response to the global financial crisis. An overview of the risks associated with regulatory reform is presented on page 16 of the *Annual Report and Accounts 2009*.

Increased capital requirements and pillar 3 disclosures for market risk and securitisations have already been announced by the Basel Committee and are due for implementation in the EU in 2011. The Basel Committee issued further proposals in a Consultative Document 'Strengthening the resilience of the banking sector' on 17 December 2009. The Committee's proposals are part of global initiatives to strengthen the financial regulatory system, and have been endorsed by the Financial Stability Board and the G20 leaders. A comprehensive impact assessment will be carried out on the proposals in the first half of 2010, with the aim of developing a fully calibrated set of standards by the end of 2010. The proposals will be phased in as financial conditions improve and the economic recovery is assured, with the aim of implementation by the end of 2012. Within this context, the Basel Committee will also consider appropriate transition and grandfathering arrangements. The consultation period for these proposals closes on 16 April 2010.

### **Frequency**

In accordance with FSA requirements, the Group intends to publish comprehensive pillar 3 disclosures annually. Capital structure, capital requirements and capital ratios will next be disclosed at the half year in the *Interim Report 2010*.

### **Comparison with the Annual Report and Accounts 2009**

The *Pillar 3 Disclosures 2009* have been prepared in accordance with regulatory capital adequacy concepts and rules, rather than in accordance with International Financial Reporting Standards ('IFRSs'). Therefore, some information in the *Pillar 3 Disclosures 2009* is not directly comparable with the financial information in the *Annual Report and Accounts 2009*. This is most pronounced for the credit risk disclosures, where credit exposure is defined as the maximum loss the Group has estimated under specified Basel II parameters. This differs from similar information in the *Annual Report and Accounts 2009*, which is mainly reported as at the balance sheet date and, therefore, does not reflect the likelihood of future drawings of committed credit lines.

## **Verification**

The *Pillar 3 Disclosures 2009* have been appropriately verified internally but have not been audited by the Group's external auditor.

## **Significant subsidiaries**

Links to the financial information of significant subsidiaries, including capital resources and requirements, are available on HSBC's investor relations website page [www.hsbc.com/investor-relations/financial-results/hsbc-group-companies](http://www.hsbc.com/investor-relations/financial-results/hsbc-group-companies).

## **Consolidation basis**

The basis of consolidation for financial accounting purposes is described on page 367 of the *Annual Report and Accounts 2009* and differs from that used for regulatory purposes. Investments in banking associates, which are equity accounted in the financial accounting consolidation, are proportionally consolidated for regulatory purposes. Subsidiaries and associates engaged in insurance and non-financial activities are excluded from the regulatory consolidation and are deducted from regulatory capital. The regulatory consolidation does not include Special Purpose Entities ('SPE's) where significant risk has been transferred to third parties. Exposures to these SPEs are treated as securitisation positions for regulatory purposes and are either risk-weighted or deducted from capital.

## **Scope of Basel II permissions**

### **Credit risk**

Basel II provides three approaches of increasing sophistication to the calculation of pillar 1 credit risk capital requirements. The most basic, the standardised approach, requires banks to use external credit ratings to determine the risk weightings applied to rated counterparties and group other counterparties into broad categories and apply standardised risk weightings to these categories. The next level, the internal ratings-based ('IRB') foundation approach, allows banks to calculate their credit risk capital requirements on the basis of their internal assessment of the probability that a counterparty will default ('PD'), but subjects their quantified estimates of exposure at default ('EAD') and loss given default ('LGD') to standard supervisory parameters. Finally, the IRB advanced approach allows banks to use their own internal assessment in both determining PD and quantifying EAD and LGD.

The capital resources requirement, which is intended to cover unexpected losses, is derived from a formula specified in the regulatory rules, which incorporates these factors and other variables such as maturity and correlation. Expected losses under the IRB approaches are calculated by multiplying PD by EAD and LGD. Expected losses are deducted from capital to the extent that they exceed accounting impairment allowances.

For credit risk, with the FSA's approval, HSBC has adopted the IRB advanced approach for the majority of its business, with the remainder on either IRB foundation or standardised approaches.

For consolidated group reporting, the FSA's rules permit the use of other regulators' standardised approaches where they are considered equivalent. The use of other regulators' IRB approaches is subject to the agreement of the FSA. Under the Group's Basel II rollout plans, a number of Group companies are in transition to advanced IRB approaches. At December 2009, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB approaches. Other Group companies and portfolios remain on the standardised or foundation approaches under Basel II, pending definition of local regulations or model approval, or under exemptions from IRB treatment.

## **Counterparty credit risk**

Counterparty credit risk in both the trading and non-trading books is the risk that the counterparty to a transaction may default before completing the satisfactory settlement of the transaction. Three approaches to calculating counterparty credit risk and determining exposure values are defined by Basel II: standardised, mark-to-market and internal model method ('IMM'). These exposure values are used to determine capital requirements under one of the credit risk approaches; standardised, IRB foundation and IRB advanced.

HSBC uses the mark-to-market and IMM approaches for counterparty credit risk. Its longer-term aim is to migrate more positions from the mark-to-market to the IMM approach.

### **Market risk**

Market risk is the risk that movements in market risk factors, including foreign exchange, commodity prices, interest rates, credit spread and equity prices will reduce HSBC's income or the value of its portfolios. Market risk is measured, with FSA permission, using Value at Risk ('VAR') models or the standard rules prescribed by the FSA.

HSBC uses both VAR and standard rules approaches for market risk. Its longer-term aim is to migrate more positions from standard rules to VAR.

### **Operational risk**

Basel II includes capital requirements for operational risk, again utilising three levels of sophistication. The capital required under the basic indicator approach is a simple percentage of gross revenues, whereas under the standardised approach it is one of three different percentages of gross revenues allocated to each of eight defined business lines. Both these approaches use an average of the last three financial years' revenues. Finally, the advanced measurement approach uses banks' own statistical analysis and modelling of operational risk data to determine capital requirements.

HSBC has adopted the standardised approach in determining its Group operational risk capital requirements.

**Capital****Table 1: Capital structure at 31 December 2009**

	2009	2008
	US\$bn	US\$bn
Composition of regulatory capital 1		
<b>Tier 1 capital</b>		
Shareholders' equity	135	
.....	.3	106.3
Shareholders' equity per balance sheet <sup>2</sup> .....		
.....	<b>128.3</b>	93.6
Preference share premium		
.....	<b>(1.4)</b>	(1.4)
Other equity instruments		
.....	<b>(2.1)</b>	(2.1)
Deconsolidation of special purpose entities <sup>3</sup> .....		
.....	<b>10.5</b>	16.2
Minority interests		
.....	<b>3.9</b>	3.6
Minority interests per balance sheet		
.....	<b>7.4</b>	6.6
Preference share minority interests		
.....	<b>(2.4)</b>	(2.1)
Minority interest transferred to tier 2 capital		
.....	<b>(0.7)</b>	(0.6)
Minority interest in deconsolidated subsidiaries		
.....	<b>(0.4)</b>	(0.3)
Regulatory adjustments to the accounting basis		
.....	<b>0.2</b>	0.4
Unrealised losses on available-for-sale debt securities <sup>4</sup> .....		
.....	<b>0.9</b>	5.2
Own credit spread		
.....	<b>(1.0)</b>	(5.7)
Defined benefit pension fund adjustment <sup>5</sup> ....		
.....	<b>2.5</b>	1.8
Reserves arising from revaluation of property and unrealised gains on available-for-sale equities		
.....	<b>(2.2)</b>	(1.7)
Cash flow hedging reserve		
.....	-	0.8
Deductions		
.....	<b>(33.1)</b>	(30.0)

Goodwill capitalised and intangible assets .....	<b>(28.6)</b>	(26.8)
50% of securitisation positions.....	<b>(1.6)</b>	(1.0)
50% of tax credit adjustment for expected losses.....	<b>0.5</b>	0.5
50% of excess of expected losses over impairment allowances .....	<b>(3.4)</b>	(2.7)
 Core tier 1 capital .....	 <b>106.3</b>	 80.3
 Other tier 1 capital before deductions .....	 <b>15.8</b>	 14.9
Preference share premium .....	<b>1.4</b>	1.4
Preference share minority interests .....	<b>2.4</b>	2.1
Innovative tier 1 securities .....	<b>12.0</b>	11.4
 Deductions .....	 <b>0.1</b>	 0.1
Unconsolidated investments <sup>6</sup> .....	<b>(0.4)</b>	(0.4)
50% of tax credit adjustment for expected losses .....	<b>0.5</b>	0.5
 Tier 1 capital .....	 <b>122.2</b>	 95.3
<b>Tier 2 capital</b>		
Total qualifying tier 2 capital before deductions .....	<b>50.0</b>	49.4
Reserves arising from revaluation of property and unrealised gains on available-for-sale equities .....	<b>2.2</b>	1.7
Collective impairment allowances <sup>7</sup> .... .....	<b>4.1</b>	3.2
Perpetual subordinated debt .....	<b>3.0</b>	3.0
Term subordinated debt .....	<b>40.4</b>	41.2
Minority interest in tier 2 capital .....	<b>0.3</b>	0.3
 Total deductions other than from tier 1 capital .....	 <b>(16.5)</b>	 (13.3)
Unconsolidated investments <sup>6</sup> .....	<b>(11.5)</b>	(9.6)

50% of securitisation positions		
.....	(1.6)	(1.0)
50% of excess of expected losses over impairment allowances		
.....	(3.4)	(2.7)

Total regulatory capital		
.....	155.7	131.4

Total tier 1 capital excluding innovative tier 1 securities		
.....	110.2	83.9

Total tier 2 capital before deductions plus innovative tier 1 securities		
.....	62.0	60.8

At 31 December 2009                      At 31 December 2008

Capital    Capital  
required<sup>8</sup>    required<sup>8</sup>

RWAs    RWAs

US\$bn                      US\$bn                      US\$bn                      US\$bn

**Capital requirements**

Credit risk	903.5	72.3	882.6	70.6
.....				
Counterparty credit risk	51.9	4.2	74.0	5.9
.....				
Market risk	51.9	4.1	70.3	5.6
.....				
Operational risk	125.9	10.1	121.1	9.7
.....				
Total capital requirements	1,133.2	90.7	1,148.0	91.8
.....				

2009    2008  
%       %

**Capital ratios**

Core tier 1 ratio	9.4	7.0
.....		
Tier 1 ratio	10.8	8.3
.....		
Total capital ratio	13.7	11.4

1

The terms and conditions of capital securities issued by the Group are detailed in the Appendix on page 47.

2

Includes externally verified profits for the year to 31 December 2009.

3

Mainly comprises unrealised losses on available-for-sale debt securities within special purpose entities which are excluded from the regulatory consolidation.

4



Under FSA rules, unrealised gains/losses on debt securities net of tax must be excluded from capital resources.

5

Under FSA rules, the defined benefit liability may be substituted with the additional funding that will be paid into the relevant schemes over the following five year period.

6

Mainly comprise investments in insurance entities.

7

Under FSA rules, collective impairment allowances on loan portfolios on the standardised approach are included in tier 2 capital.

8

Calculated as 8 per cent of risk-weighted assets ('RWA's).

**Table 2: Risk-weighted assets - analysis by geographical region**

	<b>Europe</b>	<b>Hong Kong</b>	<b>Rest of Asia-Pacific<sup>1</sup></b>	<b>Middle East<sup>1</sup></b>	<b>North America</b>	<b>Latin America</b>	<b>Total RWAs<sup>2</sup></b>
	<b>US\$bn</b>	<b>US\$bn</b>	<b>US\$bn</b>	<b>US\$bn</b>	<b>US\$bn</b>	<b>US\$bn</b>	<b>US\$bn</b>
<b>At 31 December 2009</b>							
Credit risk	237.5	99.0	150.2	46.7	306.3	63.8	903.5
Counterparty credit risk	26.6	2.1	3.7	1.1	16.9	1.5	51.9
Market risk <sup>2</sup>	33.5	2.4	3.3	1.0	14.7	2.1	51.9
Operational risk	42.1	16.0	16.7	5.5	31.3	14.3	125.9
Total RWAs <sup>2</sup>	339.7	119.5	173.9	54.3	369.2	81.7	1,133.2
<b>At 31 December 2008</b>							
Credit risk	259.3	78.1	130.1	51.1	310.0	54.0	882.6
Counterparty credit risk	38.2	4.4	8.6	0.8	19.5	2.5	74.0
Market risk <sup>2</sup>	49.5	4.6	3.3	0.6	12.6	2.1	70.3
Operational risk	41.2	15.0	13.6	4.7	33.5	13.1	121.1
Total RWAs <sup>2</sup>	388.2	102.1	155.6	57.2	375.6	71.7	1,148.0

1

The Middle East is disclosed as a separate geographical region with effect from 1 January 2009. Previously, it formed part of Rest of Asia-Pacific. Comparative data have been restated accordingly.

2

RWAs are non-additive across geographical regions due to market risk diversification effects within the Group.

### **Capital management and allocation**

HSBC's capital management approach is driven by its strategic and organisational requirements, taking into account the regulatory, economic and commercial environment in which it operates.

It is HSBC's objective to maintain a strong capital base to support the development of its business and to meet regulatory capital requirements at all times. To achieve this, the Group's policy is to hold capital in a range of different forms and from diverse sources and all capital raising is agreed with major subsidiaries as part of their individual and the Group's capital management processes.

The Group's policy is underpinned by the Capital Management Framework, which enables HSBC to manage its capital in a consistent and aligned manner. The framework, which is approved by the Group Management Board ('GMB'), incorporates a number of different capital measures including market capitalisation, invested capital, economic capital and regulatory capital.

The responsibility for global capital allocation principles and decisions rests with GMB. Through its structured internal governance processes, HSBC maintains discipline over its investment and capital allocation decisions, seeking to ensure that returns on investment are adequate after taking account of capital costs. HSBC's strategy is to allocate capital to businesses on the basis of their economic profit generation, regulatory and economic capital requirements and cost of capital.

### **Transferability of capital within the Group**

HSBC Holdings is the primary provider of equity capital to its subsidiaries. Each subsidiary manages its own capital to support its planned business growth and meet its local regulatory requirements within the context of the approved annual Group capital plan. In accordance with HSBC's Capital Management Framework, capital generated by subsidiaries in excess of planned requirements is returned to HSBC Holdings, normally by way of dividends. During 2009 and 2008, none of the Group's subsidiaries experienced significant restrictions on paying dividends or repaying inter-company loans and advances.

### **Internal assessment of capital adequacy**

HSBC assesses the adequacy of its capital by considering the resources necessary to cover unexpected losses arising from discretionary risks, being those which it accepts such as credit risk and market risk, or non-discretionary risks, being those which arise by virtue of its operations, such as operational risk and reputational risk. The HSBC Capital Management Principles, which are approved by GMB, together with related policies define the Internal Capital Adequacy Assessment Process ('ICAAP') by which GMB examines the Group's risk profile from both regulatory and economic capital viewpoints and ensures that the Group's level of capital:

.  
remains sufficient to support the Group's risk profile and outstanding commitments;

.  
exceeds the Group's formal minimum regulatory capital requirements by an agreed margin;

.  
is capable of withstanding a severe economic downturn stress scenario; and

.  
remains consistent with the Group's strategic and operational goals, and shareholder and rating agency expectations.

The regulatory and economic capital assessments rely upon the use of models that are integrated into the Group's management of risk.

Economic capital is the internally calculated capital requirement which is deemed necessary by HSBC to support the risks to which it is exposed, and is set at a confidence level consistent with a target credit rating of AA. The minimum regulatory capital that HSBC is required to hold is determined by the rules established by the FSA for the consolidated Group and by HSBC's local regulators for individual Group companies.

The economic capital assessment is the more risk-sensitive measure as it covers a wider range of risks and takes account of the substantial diversification of risk accruing from the Group's operations. HSBC's economic capital models are calibrated to quantify the level of capital that is sufficient to absorb potential losses over a one-year time horizon to a 99.95 per cent level of confidence for its banking activities and to a 99.5 per cent level of confidence for its insurance activities and pension risks. HSBC's approach to capital management is aligned to the Group's corporate structure, business model and strategic direction. The Group's discipline around capital allocation is maintained within established processes and benchmarks, in particular the approved annual Group capital plan, of which further details can be found on page 286 of the

Annual Report and Accounts 2009

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Economic capital is the metric by which risk is measured and linked to capital within the Group's risk appetite framework. The framework, which expresses the types and quantum of risks to which HSBC wishes to be exposed, is approved annually by the Board of Directors of HSBC Holdings ('the Board'), and its implementation is overseen by GMB. Further details on the risk appetite framework may be found on page 14. HSBC's risk management framework fosters the continuous monitoring of the risk environment and an integrated evaluation of risks and their interactions. Certain of these risks are assessed and managed via the capital planning process. Risks assessed via capital and those that are not

are compared below:

Risks assessed via capital

**Credit (including counterparty credit), market and operational risk**

HSBC assesses economic capital requirements for these risk types by utilising the embedded operational infrastructure used for the pillar 1 capital calculation, together with an additional suite of models that take into account, in particular:

the increased level of confidence required to meet HSBC's strategic goals (99.95 per cent); and

internal assessments of diversification of risks within the Group's portfolios and, similarly, any concentrations of risk that arise.

The Group's economic capital assessment operates alongside the Group's regulatory capital process and consistently demonstrates a substantially lower overall capital requirement for credit risk than the regulatory equivalent, reflecting the empirical evidence of the benefits of global diversification. However, the Group maintains a prudent stance on capital coverage, ensuring that any model risk is mitigated. Economic capital requirements are used to monitor the Group's risks against its risk appetite.

**Interest rate risk in the banking book**

Interest rate risk in the banking book ('IRRBB') is defined as the exposure of the non-trading products of the Group to interest rates. Non-trading portfolios include positions that arise from the interest rate management of HSBC's retail and commercial banking assets and liabilities, and financial investments designated as available for sale and held to maturity. IRRBB arises principally from mismatches between the future yields on assets and their funding costs, as a result of interest rate changes. Analysis of this risk is complicated by having to make assumptions on embedded optionality within certain product areas such as the incidence of mortgage prepayments, and from behavioural assumptions regarding the economic duration of liabilities which are contractually repayable on demand such as current accounts. IRRBB economic capital is measured as the amount of capital necessary to cover an unexpected loss in the value of the Group's non-trading products over one year to a 99.95 per cent level of confidence.

**Insurance risk**

HSBC operates a bancassurance model which provides insurance products for customers with whom the Group has a banking relationship. Many of these insurance products are manufactured by HSBC subsidiaries but, where the Group considers it operationally more effective, third parties are engaged to manufacture and provide insurance products which HSBC sells through its banking network. The Group works with a limited number of market-leading partners to provide these products. When manufacturing products, the Group underwrites the insurance risk and retains the risks and rewards associated with writing insurance contracts.

Significant progress has been made in the finalisation of a risk-based capital methodology for the Group's insurance businesses. While this is being implemented across HSBC, a Net Asset Value capital deduction methodology is being employed for Group economic capital assessment purposes.

**Pension risk**

HSBC operates a number of pension plans throughout the world. Some of these pension plans are defined benefit plans, of which the largest is the HSBC Bank (UK) Pension Scheme. The benefits payable under the defined benefit plans are typically a function of salary and length of service. In order to fund the benefits, sponsoring Group companies (and in some instances, employees) make regular contributions in accordance with advice from actuaries and in consultation with the scheme's trustees (where relevant). The defined benefit plans invest these contributions in a range of investments designed to meet their long-term liabilities.

Pension risk arises from the potential for a deficit in a defined benefit plan to arise from a number of factors, which could include:

investments delivering a return below that required to provide the projected plan benefits. This could arise, for example, when there is a fall in the market value of equities, or when increases in long-term interest rates cause a fall in the value of fixed income securities held;

the prevailing economic environment leading to corporate failures, thus triggering write-downs in asset values (both equity and debt);

a change in either interest rates or inflation which causes an increase in the value of the scheme liabilities; and

scheme members living longer than expected (known as longevity risk).

Pension risk is assessed by way of an economic capital model that takes into account potential variations in these factors, using a VAR model.

**Residual risk**

Residual risk is, primarily, the risk that mitigation techniques prove less effective than expected. This category also includes risks that arise from specific reputational or business events that give rise to exposures not deemed to be included in the major risk categories. HSBC conducts economic capital assessments of such risks on a regular, forward-looking basis to ensure that their impact is adequately covered by the Group's capital base.

Risks not explicitly assessed via capital

**Liquidity risk**

Liquidity and funding risk management is described in detail on page 244 of the Annual Report and Accounts 2009.

The Group uses cash-flow stress testing as part of its control processes to assess liquidity risk. HSBC does not manage liquidity through the explicit allocation of capital as, in common with standard industry practice, this is not considered to be an appropriate or adequate mechanism for managing these risks. However, HSBC recognises that a strong capital base can help to mitigate liquidity risk both by providing a capital buffer to allow an entity to raise funds and deploy them in liquid positions and by serving to reduce the credit risk taken by providers of funds to

the Group.

**Structural foreign exchange risk**

Structural foreign exchange risks arise from the Group's net investments in subsidiaries, branches and associates, the functional currencies of which are other than the US dollar. Unrealised gains or losses due to revaluations of structural foreign exchange exposures are reflected in reserves, whereas other unrealised gains or losses arising from revaluations of foreign exchange positions are reflected in the income statement. HSBC's structural foreign exchange exposures are managed with the primary objective of ensuring, where practical, that HSBC's consolidated capital ratios and the capital ratios of the individual banking subsidiaries are largely protected from the effect of changes in exchange rates. This is usually achieved by ensuring that, for each subsidiary bank, the ratio of structural exposures in a given currency to risk-weighted assets ('RWA's) denominated in that currency is broadly equal to the capital ratio of the subsidiary in question. The Group evaluates residual structural foreign exchange exposures using a VAR model, but typically does not assign any economic capital for these since they are managed within appropriate economic capital buffers.

Details of the Group's management of structural foreign exchange risk can be found on page 257 of the Annual Report and Accounts 2009.

**Reputational risk**

Details of the Group's management of reputational risk can be found on page 263 of the Annual Report and Accounts 2009.

As a banking group, HSBC's reputation depends upon the way in which it conducts its business, but it can also be affected by the way in which clients to whom it provides financial services conduct themselves. A Group Reputational Risk Committee was established in 2008, at which Group functions with responsibility for activities that attract reputational risk are represented.

**Sustainability risk**

Sustainability (environmental and social) risks arise from the provision of financial services to companies or projects which run counter to the needs of sustainable development. Details of the Group's management of sustainability risk can be found on page 264 of the Annual Report and Accounts 2009.

**Business risk**

**The FSA specifies that banks, as part of their**

**internal assessment of capital adequacy process, should review their exposure to business risk.**

Business risk is the potential negative impact on profits and capital from the Group not meeting its strategic objectives, as set out in the rolling operating plan, as a result of unforeseen changes in the business and regulatory environment, exposure to economic cycles and technological changes. HSBC does not explicitly set aside capital against business risk, as a distinct category, as it believes that this risk is effectively covered by the capital set aside for other major risks such as credit risk, market risk and operational risk.

**Scenario analysis and stress testing**

Scenario analysis and stress testing are important mechanisms in understanding the sensitivities of the Group capital and business plans to the adverse effects of extreme, but plausible, events. As well as considering the potential financial effect on plans, a key output of this tool is the consideration and establishment of management action plans for mitigating such events should they, or similar events, arise.

HSBC's scenario analysis and stress testing framework and processes are overseen by the Group Stress Testing Oversight Forum ('GSTOF'). GSTOF meets regularly to monitor and review scenario analysis and stress testing reports. Membership comprises representatives of Group and regional risk and capital management functions.

Regulatory capital supply is regularly assessed against demand under a range of stress scenarios, including projected global and local economic downturns. Qualitative and quantitative techniques are used to estimate the potential impact on HSBC's capital position under such scenarios. HSBC also participates, where appropriate, in standard scenario analyses requested by regulatory bodies.

In addition to macro-economic analysis, a suite of event-driven scenarios, including operational, market and credit events, are regularly formulated and analysed in detail, ensuring that management has considered the potential impact, and what actions would be necessary, should a range of risks materialise.

In particular, this framework has aided management in mitigating some of the effects of the global financial crisis. While the prediction of future events cannot cover all eventualities, nor precisely identify future events, a number of the scenarios analysed in the past provided additional management insight into the actions necessary to mitigate the risks when similar events occurred.

In addition to the suite of risk scenarios considered for the HSBC Group, each major subsidiary conducts regular macro-economic and event-driven scenario analyses specific to that region under the Group governance framework. Executive managers from across HSBC meet regularly to consider and debate the outcome of these scenarios and formulate recommended management actions. Macro-economic analyses are considered by GMB.

As part of the Group's risk appetite process, business and capital plans are supported by forecasts of the risk parameters that drive the Group's capital requirements. The Group and regional macro-economic stress tests consider sensitivities of these drivers under a variety of potential economic forecasts in order to examine the possible capital positions that could arise. In any material economic downturn, proactive and structured intervention by management is both an inevitable and necessary consequence. Therefore, HSBC incorporates the effect of such management actions in determining whether or not the Group is likely to be able to withstand such an event.

## Risk management objectives and policies

### Overview

All HSBC's activities involve, to varying degrees, the measurement, evaluation, acceptance and management of the previously noted risks or combinations of those risks.

As risk is not static, the risk profiles of HSBC and its individual entities change continually as the scope and impact of a range of factors, from transactional to geopolitical, change. The risk environment requires continual monitoring and assessment in an integrated manner in order to understand and manage the complex risk interactions across the Group. The risk management framework that HSBC has put in place is designed to meet these challenges and is described below in terms of its organisational structure, governance, risk strategies and appetite, and supporting, monitoring and reporting processes.

#### Organisational structure

Principal governing bodies

A well established risk governance and ownership structure ensures oversight of, and accountability for, the effective management of risk at Group, regional, customer group and operating entity levels.

The Board is the Group's senior 'governing body' as defined by the FSA's rules. It approves HSBC's risk appetite framework, plans and performance targets for the Group and its principal operating subsidiaries, the appointment of senior officers, the delegation of authorities for credit and other risks and the establishment of effective control procedures.

The Board delegates authority for the day-to-day management of the Group to GMB, the Group's senior executive committee. Chaired by the Group Chief Executive, GMB's members include the Chief Financial Officer, Executive Director, Risk and Regulation; the Group Chief Technology and Services Officer; the Group Chief Risk Officer ('GCRO') and other executives appointed by the Board. GMB exercises the powers and authorities of the Board in so far as they concern the management and day-to-day running of the Group in accordance with policies and directions determined by the Board. GMB's performance is assessed against the achievement of HSBC's strategy, medium-term outlook and rolling operating plans,

building sustainable business and brand value around its customers, and a strong competitive performance in earnings per share growth and efficiency

When considering risk matters, GMB convenes as the Risk Management Meeting ('RMM'), chaired by the Chief Financial Officer, Executive Director, Risk and Regulation. RMM is the Group's senior 'designated committee' as defined by the FSA's rules, and has responsibility for setting risk appetite and approving definitive risk policies and controls. It formulates high-level Group risk management policy, exercises delegated risk authorities and oversees the implementation of risk appetite and controls. It monitors all categories of risk, receives reports on actual performance and emerging issues, determines action to be taken and reviews the efficacy of HSBC's risk management framework.

The Group Audit Committee, which is formed of non-executive directors,

meets regularly with HSBC's senior financial, internal audit, risk, legal and compliance management and the external auditor to consider HSBC Holdings' financial reporting, the nature and scope of audit reviews and the effectiveness of the systems of internal control, compliance and risk management.

The Committee has discussed the risk management recommendations of the Walker Review. Following the Committee's recommendation of appropriate terms of reference, a separate Group Risk

Committee was established by the Board on 26 February 2010.

The terms of reference of HSBC Holdings' committees serve as models for those of Group companies. Further details on principal governing bodies are provided on pages 310 to 313 of the Annual Report and Accounts 2009

#### The Global Risk function

Primary responsibility for managing risk at operating entity level lies with the respective boards and Chief Executive Officers ('CEO's), as custodians of their balance sheets and, at the most senior level, members of GMB. In their oversight and stewardship of risk management at Group level, however, GMB and RMM are supported by a dedicated Global Risk function, headed by the GCRO, who is a member of both bodies and reports to the Chief Financial Officer, Executive Director, Risk and Regulation.

Global Risk has functional responsibility for the principal financial risk types, namely retail and wholesale credit, market, operational, security and fraud risks. For these it establishes Group policy, exercises Group-wide oversight and provides reporting and analysis of portfolio composition and trends on a global and regional basis to senior management. Accountability and consistent control across the Global Risk function is provided through the Global Risk Management Board, chaired by the GCRO, the members of which include the Chief Risk Officers of HSBC's regions and the heads of risk disciplines within Group Management Office ('GMO'). Regional Chief Risk Officers report both within the business line to their local CEOs and also functionally to the GCRO, who has joint responsibility with CEOs for the appointment of the most senior risk officers and the setting of their performance objectives.

Group Risk works closely with its functional colleagues across the Group to develop and communicate global strategies and to guide the setting of consistent performance measures, targets and key performance indicators. It also co-ordinates the continued development of the Group's risk appetite, economic capital and stress testing frameworks and participates in discussions with regulators and in industry fora on risk and

regulatory policy developments, assesses their implications and makes recommendations accordingly.

The Global Risk function also works closely with Asset and Liability Management Committees ('ALCO's) across the Group to harmonise capital management disciplines across risk types.

Geographical regions, global businesses and customer groups

The Group is organised into six geographical regions: Europe; Hong Kong; Rest of Asia-Pacific; Middle East (previously, Middle East was reported as part of Rest of Asia-Pacific); North America and Latin America, within which country managers are the Group's principal representatives in their respective jurisdictions.

Regional heads and country managers are responsible for growing and controlling Group businesses in line with Group standards, policies and procedures, and for ensuring that the Group's corporate responsibilities are met in the communities in which it operates.

The Group manages its business around its customers through two global businesses, Global Banking and Markets and Private Banking, and two customer groups, Personal Financial Services, which incorporates the Group's consumer finance businesses, and Commercial Banking.

### **Group policy**

HSBC's risk management policies are encapsulated in the Group Standards Manual and cascaded in a hierarchy of policy manuals throughout the Group to communicate standards, instructions and guidance to employees. They support the formulation of risk appetite and establish procedures for monitoring and controlling risks, with timely and reliable reporting to management.

The principal risk categories to which the Group is exposed have each been assigned to 'risk owners' within GMO functions for the purposes of general oversight and the development of risk measures, key risk indicators and stress testing processes at Group level, to ensure that the Group's risk appetite is adhered to and that RMM is kept abreast of emerging risk issues. Risk ownership extends to Group policies and procedures documented in the policy manuals which all Group offices must observe, subject to dispensations agreed by the risk owner and reviewed by internal audit.

HSBC regularly reviews and updates its risk management policies, systems and methodologies to reflect changes in law, regulation, markets, products and emerging best practice.

It is a responsibility of all Group officers to identify, assess and manage risks within the scope of their assigned responsibilities. Personal accountability, reinforced by the Group's governance structure and instilled by training and experience, helps to foster a disciplined and constructive culture of risk management and control. Risk management is emphasised within the Group Remuneration policy and requirements are in place to ensure remuneration is consistent with effective risk management. Further details of the Group Remuneration policy are set out on page 318 of the

Annual Report and Accounts 2009

### **Risk appetite**

HSBC's risk appetite framework describes the quantum and types of risk that HSBC is prepared to take in executing its strategy. It is central to an integrated approach to risk, capital and business management and supports the Group in achieving its return on equity objectives, as well as being a key element of meeting the Group's obligations under the supervisory review process of Basel II.

The formulation of risk appetite considers HSBC's risk capacity, its financial position, the strength of its core earnings and the resilience of its reputation and brand. It is expressed both qualitatively, describing which risks are taken and why, and quantitatively. HSBC's senior management attaches quantitative metrics to individual risk types to ensure that:

underlying business activity may be guided and controlled so it continues to be aligned to the risk appetite framework;

key assumptions underpinning risk appetite can be monitored and, as necessary, adjusted through subsequent business planning cycles; and

business decisions expected to be necessary to mitigate risk are flagged and acted upon promptly.

The Group's risk appetite framework is also maintained at regional and customer group levels. It operates through two key mechanisms:

the framework itself defines the governance bodies, processes, metrics and other features of how HSBC addresses risk appetite as part of its ongoing business; and

periodic risk appetite statements define, at various levels in the business, the desired level of risk commensurate with return and growth targets and in line with the corporate strategy and stakeholder objectives.

The risk appetite framework covers both the beneficial and adverse aspects of risk. Within it, economic capital is a common currency by means of which risk is measured. It is used as the basis for risk evaluation, capital allocation and performance measurement across regions and customer groups. Risk appetite is executed through the operational limits that control the levels of risk run by the Group, regions and customer groups and is measured using risk-adjusted performance metrics.

### **Scope and nature of risk measurement and reporting systems**

The purpose of HSBC's risk measurement and reporting systems is to ensure that risks are comprehensively captured with all the attributes necessary to support well-founded decisions, that those attributes are accurately assessed and that information is delivered in a timely way to the right points in the organisation for those risks to be successfully managed and mitigated.

Risk measurement and reporting systems are also subject to a robust governance framework, to ensure that their design is fit for purpose and that they are functioning properly. Group risk information technology systems development is a key responsibility of the GCRO, while the operation and development of risk rating and management systems and processes are ultimately subject to the oversight of RMM and the Board.

HSBC invests significant resources in information technology systems and processes to maintain and improve its risk management capabilities. Group policy promotes the deployment of preferred technology where practicable. Group standards govern the procurement and operation of systems used in the Group's subsidiaries, processing risk information within business lines and risk functions. The measurement and monitoring of the major risks encountered by the Group, including credit, market and operational risks, are increasingly delivered by central systems or, where this is not the case for sound business reasons, through structures and processes that nevertheless support comprehensive oversight by senior management. Much of this is being progressed within the formalised structure of a wide-reaching transformation programme ('One HSBC') designed to integrate products, processes and systems.

Risk measurement, monitoring and reporting structures deployed at GMO level are replicated in global businesses and subsidiaries through a common operating model for integrated risk management and control. This model, the regional implementation of which was substantially completed during 2009, sets out the respective responsibilities of Group Risk, regional and country Risk functions in respect of such matters as risk governance and oversight, approval authorities and lending guidelines, global and local scorecards, management information and reporting, and relations with third parties including regulators, rating agencies and auditors.

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here is regular reporting on risk to business line management, to specialist functions and to the senior governance bodies of the Group. In the case of credit risk, this includes portfolio reporting using key risk indicators. Examples of credit risk portfolio reporting are detailed on page 202 of the

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### **Credit risk**

Credit risk is the risk of financial loss if a customer or counterparty fails to meet a payment obligation under a contract. It arises principally from direct lending, trade finance and leasing business, but also from off-balance sheet products such as counterparty risk guarantees and credit derivatives, and from the Group's holdings of debt securities. Among the risks the Group engages in, credit risk generates the largest regulatory capital requirement. This includes a capital requirement for counterparty credit risk in the banking and trading books. Further details regarding the Group's management of counterparty credit risk can be found on page 33 below.

#### **Objectives**

The objectives of credit risk management, underpinning sustainably profitable business, are principally:

to maintain a strong culture of responsible lending, supported by a robust risk policy and control framework;

to both partner and challenge business originators effectively in defining and implementing risk appetite, and its re-evaluation under actual and scenario conditions; and

to ensure independent, expert scrutiny and approval of credit risks, their costs and their mitigation.

#### **Organisation and responsibilities**

Group Risk supports the GCRO in overseeing credit risks at the highest level. Its major duties comprise: undertaking independent reviews of larger and higher-risk credit proposals, oversight of the Group's wholesale and retail credit risk management disciplines, ownership of the Group's credit policy and credit systems programmes, and reporting on risk matters to senior executive management and to regulators. It works closely with other parts of the Risk function, for example: with Fraud/Security Risk on enhancement of protection against retail product fraud, with Market Risk on complex transactions, with Operational Risk on the internal control framework and with Risk Strategy on developing the Group's economic capital model, risk appetite process and stress testing. The responsibilities of Group Risk are set out in detail on pages 201 to 203 of the

Annual Report and Accounts 2009

Group-wide, the Credit Risk function comprises a network of credit risk management offices reporting within regional, integrated risk functions. Together with Group Risk, they fulfil an essential role as independent risk control units distinct from business line management in providing an objective scrutiny of risk rating assessments, credit proposals for approval and other risk matters.

HSBC operates through a hierarchy of personal credit limit approval authorities, not committee structures. Risk officers of individual operating companies, acting under authorities delegated by their boards and executive bodies within local and Group standards, are accountable for their recommendations and credit approval decisions. Each operating company is responsible for the quality and performance of its credit portfolios, and for monitoring and controlling all credit risks in those portfolios, to Group standards.

Above certain risk-based thresholds established in line with authorities delegated by the Board, GMO concurrence must be sought for locally-approved facilities before they are extended to the customer. Moreover, risk proposals in certain portfolios - sovereign obligors, banks, some non-bank financial institutions and intra-Group exposures - are approved centrally in GMO to facilitate efficient control and the reporting of regulatory large and cross-border exposures; most approval authorities for these exposures are delegated by the local CEO to the GCRO, with only limited levels of authority being maintained locally.

#### **Credit Analytics**

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The Group Credit Analytics function is located within Group Risk as part of a wider analytics discipline supporting credit, economic capital and stress testing. Group Credit Analytics

formulates technical responses to industry developments and regulatory policy in the field of credit risk analytics. It develops HSBC's global credit risk models and maintains a directory of local models in use around the Group in order to facilitate governance, prioritise resources for independent review and inform the monitoring of progress toward the Group's implementation targets for the IRB advanced approach. It also provides support for the Group Credit Risk Analytics Oversight Committee ('CRAOC') which meets monthly and reports to RMM. Group CRAOC is chaired by the GCRO, and its membership is drawn from Global Risk, Group global businesses and customer groups and major Group subsidiaries; its primary responsibilities are to oversee the governance of HSBC's risk rating models for both wholesale and retail business, to manage the development of global models and to oversee the development of local models.

Parallel model governance and decision-making arrangements are in place in the Group's major subsidiaries.

### Measurement and monitoring - credit risk rating systems

HSBC's exposure to credit risk arises from a very wide range of customer and

product types, and the risk rating systems in place to measure and monitor these risks are correspondingly diverse. Each major subsidiary typically has some exposures across this range, and requirements differ from place to place.

Credit risk exposures are generally measured and managed in portfolios of either distinct customer types or product categories

. Risk rating systems for the former are designed to assess the default risk of, and loss severity associated with, customers who are typically managed as individual relationships; these rating systems tend to have a higher subjective content. Risk ratings systems for the latter are generally more purely analytical, applying techniques such as behavioural analysis across product portfolios comprising large numbers of homogeneous transactions.

Whatever the nature of the exposure, a fundamental principle of the Group's policy and approach is that analytical risk rating systems and scorecards are all merely tools at the disposal of management, serving ultimately judgemental decisions for which individual approvers are accountable. In the case of automated decision making processes, therefore, as used in retail credit origination where risk decisions may be taken

'at the point of sale' with no management intervention, that accountability rests with those responsible for the parameters built into those processes/systems and the controls surrounding their use. For distinct customers, the credit process provides for at least annual review of facility limits granted. Review may be more frequent, as required by circumstances, such as the development of adverse risk factors, and any consequent amendments to risk ratings must be promptly implemented.

HSBC seeks constantly to improve the quality of its risk management. Thus, for central management and reporting purposes, Group information technology systems have been deployed to process credit risk data efficiently and consistently;

a database has been constructed within GMO Finance and Risk covering substantially all the Group's direct lending exposures and holding the output of risk rating systems Group-wide, to support regulatory reporting and to deliver comprehensive management information at an increasingly granular level.

Group standards govern the process through which risk rating systems are initially developed, judged fit for purpose, approved and implemented; the conditions under which analytical risk model outcomes can be overridden by decision-takers; and the process of model performance monitoring and reporting. The emphasis here is on an effective dialogue between business line and risk management, suitable independence of decision-takers, and a good understanding and robust challenge on the part of senior management.

Like other facets of risk management, analytical risk rating systems are not static and are subject to review and modification in the light of the changing environment and the greater availability and quality of data. Structured processes and metrics are in place to capture relevant data and feed this into continuous model improvement.

The following pages set out credit risk exposure values, RWAs and regulatory capital requirements as at 31 December 2009 along with 31 December 2008 comparatives.

*Table 3: Credit risk - summary*

	At 31 December 2009				At 31 December 2008	
	Exposure value US\$bn	Average exposure value US\$bn	RWAs US\$bn	Capital required <sup>1</sup> US\$bn	Exposure value US\$bn	Average exposure value US\$bn
<b>Total credit risk capital requirements</b>						
Credit risk	1,887.2	1,846.7	903.5	72.3	1,809.1	1,919.5
Counterparty credit risk <sup>2</sup>	130.2	147.3	51.9	4.2	184.4	179.6



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Total						
.....	<b>2,017.4</b>	<b>1,994.0</b>	<b>955.4</b>	<b>76.5</b>	1,993.5	2,099.1
<b>Credit risk analysis</b>						
<b>by</b>						
<b>exposure class</b>						
Exposures under the						
IRB advanced						
approach .....	<b>1,405.0</b>	<b>1,215.8</b>	<b>598.1</b>	<b>47.9</b>	1,179.6	1,295.2
Retail:						
- secured on real						
estate property <sup>3</sup> ...						
.....	<b>277.6</b>	<b>269.2</b>	<b>136.6</b>	<b>11.0</b>	256.6	266.0
- qualifying revolving						
retail .....	<b>148.8</b>	<b>147.2</b>	<b>77.4</b>	<b>6.2</b>	142.4	163.3
- SMEs <sup>4</sup> .....						
.....	<b>12.3</b>	<b>13.3</b>	<b>6.8</b>	<b>0.5</b>	14.5	17.6
- other retail <sup>5</sup> .....						
.....	<b>71.8</b>	<b>79.7</b>	<b>40.2</b>	<b>3.2</b>	89.0	102.7
Total retail						
.....	<b>510.5</b>	<b>509.4</b>	<b>261.0</b>	<b>20.9</b>	502.5	549.6
Central governments						
and						
central banks						
.....	<b>237.6</b>	<b>195.6</b>	<b>33.4</b>	<b>2.7</b>	143.5	130.3
Institutions						
.....	<b>180.3</b>	<b>187.2</b>	<b>40.0</b>	<b>3.2</b>	182.5	246.2
Corporates <sup>6</sup> ....						
.....	<b>399.5</b>	<b>239.2</b>	<b>244.7</b>	<b>19.6</b>	261.3	280.7
Securitisation						
positions <sup>7</sup> ....						
.....	<b>77.1</b>	<b>84.4</b>	<b>19.0</b>	<b>1.5</b>	89.8	88.4
Exposures under the						
IRB foundation						
approach .....	<b>7.9</b>	<b>163.4</b>	<b>4.3</b>	<b>0.3</b>	171.3	186.0
Corporates <sup>6</sup> .....						
.....	<b>7.9</b>	<b>163.4</b>	<b>4.3</b>	<b>0.3</b>	171.3	186.0
Exposures under the						
standardised approach						
.....	<b>474.3</b>	<b>467.5</b>	<b>301.1</b>	<b>24.1</b>	458.2	438.3
Central governments						
and central banks						
.....	<b>64.6</b>	<b>57.5</b>	<b>0.9</b>	<b>0.1</b>	59.4	39.5
Institutions						
.....	<b>41.8</b>	<b>48.3</b>	<b>9.9</b>	<b>0.8</b>	48.2	37.1
Corporates						
.....	<b>180.5</b>	<b>175.0</b>	<b>165.1</b>	<b>13.2</b>	168.5	170.1
Credit risk						17

Retail						
.....	<b>53.7</b>	<b>58.2</b>	<b>40.4</b>	<b>3.2</b>	61.2	66.2
Secured on real estate property						
.....	<b>32.3</b>	<b>27.9</b>	<b>17.1</b>	<b>1.4</b>	28.4	29.0
Past due items						
.....	<b>4.6</b>	<b>3.9</b>	<b>6.5</b>	<b>0.5</b>	3.4	2.5
Regional governments or local authorities						
.....	<b>1.3</b>	<b>0.9</b>	<b>1.2</b>	<b>0.1</b>	0.8	0.4
Equity						
.....	<b>8.8</b>	<b>8.1</b>	<b>15.3</b>	<b>1.2</b>	8.0	8.2
Other items <sup>8</sup> .....	<b>86.7</b>	<b>87.7</b>	<b>44.7</b>	<b>3.6</b>	80.3	85.3
<b>Total</b>						
.....	<b>1,887.2</b>	<b>1,846.7</b>	<b>903.5</b>	<b>72.3</b>	1,809.1	1,919.5

1  
Calculated as 8 per cent of RWAs.

2  
For further details of counterparty credit risk, see page 33.

3  
Exposure values in the Retail IRB 'Secured on real estate property' exposure class for North America include balances that have been reduced due to partial write-offs, as described on page 205 of the Annual Report and Accounts 2009.

4  
The FSA allows exposures to small and medium-sized enterprises ('SME's) to be treated under the Retail IRB approach, where the total amount owed to the Group by the counterparty is less than EUR 1 million and the customer is not managed as individually as a corporate counterparty.

5  
Includes overdrafts and personal lending.

6  
At December 2009, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB. Comparative data have not been restated.

7  
Excludes securitisation positions deducted from capital (that would otherwise be risk-weighted at 1,250 per cent). Securitisation positions deducted from capital are shown in Table 1 and Table 26.

8  
Primarily includes such items as fixed assets, prepayments, accruals and Hong Kong Government certificates of indebtedness. Also includes immaterial exposures to Regulatory high-risk categories, Short-term claims, Securitisation positions, Collective investment undertakings, Administrative bodies and non-commercial undertakings, and Multilateral development banks under the standardised approach.

Exposure values are allocated to a region based on the country of incorporation of the HSBC subsidiary or proportionally consolidated associate where the exposure was originated.

*Table 4: Credit risk exposure - analysis by geographical region*

	Exposure value							Total exposure
	Europe	Hong Kong	Rest of Asia-Pacific <sup>1</sup>	Middle East <sup>1</sup>	North America <sup>2</sup>	Latin America		
	US\$bn	US\$bn	US\$bn	US\$bn	US\$bn	US\$bn	US\$bn	US\$bn
<b>At 31 December 2009</b>								
IRB advanced approach				20.5				1,405.0
... Central governments and central banks	512.2	292.5	154.9			396.8	28.1	
..... Institutions	25.5	80.5	42.1	13.7		53.4	22.4	237.6
..... Corporates <sup>3</sup> .....	47.4	80.0	27.4	6.6		13.2	5.7	180.3
..... Retail	157.3	73.2	62.5	0.2		106.3	-	399.5
..... Securitisation positions <sup>4</sup>	216.3	57.3	22.6	-		214.3	-	510.5
..... .....	65.7	1.5	0.3	-		9.6	-	77.1
<b>IRB foundation approach</b>	7.9	-	-	-		-	-	7.9
Corporates <sup>3</sup> .....	7.9	-	-	-		-	-	7.9
..... .....								
Standardised approach								
..... Central governments and central banks	154.9	40.9	146.3	48.5		25.8	57.9	474.3
..... Institutions	33.3	-	27.8	3.5		-	-	64.6
..... Corporates	17.3	-	20.6	3.6		0.2	0.1	41.8
..... Retail	50.5	0.6	73.0	30.1		2.5	23.8	180.5
..... Secured on real estate property .....	9.0	5.5	10.1	5.5		4.3	19.3	53.7
..... Past due items	10.5	3.1	10.3	2.2		1.9	4.3	32.3
..... Regional governments or local authorities	1.1	-	0.3	1.1		-	2.1	4.6
..... Equity	-	-	-	0.2		-	1.1	1.3
..... .....	3.3	1.3	0.9	-		3.2	0.1	8.8

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Other items <sup>5</sup> .....	29.9	30.4	3.3	2.3	13.7	7.1	86.0
<b>Total</b>	<b>675.0</b>	<b>333.4</b>	<b>301.2</b>	<b>69.0</b>	<b>422.6</b>	<b>86.0</b>	<b>1,887.0</b>
At 31 December 2008							
IRB advanced approach .....	452.3	166.7	81.7	16.9	436.1	25.9	1,179.0
Central governments and central banks .....	24.0	28.3	40.8	11.2	18.2	21.0	143.0
Institutions .....	56.6	72.6	25.0	5.7	17.7	4.9	182.0
Corporates <sup>3</sup> .....	119.3	0.1	0.1	-	141.8	-	261.0
Retail .....	184.7	56.7	15.6	-	245.5	-	502.0
Securitisation positions <sup>4</sup> ..	67.7	9.0	0.2	-	12.9	-	89.0
IRB foundation approach .....	48.6	67.7	54.7	0.3	-	-	171.0
Corporates <sup>3</sup> ..	48.6	67.7	54.7	0.3	-	-	171.0
Standardised approach .....	158.8	34.6	127.6	56.0	26.8	54.4	458.0
Central governments and central banks .....	32.3	-	23.0	3.9	-	0.2	59.0
Institutions .....	23.5	0.5	20.6	3.4	-	0.2	48.0
Corporates .....	51.2	2.7	52.0	37.2	2.8	22.6	168.0
Retail .....	11.1	4.0	16.4	6.6	4.2	18.9	61.0
Secured on real estate property .....	9.9	2.1	7.7	2.3	2.2	4.2	28.0
Past due items .....	0.4	0.1	0.6	0.6	0.1	1.6	3.0
Regional governments or local authorities .....	-	-	-	0.3	-	0.5	0.0
Equity .....	3.0	2.6	0.2	0.2	2.0	-	8.0
Other items <sup>5</sup> .....	27.4	22.6	7.1	1.5	15.5	6.2	80.0



Total RWAs								
.....								
Average RW (%)								54
.....	54	-	-	-	-	-		
<b>Standardised approach</b>								
Total exposure value	154.9	40.9	146.3	48.5	25.8	57.9	474.3	
.....								
Total RWAs	80.9	19.1	91.3	39.3	21.0	49.5	301.1	
.....								
Average RW (%)								63
.....	52	47	62	81	81	85		
<b>Total credit risk</b>								
Total exposure value	675.0	333.4	301.2	69.0	422.6	86.0	1,887.2	
.....								
Total RWAs	237.5	99.0	150.2	46.7	306.3	63.8	903.5	
.....								
Average RW (%)								48
.....	35	30	50	68	72	74		
At 31 December 2008								
IRB advanced approach <sup>3</sup>								
Total exposure value	452.3	166.7	81.7	16.9	436.1	25.9	1,179.6	
.....								
Total RWAs	138.7	24.3	15.8	4.9	287.3	9.2	480.2	
.....								
Average RW (%)								41
.....	31	15	19	29	66	36		
IRB foundation approach <sup>3</sup>								
Total exposure value	48.6	67.7	54.7	0.3	-	-	171.3	
.....								
Total RWAs	33.0	39.5	31.2	0.1	-	-	103.8	
.....								
Average RW (%)								61
.....	68	58	57	33	-	-		
Standardised approach								
Total exposure value	158.8	34.6	127.6	56.0	26.8	54.4	458.2	
.....								
Total RWAs	87.6	14.3	83.1	46.1	22.7	44.8	298.6	
.....								

Average RW (%)							
.....	55	41	65	82	85	82	65
Total credit risk							
Total exposure value							1,809.1
.....	659.7	269.0	264.0	73.2	462.9	80.3	
Total RWAs							882.6
.....	259.3	78.1	130.1	51.1	310.0	54.0	
Average RW (%)							49
.....		39 29	49	70		67 67	

1

The Middle East is disclosed as a separate geographical region with effect from 1 January 2009. Previously, it formed part of Rest of Asia-Pacific. Comparative data have been restated accordingly.

2

Exposure values in the Retail IRB 'Secured on real estate property' exposure class for North America include balances that have been reduced due to partial write-offs, as described on page 205 of the Annual Report and Accounts 2009.

3

At December 2009, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB. Comparative data have not been restated.

*Table 6: Credit risk exposure - analysis by counterparty sector*

	Exposure value						RWAs US\$bn
	Personal	Corporate and Commercial	Govern- ment	Financial 1 Banks	Total exposure	RWAs US\$bn	
<b>At 31 December 2009</b>							
IRB advanced approach						1,405.0	
.....	498.2	401.7	237.6	90.1	177.4		598.1
Central governments and central banks						237.6	
.....	-	-	237.6	-	-		33.4
Institutions						180.3	
.....	-	-	-	2.9	177.4		40.0
Corporates <sup>2</sup> .....						399.5	
.....	-	389.4	-	10.1	-		244.7
Retail <sup>3</sup> .....						510.5	
.....	498.2	12.3	-	-	-		261.0
Securitisation positions <sup>4</sup>						77.1	
.....	-	-	-	77.1	-		19.0
IRB foundation approach						7.9	
.....	-	7.3	-	0.6	-		4.3
Corporates <sup>2</sup> .....						7.9	
.....	-	7.3	-	0.6	-		4.3
Standardised approach						387.6	
.....	79.6	193.2	65.9	5.2	43.7		256.4
Central governments and central banks						64.6	
.....	-	-	64.6	-	-		0.9
Institutions						41.8	
.....	-	-	-	0.1	41.7		9.9
Corporates						180.5	
.....	-	178.7	-	1.8	-		165.1
Retail						53.7	
.....	49.0	4.7	-	-	-		40.4
Secured on real estate property						32.3	
.....	27.9	4.4	-	-	-		17.1
Past due items						4.6	
.....	2.7	1.9	-	-	-		6.5
Regional governments or local authorities						1.3	
.....	-	-	1.3	-	-		1.2
Equity						8.8	
.....	-	3.5	-	3.3	2.0		15.3
	577.8	602.2	303.5	95.9	221.1	1,800.5	858.8



Total

.....

Other items<sup>5</sup> .....**86.7****44.7**

.....

Total exposures

.....

**1,887.2****903.5**

At 31 December 2008

IRB advanced approach

.....

488.0

268.7

141.3

101.9

179.7

1,179.6

480.2

Central governments and  
central banks

.....

-

-

141.3

-

2.2

143.5

22.7

Institutions

.....

-

-

- 5.0

177.5

182.5

39.3

Corporates<sup>2</sup> ....

.....

-

254.2

- 7.1

-

261.3

155.6

Retail<sup>3</sup>.....

.....

488.0

14.5

-

-

-

502.5

248.1

Securitisation positions

.....

.....

-

-

- 89.8

-

89.8

14.5

IRB foundation approach

.....

-

161.4

- 9.9

-

171.3

103.8

Corporates<sup>2</sup> ....

.....

-

161.4

- 9.9

-

171.3

103.8

Standardised approach

.....

82.7

183.8

60.1

0.9

50.4

377.9

249.8

Central governments and  
central banks

.....

-

-

59.3

-

0.1

59.4

5.9

Institutions

.....

-

-

-

-

48.2

48.2

15.1

Corporates

.....

-

167.6

- 0.9

-

168.5

150.8

Retail

.....

56.2

5.0

-

-

-

61.2

45.7

Secured on real estate property

.....

24.1

4.3

-

-

-

28.4

14.8

Past due items

.....

2.4

1.0

-

-

-

3.4

4.3

Regional governments or local  
authorities

.....

-

-

0.8

-

-

0.8

0.8

Equity

.....

-

5.9

-

-

2.1

8.0

12.4

Credit risk

25

Total	570.7	613.9	201.4	112.7	230.1	1,728.8	833.8
Other items <sup>5</sup> ....					80.3		48.8
Total						1,809.1	882.6

1

Includes non-bank financial institutions and corporates.

2

At December 2009, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB. Comparative data have not been restated.

3

Exposure values in the Retail IRB 'Secured on real estate property' exposure class for North America include balances that have been reduced due to partial write-offs, as described on page 205 of the Annual Report and Accounts 2009.

4

Excludes Securitisation positions deducted from capital (that would otherwise be risk-weighted at 1,250 per cent). Securitisation positions deducted from capital are shown in Table 1 and Table 26.

*5 Primarily includes such items as fixed assets, prepayments, accruals and Hong Kong Government certificates of indebtedness for which a counterparty sector split is not appropriate. Also includes immaterial exposures to Regulatory high-risk categories, Short-term claims, Securitisation positions, Collective investment undertakings, Administrative bodies and non-commercial undertakings, and Multilateral development banks under the standardised approach.*

The following is an analysis of exposures by period outstanding from the reporting date to the maturity date. The full exposure value is allocated to a residual maturity band based on the contractual end date.

Table 7: Credit risk exposure - analysis by residual maturity

	Exposure value					
	Less than 1 year	Between 1 and 5 years	More than 5 years	Undated	Total exposure	RWAs
	US\$bn	US\$bn	US\$bn	US\$bn	US\$bn	US\$bn
<b>At 31 December 2009</b>						
IRB advanced approach	622.0	414.2	365.7	3.1	1,405.0	598.1
Central governments and central banks	154.4	61.8	21.2	0.2	237.6	33.4
Institutions	105.9	70.6	2.0	1.8	180.3	40.0
Corporates <sup>2</sup> ....	167.7	168.4	62.3	1.1	399.5	244.7
Retail <sup>3</sup> .....	140.4	110.9	259.2	-	510.5	261.0

Securitisation positions 4						
.....	53.6	2.5	21.0	-	77.1	19.0
IRB foundation approach						
.....	4.2	3.1	0.6	-	7.9	4.3
Corporates <sup>2</sup> .....	4.2	3.1	0.6	-	7.9	4.3
Standardised approach						
.....	116.8	213.8	49.1	94.6	474.3	301.1
Central governments and central banks						
.....	20.7	39.7	4.2	-	64.6	0.9
Institutions						
.....	16.9	24.9	-	-	41.8	9.9
Corporates						
.....	51.2	114.7	14.1	0.5	180.5	165.1
Retail						
.....	21.6	27.3	4.8	-	53.7	40.4
Secured on real estate property						
.....	1.7	5.8	24.8	-	32.3	17.1
Past due items						
.....	3.2	0.9	0.5	-	4.6	6.5
Regional governments or local authorities						
.....	0.5	0.2	0.6	-	1.3	1.2
Equity						
.....	-	-	-	8.8	8.8	15.3
Other items <sup>5</sup> .....						
.....	1.0	0.3	0.1	85.3	86.7	44.7
Total						
.....	743.0	631.1	415.4	97.7	1,887.2	903.5
At 31 December 2008						
IRB advanced approach						
.....	457.8	393.7	324.0	4.1	1,179.6	480.2
Central governments and central banks						
.....	74.3	52.5	15.4	1.3	143.5	22.7
Institutions						
.....	97.7	79.7	2.6	2.5	182.5	39.3
Corporates <sup>2</sup> .....	77.7	118.0	65.3	0.3	261.3	155.6
Retail <sup>3</sup> .....						
.....	136.4	140.5	225.6	-	502.5	248.1
Securitisation positions 4						
.....	71.7	3.0	15.1	-	89.8	14.5

IRB foundation approach	80.5	64.2	25.1	1.5	171.3	103.8
Corporates <sup>2</sup> .....	80.5	64.2	25.1	1.5	171.3	103.8
Standardised approach	111.7	217.9	44.6	84.0	458.2	298.6
Central governments and central banks	0.6	58.7	0.1	-	59.4	5.9
Institutions	18.2	29.7	0.2	0.1	48.2	15.1
Corporates	61.1	91.2	15.1	1.1	168.5	150.8
Retail	24.0	31.2	6.0	-	61.2	45.7
Secured on real estate property	1.2	5.6	21.6	-	28.4	14.8
Past due items	2.0	0.9	0.5	-	3.4	4.3
Regional governments or local authorities	0.2	0.4	0.2	-	0.8	0.8
Equity	-	-	-	8.0	8.0	12.4
Other items <sup>5</sup> .....	4.4	0.2	0.9	74.8	80.3	48.8
Total	650.0	675.8	393.7	89.6	1,809.1	882.6

1

Revolving exposures such as overdrafts are considered to have a residual maturity of less than one year.

2

At December 2009, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB. Comparative data have not been restated.

3

Exposure values in the Retail IRB 'Secured on real estate property' exposure class for North America include balances that have been reduced due to partial write-offs, as described on page 205 of the Annual Report and Accounts 2009.

4

Excludes Securitisation positions deducted from capital (that would otherwise be risk-weighted at 1,250 per cent). Securitisation positions deducted from capital are shown in Table 1 and Table 26.

5

Primarily includes such items as fixed assets, prepayments, accruals and Hong Kong Government certificates of indebtedness. Also includes immaterial exposures to Regulatory high-risk categories, Short-term claims, Securitisation positions, Collective investment undertakings, Administrative bodies and non-commercial undertakings, and Multilateral development banks under the standardised approach.

### Application of the IRB approach for credit risk

This section sets out HSBC's overall risk rating systems, a description of the population of credit risk analytical models and the Group's approaches to model governance and the use of IRB metrics.

#### Risk rating systems

HSBC's Group-wide credit risk rating framework incorporates the PD of an obligor and loss severity expressed in terms of EAD and LGD. These measures are used to calculate regulatory expected loss ('EL') and capital requirements. They are also used in conjunction with other inputs to inform rating assessments for the purpose of credit approval and many other risk management decisions.

The narrative explanations that follow relate to the advanced IRB approaches, that is advanced IRB for distinct customers and Retail IRB for the portfolio-managed retail business. Under the Group's Basel II roll-out plans, a number of Group companies are in transition to advanced IRB approaches. At December 2009, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB approaches. Other Group companies and portfolios remain on the standardised or foundation approaches under Basel II, pending the definition of local regulations or model approval, or under exemptions from IRB treatment. Further details of HSBC's use of the standardised approach can be found on page 31.

#### Wholesale business

PD for wholesale customer segments Central Governments and Central Banks (sovereigns), Institutions, Corporates and for certain individually assessed personal customers, is estimated using a Customer Risk Rating ('CRR') scale of 22 grades, of which 20 are non-default grades representing varying degrees of strength of financial condition and two are default grades.

A score generated by a model for the individual obligor type is mapped to the corresponding CRR. The process through

which

this or a judgementally amended CRR is then recommended to, and reviewed by, a credit approver takes into account all information relevant to the risk rating determination, including external ratings where

available

The finally approved CRR is mapped to a PD value range of which the 'mid-point' is used in the regulatory capital calculation.

EAD and LGD estimation for the wholesale business is subject to a Group framework of basic principles which permits flexibility in the definition of parameters by HSBC's operating entities to suit conditions in their own jurisdictions. Group Risk provides co-ordination, benchmarks and the sharing and promotion of best practice. EAD is estimated to a 12-month horizon and broadly represents the current exposure plus an estimate for future increases in exposure, taking into account such factors as available but undrawn facilities and the crystallisation of contingent exposures, post-default. LGD focuses on the facility and collateral structure, involving such factors as facility priority/seniority, the type and value of collateral, type of client and regional variances in experience, and is expressed as a percentage of EAD.

#### Retail business

The wide range of application and behavioural models used in the management of retail portfolios has been supplemented with models used to derive the measures of PD, EAD and LGD required for Basel II. For management information and reporting purposes, retail portfolios are segmented according to local, analytically-derived EL bands, which map to 10 composite EL grades, facilitating comparability across the Group's retail customer segments, business lines and product types.

#### Global and local models

Global PD models have been developed for asset classes or clearly identifiable sub-classes where the customer relationship is managed on a global basis: sovereigns, banks, certain non-bank financial institutions and the largest corporate clients, typically operating internationally. Such global management

facilitates consistent implementation by Group Risk and HSBC's operating subsidiaries worldwide of standards, policies, systems, approval procedures and other controls, reporting, pricing, performance guidelines and comparative analysis. All global models require FSA approval for IRB accreditation and fall directly under the remit of the Group CRAOC.

Local PD models are developed where the risk profile of obligors is specific to a country, sector or other non-global factor. This applies to large corporate clients having distinct characteristics in a particular geography, middle market corporates, corporate and retail small and medium-sized enterprises ('SME's) and all other retail segments. There are several hundred such models in use or under development within HSBC.

The Group's approach to EAD and LGD, the framework for which is described under 'Risk rating systems' above, similarly encompasses both global and local models. The former include EAD and LGD models for each of sovereigns and banks, as exposures to these two customer types are managed centrally by Group Risk. All local EAD and LGD models fall within the scope and principles of the Group EAD and LGD framework, subject to dispensation from Group Risk.

#### Model governance

Model governance is under the general oversight of Group CRAOC, whose responsibilities are set out in 'Credit Analytics' on page 16 above. Group CRAOC has regional and entity-level counterparts with comparable terms of reference, because the development, validation and monitoring of local models to meet local requirements and using local data are the responsibility of regional and/or local

entities under the governance of their own management, subject to overall Group policy and oversight. Such models are typically approved by national or regional regulators and need to be passed to Group CRAOC only if they apply to exposures exceeding a prescribed monetary threshold or are otherwise deemed material.

Group Risk publishes Group standards for the development, independent review, maintenance and performance monitoring of credit risk analytical models, including governance over the successive stages of a model's life-cycle. G

roup governance standards cover such topics as the delineation of responsibilities at various stages of model development: ownership, development/validation, independent review and performance monitoring. The standards provide for monetary and/or qualitative thresholds above which decisions must be escalated to higher authority, and establish minimum intervals at which activities must be carried out, e.g. all models must be reviewed at least annually, or more frequently as the need arises. The threshold for referral via Group CRAOC to RMM is a portfolio coverage of US\$20 billion or more by risk-weighted assets. Group CRAOC may deem a model material, due to the higher-risk nature of the customer sector in question. Compliance with Group standards is subject to examination both by risk oversight and review from within the Risk function itself and by internal audit. While the standards set out minimum general requirements, Group Risk has discretion to approve dispensations, and fosters best practice between offices by means of regular risk and finance team contact, internet-based instruction, business centres of excellence, a Group Risk expert forum and associated seminars.

#### Use of internal estimates

Internal estimates derived from applying the IRB approach are not only employed in the calculation of RWAs for the purpose of determining regulatory capital requirements, but also in many other contexts within risk management and business processes. Such uses continue to develop and become more embedded in management practice, as experience grows and the repository of quality data increases. These uses include:

- credit approval : authorities, including those for specific counterparty types and transactions, are delegated to HSBC's operating companies using a risk-based approach with authorities graded according to CRR;

- credit risk analytical tools

: IRB models, scorecards and other methodologies are valuable tools deployed in the assessment of customer and portfolio risk;

risk appetite

: IRB measures are an important element of risk appetite definition at customer, sector and portfolio levels, and in the implementation of the Group risk appetite framework, for instance in subsidiaries' operating plans;

portfolio management

: regular reports to the Board, RMM and Group Audit Committee contain analyses of risk exposures, e.g. by customer segment and quality grade, employing IRB metrics;

pricing

: customer relationship managers apply an IRB Risk-Adjusted Return on Capital ('RAROC') methodology in RWA and profitability calculators; and

economic capital

: IRB measures provide customer risk components for the economic capital model that has been implemented across HSBC to improve the consistent analysis of economic returns, help determine which customers, business units and products add greatest value, and drive higher returns through effective economic capital allocation.

The following tables provide an analysis of the IRB risk measures used to calculate RWAs under the IRB approach and set out the distribution of IRB exposures by credit quality. The exposure weighted average PD (or LGD) is calculated

as the sum of PD (or LGD) multiplied by the exposure value, divided by the total exposure value for the IRB advanced exposure class. The e

xposure weighted average risk weight is the average risk weight for the exposure class.

*Table 8: IRB advanced exposure - analysis of risk components*

	Exposure value	Exposure weighted average PD	Exposure weighted average LGD	Exposure weighted average risk weight	Undrawn commitments
	US\$bn	%	%	%	US\$bn
<b>IRB advanced exposure classes</b>					
<b>At 31 December 2009</b>					
Central governments and central banks	237	0.16			
.....	.6		19.9	14	
Institutions	180	0.49			
.....	.3		32.5	22	
Corporates		3.32			
1, 2	395				
.....	.3		38.9	61	

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Central governments and central banks	143.5	0.20	20.3	16	6.2
.....					
Institutions					
.....	182.5	0.47	29.6	22	6.8
Corporates					
1,2		2.17			
.....					
.....	261.3		37.8	60	43.9

1 Excludes Specialised Lending exposures subject to the supervisory slotting approach.

2 At December 2009

, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB. Comparative data have not been restated.



Table 9: IRB advanced exposure - analysis by obligor grade

1

At 31 December 2009

	Exposure value	Exposure weighted average PD	Exposure weighted average LGD	Exposure weighted average risk weight	RWAs	
	US\$bn	%	%	%	%	US\$bn
<b>Central governments and central banks</b>						
Minimal default risk	164.8	0.02	13.2	3	5.1	
.....						
Low default risk	46.1	0.07	31.4	18	8.2	
.....						
Satisfactory default risk	14.6	0.24	36.9	40	5.9	
.....						
Fair default risk	5.3	1.03	45.4	83	4.4	
.....						
Moderate default risk	5.8	2.18	44.1	122	7.1	
.....						
Significant default risk	0.7	6.42	45.1	186	1.3	
.....						
High default risk	0.3	9.69	85.7	400	1.2	
.....						
Special management	-	22.85	79.5	419	0.2	
.....						
	237.6	0.16	19.9	14	33.4	
<b>Institutions</b>						
Minimal default risk	38.2	0.03	27.1	6	2.3	
.....						
Low default risk	89.2	0.09	32.2	13	12.0	
.....						
Satisfactory default risk	40.6	0.27	34.3	31	12.5	
.....						
Fair default risk	7.9	0.99	42.5	76	6.0	
.....						
Moderate default risk	1.6	2.93	49.9	131	2.1	
.....						
Significant default risk	0.8	6.11	52.8	163	1.3	
.....						
High default risk	1.5	12.22	59.7	220	3.3	
.....						
Special management	0.2	20.60	47.3	250	0.5	
.....						
Default	0.3	100.00	50.2	-	-	
.....						

	<b>180.3</b>	<b>0.49</b>	<b>32.5</b>	<b>22</b>	<b>40.0</b>
Corporates 2, 3					
Minimal default risk	<b>32.3</b>	<b>0.03</b>	<b>40.3</b>	<b>15</b>	<b>4.7</b>
.....					
Low default risk	<b>74.8</b>	<b>0.10</b>	<b>40.6</b>	<b>25</b>	<b>18.4</b>
.....					
Satisfactory default risk	<b>124.5</b>	<b>0.40</b>	<b>38.0</b>	<b>48</b>	<b>60.1</b>
.....					
Fair default risk	<b>92.3</b>	<b>1.26</b>	<b>38.8</b>	<b>79</b>	<b>73.1</b>
.....					
Moderate default risk	<b>38.7</b>	<b>3.00</b>	<b>37.0</b>	<b>107</b>	<b>41.6</b>
.....					
Significant default risk	<b>12.0</b>	<b>6.41</b>	<b>35.3</b>	<b>133</b>	<b>15.9</b>
.....					
High default risk	<b>8.7</b>	<b>10.89</b>	<b>39.7</b>	<b>190</b>	<b>16.5</b>
.....					
Special management	<b>5.2</b>	<b>32.00</b>	<b>38.7</b>	<b>190</b>	<b>9.9</b>
.....					
Default <sup>4</sup>	<b>6.8</b>	<b>100.00</b>	<b>51.2</b>	<b>29</b>	<b>2.0</b>
.....					
	<b>395.3</b>	<b>3.32</b>	<b>38.9</b>	<b>61</b>	<b>242.2</b>

At 31 December 2008

	Exposure value	Exposure weighted average PD	Exposure weighted average LGD
	US\$bn	%	%
Central governments and central banks			
Minimal default risk			
.....	106.6	0.03	14.1
Low default risk			
.....	19.9	0.08	30.6
Satisfactory default risk			
.....	7.1	0.34	44.2
Fair default risk			
.....	5.1	1.56	59.8
Moderate default risk			
.....	4.0	1.90	39.2

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Significant default risk	0.6	3.43	30.5
.....			
High default risk			
.....	0.1	9.54	45.5
Special management			
.....	0.1	19.76	86.0
	143.5	0.20	20.3
Institutions			
Minimal default risk.....	57.2	0.03	23.9
Low default risk			
.....	85.9	0.08	29.9
Satisfactory default risk			
.....	24.7	0.27	34.6
Fair default risk			
.....	9.9	1.28	39.1
Moderate default risk			
.....	2.5	2.60	50.6
Significant default risk			
.....	0.5	5.61	57.2
High default risk			
.....	1.2	12.78	51.0
Special management			
.....	0.3	24.18	39.1
Default			
.....	0.3	100.00	27.2
	182.5	0.47	29.6
Corporates <sup>2, 3</sup>			
Minimal default risk.....	42.7	0.03	34.9
Low default risk			
.....	38.5	0.10	41.4
Satisfactory default risk			
.....	83.1	0.39	38.7
Fair default risk			
.....	57.5	1.21	36.5
Moderate default risk			
.....	18.6	2.82	35.6
Significant default risk			
.....	11.3	6.26	37.7
High default risk			
.....	3.9	11.36	37.3
Special management			
.....	3.8	26.19	39.6

Credit risk

Default <sup>4</sup>			
.....	1.9	100.00	41.8
	261.3	2.17	37.8

1 See glossary for definition of obligor grades.

2 Excludes Specialised Lending exposures subject to the supervisory slotting approach.

3 At December 2009, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB. Comparative data have not been restated.

4 There is a requirement to hold additional capital for unexpected losses on defaulted exposures where LGD exceeds best estimate of EL. As a result, in some cases, RWAs arise for exposures in default.



*Table 10: IRB foundation exposure - analysis by obligor grade*

	Exposure value	Exposure weighted average risk weight	RWAs
	US\$bn	%	US\$bn
<b>At 31 December 2009</b>			
Corporates <sup>1,2</sup>	7.9	54	4.3
.....			
.....			
<b>At 31 December 2008</b>			
Corporates <sup>1,2</sup>			
Minimal default risk	20.7	15	3.2
.....			
Low default risk	41.7	26	10.8
.....			
Satisfactory default risk	61.3	55	33.8
.....			
Fair default risk	28.7	106	30.3
.....			
Moderate default risk	13.0	131	17.0
.....			
Significant default risk	4.1	166	6.8
.....			
High default risk	0.5	180	0.9
.....			
Special management	0.5	200	1.0
.....			
Default	0.8	-	-
.....			
	171.3	61	103.8

1  
Excludes Specialised Lending exposures subject to the supervisory slotting approach.

2  
At December 2009, corporate portfolios in France, Hong Kong and Rest of Asia-Pacific completed the transition from foundation to advanced IRB. The residual exposures have not been disclosed by obligor grade as the amounts are not significant at Group level. Comparative data have not been restated.

The EL bandings for the retail business summarise a more granular EL scale for these customer segments which combine obligor and facility/product risk factors in a composite measure of PD and LGD. The definitions of PD and LGD for retail portfolios are both subject to degrees of national regulators' discretion and the international variability of the measures preclude their direct use as global comparators. The composite EL measure enables the diverse risk profiles of retail portfolios across the Group to be assessed

on a more comparable scale than through the direct utilisation of PD and LGD measures. The Middle East and Latin America are not included in this table as retail exposures in these regions are calculated under the standardised approach.

Table 11: Retail IRB exposure - analysis by geographical region



	Exposure value Rest of				Total exposure
	Europe	Hong Kong	Asia- Pacific	North America <sup>1</sup>	
	US\$bn	US\$bn	US\$bn	US\$bn	US\$bn
<b>At 31 December 2009</b>					
<b>Secured on real estate property</b>					
Expected loss band					
- less than 1%	110.9	34.1	19.3	63.2	227.5
.....					
- greater than or equal to 1% and less than 5%	2.6	0.3	0.6	14.4	17.9
.....					
- greater than or equal to 5% and less than 10%	0.5	-	-	9.9	10.4
.....					
- greater than or equal to 10% and less than 20%	0.2	-	-	5.7	5.9
.....					
- greater than or equal to 20% and less than 40%	0.1	-	-	3.1	3.2
.....					
- greater than or equal to 40% and exposures in default ...	1.2	0.1	0.3	11.1	12.7
T					
otal retail secured on real estate property exposures	115.5	34.5	20.2	107.4	277.6
.....					
<b>Qualifying revolving retail exposures</b>					
Expected loss band					
- less than 1%	35.8	11.9	-	46.6	94.3
.....					
- greater than or equal to 1% and less than 5%	7.7	2.6	-	21.1	31.4
.....					
- greater than or equal to 5% and less than 10%	1.6	0.5	-	8.9	11.0
.....					
- greater than or equal to 10% and less than 20%	0.7	0.2	-	4.8	5.7
.....					
- greater than or equal to 20% and less than 40%	0.2	0.1	-	1.5	1.8
.....					
- greater than or equal to 40% and exposures in default ...	0.9	-	-	3.7	4.6
Total qualifying revolving retail exposures	46.9	15.3	-	86.6	148.8
.....					

SMEs

<sup>2</sup>

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Expected loss band					
- less than 1%	<b>4.1</b>	<b>0.1</b>	-	<b>0.8</b>	<b>5.0</b>
.....					
- greater than or equal to 1% and less than 5%	<b>5.3</b>	-	-	<b>0.2</b>	<b>5.5</b>
.....					
- greater than or equal to 5% and less than 10%	<b>0.4</b>	-	-	-	<b>0.4</b>
.....					
- greater than or equal to 10% and less than 20%	<b>0.3</b>	-	-	-	<b>0.3</b>
.....					
- greater than or equal to 20% and less than 40%	<b>0.1</b>	-	-	-	<b>0.1</b>
.....					
- greater than or equal to 40% and exposures in default ...	<b>1.0</b>	-	-	-	<b>1.0</b>
 Total SMEs exposures	 <b>11.2</b>	 <b>0.1</b>	 -	 <b>1.0</b>	 <b>12.3</b>
.....					
 Other retail					
<sup>3</sup> Expected loss band					
- less than 1%	<b>33.2</b>	<b>6.1</b>	<b>2.3</b>	<b>4.3</b>	<b>45.9</b>
.....					
- greater than or equal to 1% and less than 5%	<b>6.0</b>	<b>0.9</b>	<b>0.1</b>	<b>6.0</b>	<b>13.0</b>
.....					
- greater than or equal to 5% and less than 10%	<b>1.3</b>	<b>0.2</b>	-	<b>2.8</b>	<b>4.3</b>
.....					
- greater than or equal to 10% and less than 20%	<b>0.6</b>	<b>0.1</b>	-	<b>2.8</b>	<b>3.5</b>
.....					
- greater than or equal to 20% and less than 40%	<b>0.2</b>	-	-	<b>1.3</b>	<b>1.5</b>
.....					
- greater than or equal to 40% and exposures in default ...	<b>1.4</b>	<b>0.1</b>	-	<b>2.1</b>	<b>3.6</b>
 Total other retail exposures	 <b>42.7</b>	 <b>7.4</b>	 <b>2.4</b>	 <b>19.3</b>	 <b>71.8</b>
.....					
 <b>Total retail</b>					
Expected loss band					
- less than 1%	<b>184.0</b>	<b>52.2</b>	<b>21.6</b>	<b>114.9</b>	<b>372.7</b>
.....					
- greater than or equal to 1% and less than 5%	<b>21.6</b>	<b>3.8</b>	<b>0.7</b>	<b>41.7</b>	<b>67.8</b>
.....					
- greater than or equal to 5% and less than 10%	<b>3.8</b>	<b>0.7</b>	-	<b>21.6</b>	<b>26.1</b>
.....					
- greater than or equal to 10% and less than 20%	<b>1.8</b>	<b>0.3</b>	-	<b>13.3</b>	<b>15.4</b>
.....					
- greater than or equal to 20% and less than 40%	<b>0.6</b>	<b>0.1</b>	-	<b>5.9</b>	<b>6.6</b>
.....					
- greater than or equal to 40% and exposures in default ...	<b>4.5</b>	<b>0.2</b>	<b>0.3</b>	<b>16.9</b>	<b>21.9</b>

Total retail exposures	216.3	57.3	22.6	214.3	510.5
.....					
	Europe	Hong Kong	Exposure value Rest of Asia- Pacific	North America <sup>1</sup>	Total exposure
	US\$bn	US\$bn	US\$bn	US\$bn	US\$bn
At 31 December 2008					
Secured on real estate property					
Expected loss band					
- less than 1%		31.7	12.7	81.4	213.0
.....	87.2				
- greater than or equal to 1% and less than 5% .....	2.4	0.5	0.3	15.7	18.9
- greater than or equal to 5% and less than 10% .....	0.5	-	-	5.9	6.4
- greater than or equal to 10% and less than 20% .....	0.2	-	-	3.9	4.1
- greater than or equal to 20% and less than 40% .....	-	-	-	3.7	3.7
- greater than or equal to 40% and exposures in default	0.8	0.2	0.2	9.3	10.5
.....					
T					
otal retail secured on real estate property exposures					
...	91.1	32.4	13.2	119.9	256.6
Qualifying revolving retail exposures					
Expected loss band					
- less than 1%		12.2	-	48.9	87.9
.....	26.8				
- greater than or equal to 1% and less than 5% .....	5.1	2.4	-	23.6	31.1
- greater than or equal to 5% and less than 10% .....	1.1	0.4	-	8.7	10.2
- greater than or equal to 10% and less than 20% .....	0.5	0.1	-	5.6	6.2
- greater than or equal to 20% and less than 40% .....	0.2	0.1	-	1.8	2.1
- greater than or equal to 40% and exposures in default	0.7	-	-	4.2	4.9
.....					
Total qualifying revolving retail exposures		15.2	-	92.8	142.4
.....	34.4				
Credit risk					

SMEs<sup>2</sup>

Expected loss band					
- less than 1%		-	-	0.5	6.5
.....	6.0				
- greater than or equal to 1% and less than 5% .....	6.8	-	-	-	6.8
- greater than or equal to 5% and less than 10% .....	0.5	-	-	-	0.5
- greater than or equal to 10% and less than 20% .....	0.2	-	-	-	0.2
- greater than or equal to 20% and less than 40% .....	0.1	-	-	-	0.1
- greater than or equal to 40% and exposures in default	0.4	-	-	-	0.4
.....					

Total SMEs exposures	14.0	-	-	0.5	14.5
.....					

Other retail<sup>3</sup>

Expected loss band					
- less than 1%		7.5	2.4	6.4	50.9
.....	34.6				
- greater than or equal to 1% and less than 5% .....	6.7	1.1	-	11.8	19.6
- greater than or equal to 5% and less than 10% .....	1.5	0.3	-	4.1	5.9
- greater than or equal to 10% and less than 20% .....	0.9	0.1	-	3.8	4.8
- greater than or equal to 20% and less than 40% .....	0.3	-	-	2.2	2.5
- greater than or equal to 40% and exposures in default	1.2	0.1	-	4.0	5.3
.....					

Total other retail exposures	45.2	9.1	2.4	32.3	89.0
.....					

Total retail					
Expected loss band					
- less than 1%		51.4	15.1	137.2	358.3
.....	154.6				
- greater than or equal to 1% and less than 5% .....	21.0	4.0	0.3	51.1	76.4
- greater than or equal to 5% and less than 10% .....	3.6	0.7	-	18.7	23.0
- greater than or equal to 10% and less than 20% .....	1.8	0.2	-	13.3	15.3

## Credit risk

- greater than or equal to 20% and less than 40% .....	0.6	0.1
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