

RENAISSANCERE HOLDINGS LTD  
Form 10-K  
February 23, 2017

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549  
FORM 10-K

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

For the fiscal year ended December 31, 2016

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File No. 001-14428

RENAISSANCERE HOLDINGS LTD.

(Exact Name Of Registrant As Specified In Its Charter)

Bermuda 98-014-1974

(State or Other Jurisdiction of (I.R.S. Employer  
Incorporation or Organization) Identification Number)

Renaissance House, 12 Crow Lane, Pembroke HM 19 Bermuda

(Address of Principal Executive Offices)

(441) 295-4513

(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Shares, Par Value \$1.00 per share	New York Stock Exchange, Inc.
Series C 6.08% Preference Shares, Par Value \$1.00 per share	New York Stock Exchange, Inc.
Series E 5.375% Preference Shares, Par Value \$1.00 per share	New York Stock Exchange, Inc.

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company, as defined in Rule 12b-2 of the Act. Large accelerated filer , Accelerated filer , Non-accelerated filer , Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

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The aggregate market value of Common Shares held by nonaffiliates of the registrant at June 30, 2016 was \$4,756.6 million based on the closing sale price of the Common Shares on the New York Stock Exchange on that date.

The number of Common Shares, par value US \$1.00 per share, outstanding at February 17, 2017 was 40,944,207.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's definitive proxy statement for the 2017 Annual General Meeting of Shareholders are incorporated by reference into Part III of this report.

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## NOTE ON FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K for the year ended December 31, 2016 (this “Form 10-K”) of RenaissanceRe Holdings Ltd. (“RenaissanceRe”) contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements are necessarily based on estimates and assumptions that are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which, with respect to future business decisions, are subject to change. These uncertainties and contingencies can affect actual results and could cause actual results to differ materially from those expressed in any forward-looking statements made by, or on behalf of, us. In particular, statements using words such as “may”, “should”, “estimate”, “expect”, “anticipate”, “intend”, “believe”, “predict”, “potential”, or words of similar import generally involve forward-looking statements. For example, we may include certain forward-looking statements in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” with regard to trends in results, prices, volumes, operations, investment results, margins, combined ratios, fees, reserves, market conditions, risk management and exchange rates. This Form 10-K also contains forward-looking statements with respect to our business and industry, such as those relating to our strategy and management objectives, market standing and product volumes, competition and new entrants in our industry, industry capital, insured losses from loss events, government initiatives and regulatory matters affecting the reinsurance and insurance industries.

The inclusion of forward-looking statements in this report should not be considered as a representation by us or any other person that our current objectives or plans will be achieved. Numerous factors could cause our actual results to differ materially from those addressed by the forward-looking statements, including the following:

- the frequency and severity of catastrophic and other events we cover;
- the effectiveness of our claims and claim expense reserving process;
- our ability to maintain our financial strength ratings;
- the effect of climate change on our business;
- the effects of United States (“U.S.”) business tax reform proposals;
- adverse tax developments, including potential changes to the taxation of inter-company or related party transactions, or changes to the tax treatment of our shareholders or investors in our joint ventures or other entities we manage;
- the effect of emerging claims and coverage issues;
- continued soft reinsurance underwriting market conditions;
- our reliance on a small and decreasing number of reinsurance brokers and other distribution services for the preponderance of our revenue;
- our exposure to credit loss from counterparties in the normal course of business;
- the effect of continued challenging economic conditions throughout the world;
- a contention by the Internal Revenue Service (the “IRS”) that Renaissance Reinsurance Ltd. (“Renaissance Reinsurance”), or any of our other Bermuda subsidiaries, is subject to taxation in the U.S.;
- the performance of our investment portfolio;
- losses we could face from terrorism, political unrest or war;
- the effect of cybersecurity risks, including technology breaches or failure, on our business;
- our ability to successfully implement our business strategies and initiatives;
- our ability to retain our key senior officers and to attract or retain the executives and employees necessary to manage our business;
- our ability to determine the impairments taken on our investments;
- the availability of retrocessional reinsurance on acceptable terms;

the effects of inflation;

the ability of our ceding companies and delegated authority counterparties to accurately assess the risks they underwrite;

the effect of operational risks, including system or human failures;

our ability to effectively manage capital on behalf of investors in joint ventures or other entities we manage;

foreign currency exchange rate fluctuations;

our ability to raise capital if necessary;

our ability to comply with covenants in our debt agreements;

changes to the regulatory systems under which we operate, including as a result of increased global regulation of the insurance and reinsurance industry;

changes in Bermuda laws and regulations and the political environment in Bermuda;

- our dependence on the ability of our operating subsidiaries to declare and pay dividends;
- the success of any of our strategic investments or acquisitions, including our ability to manage our operations as our product and geographical diversity increases;

aspects of our corporate structure that may discourage third party takeovers and other transactions;

the cyclical nature of the reinsurance and insurance industries;

adverse legislative developments that reduce the size of the private markets we serve or impede their future growth;

other political, regulatory or industry initiatives adversely impacting us;

risks related to Solvency II;

the effect on our business of the highly competitive nature of our industry, including the effect of new entrants to, competing products for and consolidation in the (re)insurance industry;

consolidation of competitors, customers and insurance and reinsurance brokers;

increasing barriers to free trade and the free flow of capital;

international restrictions on the writing of reinsurance by foreign companies and government intervention in the natural catastrophe market;

the effect of Organization for Economic Co-operation and Development (the “OECD”) or European Union (“EU”) measures to increase our taxes and reporting requirements;

the effect of the vote by the U.K. to leave the EU;

changes in regulatory regimes and/or accounting rules that impact financial results irrespective of operations; and

our need to make many estimates and judgments in the preparation of our financial statements.

As a consequence, our future financial condition and results may differ from those expressed in any forward-looking statements made by or on behalf of us. The factors listed above, which are discussed in more detail in “Part I, Item 1A. Risk Factors”, in this Form 10-K, should not be construed as exhaustive. Forward-looking statements speak only as of the date they are made, and we undertake no obligation to revise or update forward-looking statements to reflect new information, events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

## PART I

### ITEM 1. BUSINESS

Unless the context otherwise requires, references in this Form 10-K to “RenaissanceRe” refer to RenaissanceRe Holdings Ltd. (the parent company) and to the “Company” refers to RenaissanceRe Holdings Ltd. and its subsidiaries, which include Renaissance Reinsurance, RenaissanceRe Specialty U.S. Ltd. (“RenaissanceRe Specialty U.S.”), Renaissance Reinsurance U.S. Inc., formerly known as Platinum Underwriters Reinsurance, Inc. (“Renaissance Reinsurance U.S.”), Renaissance Reinsurance of Europe Unlimited Company (“Renaissance Reinsurance of Europe”) and the Company’s Lloyd’s syndicate, RenaissanceRe Syndicate 1458 (“Syndicate 1458”).

We also underwrite reinsurance on behalf of joint ventures, including Top Layer Reinsurance Ltd. (“Top Layer Re”), recorded under the equity method of accounting, Upsilon RFO Re Ltd. (“Upsilon RFO”), a consolidated variable interest entity, Fibonacci Reinsurance Ltd. (“Fibonacci Re”), an unconsolidated variable interest entity, and DaVinci Reinsurance Ltd. (“DaVinci”). In addition, through RenaissanceRe Medici Fund Ltd. (“Medici”), we invest in various insurance based investment instruments that have returns primarily tied to property catastrophe risk. The financial results of Medici, and DaVinci and DaVinci’s parent company, DaVinciRe Holdings Ltd. (“DaVinciRe”), are consolidated in our financial statements.

For your convenience, we have included a “Glossary of Selected Insurance and Reinsurance Terms” at the end of “Part I, Item 1. Business” of this Form 10-K. All dollar amounts referred to in this Form 10-K are in U.S. dollars unless otherwise indicated. Any discrepancies in the tables included herein between the amounts listed and the totals thereof are due to rounding.

#### OVERVIEW

RenaissanceRe is a global provider of reinsurance and insurance. We aspire to be the world’s best underwriter by matching well-structured risks with efficient sources of capital and our mission is to produce superior returns for our shareholders over the long term. We seek to accomplish these goals by being a trusted, long-term partner to our customers for assessing and managing risk, delivering responsive and innovative solutions, leveraging our core capabilities of risk assessment and information management, investing in these core capabilities in order to serve our customers across the cycles that have historically characterized our markets and keeping our promises. Our strategy focuses on superior risk selection, superior customer relationships and superior capital management. We provide value to our customers and joint venture partners in the form of financial security, innovative products, and responsive service. We are known as a leader in paying valid claims promptly. We principally measure our financial success through long-term growth in tangible book value per common share plus the change in accumulated dividends, which we believe is the most appropriate measure of our financial performance and in respect of which we believe we have delivered superior performance over time.

Our core products include property, casualty and specialty reinsurance and certain insurance products principally distributed through intermediaries, with whom we seek to cultivate strong long-term relationships. We believe we have been one of the world’s leading providers of property reinsurance since our founding. In recent years, through the strategic execution of a number of initiatives, including organic growth and our acquisition of Platinum Underwriters Holdings, Ltd. (“Platinum”) on March 2, 2015, we have expanded our casualty and specialty platform and products and believe we are a leader in certain casualty and specialty lines of business. We have determined our business consists of the following reportable segments: (1) Property, which is comprised of catastrophe and other property reinsurance and insurance written on behalf of our operating subsidiaries and certain joint ventures managed by our ventures unit, and (2) Casualty and Specialty, which is comprised of casualty and specialty reinsurance and insurance written on behalf of our operating subsidiaries and certain joint ventures managed by our ventures unit.

To best serve our clients in the places they do business, we have operating subsidiaries, joint ventures and underwriting platforms around the world, including DaVinci, Renaissance Reinsurance, Top Layer Re, Fibonacci Re and Upsilon RFO in Bermuda, Renaissance Reinsurance U.S. in the U.S., and Syndicate 1458 in the United Kingdom (the “U.K.”). In addition, we have a presence in Ireland and Singapore and from time to time explore opportunities in other jurisdictions. We write property and casualty and specialty reinsurance through our wholly owned operating subsidiaries, joint ventures and Syndicate 1458 and certain insurance products primarily through Syndicate 1458. Although each underwriting platform may write



any or all of our classes of business, our Bermuda platform has traditionally written, and continues to write, the preponderance of our property business and our U.S. platform and Syndicate 1458 write a significant portion of our casualty and specialty business. Syndicate 1458 provides us with access to Lloyd's extensive distribution network and worldwide licenses and also writes business through delegated authority arrangements. The underwriting results of our operating subsidiaries and underwriting platforms are included in our Property and Casualty and Specialty segment results as appropriate.

Since a meaningful portion of the reinsurance and insurance we write provides protection from damages relating to natural and man-made catastrophes, our results depend to a large extent on the frequency and severity of such catastrophic events, and the coverages we offer to customers affected by these events. We are exposed to significant losses from these catastrophic events and other exposures we cover. Accordingly, we expect a significant degree of volatility in our financial results and our financial results may vary significantly from quarter-to-quarter and from year-to-year, based on the level of insured catastrophic losses occurring around the world. We view our increased exposure to casualty and specialty lines of business as an efficient use of capital given these risks are generally less correlated with our property lines of business. This has allowed us to bring additional capacity to our clients, across a wider range of product offerings, while continuing to be good stewards of our shareholders' capital. In the future, our casualty and specialty lines of business may represent a greater proportion of our premiums and claims and claim expenses.

We continually explore appropriate and efficient ways to address the risk needs of our clients. We have created and managed, and continue to manage, multiple capital vehicles and may create additional risk bearing vehicles in the future. As our product and geographical diversity increases, we may be exposed to new risks, uncertainties and sources of volatility.

Our revenues are principally derived from three sources: (1) net premiums earned from the reinsurance and insurance policies we sell; (2) net investment income and realized and unrealized gains from the investment of our capital funds and the investment of the cash we receive on the policies which we sell; and (3) fees and other income received from our joint ventures, advisory services and various other items.

Our expenses primarily consist of: (1) net claims and claim expenses incurred on the policies of reinsurance and insurance we sell; (2) acquisition costs which typically represent a percentage of the premiums we write; (3) operating expenses which primarily consist of personnel expenses, rent and other operating expenses; (4) corporate expenses which include certain executive, legal and consulting expenses, costs for research and development, transaction and integration-related expenses, and other miscellaneous costs, including those associated with operating as a publicly traded company; (5) redeemable noncontrolling interests, which represent the interests of third parties with respect to the net income of DaVinciRe and Medici; and (6) interest and dividend costs related to our debt and preference shares. We are also subject to taxes in certain jurisdictions in which we operate. Since the majority of our income is currently earned in Bermuda, which does not have a corporate income tax, the tax impact to our operations has historically been minimal, however, in the future, our net tax exposure may increase as our operations expand geographically, or as a result of adverse tax developments.

The underwriting results of an insurance or reinsurance company are discussed frequently by reference to its net claims and claim expense ratio, underwriting expense ratio, and combined ratio. The net claims and claim expense ratio is calculated by dividing net claims and claim expenses incurred by net premiums earned. The underwriting expense ratio is calculated by dividing underwriting expenses (acquisition expenses and operational expenses) by net premiums earned. The combined ratio is the sum of the net claims and claim expense ratio and the underwriting expense ratio. A combined ratio below 100% indicates profitable underwriting prior to the consideration of investment income. A combined ratio over 100% indicates unprofitable underwriting prior to the consideration of investment income. We also discuss our net claims and claim expense ratio on a current accident year basis and a prior accident years basis. The current accident year net claims and claim expense ratio is calculated by taking current accident year net claims and claim expenses incurred, divided by net premiums earned. The prior accident years net claims and claim expense ratio is calculated by taking prior accident years net claims and claim expenses incurred, divided by net premiums earned.





## CORPORATE STRATEGY

We aspire to be the world's best underwriter by matching well-structured risks with efficient sources of capital and our mission is to produce superior returns for our shareholders over the long term. Our strategy for achieving these objectives, which is supported by our core values, our principles and our culture, is to operate an integrated system of what we believe are our three competitive advantages: superior customer relationships, superior risk selection and superior capital management. We believe all three competitive advantages are required to achieve our objectives, and we aim to seamlessly coordinate the delivery of these competitive advantages for the benefit of our ceding insurers, brokers, investors in our joint ventures and shareholders.

**Superior Customer Relationships.** We seek to be a trusted long-term partner to our customers for assessing and managing risk and delivering responsive solutions. We believe our modeling and technical expertise, our risk management products and our track record of keeping our promises have made us a provider of first choice in many lines of business to our customers worldwide. We seek to offer stable, predictable and consistent risk-based pricing and a prompt turnaround on claims.

**Superior Risk Selection.** We seek to build a portfolio of risks that produces an attractive risk-adjusted return on utilized capital. We develop a perspective of each risk using both our underwriters' expertise and sophisticated risk selection techniques, including computer models and databases such as Renaissance Exposure Management System ("REMS®"). We pursue a disciplined approach to underwriting and seek to select only those risks that we believe will produce a portfolio with an attractive return, subject to prudent risk constraints. We manage our portfolio of risks dynamically, both within sub-portfolios and across the Company.

**Superior Capital Management.** We seek to write as much attractively priced business as is available to us and then manage our capital accordingly. We generally seek to raise capital when we forecast increased demand in the market, at times by accessing capital through joint ventures or other structures, and seek to return capital to our shareholders or joint venture investors when the demand for our coverages appears to decline and when we believe a return of capital would be beneficial to our shareholders or joint venture investors. In using joint ventures, we aim to leverage our access to business and our underwriting capabilities on an efficient capital base, develop fee income, generate profit commissions, diversify our portfolio and provide attractive risk-adjusted returns to our capital providers. We routinely evaluate and review potential joint venture opportunities and strategic investments.

We believe we are well positioned to fulfill our objectives by virtue of the experience and skill of our management team, our integrated underwriting and operating platform, our significant financial strength, our strong relationships with brokers and customers, our commitment to superior service and our proprietary modeling technology. In particular, we believe our strategy, high performance culture, and commitment to our customers and joint venture partners help us to differentiate ourselves by offering specialized services and products at times and in markets where capacity and alternatives may be limited.

## SEGMENTS

We continually monitor and review our segment reporting structure in accordance with authoritative accounting guidance to determine whether any changes have occurred that would impact our reportable segments. As a result of the evolution of the Company following our acquisition of Platinum, the integration of Platinum's activities within the Company, the growth of our casualty and specialty lines of business, our current management structure including recent management changes and our current underwriting platforms, we have changed our reportable segments to "Property" and "Casualty and Specialty". The change in reportable segments had no impact on our historical consolidated financial positions, results of operations or cash flows, as previously reported.

Our reportable segments are defined as follows: (1) Property, which is comprised of catastrophe and other property reinsurance and insurance written on behalf of our operating subsidiaries and certain joint ventures managed by our ventures unit, and (2) Casualty and Specialty, which is comprised of casualty and specialty reinsurance and insurance written on behalf of our operating subsidiaries and certain joint ventures managed by our ventures unit. In addition to our two reportable segments, we have an Other category, which primarily includes our strategic investments, investments unit, corporate expenses, capital servicing



costs, noncontrolling interests, certain expenses related to the acquisition of Platinum and the remnants of our former Bermuda-based insurance operations.

For the year ended December 31, 2016, our Property and Casualty and Specialty segments accounted for 46.8% and 53.2%, respectively, of our gross premiums written. Operating results relating to our segments are included in “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

The following table shows gross premiums written allocated between our segments:

Year ended December 31,	2016	2015	2014
(in thousands)			
Property	\$1,111,263	\$1,072,159	\$1,074,890
Casualty and Specialty	1,263,313	939,241	475,373
Other category	—	(90	) 309
Total gross premiums written	\$2,374,576	\$2,011,310	\$1,550,572

We write proportional business as well as excess of loss business. In addition, we maintain delegated authority arrangements through Syndicate 1458, which are included in our Property and Casualty and Specialty segments, as appropriate. Our relative mix of business between proportional business and excess of loss business has fluctuated in the past and will likely vary in the future. In recent periods, due to an increased contribution from our Casualty and Specialty segment, a relatively larger portion of our gross premiums written have come from proportional business than in many of our comparative periods. Proportional and delegated authority business typically have relatively higher premiums per unit of expected underwriting income, together with a higher acquisition expense ratio and combined ratio, than traditional excess of loss reinsurance. In addition, these coverages tend to be exposed to relatively more attritional, and frequent, losses while being subject to less expected severity.

The following table shows gross premiums written allocated between excess of loss, proportional and delegated authority for each of our segments:

Year ended December 31, 2016	Property	Casualty and Specialty	Other	Total
(in thousands)				
Excess of loss	\$932,725	\$218,816	\$—	\$1,151,541
Proportional	148,555	900,819	—	1,049,374
Delegated authority	29,983	143,678	—	173,661
Total gross premiums written	\$1,111,263	\$1,263,313	\$—	\$2,374,576

Year ended December 31, 2015				
Excess of loss	\$919,986	\$206,522	\$(90)	\$1,126,418
Proportional	132,522	647,733	—	780,255
Delegated authority	19,651	84,986	—	104,637
Total gross premiums written	\$1,072,159	\$939,241	\$(90)	\$2,011,310

Year ended December 31, 2014				
Excess of loss	\$987,545	\$161,502	\$—	\$1,149,047
Proportional	73,279	280,827	309	354,415
Delegated authority	14,066	33,044	—	47,110
Total gross premiums written	\$1,074,890	\$475,373	\$309	\$1,550,572



## Property Segment

The following table shows gross premiums written in our Property segment allocated by class of business:

Year ended December 31, (in thousands)	2016	2015	2014
Catastrophe	\$884,361	\$930,578	\$989,335
Other property	226,902	141,581	85,555
Total Property segment gross premiums written	\$1,111,263	\$1,072,159	\$1,074,890

Our Property segment includes our catastrophe class of business, principally comprised of excess of loss reinsurance and excess of loss retrocessional reinsurance to insure insurance and reinsurance companies against natural and man-made catastrophes, and our other property class of business, primarily comprised of proportional reinsurance, property per risk, property (re)insurance, binding facilities and regional U.S. multi-line reinsurance. We write catastrophe reinsurance and insurance coverage protecting against large natural catastrophes, such as earthquakes, hurricanes and tsunamis, as well as claims arising from other natural and man-made catastrophes such as winter storms, freezes, floods, fires, windstorms, tornadoes, explosions and acts of terrorism. We offer this coverage to insurance companies and other reinsurers primarily on an excess of loss basis. This means we begin paying when our customers' claims from a catastrophe exceed a certain retained amount. We also offer proportional coverages and other structures on a catastrophe-exposed basis and may increase these offerings on an absolute or relative basis in the future.

Our excess of loss property contracts generally cover all natural perils, as outlined above. Our predominant exposure under such coverage is to property damage. However, other risks, including business interruption and other non-property losses, may also be covered under our property reinsurance contracts when arising from a covered peril. We offer our coverages on a worldwide basis. Because of the wide range of possible catastrophic events to which we are exposed, including the size of such events and the potential for multiple events to occur in the same time period, our property business is volatile and our financial condition and results of operations reflect this volatility.

To moderate the volatility of our risk portfolio, we may increase or decrease our presence in the property business based on market conditions and our assessment of risk-adjusted pricing adequacy. We frequently purchase reinsurance or other protection for our own account for a number of reasons, including, to optimize the expected outcome of our underwriting portfolio, to manage capital requirements for regulated entities and to reduce the financial impact that a large catastrophe or a series of catastrophes could have on our results.

## Casualty and Specialty Segment

We write casualty and specialty reinsurance and insurance covering primarily targeted classes of business where we believe we have a sound basis for underwriting and pricing the risk we assume. The following table shows gross premiums written in our Casualty and Specialty segment allocated by class of business:

Year ended December 31, (in thousands)	2016	2015	2014
Financial lines (1)	\$413,068	\$265,170	\$148,461
General liability	204,337	189,439	90,387
Professional liability	323,144	244,930	135,791
Other	322,764	239,702	100,734
Total Casualty and Specialty segment gross premiums written	\$1,263,313	\$939,241	\$475,373

(1)Includes financial guaranty, mortgage guaranty, political risk, surety and trade credit.

Included in the other category within our Casualty and Specialty segment is accident and health, agriculture, automobile liability, aviation, casualty clash, workers' compensation, cyber, employers' liability, energy, environmental liability, marine, medical malpractice, satellite, terrorism and umbrella or excess casualty. Lines of business such as regional multi-line and whole account may have characteristics of various other classes of business, and are allocated accordingly. Principally all of the business is reinsurance, however our book of direct insurance business has been increasing in recent periods, and may continue to do so.

In recent years, we have expanded our Casualty and Specialty segment operations through organic growth initiatives and the acquisition of Platinum, and we plan to continue to expand these operations over time if market conditions are appropriate.

Our Casualty and Specialty segment gross premiums written may be subject to significant volatility as certain lines of business in this segment can be influenced by a small number of relatively large transactions. Our team of experienced professionals seeks to underwrite these lines using a disciplined underwriting approach and sophisticated analytical tools. We generally target lines of business where we believe we can adequately quantify the risks assumed and provide coverage where we believe our underwriting is robust and the market is attractive. We also seek to identify market dislocations and write new lines of business whose risk and return characteristics are estimated to exceed our hurdle rates. Furthermore, we also seek to manage the correlations of this business with our overall portfolio. We believe that our underwriting and analytical capabilities have positioned us well to manage our casualty and specialty business.

We offer our casualty and specialty reinsurance products principally on a proportional basis, and we also provide excess of loss coverage. We expect to grow our proportional coverage on an absolute or relative basis within this segment in the future. These products frequently include tailored features such as limits or sub-limits which we believe help us manage our exposures. Any liability exceeding, or otherwise not subject to, such limits reverts to the cedant. Our Casualty and Specialty segment frequently provides coverage for relatively large limits or exposures, and thus we are subject to potential significant claims volatility.

Our Casualty and Specialty segment offers certain casualty insurance products through Syndicate 1458 including, but not limited to, general liability, medical malpractice and professional liability. Syndicate 1458 also writes business through delegated authority arrangements.

As a result of our financial strength, we have the ability to offer significant capacity and, for select risks, we have made available significant limits. We believe these capabilities, the strength of our casualty and specialty reinsurance underwriting team, and our demonstrated ability and willingness to pay valid claims are competitive advantages of our casualty and specialty reinsurance business. While we believe that these and other initiatives will support growth in our Casualty and Specialty segment, we intend to continue to apply our disciplined underwriting approach which, together with current and forecasted market conditions, is likely to temper such growth in current and near-term periods.

#### Other

Our Other category primarily includes the results of: (1) our share of strategic investments in certain markets we believe offer attractive risk-adjusted returns or where we believe our investment adds value, and where, rather than assuming exclusive management responsibilities ourselves, we partner with other market participants; (2) our investment unit which manages and invests the funds generated by our consolidated operations; (3) corporate expenses, certain expenses related to the acquisition of Platinum, capital servicing costs and noncontrolling interests; and (4) the remnants of our former Bermuda-based insurance operations.

## VENTURES

We pursue a number of other opportunities through our ventures unit, which has responsibility for creating and managing our joint ventures, executing customized reinsurance transactions to assume or cede risk and managing certain investments directed at classes of risk other than catastrophe reinsurance.

### Property Catastrophe Managed Joint Ventures

We actively manage property catastrophe-oriented joint ventures, which provide us with an additional presence in the market, enhance our client relationships and generate fee income and profit commissions. These joint ventures allow us to leverage our access to business and our underwriting capabilities on a larger capital base. Currently, our principal joint ventures include DaVinci, Top Layer Re, Medici, Upsilon RFO and Fibonacci Re. Renaissance Underwriting Managers, Ltd. (“RUM”), a wholly owned subsidiary of the Company, acts as the exclusive underwriting manager for each of these joint ventures except Medici.

### DaVinci

DaVinci was established in 2001 and principally writes property catastrophe reinsurance and certain low frequency, high severity specialty reinsurance lines of business on a global basis. In general, we seek to construct for DaVinci a portfolio with risk characteristics similar to those of Renaissance Reinsurance’s property catastrophe reinsurance portfolio, and from time to time, certain lines of specialty reinsurance written by Renaissance Reinsurance such as terrorism and workers’ compensation. In accordance with DaVinci’s underwriting guidelines, it can only participate in business also underwritten by Renaissance Reinsurance. We maintain majority voting control of DaVinci’s holding company, DaVinciRe, and accordingly, consolidate the results of DaVinciRe into our consolidated results of operations and financial position. The underwriting results of DaVinciRe are principally included in our Property segment. We seek to manage DaVinci’s capital efficiently over time in light of the market opportunities and needs we perceive and believe we are able to serve. Our noncontrolling economic ownership in DaVinciRe was 24.0% at December 31, 2016 (2015 - 26.3%).

We expect our noncontrolling economic ownership in DaVinciRe to fluctuate over time. See “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Capital Resources” for additional information with respect of DaVinci.

### Top Layer Re

Top Layer Re was established in 1999 and writes high excess non-U.S. property catastrophe reinsurance. Top Layer Re is owned 50% by State Farm Mutual Automobile Insurance Company (“State Farm”) and 50% by Renaissance Reinsurance. State Farm provides \$3.9 billion of stop loss reinsurance coverage to Top Layer Re. We account for our equity ownership in Top Layer Re under the equity method of accounting and our proportionate share of its results is reflected in equity in earnings of other ventures in our consolidated statements of operations.

### Medici

Medici is an exempted fund, incorporated under the laws of Bermuda. Medici’s objective is to invest substantially all of its assets in various insurance-based investment instruments that have returns primarily correlated to property catastrophe risk. Third-party investors subscribe for the majority of the participating, non-voting common shares of Medici. We maintain majority voting control of Medici’s parent, RenaissanceRe Fund Holdings Ltd. (“Fund Holdings”), therefore the results of Medici and Fund Holdings are consolidated in our financial statements. Our economic ownership in Medici was 36.5% at December 31, 2016 (2015 - 46.1%).

### Upsilon RFO

Effective January 1, 2013, we formed and launched a managed joint venture, Upsilon RFO, a Bermuda domiciled special purpose insurer (“SPI”), to provide additional capacity to the worldwide aggregate and per-occurrence primary and retrocessional property catastrophe excess of loss market. Upsilon RFO’s creation further enhances our efforts to match desirable reinsurance risk with efficient capital through a strategic capital structure. Original business is written directly by Upsilon RFO under fully-collateralized reinsurance contracts capitalized through the sale of non-voting shares to us and Upsilon Fund. Upsilon



RFO is considered a VIE as it has insufficient equity capital to finance its activities without additional financial support and we are the primary beneficiary. As a result, we consolidate Upsilon RFO and all significant inter-company transactions have been eliminated. Other than our equity investment, we have not provided any financial or other support to Upsilon RFO we were not contractually required to provide.

#### Upsilon Fund

Effective November 13, 2014, we incorporated Upsilon Fund, an exempted Bermuda limited segregated accounts company. Upsilon Fund was formed to provide a fund structure through which third party investors can invest in property reinsurance risk managed by us. As a segregated accounts company, Upsilon Fund is permitted to establish segregated accounts to invest in and hold identified pools of assets and liabilities. Each pool of assets and liabilities in each segregated account is ring-fenced from any claims from the creditors of Upsilon Fund's general account and from the creditors of other segregated accounts within Upsilon Fund. Third party investors purchase redeemable, non-voting preference shares linked to specific segregated accounts of Upsilon Fund and own 100% of these shares. Upsilon Fund is managed by RenaissanceRe Fund Management Ltd. in return for a management fee and performance based incentive fee. We have not provided any financial or other support to Upsilon Fund we were not contractually required to provide. Currently, Upsilon Fund is invested in Upsilon RFO and Medici.

#### Fibonacci Re

Effective November 7, 2016, Fibonacci Re, a Bermuda-domiciled SPI, was formed to provide collateralized capacity to Renaissance Reinsurance and its affiliates. Fibonacci Re raised capital from third party investors and us via a private placement of participating notes that are listed on the Bermuda Stock Exchange. This arrangement enables Renaissance Reinsurance to support its clients with additional property catastrophe reinsurance capacity and we believe it provides attractive risk-adjusted returns to our capital partners. We concluded that Fibonacci Re meets the definition of a VIE as it does not have sufficient equity capital to finance its activities. Therefore, we evaluated our relationship with Fibonacci Re and concluded we are not the primary beneficiary of Fibonacci Re as we do not have power over the activities that most significantly impact the economic performance of Fibonacci. As a result, we do not consolidate the financial position and results of operations of Fibonacci. Other than our investment in the participating notes of Fibonacci Re, we have not provided financial or other support to Fibonacci Re that we were not contractually required to provide.

#### Strategic Investments

Ventures also pursues strategic investments where, rather than assuming exclusive management responsibilities ourselves, we partner with other market participants. These investments are directed at classes of risk other than catastrophe reinsurance, and at times may also be directed at non-insurance risks. We find these investments attractive because of their expected returns, and because they provide us with diversification benefits and information and exposure to other aspects of the market. Examples of these investments include our investments in Tower Hill Insurance Group, LLC. ("THIG"), Tower Hill Holdings, Inc. ("Tower Hill"), Tower Hill Signature Insurance Holdings, Inc. ("Tower Hill Signature") and Tower Hill Re (collectively, the "Tower Hill Companies"), Essent Group Ltd. ("Essent") and Trupanion Inc. ("Trupanion"). The carrying value of these investments on our consolidated balance sheet, individually or in the aggregate, may differ from the realized value we may ultimately attain, perhaps significantly so. For example, we believe that our investment in the Tower Hill Companies, which is recorded under the equity method of accounting in our consolidated financial statements in accordance with generally accepted accounting principles in the U.S. ("GAAP"), would attract a significantly higher valuation than what is currently recognized in our consolidated financial statements. However, under GAAP, we are prohibited from recording this investment at fair value. In addition, there is no liquid market for this investment.

#### Other Transactions

Ventures works on a range of other customized reinsurance and financing transactions. For example, we have participated in and continuously analyze other attractive opportunities in the market for insurance-linked securities and derivatives. We believe our products contain a number of customized features designed to fit the needs of our partners, as well as our risk management objectives.



Our ventures unit business activities that appear in our consolidated underwriting results, such as DaVinci and certain reinsurance transactions, are included in our Property and Casualty and Specialty segment results as appropriate; the results of our equity method investments, such as Top Layer Re, and other ventures are included in the Other category of our segment results.

#### GEOGRAPHIC BREAKDOWN

Our exposures are generally diversified across geographic zones, but are also a function of market conditions and opportunities. Our largest exposure has historically been to the U.S. and Caribbean market, which represented 63.2% of our gross premiums written for the year ended December 31, 2016. A significant amount of our U.S. and Caribbean premium provides coverage against windstorms (mainly U.S. Atlantic hurricanes), earthquakes and other natural and man-made catastrophes. The following table sets forth the amounts and percentages of our gross premiums written allocated to the territory of coverage exposure:

Year ended December 31,	2016		2015		2014					
	Gross Premiums Written	Percentage of Gross Premiums Written	Gross Premiums Written	Percentage of Gross Premiums Written	Gross Premiums Written	Percentage of Gross Premiums Written				
(in thousands, except percentages)										
Property Segment										
U.S. and Caribbean	\$743,226	31.3	%	\$671,887	33.4	%	\$635,069	41.0	%	
Worldwide	210,168	8.9	%	234,801	11.7	%	210,441	13.6	%	
Worldwide (excluding U.S.) (1)	55,043	2.3	%	76,370	3.8	%	137,466	8.9	%	
Japan	44,536	1.9	%	32,830	1.6	%	33,967	2.2	%	
Europe	37,611	1.6	%	32,973	1.6	%	33,115	2.1	%	
Australia and New Zealand	13,729	0.6	%	15,869	0.8	%	22,746	1.5	%	
Other	6,950	0.3	%	7,429	0.4	%	2,086	0.1	%	
Total Property Segment	1,111,263	46.9	%	1,072,159	53.3	%	1,074,890	69.4	%	
Casualty and Specialty Segment										
U.S. and Caribbean	757,052	31.9	%	522,778	26.0	%	228,062	14.7	%	
Worldwide	471,301	19.8	%	320,452	15.9	%	226,652	14.6	%	
Worldwide (excluding U.S.) (1)	13,840	0.6	%	87,597	4.4	%	6,946	0.4	%	
Europe	5,541	0.2	%	936	—	%	238	—	%	
Australia and New Zealand	5,073	0.2	%	1,627	0.1	%	7,865	0.5	%	
Other	10,506	0.4	%	5,851	0.3	%	5,610	0.4	%	
Total Casualty and Specialty Segment	1,263,313	53.1	%	939,241	46.7	%	475,373	30.6	%	
Other category	—	—	%	(90	)	—	%	309	—	%
Total gross premiums written	\$2,374,576	100.0	%	\$2,011,310	100.0	%	\$1,550,572	100.0	%	

(1) The category “Worldwide (excluding U.S.)” consists of contracts that cover more than one geographic region (other than the U.S.).

#### NEW BUSINESS

From time to time we consider diversification into new ventures, either through organic growth, the formation of new joint ventures, or the acquisition of or the investment in other companies or books of business of other companies. This potential diversification includes opportunities to write targeted, additional classes of risk-exposed business, both directly for our own account and through new joint venture opportunities. We also regularly evaluate potential strategic opportunities we believe might utilize our skills, capabilities, proprietary technology and relationships to support possible expansion into further risk-related coverages, services and products. Generally, we focus on underwriting or trading risks where we believe reasonably sufficient data is available and our analytical abilities provide us with a competitive advantage, in order for us to seek to model estimated probabilities of losses and returns

in respect of our then current portfolio of risks.

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We regularly review potential strategic transactions that might improve our portfolio of business, enhance or focus our strategies, expand our distribution or capabilities, or provide other benefits. In evaluating potential new ventures or investments, we generally seek an attractive estimated return on equity, the ability to develop or capitalize on a competitive advantage, and opportunities which we believe will not detract from our core operations. We believe that our ability to attract investment and operational opportunities is supported by our strong reputation and financial resources, and by the capabilities and track record of our ventures unit.

#### COMPETITION

The markets in which we operate are highly competitive, and we believe that competition is, in general, increasing and becoming more robust. Our competitors include independent reinsurance and insurance companies, subsidiaries and/or affiliates of globally recognized insurance companies, reinsurance divisions of certain insurance companies, domestic and international underwriting operations, and a range of entities offering forms of risk transfer protection on a collateralized or other non-traditional basis. As our business evolves, we expect our competitors to change as well. We believe that our principal competitors include other companies active in the Bermuda market, currently including Allied World Assurance Company, AG, Arch Capital Group Ltd., Aspen Insurance Holdings Limited, Axis Capital Holdings Limited, Chubb Limited, Endurance Specialty Holdings Ltd., Everest Re Group, Ltd., Fidelis Insurance Holdings Limited (“Fidelis”), Hamilton Re Ltd. (“Hamilton Re”), PartnerRe Ltd., Third Point Reinsurance Ltd. (“Third Point”), Validus Holdings, Ltd., White Mountains Insurance Group, Ltd. and XL Group plc, as well as a growing number of private, unrated reinsurers offering predominately collateralized reinsurance. We also compete with certain Lloyd’s syndicates active in the London market, as well as with a number of other industry participants, such as American International Group, Inc., Berkshire Hathaway Inc., Hannover Rückversicherung AG (“Hannover Re”), Ironshore Inc., Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München (“Munich Re”) and Swiss Re Ltd.

Hedge funds, pension funds and endowments, investment banks, investment managers (such as Nephila Capital Ltd.), exchanges and other capital market participants are increasingly active in the reinsurance market and the market for related risk, either through the formation of reinsurance companies (such as Greenlight Reinsurance Ltd., Aeolus Re Ltd., Fidelis, Hamilton Re, and Third Point) or through the use of other financial products, such as catastrophe bonds, other insurance-linked securities and collateralized reinsurance investment funds. We expect competition from these sources to continue to increase. In addition, we continue to anticipate growth in financial products offered to the insurance market that are intended to compete with traditional reinsurance, such as exchange traded catastrophe options, insurance-linked securities, unrated privately held reinsurance companies providing collateralized or other non-traditional reinsurance, catastrophe-linked derivative agreements and other financial products.

The tax policies of the countries where our customers operate, as well as government sponsored or backed catastrophe funds, also affect demand for reinsurance, sometimes significantly. Moreover, government-backed entities increasingly represent competition for the coverages we provide directly or for the business of our customers, reducing the potential amount of third party private protection our clients might need or desire.

#### UNDERWRITING AND ENTERPRISE RISK MANAGEMENT

##### Underwriting

Our primary underwriting goal is to construct a portfolio of reinsurance and insurance contracts and other financial risks that maximizes our return on shareholders’ equity, subject to prudent risk constraints, and to generate long-term growth in tangible book value per common share plus the change in accumulated dividends. We assess each new (re)insurance contract on the basis of the expected incremental return relative to the incremental contribution to portfolio risk.

We have developed a proprietary, computer-based pricing and exposure management system, REMS<sup>®</sup>, which has analytic and modeling capabilities that help us to assess the risk and return of each incremental (re)insurance contract in relation to our overall portfolio of (re)insurance contracts. We believe that REMS<sup>®</sup> is a robust underwriting and risk management system that has been successfully integrated into our business processes and culture. The REMS<sup>®</sup> framework encompasses and facilitates risk capture,



analysis, correlation, portfolio aggregation and capital allocation within a single system for all of our natural hazards and non-natural hazards (re)insurance contracts. We continue to invest in and improve REMS©, incorporating our underwriting and modeling experience and adding proprietary software and a significant amount of new industry data. We continually strive to improve our analytical techniques for both natural hazard and non-natural hazard models in REMS© and while our experience is most developed for analyzing natural hazard catastrophe risks, we continue to invest in and evolve our capabilities for assessing non-natural hazard catastrophe risks. With the acquisition of Platinum and our recent growth in our casualty and specialty lines of business, we have increased our modeling and underwriting resources and associated capabilities with respect to our casualty and specialty lines of business. We generally utilize a multiple model approach when evaluating a proposed program, combining both probabilistic and deterministic techniques. We combine the analyses generated by REMS© with other information available to us, including our own knowledge of the client submitting the proposed program, to assess the premium offered against the risk of loss and the cost of utilized capital which the program presents. The underlying risk models integrated into our underwriting and REMS© framework are a combination of internally constructed and commercially available models. We use commercially available natural hazard catastrophe models to assist with validating and stress testing our base model and REMS© results.

Before we bind a (re)insurance risk, exposure data, historical loss information and other risk data is gathered from customers. Using a combination of proprietary software, underwriting experience, actuarial techniques and engineering expertise, as we deem appropriate, the exposure data is reviewed and augmented. We use this data as primary inputs into the REMS© modeling system as a base to create risk distributions to represent the risk being evaluated. We believe that the REMS© modeling system helps us to analyze each policy on a consistent basis, assisting our determination of what we believe to be an appropriate price to charge for each policy based upon the risk to be assumed. In part, through the process described above and the utilization of REMS©, we seek to compare our estimate of the expected returns in respect of a contract with the amount of capital we notionally allocate to the contract based on our estimate of its marginal impact on our portfolio of risks. A key advantage of our REMS© framework is our ability to include additional perils, risks and geographic areas that may not be captured in commercially available natural hazards risk models.

We periodically review the estimates and assumptions that are reflected in REMS© and our other tools. For example, the 2011 and 2010 New Zealand Earthquakes and the Tohoku Earthquake provided new insight on certain aspects of hazard and vulnerability to the global earthquake science community. Utilizing internal research capabilities from our team of scientists at Weather Predict Consulting Inc. (“Weather Predict”) and new research from the global earthquake science community, we updated several of our internal regional representations of earthquake risk in advance of the commercially available models. In late 2012, Storm Sandy gave rise to new data relating to storm surge, flood persistence and mid-Atlantic tropical storm meteorology. We subsequently updated our North Atlantic storm surge model to reflect this new data.

Our underwriters use the combination of our risk assessment and underwriting process, REMS© and other tools in their pricing decisions, which we believe provides them with several competitive advantages. These include the ability to:

- simulate a range of potential outcomes that adequately represents the risk to an individual contract;
- analyze the incremental impact of an individual reinsurance contract on our overall portfolio;
- better assess the underlying exposures associated with assumed retrocessional business;
- price contracts within a short time frame;
- capture various classes of risk, including catastrophe and other insurance risks;
- assess risk across multiple entities (including our various joint ventures) and across different components of our capital structure; and
- provide consistent pricing information.

As part of our risk management process, we also use REMS© to assist us, as a retrocedant, with the purchase of reinsurance coverage for our own account.





Our underwriting and risk management process, in conjunction with REMS<sup>®</sup>, quantifies and manages our exposure to claims from single events and the exposure to losses from a series of events. As part of our pricing and underwriting process, we also assess a variety of other factors, including:

- the reputation of the proposed cedant and the likelihood of establishing a long-term relationship with the cedant;
- the geographic area in which the cedant does business and its market share;
- historical loss data for the cedant and, where available, for the industry as a whole in the relevant regions and lines of business, in order to compare the cedant's historical catastrophe loss experience to industry averages;
- the cedant's pricing strategies; and
- the perceived financial strength of the cedant and factors such as the cedant's historical record of making premium payments in full and on a timely basis.

In order to estimate the risk profile of each line of non-natural hazard reinsurance (i.e., our casualty and specialty lines of business), we establish probability distributions and assess the correlations with the rest of our portfolio. In lines with catastrophe risk, such as excess workers' compensation and terrorism, we seek to directly leverage our skill in modeling property reinsurance risks, and seek to appropriately estimate and manage the correlations between these casualty and specialty lines and our property reinsurance portfolio. For other classes of business, in which we believe we have little or no natural catastrophe exposure, and therefore less correlation with our property reinsurance coverages, we derive probability distributions from a variety of underlying information sources, including recent historical experience, and the application of judgment as appropriate. The nature of some of these businesses lends itself less to the analysis we use for our property reinsurance coverages, reflecting both the nature of available exposure information, and the impact of human factors such as tort exposure. We produce probability distributions to represent our estimates of the related underlying risks which our products cover, which we believe helps us to make consistent underwriting decisions and to manage our total risk portfolio.

In addition, we also produce, utilize and report on models which measure our utilization of capital in light of regulatory capital considerations and constraints. Our position in respect of these regulatory capital models is reviewed by our risk management professional staff and periodically reported to and reviewed by senior underwriting personnel and executive management with responsibility for our regulated operating entities.

#### Enterprise Risk Management ("ERM")

We believe that high-quality and effective ERM is best achieved when it is a shared cultural value throughout the organization and consider ERM to be a key process which is the responsibility of every individual within the Company. We have developed and utilize tools and processes we believe support a culture of risk management and create a robust framework of ERM within our organization. We believe that our ERM processes and practices help us to identify potential events that may affect us, quantify, evaluate and manage the risks to which we are exposed, and provide reasonable assurance regarding the achievement of our objectives. We believe that effective ERM can provide us with a significant competitive advantage. We also believe that effective ERM assists our efforts to minimize the likelihood of suffering financial outcomes in excess of the ranges which we have estimated in respect of specific investments, underwriting decisions, or other operating or business activities, although we do not believe this risk can be eliminated. We believe that our risk management tools support our strategy of pursuing opportunities and help us to identify opportunities we believe to be the most attractive. In particular, we utilize our risk management tools to support our efforts to monitor our capital position, on a consolidated basis and for each of our major operating subsidiaries, and to allocate an appropriate amount of capital to support the risks we have assumed in the aggregate and for each of our major operating subsidiaries. We believe that our risk management efforts are essential to our corporate strategy and our goal of achieving long-term growth in tangible book value per share plus the change in accumulated dividends for our shareholders.

Our Board of Directors is responsible for overseeing enterprise-wide risk management and is actively involved in the monitoring of risks that could affect us. The members of the Board have regular, direct access to the senior executives and other officers responsible for identifying and monitoring our risks and coordinating our ERM, including our Group Chief Risk Officer, Chief Financial Officer, and Group General



Counsel and Chief Compliance Officer, each of whom reports directly to our Chief Executive Officer, as well as other senior personnel such as our Chief Accounting Officer, Global Corporate Controller and Head of Internal Audit. The Board also receives regular reports from the Controls and Compliance Committee.

Our ERM framework operates via a three lines of defense model. The first line of defense consists of individual functions that deliberately assume risks on our behalf and own and manage risk within the Company on a day-to-day and business operational basis. The second line of defense is responsible for risk oversight and also supports the first line to understand and manage risk. A dedicated risk team led by the Group Chief Risk Officer is responsible for this second line and reports to the Board of Director's Investment and Risk Management Committee and the Chief Executive Officer. The third line of defense, our Internal Audit team, reports to the Audit Committee of the Board of Directors and provides independent, objective assurance as to the assessment of the adequacy and effectiveness of our internal control systems and also coordinates risk-based audits and compliance reviews and other specific initiatives to evaluate and address risk within targeted areas of our business.

The principal risk areas that make up our ERM framework are assumed risk (including reserve risk), business environment risk and operational risk:

**Assumed Risk.** We define assumed risk as activities where we deliberately take risk against our capital base, including underwriting risks and other quantifiable risks such as credit risk and market risk as they relate to investments, ceded reinsurance credit risk and strategic investment risk, each of which can be analyzed in substantial part through quantitative tools and techniques. Of these, we believe underwriting risk to be the most material to us. In order to understand, monitor, quantify and proactively assess underwriting risk, we seek to develop and deploy appropriate tools to estimate the comparable expected returns on potential business opportunities and the impact that such incremental business could have on our overall risk profile. We use the tools and methods described above in "Underwriting" to seek to achieve these objectives. Embedded within our consideration of assumed risk is our management of our aggregate, consolidated risk profile. In part through the utilization of REMS© and our other systems and procedures, we analyze our in-force aggregate assumed risk portfolio on a daily basis. We believe this capability helps us to manage our aggregate exposures and to rigorously analyze and evaluate individual proposed transactions in the context of our in-force portfolio. This aggregation process captures line of business, segment and corporate risk profiles, calculates internal and external capital tests and explicitly models ceded reinsurance. Generally, additional data is added quarterly to our aggregate risk framework to reflect updated or new information or estimates relating to matters such as interest rate risk, credit risk, capital adequacy and liquidity. This information is used in day-to-day decision making for underwriting, investments and operations and is also reviewed quarterly from both a unit level and consolidated financial position perspective. We also regularly assess, monitor and review our regulatory risk capital and related constraints.

**Reserve Risk.** Reserve risk is a subcomponent of assumed risk. We define reserve risk as the risks related to our reserve for net claims and claim expenses, including the amount, both absolute and relative, of our outstanding reserve for net claims and claim expenses, and the impact of economic, social, legal and regulatory matters. Our reserve for net claims and claim expenses is subject to significant uncertainty and has the potential to develop adversely in future periods. While reserve risk may increase in both absolute terms and relative to its overall consideration in our ERM framework, we employ robust resources, procedures and technology to identify, understand, quantify and manage this risk. Our reserving methodologies and sensitivities for each respective line of business described in "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves."

**Business Environment Risk.** We define business environment risk as the risk of changes in the business, political or regulatory environment that could negatively impact our short term or long-term financial results or the markets in which we operate. This risk area also typically includes emerging risks. These risks are predominately extrinsic to us and our ability to alter or eliminate these risks is limited, so we focus our efforts on monitoring developments, assessing potential impacts of any changes, and investing in cost effective means to attempt to mitigate the consequences of and ensure compliance with any new requirements applicable to us.



**Operational Risk.** We are subject to a number of additional risks arising out of operational, regulatory, and other matters. We define operational risk to include the risk we fail to create, manage, control or mitigate the people, processes, structures or functions required to execute our strategic and tactical plans and assemble an optimized portfolio of assumed risk, and to adjust to and comply with the evolving requirements of business environment risk applicable to us. In light of the rapid evolution of our markets, business environment, and business initiatives, we seek to continually invest in the tools, processes and procedures we use to mitigate our exposure to operational risk on a cost-effective basis. As with assumed risk and business environment risk, operational risk presents intrinsic uncertainties, and we may fail to appropriately identify or mitigate applicable operational risk.

**Controls and Compliance Committee.** We believe that a key component of our current operational risk management platform is our Controls and Compliance Committee. The Controls and Compliance Committee is comprised of our Chief Financial Officer, Chief Compliance Officer, Chief Accounting Officer, Global Corporate Controller, Group Chief Risk Officer, Head of Internal Audit, staff compliance professionals and representatives from our business units. The purpose of the Controls and Compliance Committee is to establish, assess the effectiveness of, and enforce policies, procedures and practices relating to accounting, financial reporting, internal controls, regulatory, legal, compliance and related matters, and to ensure compliance with applicable laws and regulations, our Code of Ethics and Conduct (the “Code of Ethics”), and other relevant standards. In addition, the Controls and Compliance Committee is charged with reviewing certain transactions that potentially raise complex and/or significant tax, legal, accounting, regulatory, financial reporting, reputational or compliance issues.

In addition, we address other areas of operational risk through our disaster recovery program, human resource practices such as motivating and retaining top talent, our strict tax protocols and our legal and regulatory policies and procedures.

**Ongoing Development and Enhancement.** We seek to reflect and categorize risks we monitor in part through quantitative risk distributions, even where we believe that such quantitative analysis is not as robust or well developed as our tools and models for measuring and evaluating other risks, such as catastrophe and market risks. We also seek to improve the methods by which we measure risks and believe effective risk management is a continual process that requires ongoing improvement and development. We seek from time to time to identify effective new practices or additional developments both from within our industry and from other sectors. We believe that our ongoing efforts to embed ERM throughout our organization help us produce and maintain a competitive advantage and achieve our corporate goals.

#### RATINGS

Financial strength ratings are an important factor in evaluating and establishing the competitive position of reinsurance and insurance companies. Rating organizations continually review the financial positions of our reinsurers and insurers. We have received high claims-paying and financial strength ratings from A.M. Best Company, Inc. (“A.M. Best”), Standard and Poor’s Rating Services (“S&P”), Moody’s Investors Service (“Moody’s”) and Fitch Ratings Ltd. (“Fitch”). These ratings represent independent opinions of an insurer’s financial strength, operating performance and ability to meet policyholder obligations, and are not an evaluation directed toward the protection of investors or a recommendation to buy, sell or hold any of our securities. See “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Capital Resources, Ratings” for the ratings of our principal operating subsidiaries and joint ventures by segment, and details of recent ratings actions.

In addition, S&P assesses companies’ ERM practices, which is an opinion on the many critical dimensions of risk that determine overall creditworthiness. RenaissanceRe has been assigned an ERM rating of “Very Strong”, which is the highest rating assigned by S&P, and indicates that S&P believes RenaissanceRe has very strong capabilities to consistently identify, measure, and manage risk exposures and losses within RenaissanceRe’s predetermined tolerance guidelines.

#### RESERVES FOR CLAIMS AND CLAIM EXPENSES

We believe the most significant accounting judgment made by management is our estimate of claims and claim expense reserves. Claims and claim expense reserves represent estimates, including actuarial and statistical projections at a given point in time, of the ultimate settlement and administration costs for unpaid



claims and claim expenses arising from the insurance and reinsurance contracts we sell. We establish our claims and claim expense reserves by taking claims reported to us by insureds and ceding companies, but which have not yet been paid (“case reserves”), adding estimates for the anticipated cost of claims incurred but not yet reported to us, or incurred but not enough reported to us (collectively referred to as “IBNR”) and, if deemed necessary, adding costs for additional case reserves which represent our estimates for claims related to specific contracts previously reported to us which we believe may not be adequately estimated by the client as of that date, or adequately covered in the application of IBNR.

Our reserving techniques, assumptions and processes differ among our Property and Casualty and Specialty segments. Refer to “Note 8. Reserve for Claims and Claim Expenses in our Notes to the Consolidated Financial Statements” for more information on the risks we insure and reinsure, the reserving techniques, assumptions and processes we follow to estimate our claims and claim expense reserves, prior year development of the reserve for claims and claim expenses, analysis of our incurred and paid claims development and claims duration information for each of our Property and Casualty and Specialty segments. In addition, refer to “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves” for more information on our current estimates versus our initial estimates of our claims reserves, and sensitivity analysis for each of our Property and Casualty and Specialty segments.

#### INVESTMENTS

Our investment guidelines stress preservation of capital, market liquidity, and diversification of risk. The majority of our investments consist of highly rated fixed income securities. We also hold a significant amount of short term investments which are managed as part of our investment portfolio and have a maturity of one year or less when purchased. In addition, we have an allocation to other investments including private equity partnerships, catastrophe bonds, senior secured bank loan funds, and hedge funds, and to certain equity securities. We may from time to time re-evaluate our investment guidelines and explore investment allocations to other asset classes. Our investments are subject to market-wide risks and fluctuations, as well as to risks inherent in particular securities.

For additional information regarding our investment portfolio, refer to “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources, Investments” and “Note 5. Investments in our Notes to the Consolidated Financial Statements”.

#### MARKETING

We believe that our modeling and technical expertise, the risk management products we provide to our customers, and our reputation for paying claims promptly has enabled us to become a provider of first choice in many lines of business to our customers worldwide. We market our products primarily through reinsurance brokers and we focus our marketing efforts on targeted brokers and partners. We believe that our existing portfolio of business is a valuable asset and, therefore, we attempt to continually strengthen relationships with our existing brokers and customers. We believe that by maintaining close relationships with brokers, we are able to obtain access to a broad range of potential reinsureds. We target prospects that are capable of supplying detailed and accurate underwriting data and that potentially add further diversification to our book of business.

We believe that primary insurers’ and brokers’ willingness to use a particular reinsurer is based not just on pricing, but also on the financial security of the reinsurer, its claim paying ability ratings and demonstrated willingness to promptly pay valid claims, the quality of a reinsurer’s service, the reinsurer’s willingness and ability to design customized programs, its long-term stability and its commitment to provide stable reinsurance capacity across market cycles. We believe we have established a reputation with our brokers and customers for prompt response on underwriting submissions, for fast payments on valid claims and for providing creative solutions to our customers’ needs.

Our portfolio of business continues to be characterized by relatively large transactions with ceding companies with whom we do business, although no current relationship exceeds 10% of our gross premiums written. Accordingly, our gross premiums written are subject to significant fluctuations depending on our success in maintaining or expanding our relationships with these customers. We believe that our willingness and ability to design customized programs and to provide bespoke risk management products has helped us to develop long-term relationships with brokers and customers.





Our brokers assess client needs and also perform data collection, contract preparation and other administrative tasks, enabling us to market our products cost effectively by maintaining a smaller staff. In recent years, our distribution has become increasingly reliant on a small and relatively decreasing number of broker relationships reflecting consolidation in the broker sector. We expect this concentration to continue and perhaps increase. In 2016, three brokerage firms accounted for 80.8% of our gross premiums written.

The following table shows the percentage of our Property and Casualty and Specialty segments' gross premiums written generated through subsidiaries and affiliates of our largest brokers:

Year ended December 31, 2016	Casualty			
	Property	and	Specialty	Total
AON	51.8 %	41.7 %	46.4 %	
Marsh	26.0 %	21.4 %	23.6 %	
Willis Towers Watson	7.9 %	13.4 %	10.8 %	
Total of largest brokers	85.7 %	76.5 %	80.8 %	
All others	14.3 %	23.5 %	19.2 %	
Total	100.0 %	100.0 %	100.0 %	

The following table shows the number of brokers for which we issued authorization for coverage on programs, the number of program submissions received and the number and percent of authorizations issued, allocated between our Property and Casualty and Specialty segments:

Year ended December 31, 2016	Casualty	
	Property	and Specialty
Number of brokers	33	50
Program submissions	4,138	3,068
Programs authorized	1,423	1,024
Programs authorized as a percentage of program submissions	34.4 %	33.4 %

## EMPLOYEES

At February 17, 2017, we employed 376 people worldwide (February 18, 2016 - 376, February 18, 2015 - 281). None of our employees are subject to collective bargaining agreements and we are not aware of any current efforts to implement such agreements at any of our subsidiaries.

## INFORMATION TECHNOLOGY

Our information technology platform and services are critical in supporting our operational capabilities. We have an integrated team of professionals who manage and support our communication platforms, transaction-management systems, and analytics and reporting capabilities, including the development of proprietary solutions like REMS©. In addition, we have secure, off-site data centers in North America and Europe to support our global operational needs. While most of our core applications are currently housed on our own infrastructure, our use of cloud-based services is increasing as the security and cost-effectiveness of these services improves.

Our business and support functions utilize information systems that provide critical services to both our employees and our customers. Information security and privacy are important concerns, with an increasing cyber-threat environment and evolving regulatory requirements driving continued investment in this area. Computer viruses, hackers, employee misuse or misconduct and other external hazards could expose our data systems to security breaches, cyber attacks or other disruptions.

We protect our information systems with physical and electronic safeguards as well as backup systems considered appropriate by management. In addition, we perform regular security penetration test scenarios and provide regular security risk staff education awareness sessions, to evaluate our preparedness and enhance both our system and user

ability to detect, alert and respond to such an incident. We have implemented disaster recovery and business continuity plans for our operations which are tested at least annually with respect to our business-critical infrastructure and systems. We employ data backup

procedures that seek to ensure that our key business systems and data are regularly backed up, and can be restored promptly if and as needed. In addition, we generally store backup information at off-site locations, in order to seek to minimize our risk of loss of key data in the event of a disaster. Our recovery plans involve arrangements with our off-site, secure data centers. We believe we will be able to access our systems from these facilities in the event that our primary systems are unavailable due to various scenarios, such as natural disasters.

## REGULATION

The business of insurance and reinsurance is regulated in most countries and all states in the U.S., although the degree and type of regulation varies significantly from one jurisdiction to another. Currently, we operate primarily in Bermuda, the U.S. and the U.K. We also have operations in Singapore and Ireland. Although principally regulated by the regulatory authorities of their respective jurisdictions, our operating subsidiaries may also be subject to regulation in the jurisdictions of their ceding companies. In addition, expansion into additional insurance markets could expose us or our subsidiaries to increasing regulatory oversight. However, we intend to continue to conduct our operations so as to minimize the likelihood that Renaissance Reinsurance, DaVinci, Top Layer Re, RenaissanceRe Specialty U.S., Upsilon RFO, or any of our other Bermudian subsidiaries will become subject to direct U.S. regulation.

### Bermuda Regulation

All Bermuda companies must comply with the provisions of the Companies Act 1981. In addition, the Insurance Act 1978 and related regulations (collectively, the “Insurance Act”), regulate the business of our Bermuda insurance, reinsurance and management company subsidiaries.

As a holding company, RenaissanceRe is not currently subject to the Insurance Act. However, the Insurance Act regulates the insurance and reinsurance business of our Bermuda-licensed operating insurance companies.

RenaissanceRe’s Bermuda-licensed operating insurance subsidiaries and joint ventures include Renaissance Reinsurance and DaVinci, which are registered as Class 4 general business insurers, and RenaissanceRe Specialty U.S., which is registered as a Class 3B general business insurer, and Top Layer Re, which is registered as a Class 3A general business insurer under the Insurance Act. RenaissanceRe also has operating subsidiaries registered as SPIs under the Insurance Act, including Upsilon RFO. RUM and RenaissanceRe Underwriting Management Ltd. are each registered as insurance managers under the Insurance Act.

The Insurance Act imposes solvency and liquidity standards as well as auditing and reporting requirements and confers on the Bermuda Monetary Authority (the “BMA”) powers to supervise, investigate and intervene in the affairs of insurance companies.

On March 24, 2016, the BMA was recognized by the European Parliament as fully equivalent under Solvency II for its commercial (re)insurers, retroactive to January 1, 2016. To achieve this status, the BMA made certain changes to the filing requirements and public disclosure requirements applicable to commercial (re)insurers and insurance groups, including amendments to the statutory financial reporting regime, aligning it with GAAP, International Financial Reporting Standards (“IFRS”) or other acceptable accounting standards, and the introduction of an economic balance sheet (“EBS”) framework. Amendments were made to the Insurance Act to meet these changing requirements. General Purpose Financial Statements. All Class 3A, Class 3B and Class 4 insurers must prepare financial statements in respect of their insurance business in accordance with GAAP, IFRS or other acceptable accounting standards, which are published on the BMA website.

Statutory Financial Statements. Each Class 3A, Class 3B and Class 4 general business insurer is required to submit annual statutory financial statements as part of its statutory financial return no later than four months after the insurer’s financial year end (unless specifically extended). The GAAP or IFRS financial statements are the basis on which statutory financial statements are prepared, subject to the application of certain prudential filters as outlined in the Insurance Accounts Rules 2016. The statutory financial statements contain statements both on a consolidated and unconsolidated basis. The unconsolidated information forms the basis for assessing the insurer’s liquidity position, minimum solvency margin and class of registration.

**Capital and Solvency Return.** Class 3A, 3B and 4 insurers are also required to file a capital and solvency return in respect of their general business, which includes, among other items, the EBS, a schedule of governance and risk management, a catastrophe risk return, a schedule of loss triangles or reconciliation of net loss reserves, a schedule of eligible capital and the Enhanced Capital Requirement (“ECR”) as calculated by the Bermuda Solvency and Capital Requirement (“BSCR”) model. The consolidated information within the statutory financial statements form the starting basis for the preparation of the EBS. The EBS is, in turn, used as the basis to calculate the insurer’s ECR.

**Financial Condition Report.** Class 3A, 3B and 4 insurers and insurance groups are required to prepare and publish a financial condition report (“FCR”), which was introduced to the regulatory regime in 2016 as part of the measures undertaken to achieve Solvency II equivalence. The FCR provides, among other things, details of measures governing the business operations, corporate governance framework and solvency and financial performance of the insurer/insurance group.

**Minimum Solvency Margin.** A general business insurer’s statutory assets must exceed its statutory liabilities by an amount, equal to or greater than the prescribed minimum solvency margin (“Minimum Solvency Margin”), which varies with the category of its registration. The Minimum Solvency Margin that must be maintained by a Class 4 insurer is the greater of (i) \$100.0 million, (ii) 50% of net premiums written (with a credit for reinsurance ceded not exceeding 25% of gross premiums), (iii) 15% of net aggregate loss and loss expense provisions and other insurance reserves, or (iv) 25% of the ECR, which is established by reference to the BSCR model. The Minimum Solvency Margin for a Class 3A or Class 3B insurer is the greater of (i) \$1.0 million, (ii) 20% of the first \$6.0 million of net premiums written; if in excess of \$6.0 million, the figure is \$1.2 million plus 15% of net premiums written in excess of \$6.0 million, (iii) 15% of net aggregate loss and loss expense provisions and other insurance reserves, or (iv) 25% of the insurer’s ECR.

**Enhanced Capital Requirement.** Each Class 3A, Class 3B and Class 4 insurer is required to maintain its capital at a level at least equal to its ECR which is established by reference to either the BSCR or an approved internal capital model. In either case, the ECR shall at all times equal or exceed the respective Class 3A, Class 3B and Class 4 insurer’s Minimum Solvency Margin and may be adjusted in circumstances where the BMA concludes that the insurer’s risk profile deviates significantly from the assumptions underlying its ECR or the insurer’s assessment of its risk management policies and practices used to calculate the ECR applicable to it. While not specifically referred to in the Insurance Act, the BMA has also established a target capital level (“TCL”) for each Class 3A, Class 3B and Class 4 insurer equal to 120% of the respective ECR. While a Class 3A, Class 3B and Class 4 insurer is not currently required to maintain its statutory capital and surplus at this level, the TCL serves as an early warning tool for the BMA and failure to maintain statutory capital at least equal to the TCL will likely result in increased BMA regulatory oversight.

**Minimum Liquidity Ratio.** An insurer engaged in general business is required to maintain the value of its relevant assets at not less than 75% of the amount of its relevant liabilities (“Minimum Liquidity Ratio”).

**Eligible Capital.** To enable the BMA to better assess the quality of an insurer’s capital resources, Class 3A, Class 3B and Class 4 insurers must maintain available capital in accordance with a “three tiered capital regime”. All capital instruments are classified as either basic or ancillary capital, which in turn are classified into one of three tiers (Tier 1, Tier 2 and Tier 3) based on their “loss absorbency” characteristics (the “Tiered Capital Requirements”). Eligibility limits are then applied to each tier in determining the amounts eligible to cover regulatory capital requirement levels. The highest capital is classified as Tier 1 capital and lesser quality capital is classified as either Tier 2 capital or Tier 3 capital. Under this regime, not more than certain specified percentages of Tier 1, Tier 2 and Tier 3 capital may be used to satisfy the Class 3A, 3B and 4 insurers’ Minimum Solvency Margin and ECR requirements.

**Restrictions on Dividends, Distributions and Reductions of Capital.** Class 3A, Class 3B and Class 4 insurers are prohibited from declaring or paying any dividends if in breach of the required Minimum Solvency Margin or Minimum Liquidity Ratio (the “Relevant Margins”) or if the declaration or payment of such dividend would cause the insurer to fail to meet the Relevant Margins. Further, Class 3A, 3B and Class 4 insurers are prohibited from declaring or paying in any financial year dividends of more than 25% of its total statutory capital and surplus (as shown on its previous financial year’s statutory balance sheet) unless it files (at least seven days before payment of such dividends) with the BMA an affidavit stating that it will continue to meet its Relevant Margins. Class 3A, Class 3B and Class 4 insurers must obtain the BMA’s prior approval for a reduction by 15% or more of the total statutory capital as set forth

in its previous year's financial statements.

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These restrictions on declaring or paying dividends and distributions under the Insurance Act are in addition to the solvency requirements under the Companies Act which apply to all Bermuda companies.

**Fit and Proper Controllers.** The BMA maintains supervision over the controllers (as defined herein) of all Bermuda registered insurers. Currently, the Insurance Act states that no person shall become a controller of any description of a registered insurer unless the BMA has been served notice in writing stating that the person intends to become such a controller. A controller includes the managing director and chief executive of the registered insurer or its parent company; a 10%, 20%, 33% or 50% shareholder controller; and any person in accordance with whose directions or instructions the directors of the registered insurer or of its parent company are accustomed to act. In addition, all Bermuda insurers are also required to give the BMA written notice of the fact that a person has become, or ceased to be, a controller or officer of the registered insurer within 45 days of becoming aware of such fact. An officer in relation to a registered insurer includes a director, secretary, chief executive or senior executive by whatever name called.

**Material Change.** All registered insurers are required to give the BMA 30 days' notice of certain matters that are likely to be of material significance to the BMA in carrying out its supervisory function under the Insurance Act. The Insurance Act prescribes which matters require advance notice.

**Insurance Code of Conduct.** All Bermuda insurers are required to comply with the BMA's Insurance Code of Conduct, which establishes duties, requirements and standards to be complied with to ensure each insurer implements sound corporate governance, risk management and internal controls. Failure to comply with these requirements will be a factor taken into account by the BMA in determining whether an insurer is conducting its business in a sound and prudent manner under the Insurance Act.

**Special Purpose Insurer Reporting Requirements.** Unlike other (re)insurers, SPIs are fully funded to meet their (re)insurance obligations; therefore the application and supervision processes are streamlined to facilitate the transparent structure. Further, the BMA has the discretion to modify such insurer's accounting requirements under the Insurance Act. Like other (re)insurers, the principal representative of an SPI has a duty to inform the BMA in relation to solvency matters, where applicable. During 2016, new legislative requirements were introduced requiring SPIs to file annual statutory or modified financial returns via an electronic filing system. Under these requirements, SPIs are required to map GAAP financial statements to the electronic statutory forms and are required to provide information around ownership structure, assessment of risks, analyses of premium and details of segregated cells.

**Insurance Manager Reporting Requirements.** During 2016, the BMA undertook to enhance its oversight of insurance managers as part of the development of Bermuda's insurance regulatory framework. As part of this, the BMA introduced the Insurance Manager Code of Conduct and required insurance managers to file specific details via an Insurance Manager's Return. The Insurance Manager's Return requires, among other things, details around directors and officers of the insurance manager, the services provided by the entity, and details of the insurers managed by the insurance manager.

**Group Supervision.** Pursuant to the Insurance Act, the BMA acts as the group supervisor of the RenaissanceRe group of companies (the "RenaissanceRe Group") and it has designated Renaissance Reinsurance to be the "designated insurer" in respect of the RenaissanceRe Group. The designated insurer is required to ensure that the RenaissanceRe Group complies with the provisions of the Insurance Act pertaining to groups and all related group solvency and group supervision rules (together, the "Group Rules"). Under the Group Rules, the RenaissanceRe Group is required to annually prepare and submit to the BMA group GAAP financial statements, group statutory financial statements, a group capital and solvency return (including an EBS) and an FCR. An insurance group must ensure that the value of the insurance group's assets exceeds the amount of the insurance group's liabilities by the aggregate of: (i) the individual Minimum Solvency Margin of each qualifying member of the group controlled by the parent company; and (ii) the parent company's percentage shareholding in the member multiplied by the member's Minimum Solvency Margin, where the parent company exercises significant influence over a member of the group but does not control the member (the "Group Minimum Solvency Margin"). A member is a qualified member of the insurance group if it is subject to solvency requirements in the jurisdiction in which it is registered. Every insurance group is also required to submit an annual group actuarial opinion when filing its group capital and solvency return. The group is required to appoint an individual approved by the BMA to be the group actuary. The group actuary must provide an opinion on

the RenaissanceRe Group's technical provisions as recorded in the RenaissanceRe Group statutory EBS. Insurance groups are required to maintain available economic statutory capital and surplus to an amount that is equal to or exceeds the value

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of its group ECR, which is calculated at the end of its relevant year by reference to the BSCR model of the group (the “Group BSCR”) or an approved internal capital model provided that the group ECR shall at all times be an amount equal to or exceeding the Group Minimum Solvency Margin. The group ECR is being phased in over a period of six years, which commenced with the 2013 financial year end. For the 2016 financial year end the applicable group ECR is equivalent to 80% of the amount determined by the Group BSCR or an approved internal capital model. This requirement will increase by increments of 10% in each of the following two years until 100% of the amount determined by the Group BSCR or an approved internal capital model for the ECR is required for the 2018 financial year end. The BMA expects insurance groups to operate at or above a group TCL, which exceeds the group ECR. The TCL for insurance groups is set at 120% of its group ECR. In addition, under the Tiered Capital Requirements described above, not more than certain specified percentages of Tier 1, Tier 2 and Tier 3 capital may be used by an insurance group to satisfy the Group's Minimum Solvency Margin and group ECR requirements. Further, our Board of Directors has established solvency self assessment procedures for the RenaissanceRe Group that factor in all foreseeable material risks; Renaissance Reinsurance must ensure that the RenaissanceRe Group’s assets exceed the amount of the RenaissanceRe Group’s liabilities by the aggregate minimum margin of solvency of each qualifying member; and our Board of Directors has established and implements corporate governance policies and procedures designed to ensure they support the overall organizational strategy of the RenaissanceRe Group. In addition, the RenaissanceRe Group is required to prepare and submit to the BMA a quarterly financial return comprising unaudited consolidated group financial statements, a schedule of intra-group transactions and a schedule of risk concentrations. The BMA has certain powers of investigation and intervention relating to insurers and their holding companies, subsidiaries and other affiliates, which it may exercise in the interest of such insurer’s policyholders or if there is any risk of insolvency or of a breach of the Insurance Act or the insurer’s license conditions. The BMA may cancel an insurer’s registration on certain grounds specified in the Insurance Act.

Under the provisions of the Insurance Act, the BMA may, from time to time, conduct “on site” visits at the offices of insurers it regulates. Over the past several years, the BMA has conducted “on site” reviews in respect of our Bermuda-domiciled operating insurers.

**Income Taxes.** Currently, neither we nor our shareholders are required to pay Bermuda income or profits tax, withholding tax, capital gains tax, capital transfer tax, estate duty or inheritance tax in respect of our shares. We have obtained an assurance from the Minister of Finance of Bermuda under the Exempted Undertakings Tax Protection Act 1966 that, if Bermuda enacts legislation imposing any tax on profits, income, capital asset, gain or appreciation or any tax in the nature of estate duty or inheritance tax, such tax shall not be applicable to us, our operations or our shares, debentures or other obligations until March 31, 2035, except insofar as such tax applies to persons ordinarily resident in Bermuda or is payable by us in respect of real property owned or leased by us in Bermuda.

#### U.S. Regulation

**Admitted Company Regulation.** Renaissance Reinsurance U.S. is a Maryland domiciled insurer licensed in 26 states and the District of Columbia and qualified or certified as a reinsurer in 24 states. As a U.S. licensed and authorized insurer, Renaissance Reinsurance U.S. is subject to considerable regulation and supervision by state insurance regulators. The extent of regulation varies but generally has its source in statutes that delegate regulatory, supervisory and administrative authority to a department of insurance in each state. Among other things, state insurance departments regulate insurer solvency, authorized investments, loss and loss expense reserves and provisions for unearned premiums, and deposits of securities for the benefit of policyholders. State insurance departments also conduct periodic examinations of the affairs of authorized insurance companies and require the filing of annual and other reports relating to the financial condition of companies and other matters. The Maryland Insurance Administration, as Renaissance Reinsurance U.S.’s domestic regulator, is the primary financial regulator of Renaissance Reinsurance U.S. We are pursuing growth in many of lines of business written by Renaissance Reinsurance U.S., which may increase the impact of U.S. regulation on our business as a whole.

**Holding Company Regulation.** We are subject to the insurance holding company laws of Maryland, the domestic state of Renaissance Reinsurance U.S. These laws generally require Renaissance Reinsurance U.S. to file certain reports concerning its capital structure, ownership, financial condition and general business operations with the Maryland Insurance Administration. Generally, all affiliate transactions





involving Renaissance Reinsurance U.S. must be fair and, if material or of specified types, require prior notice and approval or non-disapproval by the Maryland Insurance Administration. Further, Maryland law places limitations on the amounts of dividends or distributions payable by Renaissance Reinsurance U.S. Payment of ordinary dividends by Renaissance Reinsurance U.S. requires notice to the Maryland Insurance Administration. Declaration of an extraordinary dividend, which must be paid out of earned surplus, generally requires thirty days' prior notice to and approval or non-disapproval of the Maryland Insurance Administration. An extraordinary dividend includes any dividend whose fair market value together with that of other dividends or distributions made within the preceding twelve months exceeds the lesser of (1) ten percent of the insurer's surplus as regards policyholders as of December 31 of the preceding year or (2) the insurer's net investment income, excluding realized capital gains (as determined under statutory accounting principles), for the twelve month period ending December 31 of the preceding year and pro rata distributions of any class of the insurer's own securities, plus any amounts of net investment income (subject to the foregoing exclusions), in the three calendar years prior to the preceding year which have not been distributed.

Maryland law also requires prior notice and Maryland Insurance Administration approval of acquisitions of control of a Maryland-domestic insurer or an entity directly or indirectly controlling a Maryland-domestic insurer, including its holding company. Any purchaser of 10% or more of the outstanding voting securities of an insurance company, its holding company or any other entity directly or indirectly controlling the insurance company is presumed to have acquired control, unless the presumption is rebutted. Therefore, any investor who intends to acquire 10% or more of RenaissanceRe's outstanding voting securities may need to comply with these laws and would be required to file notices and reports with the Maryland Insurance Administration before such acquisition.

Effective for 2014, Maryland adopted enterprise risk management and reporting obligations applicable to insurance holding company systems that are meant to protect the licensed companies from enterprise risk. These obligations include requiring an annual enterprise risk report by the ultimate controlling person identifying the material risks within the insurance holding company system that could pose enterprise risk to the licensed companies. We timely filed our enterprise risk reports with the Maryland Insurance Administration for 2015 and 2016.

Reinsurance Regulation. The insurance laws of each U.S. state regulate the sale of reinsurance to licensed ceding insurers by non-admitted alien reinsurers acting from locations outside the state. With some exceptions, the sale of insurance or reinsurance within a jurisdiction where the insurer is not admitted to do business is prohibited. Our Bermuda-domiciled insurance operations and joint ventures (principally Renaissance Reinsurance, DaVinci, Top Layer Re, RenaissanceRe Specialty U.S. and Upsilon RFO) are all admitted to transact insurance business in Bermuda and do not maintain an office or solicit, advertise, settle claims or conduct other insurance activities in any other jurisdiction where the conduct of such activities would require that any company be so admitted.

RenaissanceRe Underwriting Managers U.S. LLC is licensed by the Connecticut Department of Insurance as a reinsurance intermediary broker and is required to maintain its reinsurance intermediary broker license in force in order to conduct its reinsurance operations in Connecticut.

Although reinsurance contract terms and rates are generally not subject to regulation by state insurance authorities, a primary U.S. insurer ordinarily will enter into a reinsurance agreement only if it can obtain credit on its statutory financial statements for the reinsurance ceded. State insurance regulators permit U.S. ceding insurers to take credit for reinsurance ceded to non-admitted, non-U.S. (alien) reinsurers if the reinsurance contract contains certain minimum provisions and if the reinsurance obligations of the non-U.S. reinsurer are appropriately collateralized. Qualifying collateral may be established by an alien reinsurer exclusively for a single U.S. ceding company. Alternatively, an alien reinsurer that is accredited by a state may establish a multi-beneficiary trust with qualifying assets equal to its reinsurance obligations to all U.S. ceding insurers, plus a trustee surplus amount. Renaissance Reinsurance and DaVinci are each an accredited reinsurer in New York and Florida and have established multi-beneficiary trusts with a qualifying financial institution in New York for the benefit of their U.S. cedants.

States generally require alien reinsurers to provide collateral equal to one hundred percent of their reinsurance obligations to U.S. ceding insurers. However, thirty-two states have credit for reinsurance laws that permit U.S. ceding insurers to take full credit for reinsurance when a "certified" reinsurer posts reduced collateral amounts. Under these credit for reinsurance laws, qualifying alien reinsurers may reduce their



collateral for future reinsurance agreements based on a secure rating assigned by the U.S. insurance regulator. The secure rating is assigned by the state upon an assessment of the reinsurer's financial condition, financial strength ratings and other factors. In addition, the alien reinsurer must be domiciled in a jurisdiction that is "qualified" under state law. The National Association of Insurance Commissioners (the "NAIC") granted conditional qualified jurisdiction status to Bermuda effective January 1, 2014. Effective January 1, 2015, the NAIC approved its initial list of qualified jurisdictions, including Bermuda, and states that states that have these credit for reinsurance laws may accept such qualification in assessing reinsurers for certification. Florida has approved Renaissance Reinsurance and DaVinci for collateral reduction.

The Dodd-Frank Act also addresses states' extraterritorial regulation of credit for reinsurance and the solvency regulation of U.S. reinsurers. The Dodd-Frank Act prohibits a state in which a U.S. ceding insurer is licensed, but not domiciled, from denying credit for reinsurance if the ceding insurer's domestic state recognizes credit for reinsurance for the insurer's ceded risk and is a state accredited by the NAIC (or has substantially similar financial solvency requirements).

**NAIC Ratios.** The NAIC has established 13 financial ratios to assist state insurance departments in their oversight of the financial condition of licensed property and casualty insurance companies operating in their respective states. The NAIC's Insurance Regulatory Information System ("IRIS") calculates these ratios based on information submitted by insurers on an annual basis and shares the information with the applicable state insurance departments. Each ratio has an established "usual range" of results and assists state insurance departments in executing their statutory mandate to oversee the financial condition of insurance companies. A ratio result falling outside the usual range of IRIS ratios is not considered a failing result; rather unusual values are viewed as part of the regulatory early monitoring system. Furthermore, in some years, it may not be unusual for financially sound companies to have several ratios with results outside the usual ranges. An insurance company may fall outside of the usual range for one or more ratios because of specific transactions that are themselves immaterial.

**Federal Oversight and Other Government Intervention.** Government intervention in the insurance and reinsurance markets in the U.S. continues to evolve. Although U.S. state regulation is currently the primary form of regulation of insurance and reinsurance, Congress has considered proposals in several areas that may impact the industry, including the creation of an optional federal charter, repeal of the insurance company antitrust exemption from the McCarran Ferguson Act, and tax law changes, including changes to increase the taxation of reinsurance premiums paid to off-shore affiliates with respect to U.S. risks and comprehensive business tax reform legislation including border adjustments. We are unable to predict what other proposals will be made or adopted or the effect, if any, that such proposals would have on our operations and financial condition.

The Dodd-Frank Act established federal measures that impact the U.S. insurance business and preempt certain state insurance laws. For example, the Dodd-Frank Act created the Financial Stability Oversight Council (the "FSOC"), which is authorized to designate a nonbank financial company as "systemically significant" if its material financial distress could threaten the financial stability of the U.S. Since 2013, the FSOC has designated three insurance groups as systemically significant nonbank financial companies. The FSOC's potential recommendation of measures to address systemic risk in the insurance industry could affect our insurance and reinsurance operations as could a determination that we or our counterparties are systemically significant.

The Dodd-Frank Act also created the Federal Insurance Office (the "FIO"). The FIO does not have general supervisory or regulatory authority over the business of insurance, but it has preemption authority over state insurance laws that conflict with certain international agreements. The FIO is also authorized to monitor the U.S. insurance industry and identify potential regulatory gaps that could contribute to systemic risk and may recommend to the FSOC the designation of systemically important insurers. In addition, the FIO represents the U.S. at the International Association of Insurance Supervisors. The Dodd-Frank Act authorizes the U.S. Department of the Treasury ("Treasury") and the Office of the U.S. Trade Representative ("USTR") to enter into international agreements of mutual recognition regarding the prudential regulation of insurance or reinsurance (a "Covered Agreement"). The FIO is authorized to preempt state measures that (i) are inconsistent with a Covered Agreement and (ii) disfavor non-U.S. insurers subject to a Covered Agreement.

On January 13, 2017, Treasury and the USTR notified Congress that they had negotiated a Covered Agreement with the EU which establishes mutually binding prudential insurance standards and addresses three areas of insurance regulation: group supervision, reinsurance and the exchange of information

between insurance supervisors. This Covered Agreement could potentially allow credit to be taken for reinsurance ceded to a non-U.S. reinsurer domiciled in an EU jurisdiction, without the need for such reinsurer to post 100 percent qualified security or to be designated by the state as a “certified reinsurer.” In addition, and importantly for state regulation, it contemplates that in the U.S. it will be implemented by the states by incorporating its standards into state law. However, if state law is not amended to incorporate such standards and disadvantages an EU insurer, the FIO is authorized to preempt the offending state law. The Dodd-Frank Act does not provide any express statutory authority to the U.S. Congress to disapprove the negotiated Covered Agreement in its current form or require that any amendments be made to the Covered Agreement. However, Congress could exercise its authority to amend provisions of the Dodd-Frank Act governing the Covered Agreement’s entry into force. Further, the U.S. Congress has a variety of general authorities under which it could make implementation of the joint agreement by federal agencies difficult or impossible, including prohibiting the expenditure of federal funds for implementation. Furthermore, it is uncertain how the Trump administration will view the Covered Agreement, and they could choose to terminate it.

It is possible the FIO will, in the future, issue recommendations or take or initiate actions in respect of the reinsurance market that would, if enacted, impact our markets or our operations significantly, perhaps adversely. Over time, the Dodd-Frank Act or those agencies responsible for its enforcement may lay the foundation for some form of U.S. federal regulation of insurance.

Government intervention in the property insurance market, particularly with respect to natural catastrophe losses, one of our key markets, has occurred on the state and federal level over recent years. Most significantly, beginning in 2007, the state of Florida enhanced the authority of the Florida Hurricane Catastrophe Fund (the “FHCF”) to offer coverage at below-market rates and expanded the ability of the state-sponsored insurer, Citizens Property Insurance Corporation (“Citizens”), to compete with private insurance companies, and other companies that cede business to us. This legislation reduced the role of the private insurance and reinsurance markets in Florida, a key target market of ours. In succeeding years, Florida legislation allowed Citizens to increase rates and cut back support for the FHCF, which has supported, over this period, a relatively increased role for private insurers in Florida, a market in which we have established substantial market share. However, we cannot assure you that this increased role will continue or be maintained, or that adverse new legislation will not be passed.

See “Part I, Item 1A. Risk Factors” and “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Current Outlook, Legislative and Regulatory Update” for further information regarding recent legislative and regulatory proposals and the potential effects on our business and results of operations.

#### U.K. Regulation

##### Lloyd’s Regulation

General. The operations of RSML are subject to oversight by Lloyd’s, substantially effected through the Lloyd’s Franchise Board. RSML’s business plan for Syndicate 1458, including maximum underwriting capacity, requires annual approval by the Lloyd’s Franchise Board. The Lloyd’s Franchise Board may require changes to any business plan presented to it or additional capital to be provided to support the underwriting plan. Lloyd’s also imposes various charges and assessments on its members. If material changes in the business plan for Syndicate 1458 were required by the Lloyd’s Franchise Board, or if charges and assessments payable to Lloyd’s by RenaissanceRe CCL were to increase significantly, these events could have an adverse effect on the operations and financial results of RSML. We have deposited certain assets with Lloyd’s to support RenaissanceRe CCL’s underwriting business at Lloyd’s. Dividends from a Lloyd’s managing agent and a Lloyd’s corporate member can be declared and paid provided the relevant company has sufficient profits available for distribution.

By entering into a membership agreement with Lloyd’s, RenaissanceRe CCL has undertaken to comply with all Lloyd’s bye-laws and regulations as well as the provisions of the Lloyd’s Acts and the Financial Services and Markets Act 2000, as amended by the Financial Services Act 2012 (the “FSMA”).

Capital Requirements. The underwriting capacity of a member of Lloyd’s must be supported by providing a deposit (referred to as “Funds at Lloyd’s”) in the form of cash, securities or letters of credit in an amount determined under the capital adequacy regime of the U.K.’s Prudential Regulation Authority (the “PRA”).



The amount of such deposit is calculated for each member through the completion of an annual capital adequacy exercise. Under these requirements, Lloyd's must demonstrate that each member has sufficient assets to meet its underwriting liabilities plus a required solvency margin.

**Restrictions.** A Reinsurance to Close ("RITC") generally is put in place after the third year of operations of a syndicate year of account. On successful conclusion of a RITC, any profit from the syndicate's operations for that year of account can be remitted by the managing agent to the syndicate's members. If the syndicate's managing agency concludes that an appropriate RITC cannot be determined or negotiated on commercially acceptable terms in respect of a particular underwriting year, it must determine that the underwriting year remain open and be placed into run-off. During this period, there cannot be a release of the Funds at Lloyd's of a member of that syndicate without the consent of Lloyd's.

The financial security of the Lloyd's market as a whole is regularly assessed by three independent rating agencies (A.M. Best, S&P and Fitch). Syndicates at Lloyd's take their financial security rating from the rating of the Lloyd's Market. A satisfactory credit rating issued by an accredited rating agency is necessary for Lloyd's syndicates to be able to trade in certain classes of business at current levels. RSML and RenaissanceRe CCL would be adversely affected if Lloyd's current ratings were downgraded.

**Intervention Powers.** The Council of Lloyd's has wide discretionary powers to regulate members' underwriting at Lloyd's. It may, for instance, change the basis on which syndicate expenses are allocated or vary the Funds at Lloyd's requirements or the investment criteria applicable to the provision of Funds at Lloyd's. Exercising any of these powers might affect the return on the corporate member's participation in a given underwriting year. If a member of Lloyd's is unable to pay its debts to policyholders, the member may obtain financial assistance from the Lloyd's Central Fund, which in many respects acts as an equivalent to a state guaranty fund in the U.S. If Lloyd's determines that the Central Fund needs to be increased, it has the power to assess premium levies on current Lloyd's members. The Council of Lloyd's has discretion to call or assess up to 3% of a member's underwriting capacity in any one year as a Central Fund contribution.

#### PRA and FCA Regulation

The PRA currently has ultimate responsibility for the prudential supervision of the Lloyd's market and the Financial Conduct Authority (the "FCA") has responsibility for market conduct regulation. Both the PRA and FCA have substantial powers of intervention in relation to Lloyd's managing agents, such as RSML, including the power to remove an agent's authorization to manage Lloyd's syndicates. In addition, each year the PRA requires Lloyd's to satisfy an annual solvency test which measures whether Lloyd's has sufficient assets in the aggregate to meet all outstanding liabilities of its members, both current and run-off. If Lloyd's fails this test, the PRA may require the entire Lloyd's market to cease underwriting or individual Lloyd's members may be required to cease or reduce their underwriting.

Lloyd's as a whole is authorized by the PRA and regulated by both the FCA and the PRA. Lloyd's is required to implement certain rules prescribed by the PRA and by the FCA; such rules are to be implemented by Lloyd's pursuant to its powers under the Lloyd's Act 1982 relating to the operation of the Lloyd's market. Lloyd's prescribes, in respect of its managing agents and corporate members, certain minimum standards relating to their management and control, solvency and various other requirements. The PRA and the FCA directly monitor Lloyd's managing agents' compliance with the systems and controls prescribed by Lloyd's. If it appears to either the PRA or the FCA that either Lloyd's is not fulfilling its delegated regulatory responsibilities or that managing agents are not complying with the applicable regulatory rules and guidance, the PRA or the FCA may intervene at their discretion. Future regulatory changes or rulings by the PRA or FCA could impact RSML's business strategy or financial assumptions, possibly resulting in an adverse effect on RSML's financial condition and operating results.

**Change of Control.** The PRA and the FCA currently regulate the acquisition of control of any Lloyd's managing agent which is authorized under the FSMA. Any company or individual that, together with its or his associates, directly or indirectly acquires 10% or more of the shares in a Lloyd's managing agent or its parent company, or is entitled to exercise or control the exercise of 10% or more of the voting power in such Lloyd's managing agent or its parent company, would be considered to have acquired control for the purposes of the relevant legislation, as would a person who had significant influence over the management of such Lloyd's managing agent or its parent company by virtue of



their shareholding or voting power in either. A purchaser of 10% or more of RenaissanceRe's common shares or voting power would therefore be considered to have acquired control of RSML. Under the FSMA, any person or entity proposing to acquire

control over a Lloyd's managing agent must give prior notification to the PRA and the FCA of their or the entity's intention to do so. The PRA and FCA would then have 60 working days to consider the application to acquire control. Failure to make the relevant prior application could result in action being taken against RSML by the PRA or the FCA or both of them. Lloyd's approval is also required before any person can acquire control (using the same definition as for the PRA and FCA) of a Lloyd's managing agent or Lloyd's corporate member.

**Other Applicable Laws.** Lloyd's worldwide insurance and reinsurance business is subject to various regulations, laws, treaties and other applicable policies of the EU, as well as of each nation, state and locality in which it operates. Material changes in governmental requirements and laws could have an adverse effect on Lloyd's and market participants, including RSML and RenaissanceRe CCL.

#### Solvency II

Solvency II was adopted by the European Parliament in April of 2009 and came into effect on January 1, 2016. Solvency II represents a risk-based approach to insurance regulation and capital adequacy. Its principal goals are to improve the correlation between capital and risk, effect group supervision of insurance and reinsurance affiliates, implement a uniform capital adequacy structure for (re)insurers across the EU Member States, establish consistent corporate governance standards for insurance and reinsurance companies, and establish transparency through standard reporting of insurance operations. Under Solvency II, an insurer's or reinsurer's capital adequacy in relation to various insurance and business risks may be measured with an internal model developed by the insurer or reinsurer and approved for use by the Member State's regulator or pursuant to a standard formula developed by the EC. The PRA granted approval to Lloyd's internal model application in December 2015.

#### Singapore Regulation

Branches of Renaissance Reinsurance and DaVinci based in the Republic of Singapore (the "Singapore Branches") have each received a license to carry on insurance business as a general reinsurer. The activities of the Singapore Branches are primarily regulated by the Monetary Authority of Singapore pursuant to Singapore's Insurance Act. Additionally, the Singapore Branches are each regulated by the Accounting and Corporate Regulatory Authority (the "ACRA") as a foreign company pursuant to Singapore's Companies Act. Prior to the establishment of the Singapore Branches, Renaissance Reinsurance had maintained a representative office in Singapore commencing April 2012. We do not currently consider the activities and regulatory requirements of the Singapore Branches to be material to us.

Renaissance Services of Asia Pte. Ltd., our Singapore-based service company, was established as a private company limited by shares in Singapore on March 15, 2012 and is registered with the ACRA and subject to Singapore's Companies Act.

#### Ireland Regulation

Renaissance Reinsurance of Europe, incorporated under the laws of Ireland, provides coverage to insurers and reinsurers, primarily in Europe. Business is written both in Dublin and through a branch office in the U.K. Renaissance Reinsurance of Europe and its U.K. branch are regulated and supervised by the Central Bank of Ireland and are subject to the requirements of Solvency II. Renaissance Reinsurance of Europe is registered with the Companies Registration Office in Ireland and is subject to the Companies Act 2014. The Central Bank of Ireland adopts a risk-based framework to the supervision of regulated firms. Firms are rated according to the impact their failure would have on financial systems, the Irish economy and on the citizens of Ireland. Renaissance Reinsurance of Europe is currently considered by the Central Bank of Ireland to be a 'low impact' firm. We do not currently consider the regulatory requirements of Renaissance Reinsurance of Europe and its U.K. branch to be material to us.

Renaissance Services of Europe Ltd., our Dublin-based Irish service company, was established as a private company limited by shares in Ireland and is registered with the Companies Registration Office and subject to the Companies Act 2014.

## ENVIRONMENTAL AND CLIMATE CHANGE MATTERS

Our principal economic exposures arise from our coverages for natural disasters and catastrophes. We believe, and believe the consensus view of current scientific studies substantiates, that changes in climate conditions, primarily global temperatures and expected sea levels, are likely to increase the severity, and possibly the frequency, of weather related natural disasters and catastrophes relative to the historical experience over the past 100 years. We believe that this expected increase in severe weather, coupled with currently projected demographic trends in catastrophe-exposed regions, contributes to factors that will increase the average economic value of expected losses, increase the number of people exposed per year to natural disasters and in general exacerbate disaster risk, including risks to infrastructure, global supply chains and agricultural production. Accordingly, we expect an increase in claims, especially from properties located in coastal areas. We have taken measures to mitigate losses related to climate change through our underwriting process and by continuously monitoring and adjusting our risk management models.

In addition to the impacts that environmental incidents have on our business, there has been a proliferation of governmental and regulatory scrutiny related to climate change and greenhouse gases, which will also affect our business. Although most regulations related to climate change and greenhouse gases do not directly apply to our business, these regulations could indirectly impact our business.

## GLOSSARY OF SELECTED INSURANCE AND REINSURANCE TERMS

Accident year	Year of occurrence of a loss. Claim payments and reserves for claims and claim expenses are allocated to the year in which the loss occurred for losses occurring contracts and in the year the loss was reported for claims made contracts.
Acquisition expenses	The aggregate expenses incurred by a company for acquiring new business, including commissions, underwriting expenses, premium taxes and administrative expenses.
Additional case reserves	Additional case reserves represent management's estimate of reserves for claims and claim expenses that are allocated to specific contracts, less paid and reported losses by the client.
Attachment point	The dollar amount of loss (per occurrence or in the aggregate, as the case may be) above which excess of loss reinsurance becomes operative.
Bordereau	A report providing premium or loss data with respect to identified specific risks. This report is periodically furnished to a reinsurer by the ceding insurers or reinsurers.
Bound	A (re)insurance policy is considered bound, and the (re)insurer responsible for the risks of the policy, when both parties agree to the terms and conditions set forth in the policy.
Broker	An intermediary who negotiates contracts of insurance or reinsurance, receiving a commission for placement and other services rendered, between (1) a policy holder and a primary insurer, on behalf of the insured party, (2) a primary insurer and reinsurer, on behalf of the primary insurer, or (3) a reinsurer and a retrocessionaire, on behalf of the reinsurer.
Capacity	The percentage of surplus, or the dollar amount of exposure, that an insurer or reinsurer is willing or able to place at risk. Capacity may apply to a single risk, a program, a line of business or an entire book of business.
Case reserves	Capacity may be constrained by legal restrictions, corporate restrictions or indirect restrictions. Loss reserves, established with respect to specific, individual reported claims.

Casualty insurance or reinsurance	Insurance or reinsurance that is primarily concerned with the losses caused by injuries to third persons and their property (in other words, persons other than the policyholder) and the legal liability imposed on the insured resulting therefrom. Also referred to as liability insurance.
Catastrophe	A severe loss, typically involving multiple claimants. Common perils include earthquakes, hurricanes, hailstorms, severe winter weather, floods, fires, tornadoes, explosions and other natural or man-made disasters. Catastrophe losses may also arise from acts of war, acts of terrorism and political instability.
Catastrophe excess of loss reinsurance	A form of excess of loss reinsurance that, subject to a specified limit, indemnifies the ceding company for the amount of loss in excess of a specified retention with respect to an accumulation of losses resulting from a “catastrophe.”
Catastrophe-linked securities; cat-linked securities	Cat-linked securities are generally privately placed fixed income securities where all or a portion of the repayment of the principal is linked to catastrophic events. This includes securities where the repayment is linked to the occurrence and/or size of, for example, one or more hurricanes or earthquakes, or insured industry losses associated with these catastrophic events.
Cede; cedant; ceding company	When a party reinsures its liability with another, it “cedes” business and is referred to as the “cedant” or “ceding company.”
Claim	Request by an insured or reinsured for indemnification by an insurance company or a reinsurance company for losses incurred from an insured peril or event.
Claims made contracts	Contracts that cover claims for losses occurring during a specified period that are reported during the term of the contract.
Claims and claim expense ratio, net	The ratio of net claims and claim expenses to net premiums earned determined in accordance with either statutory accounting principles or GAAP.
Claim reserves	Liabilities established by insurers and reinsurers to reflect the estimated costs of claim payments and the related expenses that the insurer or reinsurer will ultimately be required to pay in respect of insurance or reinsurance policies it has issued. Claims reserves consist of case reserves, established with respect to individual reported claims, additional case reserves and “IBNR” reserves. For reinsurers, loss expense reserves are generally not significant because substantially all of the loss expenses associated with particular claims are incurred by the primary insurer and reported to reinsurers as losses.
Combined ratio	The combined ratio is the sum of the net claims and claim expense ratio and the underwriting expense ratio. A combined ratio below 100% generally indicates profitable underwriting prior to the consideration of investment income. A combined ratio over 100% generally indicates unprofitable underwriting prior to the consideration of investment income.
Decadal	Refers to events occurring over a 10-year period, such as an oscillation whose period is roughly 10 years.

**Delegated authority** A contractual arrangement between an insurer or reinsurer and an agent whereby the agent is authorized to bind insurance or reinsurance on behalf of the insurer or reinsurer. The authority is normally limited to a particular class or classes of business and a particular territory. The exercise of the authority to bind insurance or reinsurance is normally subject to underwriting guidelines and other restrictions such as maximum premium income. Under the delegated authority, the agent is responsible for issuing policy documentation, the collection of premium and may also be responsible for the settlement of claims.

**Excess and surplus lines reinsurance** Any type of coverage that cannot be placed with an insurer admitted to do business in a certain jurisdiction. Risks placed in excess and surplus lines markets are often substandard in respect to adverse loss experience, unusual, or unable to be placed in conventional markets due to a shortage of capacity.

**Excess of loss** Reinsurance or insurance that indemnifies the reinsured or insured against all or a specified portion of losses on underlying insurance policies in excess of a specified amount, which is called a “level” or “retention.” Also known as non-proportional reinsurance. Excess of loss reinsurance is written in layers. A reinsurer or group of reinsurers accepts a layer of coverage up to a specified amount. The total coverage purchased by the cedant is referred to as a “program” and will typically be placed with predetermined reinsurers in pre-negotiated layers. Any liability exceeding the outer limit of the program reverts to the ceding company, which also bears the credit risk of a reinsurer’s insolvency.

**Exclusions** Those risks, perils, or classes of insurance with respect to which the reinsurer will not pay loss or provide reinsurance, notwithstanding the other terms and conditions of reinsurance.

**Expense override** An amount paid to a ceding company in addition to the acquisition cost to compensate for overhead expenses.

**Frequency** The number of claims occurring during a given coverage period.

**Funds at Lloyd’s** Funds of an approved form that are lodged and held in trust at Lloyd’s as security for a member’s underwriting activities. They comprise the members’ deposit, personal reserve fund and special reserve fund and may be drawn down in the event that the member’s syndicate level premium trust funds are insufficient to cover its liabilities. The amount of the deposit is related to the member’s premium income limit and also the nature of the underwriting account.

**Generally Accepted Accounting Principles in the United States (“GAAP”)** Accounting principles as set forth in the statements of the Financial Accounting Standards Board (“FASB”) and related guidance, which are applicable in the circumstances as of the date in question.

**Gross premiums written** Total premiums for insurance written and assumed reinsurance during a given period.

**Incurred but not reported (“IBNR”)** Reserves for estimated losses that have been incurred by insureds and reinsureds but not yet reported to the insurer or reinsurer, including unknown future developments on losses that are known to the insurer or reinsurer.

**Insurance-linked securities** Financial instruments whose values are driven by (re)insurance loss events. Our investments in insurance-linked securities are generally linked to property losses due to natural catastrophes.

**International Financial Reporting Standards (“IFRS”)** Accounting principles, standards and interpretations as set forth in opinions of the International Accounting Standards Board which are applicable in the circumstances as of the date in question.

Layer	The interval between the retention or attachment point and the maximum limit of indemnity for which a reinsurer is responsible.
Line as limit.	The amount of excess of loss reinsurance protection provided to an insurer or another reinsurer, often referred to as limit.
Line of business	The general classification of insurance written by insurers and reinsurers, e.g., fire, allied lines, homeowners and surety, among others.
Lloyd's company)	Depending on the context, this term may refer to (a) the society of individual and corporate underwriting members that insure and reinsure risks as members of one or more syndicates (i.e., Lloyd's is not an insurance and reinsurance on behalf of their syndicate members (in this sense Lloyd's should be understood as a market place); or (c) the Corporation of Lloyd's which regulates and provides support services to the Lloyd's market.
Loss; losses	An occurrence that is the basis for submission and/or payment of a claim. Whether losses are covered, limited or excluded from coverage is dependent on the terms of the policy.
Loss reserve	For an individual loss, an estimate of the amount the insurer expects to pay for the reported claim. For total losses, estimates of expected payments for reported and unreported claims. These may include amounts for claims expenses.
Managing agent	An underwriting agent which has permission from Lloyd's to manage a syndicate and carry on underwriting and other functions for a member.
Net claims and claim expenses	The expenses of settling claims, net of recoveries, including legal and other fees and the portion of general expenses allocated to claim settlement costs (also known as claim adjustment expenses or loss adjustment expenses) plus losses incurred with respect to net claims.
Net claims and claim expense ratio	Net claims and claim expenses incurred expressed as a percentage of net earned premiums.
Net premiums earned	The portion of net premiums written during or prior to a given period that was actually recognized as income during such period.
Net premiums written	Gross premiums written for a given period less premiums ceded to reinsurers and retrocessionaires during such period.
Non-proportional reinsurance	See "Excess of loss."
Perils	This term refers to the causes of possible loss in the property field, such as fire, windstorm, collision, hail, etc. In the casualty field, the term "hazard" is more frequently used.
Profit commission	A provision found in some reinsurance agreements that provides for profit sharing. Parties agree to a formula for calculating profit, an allowance for the reinsurer's expenses, and the cedant's share of such profit after expenses.
Property insurance or reinsurance	Insurance or reinsurance that provides coverage to a person with an insurable interest in tangible property for that person's property loss, damage or loss of use.

Property per risk	Reinsurance on a treaty basis of individual property risks insured by a ceding company.
Proportional reinsurance	A generic term describing all forms of reinsurance in which the reinsurer shares a proportional part of the original premiums and losses of the reinsured. (Also known as pro rata reinsurance, quota share reinsurance or participating reinsurance.) In proportional reinsurance, the reinsurer generally pays the ceding company a ceding commission. The ceding commission generally is based on the ceding company's cost of acquiring the business being reinsured (including commissions, premium taxes, assessments and miscellaneous administrative expense) and also may include a profit factor. See also "Quota Share Reinsurance".
Quota share reinsurance	A form of proportional reinsurance in which the reinsurer assumes an agreed percentage of each insurance policy being reinsured and shares all premiums and losses accordingly with the reinsured. See also "Proportional Reinsurance".
Reinstatement premium	The premium charged for the restoration of the reinsurance limit of a catastrophe contract to its full amount after payment by the reinsurer of losses as a result of an occurrence.
Reinsurance	An arrangement in which an insurance company, the reinsurer, agrees to indemnify another insurance or reinsurance company, the ceding company, against all or a portion of the insurance or reinsurance risks underwritten by the ceding company under one or more policies. Reinsurance can provide a ceding company with several benefits, including a reduction in net liability on insurances and catastrophe protection from large or multiple losses. Reinsurance also provides a ceding company with additional underwriting capacity by permitting it to accept larger risks and write more business than would be possible without an equivalent increase in capital and surplus, and facilitates the maintenance of acceptable financial ratios by the ceding company. Reinsurance does not legally discharge the primary insurer from its liability with respect to its obligations to the insured.
Reinsurance to Close	Also referred to as a RITC, it is a contract to transfer the responsibility for discharging all the liabilities that attach to one year of account of a syndicate into a later year of account of the same or different syndicate in return for a premium.
Retention level	The amount or portion of risk that an insurer retains for its own account. Losses in excess of the retention level are paid by the reinsurer. In proportional treaties, the retention may be a percentage of the original policy's limit. In excess of loss business, the retention is a dollar amount of loss, a loss ratio or a percentage.
Retrocedant	A reinsurer who cedes all or a portion of its assumed insurance to another reinsurer.
Retrocessional reinsurance; Retrocessionaire	A transaction whereby a reinsurer cedes to another reinsurer, the retrocessionaire, all or part of the reinsurance that the first reinsurer has assumed. Retrocessional reinsurance does not legally discharge the ceding reinsurer from its liability with respect to its obligations to the reinsured. Reinsurance companies cede risks to retrocessionaires for reasons similar to those that cause primary insurers to purchase reinsurance: to reduce net liability on insurances, to protect against catastrophic losses, to stabilize financial ratios and to obtain additional underwriting capacity.
Risks	A term used to denote the physical units of property at risk or the object of insurance protection that are not perils or hazards. Also defined as chance of loss or uncertainty of loss.

Risks attaching contracts	Contracts that cover claims that arise on underlying insurance policies that incept during the term of the reinsurance contract.
Solvency II	A set of regulatory requirements that codify and harmonize the EU insurance and reinsurance regulation. Among other things, these requirements impact the amount of capital that EU insurance and reinsurance companies are required to hold. Solvency II came into effect on January 1, 2016.
Specialty lines	Lines of insurance and reinsurance that provide coverage for risks that are often unusual or difficult to place and do not fit the underwriting criteria of standard commercial products carriers.
Statutory accounting principles	Recording transactions and preparing financial statements in accordance with the rules and procedures prescribed or permitted by Bermuda, U.S. state insurance regulatory authorities including the NAIC and/or in accordance with Lloyd's specific principles, all of which generally reflect a liquidating, rather than going concern, concept of accounting.
Stop loss	A form of reinsurance under which the reinsurer pays some or all of a cedant's aggregate retained losses in excess of a predetermined dollar amount or in excess of a percentage of premium. An unprocessed application for (i) insurance coverage forwarded to a primary insurer by a prospective policyholder or by a broker on behalf of such prospective policyholder, (ii) reinsurance coverage forwarded to a reinsurer by a prospective ceding insurer or by a broker or intermediary on behalf of such prospective ceding insurer or (iii) retrocessional coverage forwarded to a retrocessionaire by a prospective ceding reinsurer or by a broker or intermediary on behalf of such prospective ceding reinsurer.
Syndicate	A member or group of members underwriting (re)insurance business at Lloyd's through the agency of a managing agent or substitute agent to which a syndicate number is assigned. A reinsurance agreement covering a book or class of business that is automatically accepted on a bulk basis by a reinsurer. A treaty contains common contract terms along with a specific risk definition, data on limit and retention, and provisions for premium and duration.
Underwriting	The insurer's or reinsurer's process of reviewing applications submitted for insurance coverage, deciding whether to accept all or part of the coverage requested and determining the applicable premiums.
Underwriting capacity	The maximum amount that an insurance company can underwrite. The limit is generally determined by a company's retained earnings and investment capital. Reinsurance serves to increase a company's underwriting capacity by reducing its exposure from particular risks.
Underwriting expense ratio	The ratio of the sum of the acquisition expenses and operational expenses to net premiums earned.
Underwriting expenses	The aggregate of policy acquisition costs, including commissions, and the portion of administrative, general and other expenses attributable to underwriting operations.
Unearned premium	The portion of premiums written representing the unexpired portions of the policies or contracts that the insurer or reinsurer has on its books as of a certain date.



## AVAILABLE INFORMATION

We maintain a website at [www.renre.com](http://www.renre.com). The information on our website is not incorporated by reference in this Form 10-K. We make available, free of charge through our website, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the U.S. Securities and Exchange Commission (the "SEC"). We also make available, free of charge from our website, our Audit Committee Charter, Compensation and Corporate Governance Committee Charter, Corporate Governance Guidelines, and Code of Ethics. Such information is also available in print for any shareholder who sends a request to RenaissanceRe Holdings Ltd., Attn: Office of the Corporate Secretary, P.O. Box HM 2527, Hamilton, HMGX, Bermuda. Reports filed with the SEC may also be viewed or obtained at the SEC Public Reference Room at 100 F Street, N.E., Washington, DC 20549. Information on the operation of the SEC Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The address of the SEC's website is [www.sec.gov](http://www.sec.gov).

### ITEM 1A. RISK FACTORS

Factors that could cause our actual results to differ materially from those in the forward-looking statements contained in this Form 10-K and other documents we file with the SEC include the following:

#### Risks Related to Our Company

Our exposure to catastrophic events could cause our financial results to vary significantly from one period to the next and could adversely impact our financial results.

We have a large overall exposure to natural and man-made disasters, such as earthquakes, hurricanes, tsunamis, winter storms, freezes, floods, fires, tornadoes, hailstorms, drought, cyber-risks and acts of terrorism. As a result, our operating results have historically been, and we expect will continue to be, significantly affected by low frequency and high severity loss events.

Claims from catastrophic events could cause substantial volatility in our quarterly and annual financial results and could materially adversely affect our financial condition, results of operations and cash flows. We believe that certain factors, including increases in the value and geographic concentration of insured property, particularly along coastal regions, the increasing risks associated with extreme weather events as a result of changes in climate conditions, and the effects of inflation, may continue to increase the number and severity of claims from catastrophic events in the future. Accordingly, unanticipated events could result in net negative impacts as compared to our competitors.

Historically, a relatively large percentage of our coverage exposures have been concentrated in the U.S. southeast, but due to the expected increase in severe weather events, there is the potential for significant exposures in other geographic areas in the future.

Our claims and claim expense reserves are subject to inherent uncertainties.

Our claims and claim expense reserves reflect our estimates, using actuarial and statistical projections at a given point in time, of our expectations of the ultimate settlement and administration costs of claims incurred.

We use actuarial and computer models (See "Part I, Item 1. Business, Underwriting and Enterprise Risk Management."), historical reinsurance and insurance industry loss statistics, and management's experience and judgment to assist in the establishment of appropriate claims and claim expense reserves. Our estimates and judgments are based on numerous factors, and may be revised as additional experience and other data become available and are reviewed, as new or improved methodologies are developed, as loss trends and claims inflation impact future payments, or as current laws or interpretations thereof change.

Due to the many assumptions and estimates involved in establishing reserves and the inherent uncertainty of modeling techniques, the reserving process is inherently uncertain. It is expected that some of our assumptions or estimates will prove to be inaccurate, and that our actual net claims and claim expenses paid and reported will differ, perhaps materially, from the reserve estimates reflected in our financial statements. Accordingly, we may understate the exposures we are assuming and our results of operations



and financial condition may be adversely impacted, perhaps significantly. Conversely, we may prove to be too conservative and contribute to factors which would impede our ability to grow in respect of new markets or perils or in connection with our current portfolio of coverages.

A decline in our financial strength ratings may adversely impact our business, perhaps materially so.

Financial strength ratings are used by ceding companies and reinsurance intermediaries to assess the financial strength and quality of reinsurers and insurers. Rating agencies evaluate us periodically and may downgrade or withdraw their financial strength ratings in the future if we do not continue to meet the criteria of the ratings previously assigned to us. In addition, rating agencies may make changes in their capital models and rating methodologies which could increase the amounts of capital required to support the ratings.

Negative ratings actions could adversely affect our ability to write new business. In addition, many reinsurance contracts contain provisions permitting cedants to cancel coverage pro rata if the reinsurer is downgraded below a certain rating level. We cannot predict whether a client would exercise this right or the effect a cancellation would have on our financial condition or future operations, but the effect could be material.

In addition, a ratings downgrade could adversely impact our ability to compete with other reinsurers and insurers, which could materially adversely affect our results of operations. For example, following a ratings downgrade we might lose customers to more highly rated competitors or retain a lower share of the business of our customers.

For the current ratings of certain of our subsidiaries and joint ventures and additional ratings information, refer to "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources, Ratings".

The trend towards increasingly frequent and severe climate events could result in underestimated exposures that have the potential to adversely impact our financial results.

Our most severe estimated economic exposures arise from our coverages for natural disasters and catastrophes. An increase in the severity and frequency of weather related natural disasters and catastrophes which we believe is likely to result from changes in climate conditions, coupled with currently projected demographic trends in catastrophe-exposed regions, contributes to factors which may increase the average economic value of expected losses, increase the number of people exposed per year to natural disasters and in general exacerbate disaster risk, including risks to infrastructure, global supply chains and agricultural production. Accordingly, we expect an increase in claims, especially from properties located in coastal areas.

A substantial portion of our coverages may be adversely impacted by climate change, and we cannot assure you that our risk assessments accurately reflect environmental and climate related risks. We cannot predict with certainty the frequency or severity of tropical cyclones or other catastrophes. Unanticipated environmental incidents could lead to additional insured losses that exceed our current estimates, resulting in disruptions to or adverse impacts on our business, the market, or our clients. Further, certain investments, such as catastrophe-linked securities and property catastrophe managed joint ventures related to hurricane coverage, or other assets in our investment portfolio, could also be adversely impacted by climate change.

U.S. tax reform proposals could reduce our access to capital, decrease demand for our products and services or otherwise adversely affect us.

We believe that the likelihood of the implementation of comprehensive business tax reform in the U.S. has increased recently. Certain proposals, such as the Tax Reform Task Force Blueprint dated June 24, 2016, which recommends moving to a consumption or destination-based tax system and provides for border adjustments taxing imports, could, if enacted, materially adversely impact the insurance and reinsurance industry and our results of operations. The enactment of legislation including border adjustments could substantially decrease the exportability of risk and reduce our access to capital and business as a whole. Such legislation may also result in increased prices for our products and services, which could cause a decrease in demand for these products and services due to limitations on the available resources of our clients. It is also possible that border adjustments could result in retaliatory actions by other countries.

There are many other comprehensive tax reform proposals being discussed in Congress and by the Trump administration, and we are currently unable to predict the final form that any legislation would take, or the ultimate impact on our business and results of operations.

Other changes and developments in U.S. tax law or regulations could have a material adverse impact on us, our shareholders or investors in our joint ventures or other entities we manage.

From time to time, Congress has considered legislation relating to the tax treatment of offshore insurance that would adversely affect reinsurance between affiliates and offshore insurance and reinsurance more generally. In addition, other legislation has been introduced in Congress intended to eliminate certain perceived tax advantages of companies (including insurance companies) that have legal domiciles outside the U.S. but have certain U.S. connections. To date, none of this legislation has been approved by Congress, and the IRS has not effected any formal action in respect of these practices. However, we can provide no assurance that similar legislation will not ultimately be adopted or that the IRS will not effect any such formal action in the future, and any such legislation or formal IRS action could have a material adverse impact on us our our shareholders.

Furthermore, over the last several years, members of Congress and the IRS have proposed legislation and regulations which, if adopted, would clarify when certain non-U.S. insurance companies would be considered a passive foreign investment company (a "PFIC") for U.S. federal income tax purposes, and it is anticipated that the IRS will issue amended proposed regulations in respect of these matters. We cannot predict the likelihood of the enactment or finalization of the proposed regulations and legislation or the scope, nature, or impact of the proposed regulations on us, should they be formally adopted or enacted. Accordingly, we cannot reliably estimate what the potential impact of any such changes could be to us, our sources of capital, our investors or the market generally. Among other things, it is possible that these IRS actions, or new legislation or rulemaking, could adversely impact the tax attributes to certain U.S. investors of participating in our joint ventures or other entities we manage, even inadvertently, in light of the perceived need for reforms.

Emerging claim and coverage issues, or other litigation, could adversely affect us.

Unanticipated developments in the law as well as changes in social conditions could potentially result in unexpected claims for coverage under our insurance and reinsurance contracts. These developments and changes may adversely affect us, perhaps materially so. For example, we could be subject to developments that impose additional coverage obligations on us beyond our underwriting intent, or to increases in the number or size of claims to which we are subject.

In addition, we believe our property results have been adversely impacted over recent periods by increasing primary claims level fraud and abuses, as well as other forms of social inflation, and that these trends may continue, particularly in certain U.S. jurisdictions in which we focus, including Florida and Texas. For example, in Florida, homeowners are increasingly assigning the benefit of their insurance recovery to third parties, typically related to a water loss claim but also with respect to other claims. This practice is referred to as an "assignment of benefits", and is characterized by an inflated size and number of claims, increased incidence of litigation, interference in the adjustment of claims, and the assertion of bad faith actions and one-way attorney fees. Assignments of benefits and related insurance fraud may directly affect us, potentially materially, through any policy we write in Florida, as well as by inflating the size of occurrences we cover under our reinsurance treaties and reducing the value of certain investments we have in Florida, including both debt and equity investments in domestic reinsurers.

With respect to our casualty and specialty reinsurance operations, these legal and social changes and their impact may not become apparent until some time after their occurrence. For example, we could be deemed liable for losses arising out of a matter, such as the potential for industry losses arising out of a pandemic illness, that we had not anticipated or had attempted to contractually exclude. Moreover, irrespective of the clarity and inclusiveness of policy language, we cannot assure you that a court or arbitration panel will enforce policy language or not issue a ruling adverse to us. Our exposure to these uncertainties could be exacerbated by the increased willingness of some market participants to dispute insurance and reinsurance contract and policy wording. Alternatively, potential efforts by us to exclude such exposures could, if successful, reduce the market's acceptance of our related products. The full effects of these and other unforeseen emerging claim and coverage issues are extremely hard to predict. As a result, the full extent of our liability under our coverages may not be known for many years after a contract is issued. Furthermore,



we expect that our exposure to this uncertainty may grow as our “long-tail” casualty businesses grow, because in these lines claims can typically be made for many years, making them more susceptible to these trends than our traditional catastrophe business, which is typically more “short-tail.” While we continually seek to improve the effectiveness of our contracts and claims capabilities, we may fail to mitigate our exposure to these growing uncertainties.

A continued soft reinsurance underwriting market would adversely affect our business and operating results.

In a soft reinsurance underwriting market, premium rates are stable or falling and coverage is readily available. In a hard reinsurance underwriting market, premium rates are increasing and less coverage is available. Leading global intermediaries and other sources have generally reported that the U.S. reinsurance market reflected a soft underwriting market during the last several years, with growing levels of industry wide capital held. This capital has been supplied principally by traditional market participants and increasingly by alternative capital providers. We believe that the reinsurance underwriting market will continue to be cyclical, with hard markets caused by withdrawal or use of excess capital, large or frequent loss events and other factors. However, it is possible that increased access of primary insurers to capital, new technologies and other factors may eliminate or significantly lessen the possibility of any future hard reinsurance underwriting market.

We depend on a few insurance and reinsurance brokers for a preponderance of our revenue, and any loss of business provided by them could adversely affect us.

We market our insurance and reinsurance products worldwide exclusively through a limited number of insurance and reinsurance brokers. As our business is heavily reliant on the use of a few brokers, the loss of a broker, through a merger, other business combination or otherwise, could result in the loss of a substantial portion of our business, which would have a material adverse effect on us. Our ability to market our products could decline as a result of the loss of the business provided by any of these brokers and it is possible that our premiums written would decrease.

Further, due to the concentration of our brokers, our brokers may have increasing power to dictate the terms and conditions of our arrangements with them, which could have a negative impact on our business.

We are exposed to counterparty credit risk, including with respect to reinsurance brokers and customers.

In accordance with industry practice, we pay virtually all amounts owed on claims under our policies to reinsurance brokers, and these brokers, in turn, pay these amounts over to the insurers that have reinsured a portion of their liabilities with us (we refer to these insurers as ceding insurers). Likewise, premiums due to us by ceding insurers are virtually all paid to brokers, who then pass such amounts on to us. In many jurisdictions, we have contractually agreed that if a broker were to fail to make a payment to a ceding insurer, we would remain liable to the ceding insurer for the deficiency. Conversely, in many jurisdictions, when the ceding insurer pays premiums for these policies to reinsurance brokers for payment over to us, these premiums are considered to have been paid by the cedants and the ceding insurer is longer liable to us for those amounts, whether or not we have actually received the premiums. Consequently, in connection with the settlement of reinsurance balances, we assume a substantial degree of credit risk associated with brokers around the world.

We are also exposed to the credit risk of our customers, who, pursuant to their contracts with us, frequently pay us over time. We cannot assure you that our premiums receivable or reinsurance recoverables, which are generally not collateralized, will be collected or that we will not be required to write down additional amounts in future periods. To the extent our customers or retrocedants become unable to pay future premiums, we would be required to recognize a downward adjustment to our premiums receivable or reinsurance recoverables, as applicable, in our financial statements.

As a result of the recent period of economic uncertainty, our consolidated credit risk, reflecting our counterparty dealings with agents, brokers, customers, retrocessionaires, capital providers, parties associated with our investment portfolio, and others has increased, perhaps materially so.

Weakness in business and economic conditions generally or specifically in the principal markets in which we do business could adversely affect our business and operating results.

Challenging economic conditions throughout the world could adversely affect our business and financial results. If economic conditions should weaken, the business environment in our principal markets would be adversely affected, which could adversely affect demand for the products sold by us or our customers. In addition, volatility in the U.S. and other securities markets may adversely affect our investment portfolio or the investment results of our clients, potentially impeding their operations or their capacity to invest in our products. Global financial markets and economic and geopolitical conditions are outside of our control and difficult to predict, being influenced by factors such as national and international political circumstances (including governmental instability, wars, terrorist acts or security operations), interest rates, market volatility, asset or market correlations, equity prices, availability of credit, inflation rates, economic uncertainty, changes in laws or regulations including as regards taxation, trade barriers, commodity prices, interest rates, currency exchange rates and controls. In addition, as discussed above, we believe our consolidated credit risk is likely to increase during an economic downturn.

U.S. taxing authorities could contend that one or more of our Bermuda subsidiaries is subject to U.S. corporate income tax, as a result of changes in law or regulations, or otherwise.

If the IRS were to contend successfully that one or more of our Bermuda subsidiaries is engaged in a trade or business in the U.S., such subsidiary would, to the extent not exempted from tax by the U.S.-Bermuda income tax treaty, be subject to U.S. corporate income tax on the portion of its net income treated as effectively connected with a U.S. trade or business, as well as the U.S. corporate branch profits tax. If we were ultimately held to be subject to taxation, our earnings would correspondingly decline.

In addition, benefits of the U.S.-Bermuda income tax treaty which may limit any tax to income attributable to a permanent establishment maintained by one or more of our Bermuda subsidiaries in the U.S. are only available to a subsidiary if more than 50% of its shares are beneficially owned, directly or indirectly, by individuals who are Bermuda residents or U.S. citizens or residents. Our Bermuda subsidiaries may not be able to continually satisfy, or establish to the IRS that they satisfy, this beneficial ownership test. Finally, it is unclear whether the U.S.-Bermuda income tax treaty (assuming satisfaction of the beneficial ownership test) applies to income other than premium income, such as investment income.

A decline in our investment performance could reduce our profitability and hinder our ability to pay claims promptly in accordance with our strategy.

We have historically derived a meaningful portion of our income from our invested assets, which are comprised of, among other things, fixed maturity securities, such as bonds, asset-backed securities, mortgage-backed securities, equity securities, and investments in private equity partnerships, bank loan funds and hedge funds. Accordingly, our financial results are subject to a variety of investment risks, including risks relating to general economic conditions, inflation, market volatility, interest rate fluctuations, foreign currency risk, liquidity risk and credit and default risk. Additionally, with respect to certain of our investments, we are subject to pre-payment or reinvestment risk.

The market value of our fixed maturity investments is subject to fluctuation depending on changes in various factors, including prevailing interest rates and widening credit spreads. Increases in interest rates could cause the market value of our investment portfolio to decrease, perhaps substantially. Conversely, a decline in interest rates could reduce our investment yield, which would reduce our overall profitability. Interest rates are highly sensitive to many factors, including governmental monetary policies, domestic and international economic and political conditions and other factors beyond our control. Any measures we take that are intended to manage the risks of operating in a changing interest rate environment may not effectively mitigate such interest rate sensitivity.

A portion of our investment portfolio is allocated to other classes of investments including equity securities and interests in alternative investment vehicles such as catastrophe bonds, private equity partnerships, senior secured bank loan funds and hedge funds. These other classes of investments are recorded on our consolidated balance sheet at fair value, which is generally established on the basis of the valuation criteria set forth in the governing documents of such investment vehicles. Such valuations may differ significantly from the values that would have been used had ready markets existed for the shares, partnership interests, notes or other securities representing interests in the relevant investment vehicles. We cannot assure you that, if we were forced to sell these assets, we would be able to sell them

for the prices at which we have

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recorded them, and we might be forced to sell them at significantly lower prices. Furthermore, our interests in many of the investment classes described above are subject to restrictions on redemptions and sales which limit our ability to liquidate these investments in the short term. These classes of investments expose us to market risks including interest rate risk, foreign currency risk, equity price risk and credit risk. The performance of these classes of investments is also dependent on the individual investment managers and the investment strategies. It is possible that the investment managers will leave and/or the investment strategies will become ineffective or that such managers will fail to follow our investment guidelines. Any of the foregoing could result in a material adverse change to our investment performance, and accordingly, adversely affect our financial results.

In addition to the foregoing, we may from time to time re-evaluate our investment approach and guidelines and explore investment opportunities in respect of other asset classes not previously discussed above, including, without limitation, by expanding our relatively small portfolio of direct investments in the equity markets. Any such investments could expose us to systemic and price volatility risk, interest rate risk and other market risks. Any investment in equity securities carries with it inherent volatility. We cannot assure you that such an investment will prove profitable and we could lose the value of our investment. Accordingly, any such investment could impact our financial results, perhaps materially, over both the short and the long term.

We could face losses from terrorism, political unrest and war.

We have exposure to losses resulting from acts of terrorism, political unrest and acts of war. The frequency of these events has increased in recent years and it is difficult to predict the occurrence of these events or to estimate the amount of loss an occurrence will generate. Accordingly, it is possible that actual losses from such acts will exceed our probable maximum loss estimate and that these acts will have a material adverse effect on us.

We closely monitor the amount and types of coverage we provide for terrorism risk under reinsurance and insurance treaties. If we think we can reasonably evaluate the risk of loss and charge an appropriate premium for such risk we will write some terrorism exposure on a stand-alone basis. We generally seek to exclude terrorism from non-terrorism treaties. If we cannot exclude terrorism, we evaluate the risk of loss and attempt to charge an appropriate premium for such risk. Even in cases where we have deliberately sought to exclude coverage, we may not be able to completely eliminate our exposure to terrorist acts.

The Terrorism Risk Insurance Act of 2002 was amended and extended by the Terrorism Risk Insurance Extension Act of 2005 and amended and extended again by the Terrorism Risk Insurance Program Reauthorization Act of 2007 (“TRIPRA”). TRIPRA expired on December 31, 2014 and was amended and renewed on January 12, 2015 for a six year period. TRIPRA provides a federal backstop to all U.S. based property and casualty insurers for insurance related losses resulting from any act of terrorism on U.S. soil or against certain U.S. air carriers, vessels or foreign missions. We benefit from TRIPRA as this protection generally inures to our benefit under our reinsurance treaties where terrorism is not excluded.

We are subject to cybersecurity risks and may incur increasing costs in an effort to minimize those risks.

We depend on the proper functioning and availability of our information technology platform, including communications and data processing systems and our proprietary pricing and exposure management system, in operating our business. We are also required to effect electronic transmissions with third parties including brokers, clients, vendors and others with whom we do business, and with our Board of Directors. We have established security measures, controls and procedures to safeguard our information technology systems and to prevent unauthorized access to such systems and any data processed or stored in such systems, and we periodically evaluate and test the adequacy of such systems, measures, controls and procedures and perform third-party risk assessments; however, there can be no guarantee that such systems, measures, controls and procedures will be effective, that we will be able to establish secure capabilities with all of third parties, or that third parties will have appropriate controls in place to protect the confidentiality of our information. Security breaches could expose us to a risk of loss or misuse of our information, litigation and potential liability.

In addition, cyber incidents that impact the availability, reliability, speed, accuracy or other proper functioning of our systems could have a significant impact on our operations, and potentially on our results. We protect our information systems with physical and electronic safeguards as well as backup systems



considered appropriate by management. However, it is not possible to protect against every potential power loss, telecommunications failure, cybersecurity attack or similar event that may arise. Moreover, the safeguards we use are subject to human implementation and maintenance and to other uncertainties.

We may not have the resources or technical sophistication to anticipate or prevent rapidly evolving types of cyberattacks. A significant cyber incident, including system failure, security breach, disruption by malware or other damage could interrupt or delay our operations, result in a violation of applicable privacy and other laws, damage our reputation, cause a loss of customers or give rise to monetary fines and other penalties, which could be significant.

While management is not aware of a cybersecurity incident that has had a material effect on our operations, there can be no assurances that a cyber incident that could have a material impact on us will not occur in the future.

Our disaster recovery and business continuity plans involve arrangements with our off-site, secure data centers. We cannot assure you that we will be able to access our systems from these facilities in the event that our primary systems are unavailable due to various scenarios, such as natural disasters or that we have prepared for every conceivable disaster or every scenario which might arise in respect of the disaster for which we have prepared, and cannot assure you our efforts in respect of disaster recovery will succeed, or will be sufficiently rapid to avoid harm to our business. Publicly reported instances of cyber security threats and incidents have increased over recent periods, and it is possible that cyber-related risks for us or the costs to us of complying with new or developing regulatory requirements will increase. In 2011, the SEC drafted informal staff-level guidance for public companies to use when considering whether to disclose cyber-attacks and their impact on a company's financial condition. In 2016, the New York Department of Finance promulgated new cybersecurity regulations that have the potential to impose pre-breach cybersecurity obligations with which we may be required to comply, and it is possible that similar laws and regulations may be enacted in the future in other jurisdictions. We also operate in a number of jurisdictions with strict data privacy and other related laws, which could be violated in the event of a significant cybersecurity incident, or by our personnel. Failure to comply with these obligations can give rise to monetary fines and other penalties, which could be significant.

See "Part I, Item 1. Business, Information Technology" for additional information related to information technology and cybersecurity.

We may from time to time modify our business and strategic plan, and these changes could adversely affect us and our financial condition.

We regularly evaluate our business plans and strategies, which often results in changes to our business plans and initiatives. Given the increasing importance of strategic execution in our industry, we are subject to increasing risks related to our ability to successfully implement our evolving plans and strategies, particularly as the pace of change in our industry continues to increase. Changing plans and strategies requires significant management time and effort, and may divert management's attention from our core and historically successful operations and competencies. Moreover, modifications we undertake to our operations may not be immediately reflected in our financial statements. Therefore, risks associated with implementing or changing our business strategies and initiatives, including risks related to developing or enhancing our operations, controls and other infrastructure, may not have an impact on our publicly reported results until many years after implementation. Our failure to carry out our business plans may have an adverse effect on our long-term results of operations and financial condition.

Our current business strategy focuses on writing reinsurance, with limited writing of primary insurance. Certain of our competitors have, in connection with consolidation in the insurance and reinsurance industries, recently increased the amount of primary insurance they are writing, both on an absolute and relative basis. There can be no assurance that our business strategy of focusing on writing reinsurance, with limited writing of primary insurance, will prove prudent as compared to the strategies of our competitors.

The loss of key senior members of management could adversely affect us.

Our success depends in substantial part upon our ability to attract and retain our senior officers. The loss of services of members of our senior management team and the uncertain transition of new members of our senior management team may strain our ability to execute our strategic initiatives. The loss of one or more of our senior officers could adversely impact our business, by, for example, making it more difficult to retain



customers, attract or maintain our capital support, or meet other needs of our business, which depend in part on the service of the departing officer. We may also encounter unforeseen difficulties associated with the transition of members of our senior management team to new or expanded roles necessary to execute our strategic and tactical plans from time to time.

In addition, our ability to execute our business strategy is dependent on our ability to attract and retain a staff of qualified underwriters and service personnel. The location of our global headquarters in Bermuda may impede our ability to recruit and retain highly skilled employees. Under Bermuda law, non-Bermudians (other than spouses of Bermudians, holders of Permanent Residents' Certificates and holders of Working Residents' Certificates) may not engage in any gainful occupation in Bermuda without a valid government work permit. Some members of our senior management are working in Bermuda under work permits that will expire over the next several years. The Bermuda government could refuse to extend these work permits, and no assurances can be given that any work permit will be issued or, if issued, renewed upon the expiration of the relevant term. If any of our senior officers or key contributors were not permitted to remain in Bermuda, or if we experienced delays or failures to obtain permits for a number of our professional staff, our operations could be disrupted and our financial performance could be adversely affected as a result.

The determination of impairments taken is highly subjective and could materially impact our financial position or results of operations.

The determination of impairments taken on our investments, investments in other ventures, goodwill and other intangible assets and loans varies by type of asset and is based upon our periodic evaluation and assessment of known and inherent risks associated with the respective asset class. Such evaluations and assessments are revised as conditions change and new information becomes available. Management updates its evaluations regularly and reflects impairments in operations as such evaluations are revised. There can be no assurance that our management has accurately assessed the level of impairments taken in our financial statements. Furthermore, additional impairments may need to be taken in the future, which could materially impact our financial position or results of operations. Historical trends may not be indicative of future impairments.

Retrocessional reinsurance may become unavailable on acceptable terms, or may not provide the coverage we intended to obtain.

As part of our risk management, we buy reinsurance for our own account, which is known as "retrocessional reinsurance." From time to time, market conditions have limited or prevented insurers and reinsurers from obtaining retrocessional reinsurance. Accordingly, we may not be able to obtain our desired amounts of retrocessional reinsurance. In addition, even if we are able to obtain such retrocessional reinsurance, we may not be able to negotiate favorable terms. This could limit the amount of business we are willing to write, or decrease the protection available to us as a result of large loss events.

When we purchase reinsurance or retrocessional reinsurance for our own account, the insolvency of any of our reinsurers, or inability or reluctance of any of our reinsurers to make timely payments to us under the terms of our reinsurance agreements could have a material adverse effect on us. Generally, we believe that the "willingness to pay" of some reinsurers and retrocessionaires is declining, so this risk may be more significant to us at present than at many times in the past. Complex coverage issues or coverage disputes may impede our ability to collect amounts we believe we are owed.

A large portion of our reinsurance protection is concentrated with a relatively small number of reinsurers. The risk of such concentration of retrocessional coverage may be increased by recent and future consolidation within the industry. We may be adversely impacted by inflation.

We monitor the risk that the principal markets in which we operate could experience increased inflationary conditions, which would, among other things, cause loss costs to increase, and impact the performance of our investment portfolio. The impact of inflation on loss costs could be more pronounced for those lines of business that are considered to be long tail in nature, as they require a relatively long period of time to finalize and settle claims. Changes in the level of inflation also result in an increased level of uncertainty in our estimation of loss reserves, particularly for long tail lines of business. The onset, duration and severity of an inflationary period cannot be estimated with precision.



We depend on the policies, procedures and expertise of ceding companies and delegated authority counterparties, who may fail to accurately assess the risks they underwrite, which exposes us to operational and financial risks.

Like other reinsurers, we do not separately evaluate each primary risk assumed under our reinsurance contracts or pursuant to our delegated authority business. Accordingly, we are heavily dependent on the original underwriting decisions made by our ceding companies and delegated authority counterparties and are therefore subject to the risk that our customers may not have adequately evaluated the risks to be reinsured, or that the premiums ceded to us will not adequately compensate us for the risks we assume, perhaps materially so. To the extent we continue to increase the relative amount of proportional coverages we offer, we will increase our aggregate exposure to risks of this nature. Our business is subject to operational risks, including systems or human failures.

We are subject to operational risks including fraud, employee errors, failure to document transactions properly or to obtain proper internal authorization, failure to comply with regulatory requirements or obligations under our agreements, failure of our service providers, such as investment custodians, actuaries, information technology providers, etc., to comply with our service agreements, or information technology failures. Losses from these risks may occur from time to time and may be significant.

We are exposed to risks in connection with our management of capital on behalf of investors in joint ventures or other entities we manage.

Our operating subsidiaries owe certain legal duties and obligations (including reporting, governance and allocation obligations) to third party investors and are subject to a variety of increasingly complex laws and regulations relating to the management of third party capital. Complying with these obligations, laws and regulations requires significant management time and attention. Although we continually monitor our compliance policies and procedures, faulty judgments, simple errors or mistakes, or the failure of our personnel to adhere to established policies and procedures, could result in our failure to comply with applicable obligations, laws or regulations, which could result in significant liabilities, penalties or other losses to us and seriously harm our business and results of operations.

In addition, in furtherance of our goal of matching well-structured risk with capital whose owners would find the risk-return trade-off attractive, we may invest capital in new and complex ventures with which we do not have a significant amount of experience, which may increase our exposure to legal, regulatory and reputational risks.

In addition, our third party capital providers may redeem their interests in our joint ventures, which could materially impact the financial condition of such joint ventures, and could in turn materially impact our financial condition and results of operations.

Certain of our joint venture capital providers provide significant capital investment and other forms of capital support in respect of our joint ventures. The loss, or alternation in a negative manner, of any of this capital support could be detrimental to our financial condition and results of operations. Moreover, we can provide no assurance that we will be able to attract and raise additional third party capital for our existing joint ventures or for potential new joint ventures and therefore we may forego existing and/or potentially attractive fee income and other income generating opportunities.

We may be adversely affected by foreign currency fluctuations.

We routinely transact business in currencies other than the U.S. dollar, our financial reporting currency. Moreover, we maintain a portion of our cash and investments in currencies other than the U.S. dollar. Although we generally seek to hedge significant non-U.S. dollar positions, we may, from time to time, experience losses resulting from fluctuations in the values of these foreign currencies, which could cause our consolidated earnings to decrease. In addition, failure to manage our foreign currency exposures could cause our results of operations to be more volatile. Adverse, unforeseen or rapidly shifting currency valuations in our key markets, such as the Eurozone jurisdictions or Japan, may magnify these risks over time.

We may require additional capital in the future, which may not be available or may only be available on unfavorable terms.

To the extent that our existing capital is insufficient to support our future operating requirements, we may need to raise additional funds through financings or limit our growth. Our operations are subject to significant volatility in capital due to our exposure to potentially significant catastrophic events. Any further equity or debt financings, or capacity needed for letters of credit, if available at all, may be on terms that are unfavorable to us. Our ability to raise such capital successfully would depend upon the facts and circumstances at the time, including our financial position and operating results, market conditions, and applicable legal issues. We are also exposed to the risk that the contingent capital facilities we have in place may not be available as expected. If we are unable to obtain adequate capital when needed, our business, results of operations and financial condition would be adversely affected.

In addition, we are exposed to the risk that we may be unable to raise new capital for our managed joint ventures and other private alternative investment vehicles, which would reduce our future fee income and market capacity and thus negatively affect our results of operations and financial condition.

The covenants in our debt agreements limit our financial and operational flexibility, which could have an adverse effect on our financial condition.

We have incurred indebtedness, and may incur additional indebtedness in the future. Our indebtedness primarily consists of publicly traded notes, letters of credit and a revolving credit facility. For more details on our indebtedness, see “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Capital Resources.”

The agreements governing our indebtedness contain covenants that limit our ability and the ability of certain of our subsidiaries to borrow money, make particular types of investments or other restricted payments, sell or place a lien on our or their respective assets, merge or consolidate. Certain of these agreements also require us or our subsidiaries to maintain specific financial ratios. If we or our subsidiaries fail to comply with these covenants or meet these financial ratios, the noteholders or the lenders could declare a default and demand immediate repayment of all amounts owed to them or, where applicable, cancel their commitments to lend or issue letters of credit or, where the reimbursement obligations are secured, require us to pledge additional or a different type of collateral.

The regulatory systems under which we operate and potential changes thereto could restrict our ability to operate, increase our costs, or otherwise adversely impact us.

Certain of our operating subsidiaries are not licensed or admitted in any jurisdiction except Bermuda, conduct business only from their principal offices in Bermuda and do not maintain offices in the U.S. The insurance and reinsurance regulatory framework continues to be subject to increased scrutiny in many jurisdictions, including the U.S. and Europe. If our Bermuda insurance or reinsurance operations become subject to the insurance laws of any state in the U.S., jurisdictions in the EU, or elsewhere, we could face challenges to the future operations of these companies.

Moreover, we could be put at a competitive disadvantage in the future with respect to competitors that are licensed and admitted in U.S. jurisdictions. Among other things, jurisdictions in the U.S. do not permit insurance companies to take credit for reinsurance obtained from unlicensed or non-admitted insurers on their statutory financial statements unless security is posted. Our contracts generally require us to post a letter of credit or provide other security (e.g., through a multi-beneficiary reinsurance trust). In order to post these letters of credit, issuing banks generally require collateral. It is possible that the EU or other countries might adopt a similar regime in the future, or that U.S. or EU regulations could be altered in a way that treats Bermuda-based companies disparately. It is possible that individual jurisdiction or cross border regulatory developments could adversely differentiate Bermuda, the jurisdiction in which we are subject to group supervision, or could exclude Bermuda-based companies from benefits such as market access, mutual recognition or reciprocal rights made available to other jurisdictions, which could adversely impact us, perhaps significantly. Any such development, or our inability to post security in the form of letters of credit or trust funds when required, could significantly and negatively affect our operations.

We could be required to allocate considerable time and resources to comply with any new or additional regulatory requirements in any of the jurisdictions in which we operate, including Bermuda, Maryland and the U.K., and any such requirements could impact the operations of our insurance and/or non-insurance





subsidiaries, result in increased costs and burdens for us and impact our financial condition. In addition, we could be adversely affected if a regulatory authority believed we had failed to comply with applicable law or regulations. Our current or future business strategy could cause one or more of our currently unregulated subsidiaries to become subject to some form of regulation. Any failure to comply with applicable laws could result in the imposition of significant restrictions on our ability to do business, and could also result in fines and other sanctions, any or all of which could adversely affect our financial results and operations.

We face risks related to changes in Bermuda law and regulations, the political environment in Bermuda.

We are incorporated in Bermuda and many of our operating companies are domiciled in Bermuda. Therefore, our exposure to potential changes in Bermuda law and regulation that may have an adverse impact on our operations, such as the imposition of tax liability, increased regulatory supervision or changes in regulation is heightened. The Bermuda insurance and reinsurance regulatory framework recently has become subject to increased scrutiny in many jurisdictions, including in the U.S. and in various states within the U.S. We are unable to predict the future impact on our operations of changes in Bermuda laws and regulations to which we are or may become subject.

In addition, we are subject to changes in the political environment in Bermuda, which could make it difficult to operate in, or attract talent to, Bermuda. For example, Bermuda is a small jurisdiction and may be disadvantaged in participating in global or cross border regulatory matters as compared with larger jurisdictions such as the U.S. or the leading EU and Asian countries. In addition, Bermuda, which is currently an overseas territory of the U.K., may consider changes to its relationship with the U.K. in the future. These changes could adversely affect Bermuda or the international reinsurance market focused there, either of which could adversely impact us commercially.

Because we are a holding company, we are dependent on dividends and payments from our subsidiaries.

As a holding company with no direct operations, we rely on our investment income, cash dividends and other permitted payments from our subsidiaries to make principal and interest payments on our debt and to pay dividends to our shareholders. From time to time, we may not have sufficient liquid assets to meet these obligations. Regulatory restrictions on the payment of dividends under Bermuda law and various U.S. insurance regulations may limit the ability of our subsidiaries to pay dividends. If our subsidiaries are restricted from paying dividends to us, we may be unable to pay dividends to our shareholders or to repay our indebtedness.

Acquisitions or strategic investments we have made or may make could turn out to be unsuccessful.

As part of our strategy, we frequently monitor and analyze opportunities to acquire or make a strategic investment in new or other businesses we believe will not detract from our core operations. The negotiation of potential acquisitions or strategic investments as well as the integration of an acquired business or new personnel, could result in a substantial diversion of management resources.

Future acquisitions could likewise involve numerous additional risks such as potential losses from unanticipated litigation or levels of claims and inability to generate sufficient revenue to offset acquisition costs. As we pursue or consummate a strategic transaction or investment, we may value the acquired or funded company or operations incorrectly, fail to integrate the acquired operations appropriately into our own operations, fail to successfully manage our operations as our product and geographical diversity increases, expend unforeseen costs during the acquisition or integration process, or encounter other unanticipated risks or challenges. If we succeed in consummating a strategic investment, we may fail to value it accurately or divest it or otherwise realize the value which we originally invested or have subsequently reflected in our consolidated financial statements. Any failure by us to effectively limit such risks or implement our acquisitions or strategic investment strategies could have a material adverse effect on our business, financial condition or results of operations.

Some aspects of our corporate structure may discourage third party takeovers and other transactions or prevent the removal of our current board of directors and management.

Some provisions of our Amended and Restated Bye-Laws may discourage third parties from making unsolicited takeover bids or prevent the removal of our current board of directors and management. In particular, our Bye-Laws prohibit transfers of our capital shares if the transfer would result in a person owning or controlling shares that constitute 9.9% or more of any class or series of our shares. In addition, our Bye-Laws reduce the total voting power of any shareholder owning, directly or indirectly, beneficially or otherwise, more than 9.9% of our common shares to not more than 9.9% of the total voting power of our capital stock unless otherwise waived at the discretion of the Board. The primary purpose of these provisions is to reduce the likelihood we will be deemed a “controlled foreign corporation” within the meaning of the Internal Revenue Code for U.S. federal tax purposes. However, these provisions may also have the effect of deterring purchases of large blocks of our common shares or proposals to acquire us, even if our shareholders might deem these purchases or acquisition proposals to be in their best interests.

In addition, our Bye-Laws provide for, among other things:

- a classified Board, whose size is fixed and whose members may be removed by the shareholders only for cause upon a 66 2/3% vote;
- restrictions on the ability of shareholders to nominate persons to serve as directors, submit resolutions to a shareholder vote and requisition special general meetings;
- a large number of authorized but unissued shares which may be issued by the Board without further shareholder action; and
- a 66 2/3% shareholder vote to amend, repeal or adopt any provision inconsistent with several provisions of the Bye-Laws.

These Bye-Law provisions make it more difficult to acquire control of us by means of a tender offer, open market purchase, proxy contest or otherwise and could discourage a prospective acquirer from making a tender offer or otherwise attempting to obtain control of us. In addition, these Bye-Law provisions could prevent the removal of our current board of directors and management. To the extent these provisions discourage takeover attempts, they could deprive shareholders of opportunities to realize takeover premiums for their shares or could depress the market price of the shares.

Maryland law also requires prior notice and Maryland Insurance Administration approval of changes in control of a Maryland-domestic insurer or its holding company. Any purchaser of 10% or more of the outstanding voting securities of an insurance company or its holding company is presumed to have acquired control, unless the presumption is rebutted. Therefore, any investor who intends to acquire 10% or more of our outstanding voting securities would be required to file notices and reports with the Maryland Insurance Administration before such acquisition.

The PRA and FCA regulate the acquisition of control of RSML, our Lloyd’s managing agent, which is authorized under the FSMA. Any company or individual that, together with its or his associates, directly or indirectly acquires 10% or more of the shares in a Lloyd’s managing agent or its parent company, or is entitled to exercise or control the exercise of 10% or more of the voting power in such Lloyd’s managing agent or its parent company, would be considered to have acquired control for the purposes of the relevant legislation, as would a person who has significant influence over the management of such Lloyd’s managing agent or its parent company by virtue of its or his shareholding or voting power in either. Lloyd’s approval is also required before any person can acquire control (using the same definition as for the PRA and FCA) of a Lloyd’s managing agent or Lloyd’s corporate member.

Investors may have difficulty in serving process or enforcing judgments against us in the U.S.

We are a Bermuda company. In addition, certain of our officers and directors reside in countries outside the U.S. All or a substantial portion of our assets and the assets of these officers and directors are or may be located outside the U.S. Investors may have difficulty effecting service of process within the U.S. on our directors and officers who reside outside the U.S. or recovering against us or these directors and officers on judgments of U.S. courts based on civil liabilities provisions of the U.S. federal securities laws whether or not we appoint an agent in the U.S. to receive service of process.



### Risks Related to Our Industry

The reinsurance and insurance businesses are historically cyclical and the pricing and terms for our products may decline, which would affect our profitability.

The reinsurance and insurance industries have historically been cyclical, characterized by periods of decreasing prices followed by periods of increasing prices. Reinsurers have experienced significant fluctuations in their results of operations due to numerous factors, including the frequency and severity of catastrophic events, perceptions of risk, levels of capacity, general economic conditions and underwriting results of other insurers and reinsurers. All of these factors may contribute to price declines generally in the reinsurance and insurance industries. Following an increase in capital in our industry after the 2005 catastrophe events and the subsequent period of substantial dislocation in the financial markets, the reinsurance and insurance markets have experienced a prolonged period of generally softening markets.

Our catastrophe-exposed lines are affected significantly by volatile and unpredictable developments, including natural and man-made disasters. The occurrence, or nonoccurrence, of catastrophic events, the frequency and severity of which are inherently unpredictable, affects both industry results and consequently prevailing market prices of our products.

We expect premium rates and other terms and conditions of trade to vary in the future. If demand for our products falls or the supply of competing capacity rises, our prospects for potential growth, due in part to our disciplined approach to underwriting, may be adversely affected. In particular, we might lose existing customers or suffer a decline in business, which we might not regain when industry conditions improve.

Recent or future U.S. federal or state legislation may impact the private markets and decrease the demand for our property reinsurance products, which would adversely affect our business and results of operations.

Legislation adversely impacting the private markets could be enacted on a state, regional or federal level. In the past, federal bills have been proposed in Congress which would, if enacted, create a federal reinsurance backstop or guarantee mechanism for catastrophic risks, including those we currently insure and reinsure in the private markets. These measures were not enacted by Congress; however, new bills to create a federal catastrophe reinsurance program to back up state insurance or reinsurance programs, or to establish other similar or analogous funding mechanisms or structures, may be introduced. We believe that such legislation, if enacted, could contribute to growth, inception or alteration of state insurance entities in a manner that would be adverse to us and to market participants more generally. If enacted, bills of this nature would likely further erode the role of private market catastrophe reinsurers and could adversely impact our financial results, perhaps materially. Moreover, we believe that numerous modeled potential catastrophes could exceed the actual or politically acceptable bonded capacity of Citizens and of the FHCF. This could lead either to a severe dislocation or the necessity of federal intervention in the Florida market, either of which would adversely impact the private insurance and reinsurance industry.

In March 2014, Congress passed the “Homeowner Flood Insurance Affordability Act of 2014” (the “Grimm-Waters Act”), which we believe has had an adverse impact on near term prospects for increased U.S. private flood insurance demand, the stability of the National Flood Insurance Program (the “NFIP”) and the primary insurers that produce policies for the NFIP or offer private coverages, and it is possible that additional adverse legislation or rulemaking will be enacted at the federal or state level.

In 2007, the state of Florida enacted legislation to expand the FHCF’s provision of below-market rate reinsurance to up to \$28.0 billion per season and expanded the ability of Citizens to compete with private insurance companies and other companies that cede business to us, which reduced the role of the private insurance and reinsurance markets in Florida. Because we are one of the largest providers of catastrophe-exposed coverage globally and in Florida, the 2007 bill and the weakened financial position of Florida insurers may have a greater adverse impact on us than it would on other reinsurance market participants. In addition, it is possible that other regulatory or legislative changes that impact Florida could affect our ability to sell certain of our products and have a material adverse effect on our operations.

Other states, particularly those with Atlantic or Gulf Coast exposures or seismic exposures (such as California), may enact new or expanded legislation based on the 2007 Florida model or otherwise, that could further diminish aggregate private market demand for our products. See “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Current Outlook, Legislative and Regulatory Update” for further

information.

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Other political, regulatory and industry initiatives by state and international authorities could adversely affect our business.

The insurance and reinsurance regulatory framework is subject to heavy scrutiny by the U.S. and individual state governments, as well as an increasing number of international authorities, and we believe it is likely there will be increased regulatory intervention in our industry in the future. For example, the U.S. federal government has increased its scrutiny of the insurance regulatory framework in recent years (including as specifically addressed in the Dodd-Frank Act), and some state legislators have considered or enacted laws that will alter and likely increase state regulation of insurance and reinsurance companies and holding companies. Moreover, the NAIC, which is an association of the insurance commissioners of all 50 states and the District of Columbia, and state insurance regulators regularly reexamine existing laws and regulations. We could also be adversely affected by proposals or enacted legislation to expand the scope of coverage under existing policies for perils such as hurricanes or earthquakes or for a pandemic disease outbreak, mandate the terms of insurance and reinsurance policies, expand the scope of the FIO or establish a new federal insurance regulator, revise laws, regulations, or contracts under which we operate, disproportionately benefit the companies of one country over those of another or repeal or diminish the insurance company antitrust exemption from the McCarran Ferguson Act.

Due to this increased legislative and regulatory scrutiny of the reinsurance industry, our cost of compliance with applicable laws may increase, which could result in a decrease to both our profitability and the amount of time that our senior management allocates to running our day-to-day operations.

Further, as we continue to expand our business operations to different regions of the world outside of Bermuda, we are increasingly subject to new and additional regulations with respect to our operations, including, for example, laws relating to anti-corruption and anti-bribery, which have received increased scrutiny in recent years.

We face certain risks related to Solvency II.

The EU directive covering the capital adequacy, risk management and regulatory reporting for insurers, known as Solvency II, came into effect on January 1, 2016. We could be materially impacted by the implementation of Solvency II depending on the costs associated with implementation by each EU country, any increased capitalization requirements and any costs associated with adjustments to our operating structure. Solvency II could also materially impact us since Solvency II affects the calculation of the solvency of international groups which conduct reinsurance and insurance operations both inside and outside of the EU. Other risks include more complex and intensive regulatory reporting burdens and regulatory requirements that conflict with requirements in other jurisdictions, all of which may have a negative impact on our results of operations. In addition, we could be required to undertake a significant amount of additional work if compliance with the Solvency II regime came into question, which in turn may divert finite resources from other business related tasks.

Although Solvency II is now in force, uncertainty remains as to how the Solvency II regime will be enforced or amended and the effectiveness of the coordination and cooperation of information sharing among supervisory bodies and regulators and the effect, if any, these developments may have on our operations and financial condition. This uncertainty has increased as a result of the 2016 U.K. referendum vote to exit the EU (“Brexit”) at a yet to be determined date. Following the withdrawal of the U.K. from the EU, the U.K. would be free to determine its own regulatory regime though it is anticipated that the U.K. will seek to have its insurance regulatory regime deemed to be equivalent to Solvency II post Brexit. We cannot currently predict whether this will be the case or the impact on us if the future U.K. regulatory regime is not found to be equivalent to Solvency II.

Bermuda was granted full Solvency II equivalence in 2016, but the U.S. currently has only been granted provisional equivalence with regard to group solvency calculations (but not group supervision and reinsurance) for a period of 10 years. If the U.S./EU Covered Agreement does not take effect, the absence of Solvency II reinsurance equivalence for the U.S. could have an adverse impact on our operations because our U.S. reinsurance companies who provide reinsurance to cedants headquartered in the European Economic Area may be required to post collateral in respect of any such reinsurance.

We operate in a highly competitive environment.

The reinsurance industry is highly competitive. We compete, and will continue to compete, with major U.S. and non-U.S. insurers and reinsurers, including other Bermuda-based reinsurers. Many of our competitors have greater financial, marketing and management resources than we do. Historically, periods of increased capacity levels in our industry have led to increased competition and decreased prices for our products.

In recent years, hedge funds, pension funds, endowments, investment banks, investment managers, exchanges and other capital markets participants have been increasingly active in the reinsurance market and markets for related risks, either through the formation of reinsurance companies or the use of other financial products intended to compete with traditional reinsurance. We expect competition from these sources and others to continue to increase over time. It is possible that such new or alternative capital could cause reductions in prices of our products, or reduce the duration or amplitude of attractive portions of the historical market cycles. New entrants or existing competitors may attempt to replicate all or part of our business model and provide further competition in the markets in which we participate. Moreover, government-backed entities increasingly represent competition for the coverages we provide directly or for the business of our customers, reducing the potential amount of third party private protection our clients might need or desire. To the extent that industry pricing of our products does not meet our hurdle rate, we would generally expect to reduce our future underwriting activities, thus resulting in reduced premiums and a reduction in expected earnings. We are unable to predict the extent to which the foregoing or other new, proposed or potential initiatives may affect the demand for our products or the risks for which we seek to provide coverage.

Consolidation in the (re)insurance industry could adversely impact us.

The (re)insurance industry, including our competitors, customers and insurance and reinsurance brokers, has been consolidating. Should the market continue to consolidate, there can be no assurance we would remain a leading reinsurer. These consolidated client and competitor enterprises may try to use their enhanced market power to negotiate price reductions for our products and services and/or obtain a larger market share through increased line sizes. If competitive pressures reduce our prices, we would generally expect to reduce our future underwriting activities, resulting in reduced premiums and a reduction in expected earnings. As the insurance industry consolidates, competition for customers will become more intense and the importance of sourcing and properly servicing each customer will become greater. We could incur greater expenses relating to customer acquisition and retention, further reducing our operating margins. In addition, insurance companies that merge may be able to spread their risks across a consolidated, larger capital base so that they require less reinsurance. The number of companies offering retrocessional reinsurance may decline. Reinsurance intermediaries could also continue to consolidate, potentially adversely impacting our ability to access business and distribute our products. We could also experience more robust competition from larger, better capitalized competitors. Any of the foregoing could adversely affect our business or our results of operation.

Increasing barriers to free trade and the free flow of capital could adversely affect the reinsurance industry and our business.

Recent political initiatives to restrict free trade and close markets, such as Brexit and the Trump administration's decision to withdraw from the Trans-Pacific partnership, could adversely affect the reinsurance industry and our business. The reinsurance industry is disproportionately impacted by restraints on the free flow of capital and risk because the value it provides depends on our ability to globally diversify risk.

Internationally, restrictions on the writing of reinsurance by foreign companies and government intervention in the natural catastrophe market could reduce market opportunities for our customers and adversely impact us.

Internationally, many countries with fast growing economies, such as China and India, continue to impose significant restrictions on the writing of reinsurance by foreign companies. In addition, in the wake of recent large natural catastrophes, a number of proposals have been introduced to alter the financing of natural catastrophes in several of the markets in which we operate. For example, the Thailand government has announced it is studying proposals for a natural catastrophe fund, under which the government would provide coverage for natural disasters in excess of an industry retention and below a certain limit, after which private reinsurers would continue to participate. The government of the Philippines has announced





that it is considering similar proposals. Indonesia's financial services authority has announced a proposal to increase the amount of insurance business placed with domestic reinsurers. A range of proposals from varying stakeholders have been reported to have been made to alter the current regimes for insuring flood risk in the U.K., flood risk in Australia and earthquake risk in New Zealand. If these proposals are enacted and reduce market opportunities for our clients or for the reinsurance industry, we could be adversely impacted. See "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Current Outlook, Legislative and Regulatory Update" for further information.

The OECD and the EU may pursue measures that might increase our taxes and reduce our net income and increase our reporting requirements.

The OECD has published reports and launched a global dialog among member and non-member countries on measures to limit harmful tax competition. These measures are largely directed at counteracting the effects of jurisdictions perceived by the OECD to be tax havens or offering preferential tax regimes. The OECD has not listed Bermuda as an uncooperative tax haven jurisdiction because Bermuda has committed to eliminating harmful tax practices and to embracing international tax standards for transparency, exchange of information and the elimination of any aspects of the regimes for financial and other services that attract business with no substantial domestic activity. We are not able to predict what changes will arise from the commitment or whether such changes will subject us to additional taxes.

In addition, in 2015, the OECD published its final series of Base Erosion and Profit Shifting ("BEPS") reports related to its attempt to coordinate multilateral action on international tax rules. The proposed actions include an examination of the definition of a "permanent establishment" and the rules for attributing profit to a permanent establishment. One of these reports covers "country-by-country" reporting, which calls for the provision, at a country-specific level, of information such as affiliate and non-affiliate revenues, profit or loss before tax, income taxes paid and accrued, capital, number of employees and tangible assets. It is expected that some countries, including some EU countries, would deem a failure to implement country-by-country reporting to be sufficient rationale to place another country on a "black-list", thus potentially restricting in some way business between the two countries. Bermuda has agreed to implement country-by-country reporting in 2016 for 2017 reporting. The implementation and ongoing requirements of country-by-country reporting will require significant management time and resources. Although we believe Bermuda's agreement to implement country-by-country reporting has reduced the likelihood that Bermuda would appear on a "black-list", some uncertainty remains. Any changes in the tax law of an OECD member state in response to the BEPS reports and recommendations could subject us to additional taxes.

The vote by the U.K. to leave the EU could adversely affect our business.

As a result of Brexit, negotiations are expected to commence to determine the terms of the U.K.'s withdrawal from the EU and its future relationship with the EU. As a result, we face risks associated with the potential uncertainty and consequences that may follow Brexit, including with respect to volatility in financial markets, exchange rates and interest rates. These uncertainties could increase the volatility of, or reduce, our investment results in particular periods or over time. Brexit could adversely affect European or worldwide political, regulatory, economic or market conditions and could contribute to instability in global political institutions and regulatory agencies. Brexit could also lead to legal uncertainty and differing laws and regulations between the U.K., and the EU, and could impair or adversely affect the ability of the Lloyd's market, including Syndicate 1458, to transact business in EU countries, particularly in respect of primary or direct insurance business as to which we currently rely on the licensure afforded to syndicates at Lloyd's for access to EU markets. In addition, these uncertainties could affect the operations, strategic position or results of insurers or reinsurers on whom we ultimately rely to access underlying insured coverages. Any of these potential effects of Brexit, and others we cannot anticipate, could adversely affect our results of operations or financial condition.

Regulatory regimes and changes to accounting rules may adversely impact financial results irrespective of business operations.

Accounting standards and regulatory changes may require modifications to our accounting principles, both prospectively and for prior periods, and such changes could have an adverse impact on our financial results. Required modification of our existing principles, and new disclosure requirements, could have an impact on our results of

operations and increase our expenses in order to implement and comply with any new requirements.

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The preparation of our consolidated financial statements requires us to make many estimates and judgments. The preparation of consolidated financial statements requires us to make many estimates and judgments that affect the reported amounts of assets, liabilities (including claims and claim expense reserves), shareholders' equity, revenues and expenses, and related disclosures. On an ongoing basis, we evaluate our estimates, including those related to premiums written and earned, our net claims and claim expenses, investment valuations, income taxes and those estimates used in our risk transfer analysis for reinsurance transactions. We base our estimates on historical experience, where possible, and on various other assumptions we believe to be reasonable under the circumstances, which form the basis for our judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our judgments and estimates may not reflect our actual results. We utilize actuarial models as well as historical insurance industry loss development patterns to establish our claims and claim expense reserves. Actual claims and claim expenses paid may deviate, perhaps materially, from the estimates reflected in our financial statements. For more details on our estimates and judgments, see "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Critical Accounting Estimates."

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**ITEM 2. PROPERTIES**

We lease office space in Bermuda, which houses our executive offices and operations for our Property and Casualty and Specialty segments. Our U.S. based subsidiaries lease office space in a number of U.S. locations, including New York, New York, Stamford, Connecticut, Chicago, Illinois and Raleigh, North Carolina. We also lease office space in London, England (U.K.), principally for our Lloyd's underwriting platform, and in Dublin, Ireland and Singapore. While we believe that our current office space is sufficient for us to conduct our operations, we may expand into additional facilities and new locations to accommodate future growth. To date, the cost of acquiring and maintaining our office space has not been material to us as a whole.

**ITEM 3. LEGAL PROCEEDINGS**

We and our subsidiaries are subject to lawsuits and regulatory actions in the normal course of business that do not arise from or directly relate to claims on reinsurance treaties or contracts or direct surplus lines insurance policies. In our industry, business litigation may involve allegations of underwriting or claims-handling errors or misconduct, disputes relating to the scope of, or compliance with, the terms of delegated underwriting agreements, employment claims, regulatory actions or disputes arising from our business ventures. Our operating subsidiaries are subject to claims litigation involving, among other things, disputed interpretations of policy coverages. Generally, our direct surplus lines insurance operations are subject to greater frequency and diversity of claims and claims-related litigation than our reinsurance operations and, in some jurisdictions, may be subject to direct actions by allegedly injured persons or entities seeking damages from policyholders. These lawsuits involving or arising out of claims on policies issued by our subsidiaries, which are typical to the insurance industry in general and in the normal course of business, are considered in our loss and loss expense reserves which are discussed in its loss reserves discussion. In addition, we may from time to time engage in litigation or arbitration related to claims for payment in respect of ceded reinsurance, including disputes that challenge our ability to enforce our underwriting intent. Such matters could result, directly or indirectly, in providers of protection not meeting their obligations to us or not doing so on a timely basis. We may also be subject to other disputes from time to time, relating to operational or other matters distinct from insurance or reinsurance claims. Any litigation, arbitration or regulatory process contains an element of uncertainty, and, accordingly, the value of an exposure or a gain contingency related to a dispute is difficult to estimate. Currently, we believe that no individual litigation or arbitration to which we are presently a party is likely to have a material adverse effect on our financial condition, business or operations.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED SHAREHOLDER MATTERS AND ISSUER REPURCHASES OF EQUITY SECURITIES

MARKET INFORMATION AND NUMBER OF HOLDERS

Our common shares are listed on the NYSE under the symbol “RNR.”

The following table sets forth, for the periods indicated, the high and low prices per share of our common shares as reported in composite NYSE trading:

	Price Range of Common Shares	
	High	Low
2016		
First Quarter	\$ 120.59	\$ 107.47
Second Quarter	121.38	107.27
Third Quarter	122.97	114.34
Fourth Quarter	137.21	117.36
2015		
First Quarter	\$ 104.72	\$ 93.89
Second Quarter	105.96	99.20
Third Quarter	108.79	99.35
Fourth Quarter	116.10	104.78

On February 17, 2017, the last reported sale price for our common shares was \$146.04 per share and there were 125 holders of record of our common shares.

## PERFORMANCE GRAPH

The following graph compares the cumulative return on our common shares, including reinvestment of our dividends on our common shares, to such return for the S&P 500 Composite Stock Price Index (“S&P 500”) and S&P’s Property-Casualty Industry Group Stock Price Index (“S&P P&C”), for the five-year period commencing December 31, 2011 and ending December 31, 2016, assuming \$100 was invested on December 31, 2011. Each measurement point on the graph below represents the cumulative shareholder return as measured by the last sale price at the end of each calendar year during the period from January 1, 2012 through December 31, 2016. As depicted in the graph below, during this period, the cumulative return was (1) 94.5% on our common shares; (2) 98.1% for the S&P 500; and (3) 143.7% for the S&P P&C.

## COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN

### DIVIDEND POLICY

Since our initial public offering, we have paid dividends on our common shares every quarter and have increased our dividend each year. The Board of Directors declared regular quarterly dividends of \$0.31 per common share to shareholders of record on March 15, 2016, June 15, 2016, September 15, 2016 and December 15, 2016, respectively. The Board of Directors declared regular quarterly dividends of \$0.29 per common share to shareholders of record on March 13, June 15, September 15 and December 15, 2015, respectively. On February 22, 2017, RenaissanceRe’s Board of Directors approved an increased dividend of \$0.32 per common share, payable on March 31, 2017, to shareholders of record on March 15, 2017. The declaration and payment of dividends are subject to the discretion of the Board and depend on, among other things, our financial condition, general business conditions, legal, contractual and regulatory restrictions regarding the payment of dividends by us and our subsidiaries and other factors which the Board may in the future consider to be relevant.

The laws of the various jurisdictions in which we and our subsidiaries are organized restrict the ability of RenaissanceRe to pay dividends to its shareholders and of our subsidiaries to pay dividends to RenaissanceRe. Refer to “Part II, Item 1. Business, Regulation”, “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources, Financial Condition” and “Note 18. Statutory Requirements in our Notes to the Consolidated Financial Statements” for additional information.

#### ISSUER REPURCHASES OF EQUITY SECURITIES

Our share repurchase program may be effected from time to time, depending on market conditions and other factors, through open market purchases and privately negotiated transactions. On February 22, 2017 RenaissanceRe’s Board of Directors approved a renewal of the authorized share repurchase program to an aggregate amount of \$500.0 million. Unless terminated earlier by resolution of RenaissanceRe’s Board of Directors, the program will expire when we have repurchased the full value of the shares authorized. The table below details the repurchases that were made under the program during the three months ended December 31, 2016, and also includes other shares purchased, which represents withholdings from employees surrendered in respect of withholding tax obligations on the vesting of restricted stock or in lieu of cash payments for the exercise price of employee stock options.

	Total shares purchased		Other shares purchased		Shares purchased under repurchase program		Dollar amount still available under repurchase program (in millions)
	Shares purchased	Average price per share	Shares purchased	Average price per share	Shares purchased	Average price per share	
Beginning dollar amount available to be repurchased							\$ 500.0
October 1 - 31, 2016	—	\$—	—	\$ —	—	\$	—
November 1 - 30, 2016	3,122	\$130.19	3,122	\$ 130.19	—	\$	—
December 1 - 31, 2016	16,250	\$136.22	16,250	\$ 136.22	—	\$	—
Total	19,372	\$135.25	19,372	\$ 135.25	—	\$	—\$ 500.0

During the year ended December 31, 2016, we repurchased an aggregate of 2.7 million common shares in open market transactions at an aggregate cost of \$309.4 million and at an average share price of \$112.87. In the future, we may authorize additional purchase activities under the currently authorized share repurchase program, increase the amount authorized under the share repurchase program, or adopt additional trading plans.

Subsequent to December 31, 2016 and through the period ended February 17, 2017, we repurchased 281 thousand common shares in open market transactions at an aggregate cost of \$40.0 million and at an average share price of \$142.40.

## ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following tables set forth our selected consolidated financial data and other financial information at the end of and for each of the years in the five-year period ended December 31, 2016. The results of Platinum are included in our consolidated financial data from March 2, 2015. The selected consolidated financial data should be read in conjunction with our consolidated financial statements and related notes thereto and “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” of this Form 10-K.

Year ended December 31, (in thousands, except share and per share data and percentages)	2016	2015	2014	2013	2012	
<b>Statements of Operations Data:</b>						
Gross premiums written	\$2,374,576	\$2,011,310	\$1,550,572	\$1,605,412	\$1,551,591	
Net premiums written	1,535,312	1,416,183	1,068,236	1,203,947	1,102,657	
Net premiums earned	1,403,430	1,400,551	1,062,416	1,114,626	1,069,355	
Net investment income	181,726	152,567	124,316	208,028	165,725	
Net realized and unrealized gains (losses) on investments	141,328	(68,918 )	41,433	35,076	163,121	
Net claims and claim expenses incurred	530,831	448,238	197,947	171,287	325,211	
Acquisition expenses	289,323	238,592	144,476	125,501	113,542	
Operational expenses	197,749	219,112	190,639	191,105	179,151	
Underwriting income	385,527	494,609	529,354	626,733	451,451	
Net income	630,048	542,242	686,256	841,768	748,949	
Net income available to RenaissanceRe common shareholders	480,581	408,811	510,337	665,676	566,014	
Net income available to RenaissanceRe common shareholders per common share – diluted	11.43	9.28	12.60	14.87	11.23	
Dividends per common share	1.24	1.20	1.16	1.12	1.08	
Weighted average common shares outstanding – diluted	41,559	43,526	39,968	44,128	49,603	
Return on average common equity	11.0	% 9.8	% 14.9	% 20.5	% 17.7	%
Combined ratio	72.5	% 64.7	% 50.2	% 43.8	% 57.8	%
<b>At December 31, Balance Sheet Data:</b>						
Total investments	\$9,316,968	\$8,999,068	\$6,743,750	\$6,821,712	\$6,355,394	
Total assets	12,352,082	11,555,287	8,202,307	8,177,651	7,926,909	
Reserve for claims and claim expenses	2,848,294	2,767,045	1,412,510	1,563,730	1,879,377	
Unearned premiums	1,231,573	889,102	512,386	477,888	399,517	
Debt	948,663	960,495	248,279	247,950	347,620	
Capital leases	26,073	26,463	26,817	27,138	27,428	
Preference shares	400,000	400,000	400,000	400,000	400,000	
Total shareholders’ equity attributable to RenaissanceRe	4,866,577	4,732,184	3,865,715	3,904,384	3,503,065	
Common shares outstanding	41,187	43,701	38,442	43,646	45,542	
Book value per common share	\$108.45	\$99.13	\$90.15	\$80.29	\$68.14	
Accumulated dividends	16.72	15.48	14.28	13.12	12.00	
	\$125.17	\$114.61	\$104.43	\$93.41	\$80.14	



Book value per common share plus  
accumulated dividends

Change in book value per common share plus change in accumulated dividends	10.7	% 11.3	% 13.7	% 19.5	% 16.8	%
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## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following is a discussion and analysis of our results of operations for 2016, compared to 2015, and 2015, compared to 2014, respectively. The following also includes a discussion of our liquidity and capital resources at December 31, 2016. The results of Platinum are included in our results of operations from March 2, 2015. This discussion and analysis should be read in conjunction with the audited consolidated financial statements and notes thereto included in this filing. This filing contains forward-looking statements that involve risks and uncertainties. Actual results may differ materially from the results described or implied by these forward-looking statements. See "Note on Forward-Looking Statements."

### OVERVIEW

RenaissanceRe is a global provider of reinsurance and insurance. We aspire to be the world's best underwriter by matching well-structured risks with efficient sources of capital and our mission is to produce superior returns for our shareholders over the long term. We seek to accomplish these goals by being a trusted, long-term partner to our customers for assessing and managing risk, delivering responsive and innovative solutions, leveraging our core capabilities of risk assessment and information management, investing in these core capabilities in order to serve our customers across the cycles that have historically characterized our markets and keeping our promises. Our strategy focuses on superior risk selection, superior customer relationships and superior capital management. We provide value to our customers and joint venture partners in the form of financial security, innovative products, and responsive service. We are known as a leader in paying valid claims promptly. We principally measure our financial success through long-term growth in tangible book value per common share plus the change in accumulated dividends, which we believe is the most appropriate measure of our financial performance and in respect of which we believe we have delivered superior performance over time.

Our core products include property, casualty and specialty reinsurance and certain insurance products principally distributed through intermediaries, with whom we seek to cultivate strong long-term relationships. We believe we have been one of the world's leading providers of catastrophe reinsurance since our founding. In recent years, through the strategic execution of a number of initiatives, including organic growth and our acquisition of Platinum on March 2, 2015, we have expanded our casualty and specialty platforms and products and believe we are a leader in certain casualty and specialty lines of business. We have determined our business consists of the following reportable segments: (1) Property, which is comprised of catastrophe and other property reinsurance and insurance written on behalf of our operating subsidiaries and certain joint ventures managed by our ventures unit, and (2) Casualty and Specialty, which is comprised of casualty and specialty reinsurance and insurance written on behalf of our operating subsidiaries and certain joint ventures managed by our ventures unit.

To best serve our clients in the places they do business, we have operating subsidiaries, joint ventures and underwriting platforms around the world, including DaVinci, Renaissance Reinsurance, Top Layer Re, Fibonacci Re and Upsilon RFO in Bermuda, Renaissance Reinsurance U.S. in the U.S., and Syndicate 1458 in the U.K. In addition, we have a presence in Ireland and Singapore and from time to time explore opportunities in other jurisdictions. We write property and casualty and specialty reinsurance through our wholly owned operating subsidiaries, joint ventures and Syndicate 1458 and certain insurance products primarily through Syndicate 1458. Although each underwriting platform may write any or all of our classes of business, our Bermuda platform has traditionally written, and continues to write, the preponderance of our property business and our U.S. platform and Syndicate 1458 write a significant portion of our casualty and specialty business. Syndicate 1458 provides us with access to Lloyd's extensive distribution network and worldwide licenses and also writes business through delegated authority arrangements. The underwriting results of our operating subsidiaries and underwriting platforms are included in our Property and Casualty and Specialty segment results as appropriate.

Since a meaningful portion of the reinsurance and insurance we write provides protection from damages relating to natural and man-made catastrophes, our results depend to a large extent on the frequency and severity of such catastrophic events, and the coverages we offer to customers affected by these events. We are exposed to significant losses from these catastrophic events and other exposures we cover. Accordingly, we expect a significant degree of volatility in our financial results and our financial results may vary significantly from quarter-to-quarter and from

year-to-year, based on the level of insured catastrophic

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losses occurring around the world. We view our increased exposure to casualty and specialty lines of business as an efficient use of capital given these risks are generally less correlated with our property lines of business. This has allowed us to bring additional capacity to our clients, across a wider range of product offerings, while continuing to be good stewards of our shareholders' capital. In the future, our casualty and specialty lines of business may represent a greater proportion of our premiums and claims and claim expenses.

We continually explore appropriate and efficient ways to address the risk needs of our clients. We have created and managed, and continue to manage, multiple capital vehicles and may create additional risk bearing vehicles in the future. As our product and geographical diversity increases, we may be exposed to new risks, uncertainties and sources of volatility.

Our revenues are principally derived from three sources: (1) net premiums earned from the reinsurance and insurance policies we sell; (2) net investment income and realized and unrealized gains from the investment of our capital funds and the investment of the cash we receive on the policies which we sell; and (3) fees and other income received from our joint ventures, advisory services and various other items.

Our expenses primarily consist of: (1) net claims and claim expenses incurred on the policies of reinsurance and insurance we sell; (2) acquisition costs which typically represent a percentage of the premiums we write; (3) operating expenses which primarily consist of personnel expenses, rent and other operating expenses; (4) corporate expenses which include certain executive, legal and consulting expenses, costs for research and development, transaction and integration-related expenses, and other miscellaneous costs, including those associated with operating as a publicly traded company; (5) redeemable noncontrolling interests, which represent the interests of third parties with respect to the net income of DaVinciRe and Medici; and (6) interest and dividend costs related to our debt and preference shares. We are also subject to taxes in certain jurisdictions in which we operate. Since the majority of our income is currently earned in Bermuda, which does not have a corporate income tax, the tax impact to our operations has historically been minimal, however, in the future, our net tax exposure may increase as our operations expand geographically, or as a result of adverse tax developments.

The underwriting results of an insurance or reinsurance company are discussed frequently by reference to its net claims and claim expense ratio, underwriting expense ratio, and combined ratio. The net claims and claim expense ratio is calculated by dividing net claims and claim expenses incurred by net premiums earned. The underwriting expense ratio is calculated by dividing underwriting expenses (acquisition expenses and operational expenses) by net premiums earned. The combined ratio is the sum of the net claims and claim expense ratio and the underwriting expense ratio. A combined ratio below 100% indicates profitable underwriting prior to the consideration of investment income. A combined ratio over 100% indicates unprofitable underwriting prior to the consideration of investment income. We also discuss our net claims and claim expense ratio on a current accident year basis and a prior accident years basis. The current accident year net claims and claim expense ratio is calculated by taking current accident year net claims and claim expenses incurred, divided by net premiums earned. The prior accident years net claims and claim expense ratio is calculated by taking prior accident years net claims and claim expenses incurred, divided by net premiums earned.

## SUMMARY OF CRITICAL ACCOUNTING ESTIMATES

### Claims and Claim Expense Reserves

#### General Description

We believe the most significant accounting judgment made by management is our estimate of claims and claim expense reserves. Claims and claim expense reserves represent estimates, including actuarial and statistical projections at a given point in time, of the ultimate settlement and administration costs for unpaid claims and claim expenses arising from the insurance and reinsurance contracts we sell. We establish our claims and claim expense reserves by taking claims reported to us by insureds and ceding companies, but which have not yet been paid ("case reserves"), adding estimates for the anticipated cost of claims incurred but not yet reported to us, or incurred but not enough reported to us (collectively referred to as "IBNR") and, if deemed necessary, adding costs for additional case reserves which represent our estimates for claims



related to specific contracts previously reported to us which we believe may not be adequately estimated by the client as of that date, or adequately covered in the application of IBNR.

On March 2, 2015 we acquired Platinum and the transaction was accounted for under the acquisition method of accounting in accordance with FASB ASC Topic Business Combinations. Total consideration paid was allocated among acquired assets and assumed liabilities based on their fair values, including Platinum's claims and claim expense reserves, which totaled \$1.4 billion at March 2, 2015, and consisted of \$179.7 million and \$1.2 billion included in our Property and Casualty and Specialty segments, respectively. These claims and claim expense reserves are subject to the reserving methodologies for each respective line of business as described below.

The following table summarizes our claims and claim expense reserves by line of business, allocated between case reserves, additional case reserves and IBNR:

At December 31, 2016	Case Reserves	Additional Case Reserves	IBNR	Total
(in thousands)				
Property	\$214,954	\$ 186,308	\$226,512	\$627,774
Casualty and Specialty	591,705	105,419	1,498,002	2,195,126
Other	6,935	—	18,459	25,394
Total	\$813,594	\$ 291,727	\$1,742,973	\$2,848,294

At December 31, 2015	Case Reserves	Additional Case Reserves	IBNR	Total
(in thousands)				
Property	\$298,687	\$ 165,838	\$241,676	\$706,201
Casualty and Specialty	553,574	129,866	1,349,726	2,033,166
Other	2,071	—	25,607	27,678
Total	\$854,332	\$ 295,704	\$1,617,009	\$2,767,045

Activity in the liability for unpaid claims and claim expenses is summarized as follows:

Year ended December 31,	2016	2015	2014
(in thousands)			
Net reserves as of January 1	\$2,632,519	\$1,345,816	\$1,462,705
Net incurred related to:			
Current year	694,957	610,685	341,745
Prior years	(164,126 )	(162,447 )	(143,798 )
Total net incurred	530,831	448,238	197,947
Net paid related to:			
Current year	83,015	95,747	39,830
Prior years	506,279	425,565	241,286
Total net paid	589,294	521,312	281,116
Amounts acquired (1)	—	1,394,117	—
Foreign exchange	(5,326 )	(34,340 )	(33,720 )
Net reserves as of December 31	2,568,730	2,632,519	1,345,816
Reinsurance recoverable as of December 31	279,564	134,526	66,694
Gross reserves as of December 31	\$2,848,294	\$2,767,045	\$1,412,510

(1) Represents the fair value of Platinum's reserve for claims and claim expenses and reinsurance recoverable acquired at March 2, 2015.



The following table details our prior year development by segment of its liability for unpaid claims and claim expenses:

Year ended December 31, (in thousands)	2016	2015	2014
Property	\$(104,876)	\$(93,786 )	\$(87,258 )
Casualty and Specialty	(58,140 )	(67,791 )	(50,403 )
Other	(1,110 )	(870 )	(6,137 )
Total favorable development of prior accident years net claims and claim expenses	\$(164,126)	\$(162,447)	\$(143,798)

Our reserving methodology for each line of business uses a loss reserving process that calculates a point estimate for our ultimate settlement and administration costs for claims and claim expenses. We do not calculate a range of estimates and do not discount any of our reserves for claims and claim expenses. We use this point estimate, along with paid claims and case reserves, to record our best estimate of additional case reserves and IBNR in our consolidated financial statements. Under GAAP, we are not permitted to establish estimates for catastrophe claims and claim expense reserves until an event occurs that gives rise to a loss.

Reserving for our reinsurance claims involves other uncertainties, such as the dependence on information from ceding companies, the time lag inherent in reporting information from the primary insurer to us or to our ceding companies, and differing reserving practices among ceding companies. The information received from ceding companies is typically in the form of bordereaux, broker notifications of loss and/or discussions with ceding companies or their brokers. This information may be received on a monthly, quarterly or transactional basis and normally includes paid claims and estimates of case reserves. We sometimes also receive an estimate or provision for IBNR. This information is often updated and adjusted from time to time during the loss settlement period as new data or facts in respect of initial claims, client accounts, industry or event trends may be reported or emerge in addition to changes in applicable statutory and case laws.

Our estimates of losses from large events are based on factors including currently available information derived from claims information from certain customers and brokers, industry assessments of losses from the events, proprietary models, and the terms and conditions of our contracts. The uncertainty of our estimates for large events is also impacted by the preliminary nature of the information available, the magnitude and relative infrequency of the events, the expected duration of the respective claims development period, inadequacies in the data provided to the relevant date by industry participants, the potential for further reporting lags or insufficiencies and, in certain cases, the form of the claims and legal issues under the relevant terms of insurance and reinsurance contracts. In addition, a significant portion of the net claims and claim expenses associated with certain large events can be concentrated with a few large clients and therefore the loss estimates for these events may vary significantly based on the claims experience of those clients. The contingent nature of business interruption and other exposures will also impact losses in a meaningful way, which we believe may give rise to significant complexity in respect of claims handling, claims adjustment and other coverage issues, over time. Given the magnitude of certain events, there can be meaningful uncertainty regarding total covered losses for the insurance industry and, accordingly, several of the key assumptions underlying our loss estimates. Loss reserve estimation in respect of our retrocessional contracts poses further challenges compared to directly assumed reinsurance. In addition, our actual net losses from these events may increase if our reinsurers or other obligors fail to meet their obligations.

Because of the inherent uncertainties discussed above, we have developed a reserving philosophy which attempts to incorporate prudent assumptions and estimates, and we have generally experienced favorable net development on prior accident years net claims and claim expenses in the last several years. However, there is no assurance that this favorable development on prior accident years net claims and claim expenses will occur in future periods.

Our reserving techniques, assumptions and processes differ among our Property and Casualty and Specialty segments. Refer to “Note 8. Reserve for Claims and Claim Expenses in our Notes to the Consolidated Financial Statements” for more information on the risks we insure and reinsure, the reserving





techniques, assumptions and processes we follow to estimate our claims and claim expense reserves, prior year development of the reserve for claims and claim expenses, analysis of our incurred and paid claims development and claims duration information for each of our Property and Casualty and Specialty segments.

#### Property Segment

##### Actual Results vs. Initial Estimates

As discussed above, the key assumption in estimating reserves for our Property segment is our estimate of incurred claims and claim expenses. The table below shows our initial estimates of incurred claims and claim expenses for each accident year and how these initial estimates have developed over time. The initial estimate of accident year incurred claims and claim expenses represents our estimate of the ultimate settlement and administration costs for claims incurred in our Property segment occurring during a particular accident year, and as reported as of December 31 of that year. The re-estimated incurred claims and claim expenses as of December 31 of subsequent years, represent our revised estimates as reported as of those dates. Our most recent estimates as reported at December 31, 2016 differ from our initial accident year estimates and demonstrate that our initial estimate of incurred claims and claim expenses are reasonably likely to vary from our most recent estimate, perhaps significantly. Changes in this estimate will be recorded in the period in which they occur. In accident years where our current estimates are lower than our initial estimates, we have experienced favorable development while accident years where our current estimates are higher than our original estimates indicates adverse development. The table is presented on a net basis and, therefore, includes the benefit of reinsurance recoverable. In addition, we have included historical incurred claims and claim expenses development information related to Platinum in the table below. For incurred accident year claims denominated in foreign currency, we have used the current year-end balance sheet foreign exchange rate for all periods provided, thereby eliminating the effects of changes in foreign currency translation rates from the incurred accident year claims development information included in the table below.

The following table details our Property segment incurred claims and claim expenses, net of reinsurance, as of December 31, 2016.

Incurred claims and claim expenses, net of reinsurance										
For the year ended December 31,										
(in thousands)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	\$387,866	\$309,228	\$250,975	\$246,823	\$234,120	\$213,228	\$206,168	\$199,792	\$198,666	\$199,383
2008	—	851,049	752,349	752,501	748,918	715,285	700,312	691,030	683,658	684,281
2009	—	—	218,607	163,124	144,352	138,131	134,013	134,722	134,059	134,359
2010	—	—	—	605,753	557,062	522,678	527,126	545,333	549,097	558,982
2011	—	—	—	—	1,230,463	1,153,960	1,103,441	1,056,822	1,036,122	1,007,368
2012	—	—	—	—	—	436,244	343,561	310,842	293,136	275,504
2013	—	—	—	—	—	—	223,542	192,681	170,629	149,197
2014	—	—	—	—	—	—	—	182,518	153,770	146,689
2015	—	—	—	—	—	—	—	—	224,669	192,593
2016	—	—	—	—	—	—	—	—	—	251,774
Total										\$3,600,130

Our initial and subsequent estimates of incurred claims and claim expenses are impacted by available information derived from claims information from certain customers and brokers, industry assessments of losses from the events, proprietary models, and the terms and conditions of our contracts. As described above, given the complexity in reserving for claims and claims expenses associated with property losses, and catastrophe excess of loss reinsurance contracts in particular, which make up a significant proportion of our Property segment, we have experienced development, both favorable and unfavorable, in any given accident year. For example, incurred claims and claim expenses associated with our 2007 accident year have developed favorably by \$188.5 million, which is 48.6% better

than our initial estimates of incurred claims and claim expenses for the 2007 accident year estimated as of December 31, 2007. This was driven

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in part by reductions in estimated ultimate claims and claim expenses associated with large catastrophe events including Windstorm Kyrill, flooding in the UK and U.S. PCS 21 Wildland Fire. In comparison, while net claims and claim expenses associated with the 2010 accident year initially developed favorably, it has experienced adverse development in the outer years. The adverse development in the outer years was driven by a deterioration in expected net claims and claim expenses associated with the 2010 New Zealand Earthquake as new and additional claims information was received. The 2010 New Zealand Earthquake has complex issues associated with establishing estimates of incurred claims and claim expenses, including the magnitude and relative infrequency of the event, the expected duration of the respective claims development period and inadequacies in the data provided by industry participants on the relevant date.

In accident years with a low level of insured catastrophe losses, our other property lines of business would contribute a greater proportion of our overall incurred claims and claim expenses within our Property segment, compared to years with a high level of insured catastrophe losses. Our other property lines of business tend to generate less volatility in future accident years and as such we would expect to see a slower more stable increase or decrease in estimated incurred net claims and claim expenses over time. However, certain of our other property contracts are exposed to catastrophe events, resulting in increased volatility of incurred claims and claim expenses driven by the occurrence of catastrophe events. In addition, volatility of the initial estimate associated with large catastrophe losses and the speed at which we settle claims can vary dramatically based on the type of event.

#### Sensitivity Analysis

The table below shows the impact on our gross reserve for claims and claim expenses, net income and shareholders' equity as of and for the year ended December 31, 2016 of a reasonable range of possible outcomes associated with our estimates of gross ultimate losses for claims and claim expenses incurred within our Property segment. The reasonable range of possible outcomes is based on a distribution of outcomes of our ultimate incurred claims and claim expenses from catastrophic events. In addition, we flex the loss ratios and development curves in our other property lines of business in a similar fashion to the sensitivity analysis performed for our Casualty and Specialty segment, discussed in greater detail below. In general, our reserve for claims and claim expenses for more recent events are subject to greater uncertainty and, therefore, greater variability and are likely to experience material changes from one period to the next. This is due to the uncertainty as to the size of the industry losses from the event, which contracts have been exposed to the catastrophic event and the magnitude of claims incurred by our clients. As our claims age, more information becomes available and we believe our estimates become more certain, although there is no assurance this trend will continue in the future. As a result, the sensitivity analysis below is based on the age of each accident year, our current estimated incurred claims and claim expenses for the catastrophic events occurring in each accident year, and a reasonable range of possible outcomes of our current estimates of claims and claim expenses by accident year. The impact on net income and shareholders' equity assumes no increase or decrease in reinsurance recoveries, loss related premium or redeemable noncontrolling interest – DaVinciRe.

#### Property Claims and Claim Expense Reserve Sensitivity Analysis

(in thousands, except percentages)	Reserve for Claims and Claim Expenses at December 31, 2016	\$ Impact of Change Reserve for Claims and Claim Expenses at December 31, 2016	% Impact of Change on Reserve for Claims and Claim Expenses at December 31, 2016	% Impact of Change on Net Income for the Year Ended December 31, 2016	% Impact of Change on Shareholders' Equity at December 31, 2016
Higher	\$ 718,570	\$ 90,796	3.2 %	(14.4 )%	(1.9 )%
Recorded	627,774	—	— %	— %	— %
Lower	\$ 553,511	\$ (74,263 )	(2.6 )%	11.8 %	1.5 %

We believe the changes we made to our estimated incurred claims and claim expenses represent a reasonable range of possible outcomes based on our experience to date and our future expectations. While we believe these are a reasonable range of possible outcomes, we do not believe the above sensitivity analysis should be considered an actuarial reserve range. In addition, the sensitivity analysis only reflects a

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reasonable range of possible outcomes in our underlying assumptions. It is possible that our estimated incurred claims and claim expenses could be significantly higher or lower than the sensitivity analysis described above. For example, we could be liable for events for which we have not estimated claims and claim expenses or for exposures we do not currently believe are covered under our policies. These changes could result in significantly larger changes to our estimated incurred claims and claim expenses, net income and shareholders' equity than those noted above, and could be recorded across multiple periods. We also caution that the above sensitivity analysis is not used by management in developing our reserve estimates and is also not used by management in managing the business.

#### Casualty and Specialty Segment

##### Actual Results vs. Initial Estimates

As discussed above, the key assumption in estimating reserves for our Casualty and Specialty segment is our estimate of incurred claims and claim expenses. Standard actuarial techniques are used to calculate the ultimate claims and claim expenses and two key assumptions include the estimated incurred claims and claim expenses ratio and the estimated loss reporting patterns. The table below shows our initial estimates of incurred claims and claim expenses for each accident year and how these initial estimates have developed over time. The initial estimate of accident year incurred claims and claim expenses represents our estimate of the ultimate settlement and administration costs for claims incurred in our Casualty and Specialty segment occurring during a particular accident year, and as reported as of December 31 of that year. The re-estimated incurred claims and claim expenses as of December 31 of subsequent years, represent our revised estimates as reported as of those dates. Our most recent estimates as reported at December 31, 2016 differ from our initial accident year estimates and demonstrate that our initial estimate of incurred claims and claim expenses are reasonably likely to vary from our most recent estimate, perhaps significantly. Changes in this estimate will be recorded in the period in which they occur. In accident years where our current estimates are lower than our initial estimates, we have experienced favorable development while accident years where our current estimates are higher than our original estimates indicates adverse development. The table is presented on a net basis and, therefore, includes the benefit of reinsurance recoverable. In addition, we have included historical incurred claims and claim expenses development information related to Platinum in the table below. For incurred accident year claims denominated in foreign currency, we have used the current year-end balance sheet foreign exchange rate for all periods provided, thereby eliminating the effects of changes in foreign currency translation rates from the incurred accident year claims development information included in the table below.

The following table details our Casualty and Specialty segment incurred claims and claim expenses, net of reinsurance, as of December 31, 2016.

(in thousands) Accident Year	Incurred claims and claim expenses, net of reinsurance									
	For the year ended December 31,									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	\$725,801	\$716,019	\$707,231	\$664,514	\$634,627	\$593,259	\$572,017	\$567,053	\$575,730	\$570,836
2008	—	618,202	676,892	656,247	641,364	601,770	594,084	581,268	578,390	563,225
2009	—	—	485,953	476,058	477,829	444,594	423,610	401,671	393,315	388,207
2010	—	—	—	382,650	389,209	375,894	340,397	318,995	305,827	304,147
2011	—	—	—	—	381,046	379,986	350,622	320,628	313,105	307,083
2012	—	—	—	—	—	426,089	423,973	394,474	386,310	376,260
2013	—	—	—	—	—	—	390,524	360,284	333,772	316,751
2014	—	—	—	—	—	—	—	475,440	459,590	454,267
2015	—	—	—	—	—	—	—	—	410,884	428,030
2016	—	—	—	—	—	—	—	—	—	423,604
Total										\$4,132,410

As each underwriting year has developed, our estimated expected incurred claims and claim expenses have changed. As an example, our re-estimated incurred claims and claim expenses decreased for the 2007 accident year from the initial estimates. This decrease was principally driven by actual reported and

paid net claims and claim expenses associated with the 2007 accident year coming in less than expected, which has resulted in a reduction in our expected ultimate claims and claim expense ratio for this accident year. In comparison, the 2015 accident year has developed adversely compared to our initial estimates of incurred claims and claim expenses and our current estimates are higher than our initial estimates. The increase in incurred claims and claim expenses for the 2015 accident year is due to the deterioration of a number of large losses in our general liability line of business.

The reserving methodology for our Casualty and Specialty segment is weighted more heavily to our initial estimate in the early periods immediately following the contracts' inception through the use of the expected loss ratio method. The expected loss ratio method estimates the incurred losses by multiplying the initial expected loss ratio by the earned premium. Under the expected loss ratio method, no reliance is placed on the development of claims and claim expenses. The determination of when reported losses are sufficient and credible to warrant selection of an ultimate loss ratio different from the initial expected loss ratio also requires judgment. We generally make adjustments for reported loss experience indicating unfavorable variances from the initial expected loss ratio sooner than reported loss experience indicating favorable variances as reporting of losses in excess of expectations tends to have greater credibility than an absence of or lower than expected level of reported losses. Over time, as a greater number of claims are reported and the credibility of reported losses improves, actuarial estimates of IBNR are typically based on the Bornhuetter-Ferguson actuarial method. The Bornhuetter-Ferguson method is weighted more heavily to claims and claim expenses development experience. If there is adverse development of prior accident years claims and claim expenses, we generally select the Bornhuetter-Ferguson method to ensure the claim experience is considered in the determination of our estimated claims and claim expenses with the associated business. If we believe we lack the claims experience in the early stages of development of a line of business, we may not select the Bornhuetter-Ferguson method until such time as we believe there is greater credibility in the expected level of reported losses. As prior accident years claims and claim expenses development experience becomes credible, the Bornhuetter-Ferguson method is generally selected which places greater weight on this experience as it develops. The Bornhuetter-Ferguson method estimates our expected ultimate claims and claim expenses by applying our initial estimated loss ratio to our undeveloped premium, and adding the reported losses to the estimate. The impact of these methodologies can be observed in the table above. For example, the 2007 accident year has experienced favorable development on prior accident years net claims and claim expenses for each subsequent calendar year-end. However, the favorable development experienced in the first few years was lower than the favorable development experienced in subsequent calendar years where the reserving methodology used changed to the Bornhuetter-Ferguson method as the experience became more credible.

#### Sensitivity Analysis

The table below quantifies the impact on our gross reserves for claims and claim expenses, net income and shareholders' equity as of and for the year ended December 31, 2016 of a reasonable range of possible outcomes in the actuarial assumptions used to estimate our December 31, 2016 claims and claim expense reserves within our Casualty and Specialty segment. The table quantifies a reasonable range of possible outcomes in our initial estimated gross ultimate claims and claim expense ratios and estimated loss reporting patterns. The changes to the initial estimated ultimate claims and claim expense ratios represent percentage increases or decreases to our current estimated ultimate claims and claim expense ratios. The change to the reporting patterns represent claims reporting that is both faster and slower than our current estimated claims reporting patterns. The impact on net income and shareholders' equity assumes no increase or decrease in reinsurance recoveries, loss related premium or redeemable noncontrolling interest – DaVinciRe.



## Casualty and Specialty Claims and Claim Expense Reserve Sensitivity Analysis

(in thousands, except percentages)	Estimated Loss Reporting Pattern	\$ Impact of Change on Reserves for Claims and Claim Expenses at December 31, 2016	% Impact of Change on Reserve for Claims and Claim Expenses at December 31, 2016	% Impact of Change on Net Income for the Year Ended December 31, 2016	% Impact of Change on Shareholders' Equity at December 31, 2016
Increase expected claims and claim expense ratio by 10%	Slower reporting	\$ 287,340	10.1 %	(45.6) %	(5.9) %
Increase expected claims and claim expense ratio by 10%	Expected reporting	149,800	5.3 %	(23.8) %	(3.1) %
Increase expected claims and claim expense ratio by 10%	Faster reporting	(5,401)	(0.2) %	0.9 %	0.1 %
Expected claims and claim expense ratio	Slower reporting	125,036	4.4 %	(19.8) %	(2.6) %
Expected claims and claim expense ratio	Expected reporting	—	— %	— %	— %
Expected claims and claim expense ratio	Faster reporting	(141,092)	(5.0) %	22.4 %	2.9 %
Decrease expected claims and claim expense ratio by 10%	Slower reporting	(37,268)	(1.3) %	5.9 %	0.8 %
Decrease expected claims and claim expense ratio by 10%	Expected reporting	(149,800)	(5.3) %	23.8 %	3.1 %
Decrease expected claims and claim expense ratio by 10%	Faster reporting	(277,198)	(9.7) %	44.0 %	5.7 %

We believe that ultimate claims and claim expense ratios 10.0 percentage points above or below our estimated assumptions constitute a reasonable range of possible outcomes based on our experience to date and our future expectations. In addition, we believe that the adjustments we made to speed up or slow down our estimated loss reporting patterns represent a reasonable range of possible outcomes. While we believe these are a reasonable range of possible outcomes, we do not believe the above sensitivity analysis should be considered an actuarial reserve range. In addition, the sensitivity analysis only reflects a reasonable range of possible outcomes in our underlying assumptions. It is possible that our initial estimated claims and claim expense ratios and loss reporting patterns could be significantly different from the sensitivity analysis described above. For example, we could be liable for events that we have not estimated reserves for, or for exposures we do not currently believe are covered under our contracts. These changes could result in significantly larger changes to reserves for claims and claim expenses, net income and shareholders' equity than those noted above, and could be recorded across multiple periods. We also caution that the above sensitivity analysis is not used by management in developing our reserve estimates and is also not used by management in managing the business.

## Other

Included in the Other category are the remnants of our former Bermuda-based insurance operations. These operations are in run-off and no new business is being underwritten. Our outstanding claims and claim expense reserves for these operations include insurance policies and proportional reinsurance with respect to risks including: 1) commercial property, which principally included catastrophe-exposed commercial property products; 2) commercial multi-line, which included commercial property and liability coverage, such as general liability, automobile liability and physical

damage, building and contents, professional liability and various specialty products; and 3) personal lines property, which principally included homeowners personal lines property coverage and catastrophe exposed personal lines property coverage and totaled \$25.4 million at December 31, 2016 (2015 - \$27.7 million).

Our reserving techniques and processes for our Casualty and Specialty segment also apply to our Other category. In addition, certain of our coverages may be impacted by natural and man-made catastrophes.

We estimate claim reserves for these losses after the event giving rise to these losses occurs, following a process that is similar to that used in our Property segment.

#### Premiums and Related Expenses

Premiums are recognized as income, net of any applicable reinsurance or retrocessional coverage purchased, over the terms of the related contracts and policies. Premiums written are based on contract and policy terms and include estimates based on information received from both insureds and ceding companies. Unearned premiums represents the portion of premiums written that relate to the unexpired terms of contracts and policies in force. Amounts are computed by pro rata methods based on statistical data or reports received from ceding companies. Reinstatement premiums are estimated after the occurrence of a significant loss and are recorded in accordance with the contract terms based upon paid losses and case reserves. Reinstatement premiums are earned when written.

Due to the nature of reinsurance, ceding companies routinely report and remit premiums to us subsequent to the contract coverage period. Consequently, premiums written and receivable include amounts reported by the ceding companies, supplemented by our estimates of premiums that are written but not reported. The estimation of written premiums may be affected by early cancellation, election of contract provisions for cut-off and return of unearned premiums or other contract disruptions. The time lag involved in the process of reporting premiums is shorter than the lag in reporting losses. In addition to estimating premiums written, we estimate the earned portion of premiums written which is subject to judgment and uncertainty. Any adjustments to written and earned premiums, and the related losses and acquisition expenses, are accounted for as changes in estimates and are reflected in the results of operations in the period in which they are made.

Lines of business that are similar in both the nature of their business and estimation process may be grouped for purposes of estimating premiums. Premiums are estimated based on ceding company estimates and our own judgment after considering factors such as: (1) the ceding company's historical premium versus projected premium, (2) the ceding company's history of providing accurate estimates, (3) anticipated changes in the marketplace and the ceding company's competitive position therein, (4) reported premiums to date and (5) the anticipated impact of proposed underwriting changes. Estimates of premiums written and earned are based on the selected ultimate premium estimate, the terms and conditions of the reinsurance contracts and the remaining exposure from the underlying policies. We evaluate the appropriateness of these estimates in light of the actual premium reported by the ceding companies, information obtained during audits and other information received from ceding companies.

#### Reinsurance Recoverables

We enter into retrocessional reinsurance agreements in order to help reduce our exposure to large losses and to help manage our risk portfolio. Amounts recoverable from reinsurers are estimated in a manner consistent with the claims and claim expense reserves associated with the related assumed reinsurance. For multi-year retrospectively rated contracts, we accrue amounts (either assets or liabilities) that are due to or from our retrocessionaires based on estimated contract experience. If we determine that adjustments to earlier estimates are appropriate, such adjustments are recorded in the period in which they are determined.

The estimate of reinsurance recoverables can be more subjective than estimating the underlying claims and claim expense reserves as discussed under the heading "Claims and Claim Expense Reserves" above. In particular, reinsurance recoverables may be affected by deemed inuring reinsurance, industry losses reported by various statistical reporting services, and other factors. Reinsurance recoverables on dual trigger reinsurance contracts require us to estimate our ultimate losses applicable to these contracts as well as estimate the ultimate amount of insured industry losses that will be reported by the applicable statistical reporting agency, as per the contract terms. In addition, the level of our additional case reserves and IBNR reserves has a significant impact on reinsurance recoverables. These factors can impact the amount and timing of the reinsurance recoverables to be recorded.

The majority of the balance we have accrued as recoverable will not be due for collection until some point in the future. The amounts recoverable ultimately collected are open to uncertainty due to the ultimate ability and willingness of reinsurers to pay our claims, for reasons including insolvency and elective run-off, contractual dispute and various other reasons. In addition, because the majority of the balances



recoverable will not be collected for some time, economic conditions as well as the financial and operational performance of a particular reinsurer may change, and these changes may affect the reinsurer's willingness and ability to meet their contractual obligations to us. To reflect these uncertainties, we estimate and record a valuation allowance for potential uncollectible reinsurance recoverables which reduces reinsurance recoverables and net income.

We estimate our valuation allowance by applying specific percentages against each reinsurance recoverable based on our counterparty's credit rating. The percentages applied are based on historical industry default statistics developed by major rating agencies and are then adjusted by us based on industry knowledge and our judgment and estimates. We also apply case-specific valuation allowances against certain recoveries we deem unlikely to be collected in full. We then evaluate the overall adequacy of the valuation allowance based on other qualitative and judgmental factors. The valuation allowance recorded against reinsurance recoverable was \$4.2 million at December 31, 2016 (2015 - \$1.6 million). The reinsurers with the three largest balances accounted for 27.1%, 19.9% and 7.7%, respectively, of our reinsurance recoverable balance at December 31, 2016 (2015 - 21.5%, 13.8% and 13.1%, respectively). The three largest company-specific components of the valuation allowance represented 27.1%, 17.9% and 5.6%, respectively, of our total valuation allowance at December 31, 2016 (2015 - 22.7%, 8.3% and 3.2%, respectively).

#### Fair Value Measurements and Impairments

##### Fair Value

The use of fair value to measure certain assets and liabilities with resulting unrealized gains or losses is pervasive within our consolidated financial statements. Fair value is defined under accounting guidance currently applicable to us to be the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between open market participants at the measurement date. We recognize the change in unrealized gains and losses arising from changes in fair value in our consolidated statements of operations.

FASB ASC Topic Fair Value Measurements and Disclosures prescribes a fair value hierarchy that prioritizes the inputs to the respective valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to valuation techniques that use at least one significant input that is unobservable (Level 3).

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the level in the fair value hierarchy within which the fair value measurement in its entirety falls has been determined based on the lowest level input that is significant to the fair value measurement of the asset or liability.

Our assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and we consider factors specific to the asset or liability.

In order to determine if a market is active or inactive for a security, we consider a number of factors, including, but not limited to, the spread between what a seller is asking for a security and what a buyer is bidding for the same security, the volume of trading activity for the security in question, the price of the security compared to its par value (for fixed maturity investments), and other factors that may be indicative of market activity.

At December 31, 2016, we classified \$4.4 million and \$17.4 million of our other assets and liabilities, respectively, at fair value on a recurring basis using Level 3 inputs. This represented 0.0% and 0.3% of our total assets and liabilities, respectively. Level 3 fair value measurements are based on valuation techniques that use at least one significant input that is unobservable. These measurements are made under circumstances in which there is little, if any, market activity for the asset or liability. We use valuation models or other pricing techniques that require a variety of inputs including contractual terms, market prices and rates, yield curves, credit curves, measures of volatility, prepayment rates and correlations of such inputs, some of which may be unobservable, to value these Level 3 assets and liabilities. Our assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment. In making the assessment, we considered factors specific to the asset or liability. In certain cases, the inputs used to measure fair value of an asset or a liability may fall into different levels of the fair value hierarchy. In such cases, the level in the fair value hierarchy within which the fair value measurement in its entirety is classified

is determined based on the lowest level input that is significant to the fair value measurement of the asset or liability. Refer to “Note 6. Fair Value Measurements in our Notes to the Consolidated Financial Statements” for additional information about fair value measurements.

#### Impairments

The amount and timing of asset impairment is subject to significant estimation techniques and is a critical accounting estimate for us. The significant impairment reviews we complete are for our goodwill and other intangible assets and equity method investments, as described in more detail below.

#### Goodwill and Other Intangible Assets

Goodwill and other intangible assets acquired are initially recorded at fair value. Subsequent to initial recognition, finite lived other intangible assets are amortized over their estimated useful life, subject to impairment, and goodwill and indefinite lived other intangible assets are carried at the lower of cost or fair value. If goodwill or other intangible assets are impaired, they are written down to their estimated fair values with a corresponding expense reflected in our consolidated statements of operations.

On March 2, 2015 we acquired Platinum and the transaction was accounted under the acquisition method of accounting in accordance with FASB ASC Topic Business Combinations. Total consideration paid was allocated among acquired assets and assumed liabilities based on their fair values. In connection with the acquisition of Platinum, we recognized identifiable finite lived intangible assets of \$75.2 million, which will be amortized over a weighted average period of 8 years, identifiable indefinite lived intangible assets of \$8.4 million, and certain other adjustments to the fair values of the assets acquired, liabilities assumed and shareholders’ equity of Platinum at March 2, 2015 as summarized in “Note 3. Acquisition of Platinum in our Notes to the Consolidated Financial Statements”. Intangible assets with definite lives will be amortized over their estimated useful lives. In addition, we recognized goodwill of \$191.7 million primarily attributable to Platinum’s workforce and synergies expected to result upon the integration of Platinum into our operations. There were no other adjustments to carried goodwill during the period ended December 31, 2016 reflected on our consolidated balance sheet at December 31, 2016. Goodwill resulting from the acquisition of Platinum will not be amortized but instead will be tested for impairment at least annually, as outlined below (more frequently if certain indicators are present).

We test goodwill and other intangible assets for impairment in the fourth quarter of each year, or more frequently if events or changes in circumstances indicate that the carrying amount may not be recoverable. For purposes of the annual impairment evaluation, goodwill is assigned to the applicable reporting unit of the acquired entities giving rise to the goodwill and other intangible assets and is tested based on the cash flows they produce. There are generally many assumptions and estimates underlying the fair value calculation. Principally, we identify the reporting unit or business entity that the goodwill or other intangible asset is attributed to, and review historical and forecasted operating and financial performance and other underlying factors affecting such analysis, including market conditions. Other assumptions used could produce significantly different results which may result in a change in the value of goodwill or our other intangible assets and a related charge in our consolidated statements of operations. An impairment charge could be recognized in the event of a significant decline in the implied fair value of those operations where the goodwill or other intangible assets are applicable. In the event we determine that the value of goodwill has become impaired, an accounting charge will be taken in the fiscal quarter in which such determination is made, which could have a material adverse effect on our results of operations in the period in which the impairment charge is recorded. As at December 31, 2016, excluding the amounts recorded in investments in other ventures, under the equity method, as noted below, our consolidated balance sheets include \$197.6 million of goodwill (2015 - \$197.6 million) and \$53.6 million of other intangible assets (2015 - \$67.6 million). Impairment charges related to these balances were \$Nil during the year ended December 31, 2016 (2015 - \$Nil, 2014 - \$Nil). In the future it is possible we will hold more goodwill, which would increase the degree of judgment and uncertainty embedded in our financial statements, and potentially increase the volatility of our reported results.

#### Investments in Other Ventures, Under Equity Method

Investments in which we have significant influence over the operating and financial policies of the investee are classified as investments in other ventures, under equity method, and are accounted for under the equity method of accounting. Under this method, we record our proportionate share of income or loss from such investments in our results for the period. Any decline in the value of investments in other ventures, under equity method, including goodwill and other intangible assets arising upon acquisition of the investee, considered by management to be other-than-temporary, is reflected in our consolidated statements of operations in the period in which it is determined. As of December 31, 2016, we had \$124.2 million (2015 - \$132.4 million) in investments in other ventures, under equity method on our consolidated balance sheets, including \$7.8 million of goodwill and \$11.9 million of other intangible assets (2015 - \$7.8 million and \$15.3 million). The carrying value of our investments in other ventures, under equity method, individually or in the aggregate, may, and likely will, differ from the realized value we may ultimately attain, perhaps significantly so.

In determining whether an equity method investment is impaired, we take into consideration a variety of factors including the operating and financial performance of the investee, the investee's future business plans and projections, recent transactions and market valuations of publicly traded companies where available, discussions with the investee's management, and our intent and ability to hold the investment until it recovers in value. Accordingly, we make assumptions and estimates in assessing whether an impairment has occurred and if, in the future, our assumptions and estimates made in assessing the fair value of these investments change, this could result in a material decrease in the carrying value of these investments. This would cause us to write-down the carrying value of these investments and could have a material adverse effect on our results of operations in the period the impairment charge is taken. We do not have any current plans to dispose of these investments, and cannot assure you we will consummate future transactions in which we realize the value at which these holdings are reflected in our financial statements. During the year ended December 31, 2016, we recorded \$Nil (2015 - \$5.6 million, 2014 - \$Nil) of other-than-temporary impairment charges related to goodwill and other intangible assets associated with our investments in other ventures, under the equity method. Refer to "Note 4. Goodwill and Other Intangible Assets in our Notes to the Consolidated Financial Statements" for additional information.

#### Income Taxes

Income taxes have been provided in accordance with the provisions of FASB ASC Topic Income Taxes. Deferred tax assets and liabilities result from temporary differences between the amounts recorded in our consolidated financial statements and the tax basis of our assets and liabilities. Such temporary differences are primarily due to net operating loss carryforwards and GAAP versus tax basis accounting differences relating to reserves for claims and claim expenses, deferred interest expense, accrued expenses, unearned premiums, deferred underwriting results, deferred acquisition expenses, amortization and depreciation and investments. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance against deferred tax assets is recorded if it is more likely than not that all, or some portion, of the benefits related to deferred tax assets will not be realized.

On March 2, 2015 we acquired Platinum and the transaction was accounted for under the acquisition method of accounting in accordance with FASB ASC Topic Business Combinations. Total consideration paid was allocated among acquired assets and assumed liabilities based on their fair values, including Platinum's net deferred tax asset which totaled \$12.9 million at March 2, 2015.

At December 31, 2016, our net deferred tax asset (prior to our valuation allowance) and valuation allowance were \$98.9 million (2015 - \$96.2 million) and \$18.8 million (2015 - \$17.9 million), respectively (see "Note 15. Taxation in our Notes to the Consolidated Financial Statements" for additional information). At each balance sheet date, we assess the need to establish a valuation allowance that reduces the net deferred tax asset when it is more likely than not that all, or some portion, of the deferred tax assets will not be realized. The valuation allowance assessment is performed separately in each taxable jurisdiction based on all available information including projections of future GAAP taxable income from each tax-paying component in each tax jurisdiction. Losses incurred within our U.S. tax-paying subsidiaries in the fourth quarter of 2011 were significant enough to result in a cumulative GAAP taxable loss at the U.S. tax-paying subsidiaries for the three year period ended December 31, 2011. We reassess our valuation allowance

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quarterly basis and commencing with our reassessment effective December 31, 2011, we determined that it is more likely than not that we would not be able to recover our U.S. net deferred tax asset and as a result, recognized a full valuation allowance in the fourth quarter of 2011. We concluded that a valuation allowance was required from 2011 through the period ended December 31, 2014 based on the relevant evidence during that time period, primarily that we remained in a cumulative GAAP taxable loss position for this period, among other facts. At December 31, 2014, the U.S. valuation allowance was \$48.4 million. In the first quarter of 2015, as a result of expected profits in our U.S.-based operations due principally to the acquisition of Platinum, we determined it was more likely than not we would be able to recover a substantial portion of the U.S. net deferred tax asset and thus reduced the U.S. valuation allowance from \$48.4 million to \$1.0 million. Factors that led to this determination included the combined cumulative GAAP taxable income position of our U.S.-based operations (including the entities acquired) along with the long term expected profits of the combined operations. A valuation allowance continues to be provided against deferred tax assets in the majority of our Ireland, U.K., and Singapore operations as these operations have produced historical GAAP taxable losses, among other facts.

We have unrecognized tax benefits of \$Nil as of December 31, 2016 (2015 - \$Nil). Interest and penalties related to unrecognized tax benefits, would be recognized in income tax expense. At December 31, 2016, interest and penalties accrued on unrecognized tax benefits were \$Nil (2015 - \$Nil). Income tax returns filed for tax years 2013 through 2015, 2012 through 2015, 2015, and 2012 through 2015, are open for examination by the IRS, Irish tax authorities, U.K. tax authorities, and Singapore tax authorities, respectively. We do not expect the resolution of these open years to have a significant impact on our consolidated statements of operations and financial condition.

## SUMMARY OF RESULTS OF OPERATIONS

Year ended December 31, (in thousands, except per share amounts and percentages)	2016	2015	2014	
<b>Statements of operations highlights</b>				
Gross premiums written	\$2,374,576	\$2,011,310	\$1,550,572	
Net premiums written	\$1,535,312	\$1,416,183	\$1,068,236	
Net premiums earned	\$1,403,430	\$1,400,551	\$1,062,416	
Net claims and claim expenses incurred	530,831	448,238	197,947	
Acquisition expenses	289,323	238,592	144,476	
Operational expenses	197,749	219,112	190,639	
Underwriting income	\$385,527	\$494,609	\$529,354	
Net investment income	\$181,726	\$152,567	\$124,316	
Net realized and unrealized gains (losses) on investments	141,328	(68,918 )	41,433	
Change in net unrealized gains on fixed maturity investments available for sale	(1,870 )	(1,243 )	(855 )	
Total investment result	\$321,184	\$82,406	\$164,894	
Net income	\$630,048	\$542,242	\$686,256	
Net income available to RenaissanceRe common shareholders	\$480,581	\$408,811	\$510,337	
Net income available to RenaissanceRe common shareholders per common share – diluted	\$11.43	\$9.28	\$12.60	
Dividends per common share	\$1.24	\$1.20	\$1.16	
<b>Key ratios</b>				
Net claims and claim expense ratio – current accident year	49.5	% 43.6	% 32.2	%
Net claims and claim expense ratio – prior accident years	(11.7 )	)% (11.6 )	)% (13.6 )	)%
Net claims and claim expense ratio – calendar year	37.8	% 32.0	% 18.6	%
Underwriting expense ratio	34.7	% 32.7	% 31.6	%
Combined ratio	72.5	% 64.7	% 50.2	%
Return on average common equity	11.0	% 9.8	% 14.9	%
Book value	December 31, 2016	December 31, 2015	December 31, 2014	
Book value per common share	\$108.45	\$99.13	\$90.15	
Accumulated dividends per common share	16.72	15.48	14.28	
Book value per common share plus accumulated dividends	\$125.17	\$114.61	\$104.43	
Change in book value per common share plus change in accumulated dividends	10.7	% 11.3	% 13.7	%
Balance sheet highlights	December 31, 2016	December 31, 2015	December 31, 2014	
Total assets	\$12,352,082	\$11,555,287	\$8,202,307	
Total shareholders' equity attributable to RenaissanceRe	\$4,866,577	\$4,732,184	\$3,865,715	



Results of operations for 2016 compared to 2015.

Net income available to RenaissanceRe common shareholders was \$480.6 million in 2016, compared to \$408.8 million in 2015, an increase of \$71.8 million. As a result of our net income available to RenaissanceRe common shareholders in 2016, we generated an annualized return on average common equity of 11.0% and our book value per common share increased from \$99.13 at December 31, 2015 to \$108.45 at December 31, 2016, a 10.7% increase, after considering the change in accumulated dividends paid to our common shareholders, and the impact of repurchasing an aggregate of 2.7 million common shares in open market transactions.

The most significant events affecting our financial performance during 2016, on a comparative basis to 2015, include: Higher Investment Results - our total investment result of \$321.2 million in 2016, which includes the sum of net investment income, net realized and unrealized gains (losses) on investments, and the change in net unrealized gains on fixed maturity investments available for sale, increased \$238.8 million from \$82.4 million in 2015. Impacting the total investment result in 2016 were: (i) net unrealized gains in our portfolio of fixed maturity investments trading, principally the result of significant credit spread tightening in 2016, compared to marginal credit spread widening during 2015; (ii) net investment income in our portfolio of fixed maturity investments, driven by an increase in average invested assets; and (iii) net realized and unrealized gains on equity investments trading as a result of the strong performance of a number of our equity positions during the year. Partially offsetting these items were net realized and unrealized losses on certain investment-related derivatives due to changes in the yield curve that occurred during the year; partially offset by

Lower Underwriting Income - we generated underwriting income of \$385.5 million and a combined ratio of 72.5% in 2016, compared to \$494.6 million and 64.7%, respectively, in 2015, a decrease of \$109.1 million and an increase of 7.8 percentage points, respectively. The increase in the combined ratio in 2016, compared to 2015, was primarily driven by higher net claims and claim expenses and an increase in underwriting expenses adding 5.8 and 2.0 percentage points, respectively, to the combined ratio. Included in net claims and claim expenses in 2016 was an aggregate of \$122.6 million associated with a wildfire originating near Fort McMurray, Alberta (the "Fort McMurray Wildfire"), a number of weather-related events in Texas (the "2016 Texas Events") and Hurricane Matthew. The net negative impact of these events on our consolidated underwriting result was \$102.9 million, and these events added 7.9 percentage points to our consolidated combined ratio. See below for additional information related to the Fort McMurray Wildfire, the 2016 Texas Events and Hurricane Matthew;

Higher Income Tax Expense - we recognized \$0.3 million of income tax expense in 2016, compared to an income tax benefit of \$45.9 million in 2015, representing a \$46.2 million change in income tax expense, primarily due to a decrease in our U.S.-based deferred tax asset valuation allowance from \$48.5 million to \$1.0 million in 2015, as a result of expected profits in our U.S.-based operations due principally to the acquisition of Platinum; and

Higher Net Income Attributable to Redeemable Noncontrolling Interests - our net income attributable to redeemable noncontrolling interests was \$127.1 million in 2016, compared to \$111.1 million in 2015, principally due to an increase in the profitability of DaVinciRe. Our ownership in DaVinciRe was 24.0% at December 31, 2016, compared to 26.3% at December 31, 2015.

Net Negative Impact of the Fort McMurray Wildfire, the 2016 Texas Events and Hurricane Matthew

Net negative impact includes the sum of estimates of net claims and claim expenses incurred, earned reinstatement premiums assumed and ceded, lost profit commissions and redeemable noncontrolling interest - DaVinci Re. Our estimate of the net negative impact of the Fort McMurray Wildfire, the 2016 Texas Events and Hurricane Matthew are based on a review of our potential exposures, preliminary discussions with counterparties and catastrophe modeling techniques. Given the magnitude and recent occurrence of these catastrophe events, delays in receiving claims data, the contingent nature of business interruption and other exposures, potential uncertainties relating to reinsurance recoveries and other uncertainties inherent in loss estimation, meaningful uncertainty remains regarding losses from these events. Accordingly, our actual net negative impact from these events will vary from these estimates, perhaps significantly. Changes in these estimates will be recorded in the period in which they occur.

The supplemental financial data below provides additional information detailing the net negative impact of the Fort McMurray Wildfire, the 2016 Texas Events and Hurricane Matthew on our consolidated financial statements for the year ended December 31, 2016.

Year ended December 31, 2016	Fort McMurray Wildfire	2016 Texas Events	Hurricane Matthew	Total
(in thousands, except percentages)				
Net claims and claim expenses incurred	\$ (23,961 )	\$ (38,502 )	\$ (60,117 )	\$ (122,580 )
Assumed reinstatement premiums earned	5,143	6,891	9,945	21,979
Lost profit commissions	(330 )	(1,172 )	(824 )	(2,326 )
Net negative impact on underwriting result	(19,148 )	(32,783 )	(50,996 )	(102,927 )
Redeemable noncontrolling interest - DaVinciRe	3,404	5,675	6,519	15,598
Net negative impact	\$ (15,744 )	\$ (27,108 )	\$ (44,477 )	\$ (87,329 )
Percentage point impact on consolidated combined ratio	1.4	2.5	3.8	7.9
Net negative impact on Property segment underwriting result	\$ (18,956 )	\$ (32,783 )	\$ (49,271 )	\$ (101,010 )
Net negative impact on Casualty and Specialty segment underwriting result	(192 )	—	(1,725 )	(1,917 )
Net negative impact on underwriting result	\$ (19,148 )	\$ (32,783 )	\$ (50,996 )	\$ (102,927 )

#### Acquisition of Platinum

We acquired Platinum on March 2, 2015. Therefore, our results of operations for 2016 included the results of the legacy business acquired from Platinum for the period January 1, 2016 through December 31, 2016, while for 2015, the results of operations of Platinum were included for the period March 2, 2015 (the date of acquisition) through December 31, 2015.

Results of operations for 2015 compared to 2014.

Net income available to RenaissanceRe common shareholders was \$408.8 million in 2015, compared to \$510.3 million in 2014, a decrease of \$101.5 million. As a result of our net income available to RenaissanceRe common shareholders in 2015, we generated an annualized return on average common equity of 9.8% and our book value per common share increased from \$90.15 at December 31, 2014 to \$99.13 at December 31, 2015, an 11.3% increase, after considering the change in accumulated dividends paid to our common shareholders.

The most significant events affecting our financial performance during 2015, on a comparative basis to 2014, include: Lower Total Investment Result - our total investment result, which includes the sum of net investment income, net realized and unrealized gains (losses) on investments, and the change in net unrealized gains on fixed maturity investments available for sale, was \$82.4 million in 2015 compared to \$164.9 million in 2014, a decrease of \$82.5 million. The decrease in the total investment result was primarily due to net unrealized losses in our portfolio of fixed maturity investments trading, principally as a result of an upward shift in the yield curve driven by the rising interest rate environment, combined with unrealized losses in our portfolio of equity investments trading and lower net investment income from private equity investments. Offsetting these items was an increase in net investment income in our portfolio of fixed maturity investments primarily driven by an increase in average invested assets, which was principally due to the acquisition of Platinum, and net realized and unrealized gains on investments-related derivatives due to the increasing interest rate environment;

Lower Underwriting Income - we generated underwriting income of \$494.6 million and a combined ratio of 64.7% in 2015, compared to \$529.4 million and 50.2%, respectively, in 2014. The \$34.7 million decrease in underwriting income was primarily driven by a \$268.9 million increase in current accident year net claims and claim expenses and a \$94.1 million increase in acquisition expenses, partially offset by a \$338.1 million increase in net premiums earned. The increase in current accident year net claims and claim expenses was primarily driven by our Property and Casualty and Specialty segments, while the increase in acquisition expenses and net premiums earned are principally driven by our Casualty and Specialty segment; and

Higher Corporate Expenses - our corporate expenses increased \$54.1 million to \$77.1 million in 2015, compared to \$23.0 million in 2014, primarily due to \$53.5 million of corporate expenses associated with the acquisition and integration of Platinum; partially offset by

Income Tax Benefit - we recognized an income tax benefit of \$45.9 million in 2015, compared to an income tax expense of \$608 thousand in 2014, primarily as a result of a reduction in our U.S.-based deferred tax asset valuation allowance from \$48.5 million to \$1.0 million in the first quarter of 2015 as a result of expected profits in our U.S.-based operations due principally to the acquisition of Platinum; and

Lower Net Income Attributable to Redeemable Noncontrolling Interests - net income attributable to redeemable noncontrolling interests of \$111.1 million in 2015, compared to \$153.5 million in 2014, a decrease of \$42.5 million, principally due to a decrease in the profitability of DaVinciRe. Our ownership in DaVinciRe was 26.3% at December 31, 2015, compared to 23.4% at December 31, 2014.

## Underwriting Results by Segment

## Property Segment

Below is a summary of the underwriting results and ratios for our Property segment:

Year ended December 31, (in thousands, except percentages)	2016	2015	2014	
Gross premiums written	\$1,111,263	\$1,072,159	\$1,074,890	
Net premiums written	\$725,321	\$726,145	\$662,552	
Net premiums earned	\$720,951	\$805,985	\$698,416	
Net claims and claim expenses incurred	151,545	128,290	16,643	
Acquisition expenses	97,594	94,249	66,262	
Operational expenses	108,642	118,666	117,943	
Underwriting income	\$363,170	\$464,780	\$497,568	
Net claims and claim expenses incurred – current accident year	\$256,421	\$222,076	\$103,901	
Net claims and claim expenses incurred – prior accident years	(104,876 )	(93,786 )	(87,258 )	
Net claims and claim expenses incurred – total	\$151,545	\$128,290	\$16,643	
Net claims and claim expense ratio – current accident year	35.6	% 27.6	% 14.9	%
Net claims and claim expense ratio – prior accident years	(14.6 )	)% (11.7 )	)% (12.5 )	)%
Net claims and claim expense ratio – calendar year	21.0	% 15.9	% 2.4	%
Underwriting expense ratio	28.6	% 26.4	% 26.4	%
Combined ratio	49.6	% 42.3	% 28.8	%

Property Gross Premiums Written – In 2016, our Property segment gross premiums written increased by \$39.1 million, or 3.6%, to \$1,111.3 million, compared to \$1,072.2 million in 2015. Market conditions remained challenging during 2016, resulting in decreased gross premiums written on certain programs and transactions. However, we were able to increase our participation on a select number of transactions we believe have comparably attractive risk-return attributes, while continuing to exercise underwriting discipline given prevailing market terms and conditions. Included in gross premiums written in the Property segment in 2016 was \$21.4 million of reinstatement premiums associated with the Fort McMurray Wildfire, the 2016 Texas Events and Hurricane Matthew.

In 2015, our Property segment gross premiums written decreased by \$2.7 million, or 0.3%, to \$1,072.2 million, compared to \$1,074.9 million in 2014. Market conditions were challenging during 2015, and we exercised underwriting discipline given prevailing terms and conditions, resulting in decreased gross premiums written on certain programs and transactions, offset in part by increased demand and growth in certain areas, including some new programs which provided opportunities we believed to be attractive. These new programs included the FHCF risk transfer program which we were a substantial participant in, and market opportunities arising as a result of the assumption of risk by domestic Florida private insurance companies from Citizens, which in general increases the amount of ultimate private reinsurance protection purchased in connection with the underlying individual risk. Our Property segment gross premiums written continue to be characterized by a large percentage of U.S. and Caribbean premium, as we have found business derived from exposures in Europe, Asia and the rest of the world to be, in general, less attractive on a risk-adjusted basis during recent periods. A significant amount of our U.S. and Caribbean premium provides coverage against windstorms, notably U.S. Atlantic windstorms, as well as earthquakes and other natural and man-made catastrophes.

Year ended December 31, (in thousands)	2016	2015	2014
Ceded premiums written - Property	\$385,942	\$346,014	\$412,338

Property Ceded Premiums Written – Ceded premiums written in our Property segment increased \$39.9 million to \$385.9 million in 2016, compared to \$346.0 million in 2015, primarily reflecting increased purchases of retrocessional reinsurance as part of our management of our risk portfolio.

Ceded premiums written in our Property segment decreased \$66.3 million, to \$346.0 million in 2015, compared to \$412.3 million in 2014, primarily reflecting a reduction in purchases of retrocessional reinsurance driven by a reduction in premiums ceded to company-sponsored third party capital vehicles to \$32.9 million in 2015, compared to \$65.5 million 2014, and lower premiums paid for retrocessional reinsurance purchases.

Due to the potential volatility of the reinsurance contracts which we sell, we purchase reinsurance to reduce our exposure to large losses and to help manage our risk portfolio. To the extent that appropriately priced coverage is available, we anticipate continued use of retrocessional reinsurance to reduce the impact of large losses on our financial results and to manage our portfolio of risk; however, the buying of ceded reinsurance in our Property segment is based on market opportunities and is not based on placing a specific reinsurance program each year. In addition, in future periods we may utilize the growing market for insurance-linked securities to expand our ceded reinsurance buying if we find the pricing and terms of such coverages attractive.

Property Underwriting Results – Our Property segment generated underwriting income of \$363.2 million in 2016, compared to \$464.8 million in 2015, a decrease of \$101.6 million. In 2016, our Property segment generated a net claims and claim expense ratio of 21.0%, an underwriting expense ratio of 28.6% and a combined ratio of 49.6%, compared to 15.9%, 26.4% and 42.3%, respectively, in 2015.

The \$101.6 million decrease in underwriting income in the Property segment in 2016, compared to 2015, was primarily driven by an \$85.0 million decrease in net premiums earned and a \$23.3 million increase in net claims and claim expenses. The \$85.0 million decrease in net premiums earned was driven by an increase in purchases of retrocessional reinsurance described above.

Included in net claims and claim expenses in the Property segment in 2016 was an aggregate of \$120.1 million associated with the Fort McMurray Wildfire, the 2016 Texas Events and Hurricane Matthew. The net negative impact of these events on the the Property segment underwriting result was \$101.0 million, and these events added 17.9 percentage points to the Property segment combined ratio.

During 2016, we experienced \$104.9 million of favorable development on prior accident year net claims and claim expenses within our Property segment, compared to \$93.8 million in 2015. The favorable development on prior accident years net claims and claim expenses in 2016 included \$15.1 million from the 2011 Thailand Floods, \$10.8 million from Storm Sandy in 2012, \$7.3 million from the 2011 Tohoku Earthquake and Tsunami and \$5.7 million from the 2015 Tianjin Explosion, each primarily the result of changes in our estimated ultimate loss for each respective event, with the remainder due to a number of relatively smaller events.

Our Property segment generated underwriting income of \$464.8 million million in 2015, compared to \$497.6 million in 2014, a decrease of \$32.8 million. In 2015, our Property segment generated a net claims and claim expense ratio of 15.9%, an underwriting expense ratio of 26.4% and a combined ratio of 42.3%, compared to 2.4%, 26.4% and 28.8%, respectively, in 2014.

The \$32.8 million decrease in underwriting income in our Property segment in 2015, compared to 2014, was primarily driven by a \$111.6 million increase in net claims and claim expenses, including a \$118.2 million increase in current accident year net claims and claim expenses, due to higher event-driven catastrophe losses and higher attritional losses, and a \$28.0 million increase in acquisition expenses, with each of the higher attritional losses and increase in acquisition expenses driven by the increase in other property gross premiums written. Partially offsetting these items was a \$107.6 million increase in net premiums earned, which was driven by lower ceded premiums earned due to the reduction in ceded premiums written, noted above. Included in current accident year net claims and claim expenses is \$27.9





million related to a number of U.S. winter storms, \$27.3 million related to the Tianjin Explosion and \$23.0 million related to a U.S. wind and thunderstorm event, with the remainder due to a number of other smaller catastrophe events. During the fourth quarter of 2015, we recognized a recovery and corresponding reduction to acquisition expenses in our Property segment of \$7.7 million associated with the December 2015 decision by the IRS to revoke its position that the excise tax applies on foreign to foreign retrocessions.

During 2015, we experienced \$93.8 million of favorable development on prior accident years net claims and claim expenses within our Property segment. Included in the favorable development of prior accident years net claims and claim expenses related to large catastrophe events was \$12.5 million related to Storm Sandy and \$10.2 million related to the April and May 2011 U.S. Tornadoes, each principally the result of changes in our estimated ultimate loss for each respective event. In addition, we experienced \$69.3 million of favorable development related to a number of other large and small catastrophe events that we principally estimate net claims and claim expenses for using traditional actuarial methods. Net favorable development of prior accident years net claims and claim expenses related to the 2011 New Zealand Earthquake, the 2011 Thailand Floods and the 2011 Tohoku Earthquake and Tsunami (collectively the “2011 International Events”) was \$1.4 million and included reductions in reported losses on the 2011 Thailand Floods and Tohoku Earthquake and Tsunami, offset by a net increase in reported losses on the 2011 New Zealand Earthquake, with each respective movement principally driven by the same counterparties re-allocating losses between the 2011 International Events.

See “Part II, Item 7. Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves” and “Note 8. Reserve for Claims and Claim Expenses in our Notes to the Consolidated Financial Statements” for additional discussion of our reserving techniques and prior year development of net claims and claim expenses.

Year ended December 31, (in thousands)	2016	2015	2014
Profit commissions and fees	\$68,346	\$61,923	\$84,851
Decrease in underwriting expense ratio	9.5	% 7.7	% 12.2
Net impact of profit commissions and fees	\$112,227	\$106,722	\$139,036

Profit Commissions and Fees – We have entered into joint ventures and specialized quota share cessions of our property book of business. In accordance with the joint venture and quota share agreements, we are entitled to certain profit commissions and fee income. We record these profit commissions and fees as a reduction in acquisition and operating expenses, respectively, and, accordingly, these profit commissions and fees have reduced our underwriting expense ratios.

In addition, we are entitled to certain fee income and profit commissions from DaVinci. Since the results of DaVinci and its parent, DaVinciRe, are consolidated in our results of operations, these fees and profit commissions are eliminated in our consolidated financial statements and are principally reflected in redeemable noncontrolling interest – DaVinciRe. The net impact of all fees and profit commissions related to these joint ventures and specialized quota share cessions within our Property segment was \$112.2 million, \$106.7 million and \$139.0 million in 2016, 2015 and 2014, respectively.

## Casualty and Specialty Segment

Below is a summary of the underwriting results and ratios for our Casualty and Specialty segment:

Year ended December 31, (in thousands, except percentages)	2016	2015	2014	
Gross premiums written	\$1,263,313	\$939,241	\$475,373	
Net premiums written	\$809,848	\$690,086	\$405,340	
Net premiums earned	\$682,337	\$594,614	\$363,632	
Net claims and claim expenses incurred	380,396	320,818	187,441	
Acquisition expenses	191,729	144,095	84,762	
Operational expenses	88,984	100,180	72,393	
Underwriting income	\$21,228	\$29,521	\$19,036	
Net claims and claim expenses incurred – current accident year	\$438,536	\$388,609	\$237,844	
Net claims and claim expenses incurred – prior accident years	(58,140 )	(67,791 )	(50,403 )	
Net claims and claim expenses incurred – total	\$380,396	\$320,818	\$187,441	
Net claims and claim expense ratio – current accident year	64.3	% 65.4	% 65.4	%
Net claims and claim expense ratio – prior accident years	(8.6 )	)% (11.4 )	)% (13.9 )	)%
Net claims and claim expense ratio – calendar year	55.7	% 54.0	% 51.5	%
Underwriting expense ratio	41.2	% 41.0	% 43.3	%
Combined ratio	96.9	% 95.0	% 94.8	%

Casualty and Specialty Gross Premiums Written – In 2016, our Casualty and Specialty segment gross premiums written increased \$324.1 million, or 34.5%, to \$1,263.3 million, compared to \$939.2 million in 2015, principally driven by select organic growth, primarily related to mortgage reinsurance opportunities reflected in our financial lines of business. In addition, our casualty and specialty lines of business were impacted in 2016 by business acquired in connection with our acquisition of Platinum for the period from January 1, 2016 through December 31, 2016, compared to 2015, which included gross premiums written from Platinum for the period from March 2, 2015 (the date of acquisition) through December 31, 2015.

In 2015, our Casualty and Specialty segment gross premiums written increased \$463.9 million, or 97.6%, to \$939.2 million, compared to \$475.4 million in 2014, driven primarily by the acquisition of Platinum and increases in certain casualty and financial lines of business, while continuing to exercise underwriting discipline given prevailing terms and conditions.

During 2016 and 2015, we experienced growth in a number of our casualty and specialty lines of business and will continue to seek to expand our casualty and specialty operations through our underwriting platforms, including Bermuda, the U.S. and Syndicate 1458, although we cannot assure you we will do so.

Our Casualty and Specialty segment gross premiums written during 2016 reflected a relatively larger percentage of proportional reinsurance compared to excess of loss reinsurance than in many of our comparative periods. Our relative mix of business between proportional business and excess of loss business has fluctuated in the past and will likely vary in the future. Proportional business typically has relatively higher premiums per unit of expected underwriting income, together with a higher combined ratio, than traditional excess of loss reinsurance. In addition, proportional coverage tends to be exposed to relatively more attritional, and frequent, losses while subject to less expected severity. Moreover, market conditions for our Casualty and Specialty segment have been impacted by a trend towards increased ceding commissions on our assumed proportional reinsurance.

Year ended December 31, (in thousands)	2016	2015	2014
Ceded premiums written - Casualty and Specialty	\$453,465	\$249,155	\$70,033

Casualty and Specialty Ceded Premiums Written – Ceded premiums written in our Casualty and Specialty segment increased \$204.3 million to \$453.5 million in 2016, compared to \$249.2 million in 2015, primarily reflecting increased purchases of retrocessional reinsurance as part of our management of our risk portfolio.

Ceded premiums written in our Casualty and Specialty segment increased \$179.1 million to \$249.2 million in 2015, compared to \$70.0 million in 2014, primarily reflecting an increase in the purchase of retrocessional reinsurance driven by the increased gross premiums written, as noted above.

Casualty and Specialty Underwriting Results – Our Casualty and Specialty segment generated underwriting income of \$21.2 million in 2016, compared to \$29.5 million in 2015. In 2016, our Casualty and Specialty segment generated a net claims and claim expense ratio of 55.7%, an underwriting expense ratio of 41.2% and a combined ratio of 96.9%, compared to 54.0%, 41.0% and 95.0%, respectively, in 2015.

Impacting our Casualty and Specialty segment combined ratio was a 1.7 percentage point increase in the net claims and claim expense ratio in 2016, compared to 2015, principally driven by a decrease in favorable development on prior accident years net claims and claim expenses of \$9.7 million. The favorable development on prior accident years net claims and claim expenses of \$58.1 million in 2016 was principally driven by actual reported losses coming in better than expected and \$5.5 million of favorable development associated with actuarial assumption changes.

Our Casualty and Specialty segment generated underwriting income of \$29.5 million in 2015, compared to \$19.0 million in 2014. In 2015, our Casualty and Specialty segment generated a net claims and claim expense ratio of 54.0%, an underwriting expense ratio of 41.0% and a combined ratio of 95.0%, compared to 51.5%, 43.3% and 94.8%, respectively, in 2014.

The \$10.5 million increase in underwriting income in our Casualty and Specialty segment for 2015, compared to 2014, was principally driven by a \$17.4 million increase in favorable development on prior accident years net claims and claim expenses. In addition, our Casualty and Specialty segment experienced a \$231.0 million increase in net premiums earned, principally as a result of having a full year of net premiums earned in connection with the acquisition of Platinum, compared to 2015, which included net premiums earned from Platinum for the period from March 2, 2015 (the date of acquisition) through December 31, 2015. Partially offsetting the increase in net premiums earned was a \$150.8 million increase in current accident year net claims and claim expenses and a \$87.1 million increase in underwriting expenses. The increase in current accident year net claims and claim expenses was principally due to a higher level of attritional losses primarily as a result of the increase in net premiums earned.

The Casualty and Specialty segment experienced \$67.8 million of favorable development on prior accident years net claims and claim expenses in 2015, compared to \$50.4 million in 2014. The favorable development of prior accident years net claims and claim expenses within our Casualty and Specialty segment in 2015 of \$67.8 million was driven by \$72.6 million related to the application of our formulaic actuarial reserving methodology with attritional net claims and claim expenses reported coming in lower than expected on prior accident years events, partially offset by adverse development of \$4.8 million associated with actuarial assumption changes.

See “Part II, Item 7. Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves” and “Note 8. Reserve for Claims and Claim Expenses in our Notes to the Consolidated Financial Statements” for additional discussion of our reserving techniques and prior year development of net claims and claim expenses.

Year ended December 31, (in thousands, except percentages)	2016	2015	2014
Profit commissions and fees	\$31,950	\$8,726	\$1,914
Decrease in underwriting expense ratio	4.7	% 1.5	% 0.5

Profit Commissions and Fees – We have entered into specialized quota share cessions of our casualty and specialty book of business. In accordance with these quota share agreements, we are entitled to certain profit commissions and fee income. We record these profit commissions and fees as a reduction in acquisition and operating expenses, respectively, and, accordingly, these profit commissions and fees have reduced our underwriting expense ratios.

#### Other Underwriting Income

Year ended December 31,	2016	2015	2014
(in thousands)			
Underwriting income	\$1,129	\$308	\$12,750

Included in our Other category are the remnants of our former Bermuda-based insurance operations. Included in our Other category was underwriting income of \$1.1 million in 2016, driven by favorable development on prior accident years net claims and claim expense.

Included in our Other category was underwriting income of \$12.8 million in 2014, primarily due to the release of \$6.7 million of profit commissions as a result of the commutation of several quota share agreements and a reduction in the estimated ultimate losses on a proportional property contract of \$6.1 million, each related to our former Insurance segment.

#### Net Investment Income

Year ended December 31,	2016	2015	2014
(in thousands)			
Fixed maturity investments	\$160,661	\$134,800	\$100,855
Short term investments	5,127	1,227	944
Equity investments trading	4,235	8,346	3,450
Other investments			
Private equity investments	6,155	9,455	18,974
Other	20,181	12,472	11,037
Cash and cash equivalents	788	467	395
	197,147	166,767	135,655
Investment expenses	(15,421 )	(14,200 )	(11,339 )
Net investment income	\$181,726	\$152,567	\$124,316

Net investment income was \$181.7 million in 2016, compared to \$152.6 million in 2015, an increase of \$29.2 million. Impacting our net investment income for 2016 was higher net investment income in our portfolio of fixed maturity investments primarily driven by higher average invested assets and improved returns in our portfolio of other investments principally driven by our catastrophe bond portfolio, partially offset by a decrease in dividend income from our equity investment portfolio, due to lower average invested assets.

Net investment income was \$152.6 million in 2015, compared to \$124.3 million in 2014, an increase of \$28.3 million. Impacting our net investment income for 2015 was higher net investment income in our portfolio of fixed maturity investments primarily driven by higher average invested assets, in part due to the acquisition of Platinum, partially offset by lower returns in our portfolio of private equity investments as a result of the weaker returns in the broader equity markets.



Low interest rates in recent years have lowered the yields at which we invest our assets relative to historical levels, and combined with the current composition of our investment portfolio and other factors, we expect these developments to constrain investment income growth for the near term. Our private equity and other investment portfolios are accounted for at fair value with the change in fair value recorded in net investment income, which included net unrealized gains of \$11.5 million, \$10.4 million and \$17.7 million in 2016, 2015 and 2014, respectively. Net Realized and Unrealized Gains (Losses) on Investments

Year ended December 31, (in thousands)	2016	2015	2014
Gross realized gains	\$72,739	\$50,488	\$45,568
Gross realized losses	(38,315 )	(53,630 )	(14,868 )
Net realized gains (losses) on fixed maturity investments	34,424	(3,142 )	30,700
Net unrealized gains (losses) on fixed maturity investments trading	26,954	(64,908 )	19,680
Net realized and unrealized (losses) gains on investments-related derivatives	(15,414 )	5,443	(30,931 )
Net realized gains on equity investments trading	14,190	16,348	10,908
Net unrealized gains (losses) on equity investments trading	81,174	(22,659 )	11,076
Net realized and unrealized gains (losses) on investments	\$141,328	\$(68,918)	\$41,433

Our investment portfolio strategy seeks to preserve capital and provide us with a high level of liquidity. A large majority of our investments are invested in the fixed income markets and, therefore, our realized and unrealized holding gains and losses on investments are highly correlated to fluctuations in interest rates. Therefore, as interest rates decline, we will tend to have realized and unrealized gains from our investment portfolio, and as interest rates rise, we will tend to have realized and unrealized losses from our investment portfolio.

Net realized and unrealized gains on investments were \$141.3 million in 2016, compared to net realized and unrealized losses on investments of \$68.9 million in 2015, an increase of \$210.2 million. Impacting our net realized and unrealized gains on investments were:

net realized and unrealized gains on our fixed maturity investments trading of \$61.4 million in 2016, compared to losses of \$68.1 million in 2015, which was positively impacted by a significant credit spread tightening during 2016, partially offset by \$15.4 million net realized and unrealized losses on certain investments-related derivatives primarily driven by changes in the yield curve that occurred during 2016; and

net realized and unrealized gains on equity investments trading of \$95.4 million in 2016, compared to net realized and unrealized losses of \$6.3 million in 2015, an improvement of \$101.7 million, principally driven by the strong performance of a number of our equity positions in 2016, including Essent and Trupanion.

Net realized and unrealized losses on investments were \$68.9 million in 2015, compared to net realized and unrealized gains on investments of \$41.4 million in 2014, a decrease of \$110.4 million. Impacting our net realized and unrealized losses on investments was:

net unrealized losses on our fixed maturity investments trading of \$64.9 million in 2015, compared to gains of \$19.7 million in 2014, which was negatively impacted by an upward shift in the yield curve, driven by the increasing interest rate environment during 2015, partially offset by a corresponding improvement of \$36.4 million in net realized and unrealized gains on investments-related derivatives to a gain of \$5.4 million; and

net unrealized losses on equity investments trading of \$22.7 million in 2015, compared to net unrealized gains of \$11.1 million in 2014, primarily driven by unrealized losses associated with our

investment in Essent, combined with weaker returns in the broader equity markets during 2015, partially offset by an increase in net realized gains on equity investments trading of \$5.4 million to gains of \$16.3 million in 2015, compared to 2014, principally driven by exiting a number of profitable positions during the year.

#### Net Foreign Exchange (Losses) Gains

Year ended December 31, (in thousands)	2016	2015	2014
Total foreign exchange (losses) gains	\$(13,788)	\$(3,051)	\$6,260

Our functional currency is the U.S. dollar. We routinely write a portion of our business in currencies other than U.S. dollars and invest a portion of our cash and investment portfolio in currencies other than the U.S. dollar. As a result, we may experience foreign exchange gains and losses in our consolidated financial statements. All changes in exchange rates, are recognized in our consolidated statements of operations. We are primarily impacted by the foreign currency risk exposures associated with our underwriting operations and investment portfolio, and may, from time to time, enter into foreign currency forward and option contracts to minimize the effect of fluctuating foreign currencies on the value of non-U.S. dollar denominated assets and liabilities. Refer to “Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk” for additional information related to our exposure to foreign currency risk and “Note 19. Derivative Instruments in our Notes to the Consolidated Financial Statements” for additional information related to foreign currency forward and option contracts we have entered into.

Foreign currency exchange losses were \$13.8 million in 2016, compared to \$3.1 million in 2015, with the deterioration primarily driven by the significant strengthening of the U.S. dollar in 2016 against non-U.S. currencies in which we primarily transact, including the Australian Dollar, the Euro and the British Pound, partially offset by the New Zealand Dollar and Japanese Yen strengthening against the U.S. dollar.

Foreign currency exchange losses were \$3.1 million in 2015, compared to gains of \$6.3 million in 2014, with the decrease principally the result of the U.S. dollar strengthening against the Australian Dollar, the Canadian Dollar and the New Zealand Dollar.

#### Equity in Earnings of Other Ventures

Year ended December 31, (in thousands)	2016	2015	2014
Tower Hill Companies	\$10,379	\$13,116	\$18,376
Top Layer Re	(8,576 )	8,026	10,411
Other	(840 )	(661 )	(2,712 )
Total equity in earnings of other ventures	\$963	\$20,481	\$26,075

Equity in earnings of other ventures primarily represents our pro-rata share of the net income from our investments in the Tower Hill Companies and Top Layer Re, and, except for Top Layer Re, is recorded one quarter in arrears. The carrying value of these investments on our consolidated balance sheets, individually or in the aggregate, may differ from the realized value we may ultimately attain, perhaps significantly so.

Equity in earnings of other ventures was \$1.0 million in 2016, compared to \$20.5 million in 2015, with the decrease driven by lower profitability in Top Layer Re and the Tower Hill Companies. Impacting equity in earnings of other ventures during 2016 was a \$8.6 million loss related to our 50% ownership in Top Layer Re. During 2016, Top Layer Re reduced its estimated ultimate claim and claim expenses and related reinsurance recoverable associated with the 2011 Tohoku Earthquake to \$Nil as a result of favorable loss emergence, resulting in an increase in underwriting income for Top Layer Re for 2016. However, the increase in underwriting income was more than offset by the reversal of an unrealized foreign exchange gain related to the reserve for claims and claim expenses, which were denominated in Japanese Yen. While Top Layer Re had fully hedged its net economic exposure to Japanese Yen associated with this loss since inception, because the hedged net liability went to \$Nil, Top Layer Re recorded an unrealized foreign





exchange loss for the year. If the reserve for net claims and claim expenses had been paid in full, rather than being reduced to \$Nil, there would have been no financial statement impact to Top Layer Re.

Equity in earnings of other ventures was \$20.5 million in 2015, compared to \$26.1 million in 2014, with the decrease driven by lower profitability in the Tower Hill Companies and Top Layer Re.

#### Other Income (Loss)

Year ended December 31, (in thousands)	2016	2015	2014
Assumed and ceded reinsurance contracts accounted for as derivatives and deposits	\$14,246	\$12,534	\$1,321
Other	(68 )	938	(1,744 )
Total other income (loss)	\$14,178	\$13,472	\$(423 )

In 2016, we generated other income of \$14.2 million, compared to other income of \$13.5 million in 2015, with the increase driven by our assumed and ceded reinsurance contracts accounted for as derivatives and deposits.

In 2015, we generated other income of \$13.5 million, compared to an other loss of \$0.4 million in 2014, with the increase driven by our assumed and ceded reinsurance contracts accounted for as derivatives and deposits.

#### Corporate Expenses

Year ended December 31,	2016	2015	2014
(in thousands)			
Total corporate expenses	\$37,402	\$76,514	\$22,749

Corporate expenses include certain executive, director, legal and consulting expenses, costs for research and development, impairment charges related to goodwill and other intangible assets, and other miscellaneous costs, including those associated with operating as a publicly traded company. Corporate expenses decreased \$39.1 million to \$37.4 million in 2016, compared to \$76.5 million in 2015, primarily reflecting a decrease to \$2.1 million of corporate expenses associated with the acquisition and integration of Platinum incurred during 2016, compared to \$53.5 million in 2015, and a \$5.6 million charge in the fourth quarter of 2015 associated with the impairment of the goodwill and other intangible assets of an investment in other ventures, recorded under the equity method. No such impairments were recorded during the fourth quarter of 2016. Partially offsetting these items was \$15.4 million of expenses related to executive departures recorded in 2016.

Corporate expenses increased \$53.8 million to \$76.5 million in 2015, compared to \$22.7 million in 2014, primarily due to \$53.5 million of expenses associated with the acquisition and integration of Platinum, comprised of \$11.8 million of transaction-related expenses, \$5.4 million of integration-related expenses and \$36.3 million of compensation-related expenses. Also included in corporate expenses in 2015 was a \$5.6 million charge associated with the impairment of the goodwill and other intangible assets of an investment in other ventures, recorded under the equity method.

## Interest Expense and Preferred Share Dividends

Year ended December 31, (in thousands)	2016	2015	2014
Interest expense			
\$250 million Series B 7.50% Senior Notes due 2017	\$18,750	\$15,625	\$—
\$250 million 5.75% Senior Notes due 2020	14,375	14,375	14,375
\$300 million 3.700% Senior Notes due 2025	11,100	8,586	—
\$150 million 4.750% Senior Notes due 2025 (DaVinciRe)	7,125	4,774	—
Other	(9,206)	(7,090)	3,027
Total interest expense	42,144	36,270	17,402
Preferred share dividends			
\$125 million 6.08% Series C Preference Shares	7,600	7,600	7,600
\$275 million 5.375% Series E Preference Shares	14,781	14,781	14,781
Total preferred share dividends	22,381	22,381	22,381
Total interest expense and preferred share dividends	\$64,525	\$58,651	\$39,783

Interest expense increased \$5.9 million to \$42.1 million in 2016, compared to \$36.3 million in 2015, primarily driven by:

a full year of interest expense on the \$250 million of Series B 7.50% Senior Notes due 2017 assumed in connection with the acquisition of Platinum on March 2, 2015, \$300 million of our 3.700% Senior Notes due 2025 issued on March 24, 2015 and \$150 million of DaVinciRe's 4.750% Senior Notes due 2025 issued on May 4, 2015; partially offset by

amortization of net fair value adjustments of \$12.8 million, included in the other category in the table above, which reduced our interest expense and were recognized in connection with the acquisition of Platinum and its \$250.0 million Series B 7.50% Notes due June 1, 2017. See "Note 3. Acquisition of Platinum in our Notes to the Consolidated Financial Statements" for additional information with respect to the acquisition of Platinum and the related fair value adjustments.

Interest expense increased \$18.9 million to \$36.3 million in 2015, compared to \$17.4 million in 2014, primarily driven by:

interest expense of \$15.6 million related to the acquisition of \$250.0 million Series B 7.50% Notes due June 1, 2017, in connection with acquisition of Platinum;

- the issuance on March 24, 2015 of \$300.0 million of 3.700% Senior Notes due April 1, 2025, resulting in interest expense of \$8.6 million; and

the issuance on May 4, 2015 of \$150.0 million of DaVinciRe's 4.750% Senior Notes due May 1, 2025, resulting in interest expense of \$4.8 million; partially offset by

net fair value adjustments of \$10.7 million, included in the other category in the table above, which reduced our interest expense and were recognized in connection with the acquisition of Platinum and its \$250.0 million Series B 7.50% Notes due June 1, 2017.

Preferred share dividends were flat at \$22.4 million in each of 2016, 2015 and 2014.

## Income Tax (Expense) Benefit

Year ended December 31,	2016	2015	2014
(in thousands)			
Income tax (expense) benefit	\$(340)	\$45,866	\$(608)

We are subject to income taxes in certain jurisdictions in which we operate; however, since the majority of our income is currently earned in Bermuda, which does not have a corporate income tax, the tax impact to our operations has historically been minimal.

During 2016, we recognized an income tax expense of \$0.3 million, compared to an income tax benefit of \$45.9 million in 2015, primarily the result of a reduction in our U.S. valuation allowance from \$48.5 million to \$1.0 million in the first quarter of 2015 as a result of expected profits in our U.S.-based operations due principally to the acquisition of Platinum. Our income tax expense of \$0.3 million in 2016 is relatively flat when compared to our income tax expense of \$0.6 million in 2014.

We recognized an income tax benefit of \$45.9 million in 2015, compared to an income tax expense of \$0.6 million in 2014, primarily the result of a reduction in our U.S. valuation allowance, as discussed above.

At December 31, 2016, our U.S. tax-paying subsidiaries had a net deferred tax asset (after valuation allowance) of \$80.1 million. Our Ireland, U.K. and Singapore operations have historically produced GAAP taxable losses and we currently do not believe it is more likely than not that we will be able to recover the predominant amount of our net deferred tax assets in these jurisdictions. Our valuation allowance totaled \$18.8 million and \$17.9 million at December 31, 2016 and 2015, respectively.

Our effective income tax rate, which we calculate as income tax (expense) benefit divided by income before taxes, may fluctuate significantly from period to period depending on the geographic distribution of pre-tax income in any given period between different jurisdictions with comparatively higher tax rates and those with comparatively lower tax rates. The geographic distribution of pre-tax income can vary significantly between periods due to, but not limited to, the following factors: the business mix of net premiums written and earned; the size and nature of net claims and claim expenses incurred; the amount and geographic location of operating expenses, net investment income, net realized and unrealized gains (losses) on investments; outstanding debt and related interest expense; and the amount of specific adjustments to determine the income tax basis in each of our operating jurisdictions. In addition, a significant portion of our gross and net premiums are currently written and earned in Bermuda, which does not have a corporate income tax, including the majority of our catastrophe business, which can result in significant volatility to our pre-tax income (loss) in any given period. We expect our consolidated effective tax rate to increase in the future, as our global operations outside of Bermuda expand, including in connection with the acquisition of Platinum. In addition, it is possible we could be adversely affected by changes in tax laws, regulation, or enforcement, any of which could increase our effective tax rate more rapidly or steeply than we currently anticipate.

The preponderance of our revenue and pre-tax income is generated by our domestic operations (i.e., Bermuda) in the form of underwriting income and net investment income, when compared to our foreign operations. The geographic distribution of pre-tax income can vary significantly between periods for a variety of reasons, including the business mix of net premiums written and earned, the size and nature of net claims and claim expenses incurred, the amount and geographic location of operating expenses, net investment income and net realized and unrealized gains (losses) on investments and the amount of specific adjustments to determine the income tax basis in each of our operating jurisdictions. Pre-tax income for our domestic operations was higher compared to our foreign operations for the years ended December 31, 2016, 2015 and 2014 primarily as a result of the more volatile catastrophe business underwritten in our Bermuda operations during these periods being relatively free of catastrophe losses and thus generating higher levels of net underwriting income than our foreign operations, which underwrite primarily less volatile business with higher attritional net claims and claim expenses and as a result produce lower levels of net underwriting income in benign loss years.



## Net Income Attributable to Redeemable Noncontrolling Interests

Year ended December 31, (in thousands)	2016	2015	2014
Net income attributable to redeemable noncontrolling interests	\$(127,086)	\$(111,050)	\$(153,538)

Our net income attributable to redeemable noncontrolling interests was \$127.1 million in 2016, compared to \$111.1 million in 2015. The \$16.0 million increase in net income attributable to redeemable noncontrolling interests was principally due to an increase in the profitability of DaVinciRe and a decrease in our ownership of DaVinciRe to 24.0% at December 31, 2016, compared to 26.3% at December 31, 2015.

Our net income attributable to redeemable noncontrolling interests was \$111.1 million in 2015, compared to \$153.5 million in 2014. The \$42.5 million decrease in net income attributable to redeemable noncontrolling interests was principally due to a decrease in the profitability of DaVinciRe. Our ownership in DaVinciRe was 26.3% at December 31, 2015, compared to 23.4% at December 31, 2014.

We expect our noncontrolling economic ownership in DaVinciRe to fluctuate over time.

## LIQUIDITY AND CAPITAL RESOURCES

## Financial Condition

RenaissanceRe is a holding company, and we therefore rely on dividends from our subsidiaries and investment income to make principal and interest payments on our debt and to make dividend payments to our preference and common shareholders. The payment of dividends by our subsidiaries is, under certain circumstances, limited by the applicable laws and regulations in the various jurisdictions in which our subsidiaries operate, including among others, Bermuda, the U.S., the U.K. and Ireland. For example, insurance laws require our insurance subsidiaries to maintain certain measures of solvency and liquidity. The regulations governing our ability and the ability of our principal operating subsidiaries to pay dividends are discussed below, with further detail provided in “Part I, Item 1. Regulation”. In addition, refer to “Note 18. Statutory Requirements in our Notes to the Consolidated Financial Statements” for additional information with respect to our statutory requirements.

During the year ended December 31, 2016, our principal operating subsidiaries returned capital to RenaissanceRe, which included dividends declared and return of capital, net of capital contributions received, of \$341.7 million (2015 - \$1.2 billion).

In the aggregate, our operating subsidiaries have historically produced sufficient cash flows to meet their expected claims payments and operational expenses and to provide dividend payments to us. Our subsidiaries also maintain a concentration of investments in high quality liquid securities, which management believes will provide additional liquidity for extraordinary claims payments should the need arise. See “Capital Resources” section below.

## Group Supervision

The BMA is our group supervisor. Under the Insurance Act, we are required to maintain capital at a level equal to our ECR, which is established by reference to the BSCR model. The BSCR is a mathematical model designed to give the BMA robust methods for determining an insurer’s capital adequacy. Underlying the BSCR is the belief that all insurers should operate on an ongoing basis with a view to maintaining their capital at a prudent level in excess of the minimum solvency margin otherwise prescribed under the Insurance Act. We are also subject to an early-warning level based on 120% of the ECR, which the BMA considers to be the target capital level, which may trigger additional reporting requirements or other enhanced oversight. We are currently completing our 2016 group BSCR, which must be filed with the BMA on or before May 31, 2017, and at this time, we believe we will exceed the target level of required economic statutory capital. Our 2015 group BSCR exceeded the target level of required statutory capital.

### Bermuda Subsidiaries

Bermuda regulations require BMA approval for any reduction of capital in excess of 15% of statutory capital, as defined in the Insurance Act. The Insurance Act also requires the Bermuda insurance subsidiaries of RenaissanceRe to maintain certain measures of solvency and liquidity. At December 31, 2016, the statutory capital and surplus of our Bermuda insurance subsidiaries exceeded the minimum amount required to be maintained under Bermuda law. As a result of the acquisition of Platinum and the potential for organizational and capital changes, Renaissance Reinsurance and RenaissanceRe Specialty Risks Ltd. ("RenaissanceRe Specialty Risks") each received a request from the BMA, on February 24, 2015 and March 27, 2015, respectively, to obtain written approval prior to paying dividends or returning capital to RenaissanceRe during 2015. Subsequent to these requests and through December 31, 2015, Renaissance Reinsurance and RenaissanceRe Specialty Risks returned capital to RenaissanceRe, which included dividends declared and return of capital, of \$245.0 million and \$680.0 million, respectively. Effective October 1, 2016, each of RenaissanceRe Specialty Risks and Platinum Bermuda merged into Renaissance Reinsurance, with Renaissance Reinsurance being the sole surviving entity. As part of the merger, Renaissance Reinsurance applied for, and effective November 18, 2016 received, approval from the BMA to reduce its statutory capital by \$500.0 million through a return of capital to RenaissanceRe. The return of capital was completed prior to December 31, 2016.

Under the Insurance Act, RenaissanceRe Specialty U.S. is defined as a Class 3B insurer, and Renaissance Reinsurance and DaVinci are classified as Class 4 insurers, and must each maintain capital at a level equal to an ECR which is established by reference to the BSCR model. The 2016 BSCR for Renaissance Reinsurance, RenaissanceRe Specialty U.S. and DaVinci must be filed with the BMA before April 30, 2017; at this time, we believe each company will exceed its respective target level of required economic statutory capital. In addition, audited annual financial statements prepared in accordance with GAAP for each of Renaissance Reinsurance, RenaissanceRe Specialty U.S. and DaVinci are filed prior to April 30 of each year with the BMA and are available free of charge on the BMA's website.

### U.K. Subsidiaries

Underwriting capacity, or stamp capacity, of a member of Lloyd's must be supported by providing a deposit in the form of cash, securities or letters of credit, which are referred to as Funds at Lloyd's ("FAL"). The amount of FAL is determined by Lloyd's and is based on Syndicate 1458's solvency and capital requirement as calculated through its internal model. In addition, if the FAL are not sufficient to cover all losses, the Lloyd's Central Fund provides an additional level of security for policyholders. At December 31, 2016, the stamp capacity approved by Lloyd's for Syndicate 1458 was £353.2 million based on its business plan originally approved in November 2016 (December 31, 2015 - £293.3 million based on its business plan originally approved in November 2015). At December 31, 2016, the FAL required to support the underwriting activities at Lloyd's through Syndicate 1458 was £351.7 million (December 31, 2015 - £308.9 million). Actual FAL posted for Syndicate 1458 at December 31, 2016 by RenaissanceRe CCL is \$380.0 million and £90.0 million supported 100% by letters of credit (December 31, 2015 - \$360.0 million and £85.0 million).

### U.S. Subsidiaries

Renaissance Reinsurance U.S. is domiciled in Maryland, which has adopted the NAIC's model law which uses a risk-based capital ("RBC") model to monitor and regulate the solvency of licensed life, health, and property and casualty insurance and reinsurance companies. The RBC calculation is used to measure an insurer's capital adequacy with respect to the risk characteristics of the insurer's premiums written and net claims and claim expenses, rate of growth and quality of assets, among other measures. At December 31, 2016, the statutory capital and surplus of Renaissance Reinsurance U.S. exceeded the minimum capital adequacy level required to be maintained under U.S. law.

Renaissance Reinsurance U.S. is subject to certain restrictions on its ability to pay dividends pursuant to Maryland law, including making appropriate filings with and obtaining certain approvals from its regulator. During 2017, Renaissance Reinsurance U.S. will have an ordinary dividend capacity of \$25.4 million (2016 - \$26.0 million).





#### Top Layer Re

Renaissance Reinsurance is obligated to make a mandatory capital contribution of up to \$50.0 million in the event that a loss reduces Top Layer Re's capital below a specified level.

#### Liquidity and Cash Flows

##### Holding Company Liquidity

As a Bermuda-domiciled holding company, RenaissanceRe has limited operations of its own and its assets consist primarily of investments in subsidiaries, and, to a degree, cash and securities in amounts which fluctuate over time. Accordingly, RenaissanceRe's future cash flows largely depend on the availability of dividends or other statutorily permissible payments from our subsidiaries. As discussed above, the ability to pay such dividends is limited by the applicable laws and regulations in the various jurisdictions in which our subsidiaries operate.

RenaissanceRe's principal uses of liquidity are: (1) common share related transactions including dividend payments to our common shareholders and common share repurchases, (2) preference share related transactions including dividend payments to our preference shareholders and preference share redemptions, (3) interest and principal payments on debt, (4) capital investments in our subsidiaries, (5) acquisition of new or existing companies or businesses, such as our acquisition of Platinum and (6) certain corporate and operating expenses.

We attempt to structure our organization in a way that facilitates efficient capital movements between RenaissanceRe and our operating subsidiaries and to ensure that adequate liquidity is available when required, giving consideration to applicable laws and regulations, and the domiciliary location of sources of liquidity and related obligations.

##### Sources of Liquidity

Historically, cash receipts from operations, consisting of premiums and investment income, have provided sufficient funds to pay losses and operating expenses of our subsidiaries and to fund dividends to RenaissanceRe. The premiums received by our operating subsidiaries are generally received months or even years before losses are paid under the policies related to such premiums. Premiums and acquisition expenses generally are received within the first two years of inception of a contract, while operating expenses are generally paid within a year of being incurred. It generally takes much longer for claims and claims expenses to be reported and ultimately settled, requiring the establishment of reserves for claims and claim expenses. Therefore, the amount of claims paid in any one year is not necessarily related to the amount of net claims incurred in that year, as reported in the consolidated statement of operations.

While we expect that our liquidity needs will continue to be met by our cash receipts from operations, as a result of the combination of current market conditions, lower than usual investment yields, and the nature of our business where a large portion of the coverages we provide can produce losses of high severity and low frequency, future cash flows from operating activities cannot be accurately predicted and may fluctuate significantly between individual quarters and years. In addition, due to the magnitude and complexity of certain large loss events, meaningful uncertainty remains regarding losses from these events and our actual ultimate net losses from these events may vary materially from preliminary estimates, which would impact our cash flows from operations.

Our "shelf" registration statement on Form S-3 under the Securities Act allows for the public offering of various types of securities, including common shares, preference shares and debt securities, and also provides a source of liquidity.

Because we are "well-known seasoned issuer" as defined by the rules promulgated under the Securities Act, we are also eligible to file additional automatically effective registration statements on Form S-3 in the future for the potential offering and sale of an unlimited amount of debt and equity securities.

In addition, we maintain letter of credit facilities which provide liquidity. Refer to "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources, Capital Resources" for details of these facilities.

## Cash Flows

Year ended December 31, (in thousands)	2016	2015	2014
Net cash provided by operating activities	\$469,829	\$414,737	\$660,657
Net cash (used in) provided by investing activities	(164,532 )	(339,039 )	141,653
Net cash used in financing activities	(386,388 )	(83,665 )	(694,678 )
Effect of exchange rate changes on foreign currency cash	(4,637 )	(10,732 )	9,920
Net (decrease) increase in cash and cash equivalents	(85,728 )	(18,699 )	117,552
Cash and cash equivalents, beginning of period	506,885	525,584	408,032
Cash and cash equivalents, end of period	\$421,157	\$506,885	\$525,584

## 2016

During 2016, our cash and cash equivalents decreased \$85.7 million, to \$421.2 million at December 31, 2016, compared to \$506.9 million at December 31, 2015.

Cash flows provided by operating activities. Cash flows provided by operating activities during the year ended December 31, 2016 were \$469.8 million, compared to \$414.7 million during the year ended December 31, 2015. Cash flows provided by operating activities during the year ended December 31, 2016 were primarily the result of certain adjustments to reconcile our net income of \$630.0 million to net cash provided by operating activities, including:

- an increase in unearned premiums of \$342.5 million due to an increase in our gross premiums written; and
- a \$150.0 million increase in reinsurance balances payable due to the increase in gross premiums ceded and the timing of our payments of gross premiums ceded;
- a decrease in our reserve for claims and claim expenses of \$81.2 million as a result of claims payments of \$623.8 million, partially offset by claims and claims expenses incurred of \$710.7 million;
- a \$210.6 million decrease in prepaid reinsurance premiums due to the timing of our payments of gross premiums ceded;
- an increase in premiums receivable and deferred acquisition costs of \$209.3 million and \$135.9 million, respectively, due to the increase in our gross premiums written; and
- a \$145.0 million increase in reinsurance recoverable.

Cash flows used in investing activities. During the year ended December 31, 2016, our cash flows used in investing activities were \$164.5 million, principally reflecting net purchases of fixed maturity investments of \$162.5 million, short term investments of \$118.6 million and other investments of \$68.6 million; partially offset by net sales of equity investments trading of \$184.8 million.

Cash flows used in financing activities. Our cash flows used in financing activities in the year ended December 31, 2016 were \$386.4 million, and were principally the result of net outflows related to the settlement of \$309.4 million of common share repurchases, \$51.6 million and \$22.4 million of dividends paid on our common and preference shares, respectively, and net outflows of \$3.0 million related to a net return of capital to third party shareholders, principally in DaVinciRe and Medici.

## 2015

During 2015, our cash and cash equivalents decreased \$18.7 million, to \$506.9 million at December 31, 2015, compared to \$525.6 million at December 31, 2014.

Cash flows provided by operating activities. Cash flows provided by operating activities during the year ended December 31, 2015 were \$414.7 million, compared to \$660.7 million during the year ended December 31, 2014. Cash flows provided by operating activities during the year ended December 31, 2015

were primarily the result of certain adjustments to reconcile our net income of \$542.2 million to net cash provided by operating activities, including:

- an increase in unearned premiums of \$144.0 million due to an increase in our gross premiums written; and
- a \$64.9 million and \$128.4 million increase in reinsurance balances payable and prepaid reinsurance premiums, respectively, due to the increase in gross premiums ceded and the timing of our payments of gross premiums ceded;
- an increase in premiums receivable and deferred acquisition costs of \$105.3 million and \$89.2 million, respectively, due to the increase in our gross premiums written;
- a decrease in our reserve for claims and claim expenses of \$43.3 million as a result of claims payments of \$588.3 million, partially offset by claims and claims expenses incurred of \$545.0 million; and
- a \$64.1 million increase in reinsurance recoverable.

Cash flows used in investing activities. During the year ended December 31, 2015, our cash flows used in investing activities were \$339.0 million, principally reflecting the net cash consideration paid for Platinum of \$678.2 million, which was comprised of gross cash outflows of \$904.4 million, net of cash acquired of \$226.3 million; net purchases of fixed maturity investments of \$192.6 million; and net purchases of equity investments trading of \$147.6 million. Partially offsetting these net outflows were our net sales of short term investments of \$669.1 million. Refer to “Part I, Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Summary Results of Operations and Liquidity and Capital Resources, Impact of Platinum Acquisition on Liquidity and Capital Resources” and “Note 3. Acquisition of Platinum in our Notes to the Consolidated Financial Statements” for additional information with respect to the acquisition of Platinum.

Cash flows used in financing activities. Our cash flows used in financing activities in the year ended December 31, 2015 were \$83.7 million, and were principally the result of net outflows related to the settlement of \$259.9 million of common share repurchases, net outflows of \$193.0 million related to a net return of capital to third party shareholders, principally in DaVinciRe, and \$54.0 million and \$22.4 million of dividends paid on our common and preference shares, respectively, partially offset by the issuance of \$300.0 million of our 3.700% Senior Notes due 2025, net of expenses, of \$297.8 million, and the issuance of \$150.0 million of DaVinciRe’s 4.750% Senior Notes due 2025, net of expenses, of \$147.8 million.

#### Impact of Platinum Acquisition on Liquidity and Capital Resources

On March 2, 2015, we completed the acquisition of Platinum. The aggregate consideration for the transaction was \$1.93 billion, comprised of a special dividend of \$253.2 million paid by Platinum, the issuance of 7.4 million RenaissanceRe common shares valued at \$761.8 million, and cash consideration of \$904.4 million. We used a short term bridge loan to fund \$300.0 million of the cash consideration paid by us and on March 24, 2015, issued \$300.0 million of our 3.700% Senior Notes due 2025 (together with cash on hand) to replace the short term bridge loan used to fund part of the cash consideration. The remaining \$604.4 million of cash consideration was funded through our available funds.

We incurred \$2.1 million of corporate expenses associated with the acquisition and integration of Platinum in the year ended December 31, 2016, in addition to \$53.5 million during the year ended December 31, 2015. We expect to incur some additional costs and expenses associated with the acquisition and integration of Platinum in 2017.

Following the close of the acquisition of Platinum and execution of the actions noted above, we believe our operating subsidiaries have adequate capital resources in the aggregate, and the ability to produce sufficient cash flows to meet their expected claims payments and operational expenses and to provide dividend payments to RenaissanceRe. In turn, we believe RenaissanceRe has adequate capital resources, or the access to capital resources, to meet our obligations, including dividend payments to our common and preferred shareholders, interest payments on our senior notes and other liabilities, as they come due.

### Capital Resources

In the normal course of our operations, we may from time to time evaluate additional share or debt issuances given prevailing market conditions and capital management strategies, including for our operating subsidiaries and joint ventures. In addition, we enter into agreements with financial institutions to obtain letter of credit facilities for the benefit of our operating subsidiaries in their reinsurance and insurance business.

Our total shareholders' equity attributable to RenaissanceRe and debt is as follows:

	At December 31, 2016	At December 31, 2015	Change
(in thousands)			
Common shareholders' equity	\$4,466,577	\$4,332,184	\$134,393
Preference shares	400,000	400,000	—
Total shareholders' equity attributable to RenaissanceRe	4,866,577	4,732,184	134,393
3.700% Senior Notes due 2025	296,948	296,577	371
5.75% Senior Notes due 2020	248,941	248,610	331
Series B 7.50% Senior Notes due 2017	255,352	268,196	(12,844 )
4.750% Senior Notes due 2025 (DaVinciRe)	147,422	147,112	310
RenaissanceRe revolving credit facility – unborrowed	250,000	250,000	—
Total debt	1,198,663	1,210,495	(11,832 )
Total shareholders' equity attributable to RenaissanceRe and debt	\$6,065,240	\$5,942,679	\$122,561

During 2016, our total shareholders' equity attributable to RenaissanceRe and debt increased by \$122.6 million, to \$6.1 billion.

Our shareholders' equity attributable to RenaissanceRe increased \$134.4 million during 2016 principally as a result of: our comprehensive income attributable to RenaissanceRe of \$502.0 million; partially offset by our repurchase of 2.7 million shares in open market transactions at an aggregate cost of \$309.4 million, and at an average share price of \$112.87; and

\$51.6 million and \$22.4 million of dividends on our common and preference shares, respectively.

During 2016, our debt decreased \$11.8 million, primarily driven by the amortization of deferred debt issuance costs and the amortization of the fair value adjustment related to the assumption of the Series B 7.50% Senior Notes due 2017 in connection with the acquisition of Platinum. We currently anticipate repaying the 7.50% Senior Notes due 2017 with existing cash on hand and do not plan on re-financing the notes, however we cannot assure you we will do so.

## Credit Facilities

The outstanding amounts issued or drawn under each of our significant credit facilities is set forth below:

At December 31, 2016 (in thousands)	Issued or Drawn
RenaissanceRe Revolving Credit Facility	\$—
Uncommitted Standby Letter of Credit Facility with Wells Fargo	140,829
Uncommitted Standby Letter of Credit Facility with NAB	4,855
Bilateral Letter of Credit Facility with Citibank Europe	244,909
Funds at Lloyd’s Letter of Credit Facilities	
Renaissance Reinsurance FAL Facility	380,000
Total credit facilities in U.S. dollars	\$770,593
Funds at Lloyd’s Letter of Credit Facilities	
Renaissance Reinsurance FAL Facility	£90,000
Specialty Risks FAL Facility	10,000
Total credit facilities in British Pounds	£100,000

Refer to “Note 9. Debt and Credit Facilities in our Notes to the Consolidated Financial Statements” for additional information related to our debt and credit facilities and “Note 12. Shareholders’ Equity in our Notes to the Consolidated Financial Statements” for additional information related to our common and preference shares.

## Multi-Beneficiary Reinsurance Trusts and Multi-Beneficiary Reduced Collateral Reinsurance Trusts

Renaissance Reinsurance and DaVinci are each approved as a Trusteed Reinsurer in the state of New York and each has established a multi-beneficiary reinsurance trust to collateralize its respective (re)insurance liabilities associated with U.S. domiciled cedants. We expect, over time, to transition cedants with existing outstanding letters of credit to the appropriate multi-beneficiary reinsurance trust as determined by cedant state of domicile, thereby reducing our absolute and relative reliance on letters of credit. Accordingly, it is our intention to seek to have new business incepting with cedants domiciled in approved states collateralized using a multi-beneficiary reinsurance trust. Cedants collateralized with a multi-beneficiary reinsurance trust will be eligible for automatic reinsurance credit in their respective U.S. regulatory filings.

In addition, Renaissance Reinsurance and DaVinci are each approved as an “eligible reinsurer” in the state of Florida, and are authorized to provide reduced collateral equal to 20% and 50%, respectively, of their net outstanding insurance liabilities to Florida-domiciled insurers.

Refer to “Note 18. Statutory Requirements in our Notes to the Consolidated Financial Statements” for additional information related to our multi-beneficiary reinsurance trusts and multi-beneficiary reduced collateral reinsurance trust.

## Redeemable Noncontrolling Interest – DaVinciRe

Refer to “Note 10. Noncontrolling Interests in our Notes to the Consolidated Financial Statements” for additional information related to redeemable noncontrolling interest - DaVinciRe.

## Ratings

Financial strength ratings are an important factor in respect of the competitive position of reinsurance and insurance companies. We have received high claims-paying and financial strength ratings from A.M. Best, S&P, Moody’s and Fitch. These ratings represent independent opinions of an insurer’s financial strength, operating performance and ability to meet policyholder obligations, and are not an evaluation directed toward the protection of investors or a recommendation to buy, sell or hold any of our securities. Rating

organizations continually review the financial positions of our principal operating subsidiaries and joint ventures and ratings may be revised or revoked by the agencies which issue them.

Presented below are the ratings of our principal operating subsidiaries and joint ventures and the ERM rating of RenaissanceRe as of February 17, 2017.

	A.M. Best S&P		Moody's Fitch	
Renaissance Reinsurance (1)	A+	AA-	A1	A+
DaVinci (1)	A	AA-	A3	—
Renaissance Reinsurance U.S. (1)	A	AA-	—	—
RenaissanceRe Specialty U.S. (1)	A	AA-	—	—
Renaissance Reinsurance of Europe (1)	A+	AA-	—	—
Top Layer Re (1)	A+	AA	—	—
Syndicate 1458	—	—	—	—
Lloyd's Overall Market Rating (2)	A	A+	—	AA-
RenaissanceRe (3)	—	Very Strong	—	—

(1) The A.M. Best, S&P, Moody's and Fitch ratings for these companies set forth in the table above reflect the insurer's financial strength rating and in addition, the S&P ratings also reflect the insurer's issuer credit rating.

(2) The A.M. Best, S&P and Fitch ratings for the Lloyd's Overall Market Rating represent its financial strength rating.

(3) The S&P rating for RenaissanceRe represents rating on its Enterprise Risk Management practices.

A.M. Best. "A+" is the second highest designation of A.M. Best's sixteen rating levels. "A+" rated insurance companies are defined as "Superior" companies and are considered by A.M. Best to have a very strong ability to meet their obligations to policyholders. "A" is the third highest designation assigned by A.M. Best, representing A.M. Best's opinion that the insurer has an "Excellent" ability to meet its ongoing obligations to policyholders.

On August 19, 2016, A.M. Best affirmed the financial strength rating of "A" (Excellent) of DaVinci Renaissance Reinsurance U.S. and Renaissance Specialty U.S. and "A+" (Superior) of Top Layer Re, with an outlook of stable. Following the acquisition of Platinum, on April 16, 2015, A.M. Best removed from under review with negative implications and affirmed the financial strength rating of "A+" (Superior) for each of Renaissance Reinsurance and Renaissance Reinsurance of Europe, with an outlook of negative. A.M. Best also removed from under review with negative implications and affirmed the financial strength rating of "A" (Excellent) for each of DaVinci and RenaissanceRe Specialty U.S., with an outlook of stable. Furthermore, A.M. Best removed from under review with developing implications and affirmed the financial strength rating of "A" (Excellent) for Renaissance Reinsurance U.S., with an outlook of stable. In addition, A.M. Best affirmed its issuer credit rating of "a-" (Excellent) and all debt ratings of RenaissanceRe.

S&P. The "AA" range ("AA+", "AA", "AA-"), which has been assigned by S&P to Renaissance Reinsurance, DaVinci, Renaissance Reinsurance U.S., RenaissanceRe Specialty U.S., Renaissance Reinsurance of Europe and Top Layer Re, is the second highest rating assigned by S&P and indicates that S&P believes the insurers have very strong capacity to meet its financial commitments, differing only slightly from those rated higher. The "A" range ("A+", "A", "A-"), which is the third highest rating assigned by S&P, indicates that S&P believes the insurers have strong capacity to meet their respective financial commitments but they are somewhat more susceptible to adverse effects or changes in circumstances and economic conditions than insurers rated higher. S&P assigns an issuer credit rating to an entity which is an opinion on the creditworthiness of the obligor with respect to a specific financial obligation.

On December 2, 2016, S&P affirmed the financial strength ratings of Renaissance Reinsurance, DaVinci and Renaissance Reinsurance of Europe of "AA-" and raised the financial strength rating on each of Renaissance Reinsurance U.S. and RenaissanceRe Specialty U.S. to "AA-". At the same time, S&P revised its outlook on RenaissanceRe and its subsidiaries to negative from stable. In addition, S&P withdrew its



ratings on RenaissanceRe Specialty Risks Ltd. and Platinum Underwriters Bermuda, Ltd. in connection with the October 1, 2016 merger of these entities into Renaissance Reinsurance, with Renaissance Reinsurance being the sole surviving entity.

On October 12, 2015, S&P affirmed Top Layer Re's financial strength rating and issuer credit rating of "AA". The outlook for this rating is stable.

In addition, S&P assesses companies' ERM practices, which is an opinion on the many critical dimensions of risk management that determine overall creditworthiness. RenaissanceRe has been assigned an ERM rating of "Very Strong", which is the highest rating assigned by S&P, and indicates that S&P believes RenaissanceRe has extremely strong capabilities to consistently identify, measure, and manage risk exposures and losses within RenaissanceRe's predetermined tolerance guidelines. On December 2, 2016, S&P affirmed the ERM rating of RenaissanceRe of "Very Strong".

Moody's. Moody's Insurance Financial Strength Ratings represent its opinions of the ability of insurance companies to pay punctually policyholder claims and obligations and senior unsecured debt instruments. Moody's believes that insurance companies rated "A1", such as Renaissance Reinsurance, and companies rated "A3", such as DaVinci, offer good financial security.

On November 25, 2015, Moody's affirmed its ratings of RenaissanceRe and RenaissanceRe's operating subsidiaries and changed its outlook to stable, from negative. The stable outlook reflects Moody's more positive view of the acquisition of Platinum, although concerns linger about reinsurance sector fundamentals.

Fitch. Fitch's issuer financial strength ratings provide an assessment of the financial strength of an insurance organization. Fitch believes that insurance companies rated "A+", such as Renaissance Reinsurance, have "Strong" capacity to meet policyholders and contract obligations on a timely basis with a low expectation of ceased or interrupted payments. Insurers rated "AA-" by Fitch are believed to have a very low expectation of ceased or interrupted payments and very strong capital to meet policyholder obligations.

On August 10, 2016, Fitch affirmed the issuer financial strength rating of Renaissance Reinsurance at "A+". The outlook for this rating is stable.

On November 25, 2014, following our announcement of RenaissanceRe's intention to acquire Platinum, Fitch affirmed its ratings of RenaissanceRe and RenaissanceRe's operating subsidiaries. The outlook is stable for these ratings.

#### Lloyd's Overall Market Rating

A.M. Best, S&P and Fitch have each assigned a financial strength rating to the Lloyd's overall market. The financial risks to policy holders of syndicates within the Lloyd's market are partially mutualized through the Lloyd's Central Fund, to which all underwriting members contribute. Because of the presence of the Lloyd's Central Fund, and the current legal and regulatory structure of the Lloyd's market, financial strength ratings on individual syndicates would not be particularly meaningful and in any event would not be lower than the financial strength rating of the Lloyd's overall market.

#### Reserve for Claims and Claim Expenses

We believe the most significant accounting judgment made by management is our estimate of claims and claim expense reserves. Claims and claim expense reserves represent estimates, including actuarial and statistical projections at a given point in time, of the ultimate settlement and administration costs for unpaid claims and claim expenses arising from the insurance and reinsurance contracts we sell. We establish our claims and claim expense reserves by taking claims reported to us by insureds and ceding companies, but which have not yet been paid ("case reserves"), adding the costs for additional case reserves ("additional case reserves") which represent our estimates for claims related to specific contracts previously reported to us which we believe may not be adequately estimated by the client as of that date, and adding estimates for the anticipated cost of IBNR.



Our reserving techniques, assumptions and processes differ among our Property and Casualty and Specialty segments. Refer to “Note 8. Reserve for Claims and Claim Expenses in our Notes to the Consolidated Financial Statements” for more information on the risks we insure and reinsure, the reserving techniques, assumptions and processes we follow to estimate our claims and claim expense reserves, prior year development of the reserve for claims and claim expenses, analysis of our incurred and paid claims development and claims duration information for each of our Property and Casualty and Specialty segments. In addition, refer to “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves” for more information on the reserving techniques, assumptions and processes we follow to estimate our claims and claim expense reserves, our current estimates versus our initial estimates of our claims reserves, and sensitivity analysis for each of our Property and Casualty and Specialty segments.

#### Investments

The table below shows our invested assets:

At December 31, (in thousands, except percentages)	2016		2015		Change
U.S. treasuries	\$2,617,894	28.1 %	\$2,064,944	23.0 %	\$552,950
Agencies	90,972	1.0 %	137,976	1.5 %	(47,004 )
Municipal	519,069	5.6 %	583,282	6.5 %	(64,213 )
Non-U.S. government (Sovereign debt)	333,224	3.6 %	334,981	3.7 %	(1,757 )
Non-U.S. government-backed corporate	133,300	1.4 %	138,994	1.5 %	(5,694 )
Corporate	1,877,243	20.2 %	2,055,323	22.9 %	(178,080 )
Agency mortgage-backed	462,493	5.0 %	504,518	5.6 %	(42,025 )
Non-agency mortgage-backed	258,944	2.7 %	270,763	3.0 %	(11,819 )
Commercial mortgage-backed	409,747	4.4 %	561,496	6.2 %	(151,749 )
Asset-backed	188,358	2.0 %	130,541	1.4 %	57,817
Total fixed maturity investments, at fair value	6,891,244	74.0 %	6,782,818	75.3 %	108,426
Short term investments, at fair value	1,368,379	14.7 %	1,208,401	13.4 %	159,978
Equity investments trading, at fair value	383,313	4.1 %	393,877	4.4 %	(10,564 )
Other investments, at fair value	549,805	5.9 %	481,621	5.4 %	68,184
Total managed investment portfolio	9,192,741	98.7 %	8,866,717	98.5 %	326,024
Investments in other ventures, under equity method	124,227	1.3 %	132,351	1.5 %	(8,124 )
Total investments	\$9,316,968	100.0 %	\$8,999,068	100.0 %	\$317,900

At December 31, 2016, we held investments totaling \$9.3 billion, compared to \$9.0 billion at December 31, 2015, with net unrealized appreciation included in accumulated other comprehensive income of \$1.1 million at December 31, 2016, compared to \$2.1 million at December 31, 2015. Our investment guidelines stress preservation of capital, market liquidity, and diversification of risk. Notwithstanding the foregoing, our investments are subject to market-wide risks and fluctuations, as well as to risks inherent in particular securities.

In addition to the information presented above and below, refer to “Note 5. Investments and Note 6. Fair Value Measurements in our Notes to the Consolidated Financial Statements” for additional information regarding our investments and the fair value measurement of those investments, respectively.

As the reinsurance coverages we sell include substantial protection for damages resulting from natural and man-made catastrophes, we expect from time to time to become liable for substantial claim payments at short notice.

Accordingly, our investment portfolio as a whole is structured to seek to preserve capital and provide a high level of liquidity which means that the large majority of our investment portfolio consists of

highly rated fixed income securities, including U.S. treasuries, agencies, municipals, highly rated sovereign and supranational securities, high-grade corporate securities and mortgage-backed and asset-backed securities. We also have an allocation to publicly traded equities reflected on our consolidated balance sheet as equity investments trading and an allocation to other investments (including catastrophe bonds, private equity partnerships, senior secured bank loan funds, hedge funds and other investments). At December 31, 2016, our portfolio of equity investments trading totaled \$383.3 million, or 4.1%, of our total investments (2015 - \$393.9 million or 4.4%) inclusive of our investment in Essent Group Ltd. of \$183.4 million (2015 - \$102.1 million) and Trupanion of \$42.8 million (2015 - \$26.9 million), and our portfolio of other investments totaled \$549.8 million, or 5.9%, of our total investments (2015 - \$481.6 million or 5.4%).

The following table summarizes the composition of our investment portfolio, including the amortized cost and fair value of our investment portfolio and the ratings as assigned by S&P, or Moody's and/or other rating agencies when S&P ratings were not available, and the respective effective yield.

December 31, 2016	Amortized Cost	Fair Value	% of Total Investment Portfolio	Weighted Average Effective Yield	Credit Rating (1)				Non-Investment Grade
					AAA	AA	A	BBB	
(in thousands, except percentages)									
Short term investments	\$1,368,379	\$1,368,379	14.7 %	0.7 %	\$1,353,946	\$13,086	\$367	\$454	\$249
		100.0 %			99.0 %	1.0 %	— %	— %	— %
Fixed maturity investments									
U.S. treasuries	2,635,282	2,617,894	28.1 %	1.4 %	—	2,617,894	—	—	—
Agencies	91,905	90,972	1.0 %	2.0 %	—	90,972	—	—	—
Municipal	524,559	519,069	5.6 %	2.4 %	120,851	268,519	89,017	40,682	—
Non-U.S. government (Sovereign debt)	342,108	333,224	3.6 %	1.6 %	275,624	31,811	14,303	11,486	—
Non-U.S. government-backed corporate	137,024	133,300	1.4 %	1.5 %	91,918	39,145	951	1,286	—
Corporate	1,868,125	1,877,243	20.2 %	3.7 %	45,861	151,147	523,273	492,092	639,366
Agency mortgage-backed	471,235	462,493	5.0 %	2.9 %	—	462,493	—	—	—
Non-agency mortgage-backed	252,829	258,944	2.7 %	4.9 %	10,501	20,052	6,768	19,294	198,100
Commercial mortgage-backed	409,682	409,747	4.4 %	2.6 %	330,801	68,959	7,155	2,832	—
Asset-backed	187,941	188,358	2.0 %	2.3 %	168,182	17,493	2,683	—	—
Total fixed maturity investments	6,920,690	6,891,244	74.0 %	2.4 %	1,043,738	3,768,485	644,150	567,672	837,466
		100.0 %			15.2 %	54.7 %	9.3 %	8.2 %	12.2 %
Equity investments trading		383,313	4.1 %	—	—	—	—	—	—
		100.0 %			— %	— %	— %	— %	— %
Other investments									

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Catastrophe bonds	335,209	3.6	%	—	—	—	—	335,209
Private equity partnerships	191,061	2.1	%	—	—	—	—	—
Senior secured bank loan funds	22,040	0.2	%	—	—	—	—	—
Hedge funds	1,495	—	%	—	—	—	—	—
Total other investments	549,805	5.9	%	—	—	—	—	335,209
	100.0	%		—	% —	% —	% —	% 61.0
Investments in other ventures	124,227	1.3	%	—	—	—	—	—
	100.0	%		—	% —	% —	% —	% —
Total investment portfolio	\$9,316,968	100.0	%	\$2,397,684	\$3,781,571	\$644,517	\$568,126	\$1,172,000
	100.0	%		25.7	% 40.6	% 6.9	% 6.1	% 12.6

(1) The credit ratings included in this table are those assigned by S&P. When ratings provided by S&P were not available, ratings from other nationally recognized rating agencies were used. We have grouped short term investments with an A-1+ and A-1 short term issue credit rating as AAA, short term investments with A-2 short term issue credit rating as AA and short term investments with an A-3 short term issue credit rating as A.

#### Fixed Maturity Investments and Short Term Investments

At December 31, 2016, our fixed maturity investments and short term investment portfolio had a dollar-weighted average credit quality rating of AA (2015 – AA) and a weighted average effective yield of 2.1% (2015 – 2.2%). At December 31, 2016, our non-investment grade and not rated fixed maturity investments totaled \$867.2 million or 12.6% of our fixed maturity investments (2015 - \$723.6 million or 10.7%, respectively). In addition, within our other investments category we have funds that invest in non-investment grade and not rated fixed income securities and non-investment grade cat-linked securities. At December 31, 2016, the funds that invest in non-investment grade and not rated fixed income securities and non-investment grade cat-linked securities totaled \$357.2 million (2015 – \$264.5 million).

At December 31, 2016, we had \$1,368.4 million of short term investments (2015 – \$1,208.4 million). Short term investments are managed as part of our investment portfolio and have a maturity of one year or less when purchased. Short term investments are carried at fair value.

The duration of our fixed maturity investments and short term investments at December 31, 2016 was 2.4 years (2015 – 2.3 years). From time to time, we may reevaluate the duration of our portfolio in light of the duration of our liabilities and market conditions.

The value of our fixed maturity investments will fluctuate with changes in the interest rate environment and when changes occur in the overall investment market and in overall economic conditions. Additionally, our differing asset classes expose us to other risks which could cause a reduction in the value of our investments. Examples of some of these risks include:

Changes in the overall interest rate environment can expose us to “prepayment risk” on our mortgage-backed investments. When interest rates decline, consumers will generally make prepayments on their mortgages and, as a result, our investments in mortgage-backed securities will be repaid to us more quickly than we might have originally anticipated. When we receive these prepayments, our opportunities to reinvest these proceeds back into the investment markets will likely be at reduced interest rates. Conversely, when interest rates increase, consumers will generally make fewer prepayments on their mortgages and, as a result, our investments in mortgage-backed securities will be repaid to us less quickly than we might have originally anticipated. This will increase the duration of our portfolio, which is disadvantageous to us in a rising interest rate environment.

Our investments in certain tax-exempt municipal fixed income securities are subject to the risk that the U.S. Government could limit or materially alter the current tax exemption on these securities and future new issuances.

While the potential reduction or loss of such tax exemption would likely lead to increased yields on newly issued municipal fixed income securities in the long term, we would also expect to see a decrease in the fair value of our municipal fixed income securities portfolio in the short term.

Our investments in mortgage-backed securities are also subject to default risk. This risk is due in part to defaults on the underlying securitized mortgages, which would decrease the fair value of the investment and be disadvantageous to us. Similar risks apply to other asset-backed securities in which we may invest from time to time.

Our investments in debt securities of other corporations are exposed to losses from insolvencies of these corporations, and our investment portfolio can also deteriorate based on reduced credit quality of these corporations. We are also exposed to the impact of widening credit spreads even if specific securities are not downgraded.

Our investments in asset-backed securities are subject to prepayment risks, as noted above, and to the structural risks of these securities. The structural risks primarily emanate from the priority of each security in the issuer’s overall capital structure. We are also exposed to the impact of widening credit spreads.

Within our other investments category, we have funds that invest in non-investment grade fixed income securities as well as securities denominated in foreign currencies. These investments expose us to losses from insolvencies and other credit-related issues. We are also exposed to fluctuations in foreign exchange rates that may result in realized losses to us if our exposures are not hedged or if our hedging strategies are not effective and also to widening of credit spreads.



The following table summarizes the composition of the fair value of the fixed maturity investments and short term investments of our top ten corporate issuers at the date indicated.

At December 31, 2016  
(in thousands)

Issuer	Total	Short term investments	Fixed maturity investments
Goldman Sachs Group Inc.	\$42,179	\$	—\$ 42,179
JP Morgan Chase & Co.	41,919	—	41,919
Morgan Stanley	40,262	—	40,262
Bank of America Corp.	36,056	—	36,056
Wells Fargo & Co.	34,785	—	34,785
HSBC Holdings PLC	21,323	—	21,323
Royal Bank of Canada	19,404	—	19,404
Credit Suisse Group AG	19,193	—	19,193
PNC Financial Services Group Inc.	18,896	—	18,896
Citigroup Inc.	17,777	—	17,777
Total (1)	\$291,794	\$	—\$ 291,794

(1) Excludes non-U.S. government-backed corporate fixed maturity investments, reverse repurchase agreements and commercial paper, at fair value.

Equity Investments Trading

The following table summarizes the fair value of equity investments trading:

At December 31, (in thousands)	2016	2015	Change
Financials	\$275,065	\$193,716	\$81,349
Communications and technology	36,770	65,833	(29,063 )
Industrial, utilities and energy	30,303	51,168	(20,865 )
Consumer	20,501	40,918	(20,417 )
Healthcare	17,245	36,148	(18,903 )
Basic materials	3,429	6,094	(2,665 )
Total	\$383,313	\$393,877	\$(10,564)

We have a diversified public equity securities mandate with a third party investment manager which currently comprises a portion of our investments included in equity investments trading. In addition, we internally manage a number of strategic public equity investments, principally included in the financials category of our equity investments trading, and at December 31, 2016 included \$183.4 million (2015 - \$102.1 million) related to our investment in Essent and \$42.8 million (2015 - \$26.9 million) related to our investment in Trupanion. It is possible our equity allocation will increase in the future, and it could, from time to time, have a material effect on our financial results for the reasonably foreseeable future.

## Other Investments

The table below shows our portfolio of other investments:

At December 31, (in thousands)	2016	2015	Change
Catastrophe bonds	\$335,209	\$241,253	\$93,956
Private equity partnerships	191,061	214,848	(23,787 )
Senior secured bank loan funds	22,040	23,231	(1,191 )
Hedge funds	1,495	2,289	(794 )
Total other investments	\$549,805	\$481,621	\$68,184

We account for our other investments at fair value in accordance with FASB ASC Topic Financial Instruments. The fair value of certain of our fund investments, which principally include private equity funds, senior secured bank loan funds and hedge funds, is recorded on our balance sheet in other investments, and is generally established on the basis of the net valuation criteria established by the managers of such investments, if applicable. The net valuation criteria established by the managers of such investments is established in accordance with the governing documents of such investments. Many of our fund investments are subject to restrictions on redemptions and sales which are determined by the governing documents and limit our ability to liquidate these investments in the short term. Certain of our fund managers, fund administrators, or both, are unable to provide final fund valuations as of our current reporting date.

The typical reporting lag experienced by us to receive a final net asset value report is one month for hedge funds and senior secured bank loan funds and three months for private equity funds, although, in the past, in respect of certain of our private equity funds, we have on occasion experienced delays of up to six months at year end, as the private equity funds typically complete their respective year-end audits before releasing their final net asset value statements.

In circumstances where there is a reporting lag between the current period end reporting date and the reporting date of the latest fund valuation, we estimate the fair value of these funds by starting with the prior month or quarter-end fund valuations, adjusting these valuations for actual capital calls, redemptions or distributions, as well as the impact of changes in foreign currency exchange rates, and then estimating the return for the current period. In circumstances in which we estimate the return for the current period, all information available to us is utilized. This principally includes preliminary estimates reported to us by our fund managers, obtaining the valuation of underlying portfolio investments where such underlying investments are publicly traded and therefore have a readily observable price, using information that is available to us with respect to the underlying investments, reviewing various indices for similar investments or asset classes, as well as estimating returns based on the results of similar types of investments for which we have obtained reported results, or other valuation methods, where possible. Actual final fund valuations may differ, perhaps materially so, from our estimates and these differences are recorded in our consolidated statement of operations in the period in which they are reported to us, as a change in estimate. Included in net investment income for the year ended December 31, 2016 is a loss of \$3.4 million (2015 - loss of \$2.5 million) representing the change in estimate during the period related to the difference between our estimated net investment income due to the lag in reporting discussed above and the actual amount as reported in the final net asset values provided by our fund managers.

Our estimate of the fair value of catastrophe bonds is based on quoted market prices, or when such prices are not available, by reference to broker or underwriter bid indications.

We have committed capital to private equity partnerships and other entities of \$794.2 million, of which \$554.7 million has been contributed at December 31, 2016. Our remaining commitments to these funds at December 31, 2016 totaled \$249.4 million. In the future, we may enter into additional commitments in respect of private equity partnerships or individual portfolio company investment opportunities.

## Investments in Other Ventures, under Equity Method

The table below shows our investments in other ventures, under equity method:

At December 31, (in thousands, except percentages)	2016			2015		
	Investment	Ownership %	Carrying Value	Investment	Ownership %	Carrying Value
THIG	\$50,000	25.0 %	\$19,286	\$50,000	25.0 %	\$19,155
Tower Hill	10,000	32.3 %	21,590	10,000	31.3 %	19,981
Tower Hill Re	4,250	25.0 %	2,903	4,250	25.0 %	4,136
Tower Hill Signature	500	25.0 %	9,085	500	25.0 %	7,315
Total Tower Hill Companies	64,750		52,864	64,750		50,587
Top Layer Re	65,375	50.0 %	60,360	65,375	50.0 %	68,936
Other	23,923	41.8 %	11,003	23,607	43.5 %	12,828
Total investments in other ventures, under equity method	\$154,048		\$124,227	\$153,732		\$132,351

Except for Top Layer Re, the equity in earnings of the Tower Hill Companies and our other category of investments in other ventures are reported one quarter in arrears.

The carrying value of our investments in other ventures, under equity method, individually or in the aggregate may, and likely will, differ from the realized value we may ultimately attain, perhaps significantly so.

## Effects of Inflation

The potential exists, after a catastrophe loss, for the development of inflationary pressures in a local economy. The anticipated effects on us are considered in our catastrophe loss models. Our estimates of the potential effects of inflation are also considered in pricing and in estimating reserves for unpaid claims and claim expenses. In addition, it is possible that the risk of general economic inflation has increased which could, among other things, cause claims and claim expenses to increase and also impact the performance of our investment portfolio. The actual effects of this potential increase in inflation on our results cannot be accurately known until, among other items, claims are ultimately settled. The onset, duration and severity of an inflationary period cannot be estimated with precision.

## Off-Balance Sheet and Special Purpose Entity Arrangements

At December 31, 2016, we had not entered into any off-balance sheet arrangements, as defined by Item 303(a)(4) of Regulation S-K.



### Contractual Obligations

In the normal course of our business, we are a party to a variety of contractual obligations and these are considered by us when assessing our liquidity requirements.

The table below shows our contractual obligations:

At December 31, 2016	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
(in thousands)					
Long term debt obligations (1)					
3.700% Senior Notes due 2025	\$ 391,564	\$ 11,100	\$ 22,200	\$ 22,200	\$ 336,064
5.75% Senior Notes due 2020	296,043	14,375	28,750	252,918	—
Series B 7.50% Senior Notes due 2017	257,800	257,800	—	—	—
4.750% Senior Notes due 2025 (DaVinciRe)	209,964	7,125	14,250	14,250	174,339
Total long term debt obligations	1,155,371	290,400	65,200	289,368	510,403
Private equity and investment commitments (2)	249,442	249,442	—	—	—
Operating lease obligations	34,551	7,553	13,237	8,942	4,819
Capital lease obligations	30,836	3,017	5,200	5,322	17,297
Payable for investments purchased	305,714	305,714	—	—	—
Reserve for claims and claim expenses (3)	2,848,294	774,303	888,166	478,982	706,843
Total contractual obligations	\$ 4,624,208	\$ 1,630,429	\$ 971,803	\$ 782,614	\$ 1,239,362

(1) Includes contractual interest payments.

(2) The private equity and investment commitments do not have a defined contractual commitment date and we have therefore included them in the less than one year category.

We caution that the information provided above related to estimated future payment dates of our reserves for claims and claim expenses is not prepared or utilized for internal purposes and we currently do not estimate the future payment dates of claims and claim expenses. Because of the nature of the coverages we provide, the amount and timing of the cash flows associated with our policy liabilities will fluctuate, perhaps significantly, and therefore (3) are highly uncertain. We have based our estimates of future claim payments upon benchmark industry payment patterns, drawing upon available relevant sources of loss and allocated loss adjustment expense development data. These benchmarks are revised periodically as new trends emerge. We believe that it is likely that this benchmark data will not be predictive of our future claim payments and that material fluctuations can occur due to the nature of the losses which we insure and the coverages which we provide.

In certain circumstances, many of our contractual obligations may be accelerated to dates other than those reflected in the table, due to defaults under the agreements governing those obligations (including pursuant to cross-default provisions in such agreements) or in connection with certain changes in control of the Company, if applicable. In addition, in connection with any such default under the agreement governing these obligations, in certain circumstances, these obligations may bear an increased interest rate or be subject to penalties as a result of such a default.

### CURRENT OUTLOOK

#### Property Exposed Market Developments

Over the past several years, notwithstanding the occurrence of a number of significant loss events, including Storm Sandy in 2012, one of the most significant insured losses on record, and the increased frequency of severe weather events from 2013 through 2016 in many high-insurance-penetration regions, including the Fort McMurray Wildfire, the 2016 Texas Events and Hurricane Matthew, the global property catastrophe insurance and reinsurance markets have manifested growing, and ultimately record, levels of industry wide capital held. At the same time, reinsurance demand for many coverages and solutions has not grown at the pace of this growth in available capital. During the January 2017 property catastrophe reinsurance renewal season, we believe that supply, principally from traditional market participants and increasingly complemented by alternative capital providers, more than offset market demand,

resulting in a continued reduction of overall market pricing on a risk-adjusted basis, except for, in general, recent loss

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impacted treaties and contracts. We continue to expect the supply of capital to outpace any growth of demand, and we do not expect market developments to shift more favorably in the near term, absent unusually large, or unforeseen, contingent events.

Accordingly, although our in-force book of business remains attractive to us, with our continuing focus on underwriting discipline, absent changed conditions, we do not expect to maintain the size of our aggregate book of property-exposed reinsurance business. While we will strive to maintain a high level of net portfolio quality, we cannot assure you we will succeed in doing so. In addition, we believe that many of the key markets we serve are increasingly characterized by large, increasingly sophisticated cedants who are able to manage large retentions, can access risk transfer capital in expanding forms, and may seek to focus their reinsurance relationships on a core group of well-capitalized, highly-rated reinsurers who can provide a complete product suite as well as value added service. In addition to pricing, market conditions are increasingly impacted by an erosion of terms and conditions, for which we believe the reinsurance market is being undercompensated or in some instances uncompensated. It is possible that an increasing portion of the business ceded to the reinsurance market will be priced below levels we find acceptable, or will be characterized by contractual terms and conditions we do not find to be acceptable, absent the advent of significant new developments. While we believe we are well positioned to compete for business we find attractive, these dynamics may introduce or exacerbate challenges in our markets. We may also purchase additional retrocessional protection to maintain an appropriate risk adjusted level of exposure, although we cannot assure you we will do so. To the extent we increase our aggregate retrocessional purchases, absent the occurrence of loss activity covered by such retrocessions, our net income for the period will decrease to reflect the cost of such cessions, and we cannot assure you we will obtain commensurate value from factors such as potentially enhanced client acceptance, stability of our ratings, liquidity or otherwise.

#### Casualty and Specialty Exposed Market Developments

In the markets in which our Casualty and Specialty segment operates, we continue to expect casualty insurance and reinsurance capacity to remain abundant during 2017. Leading global intermediaries and other sources have generally reported that the U.S. casualty reinsurance market overall reflects a soft pricing environment and we believe that prevailing terms and conditions in the casualty market are such that many programs and treaties do not meet our pricing standards. However, we also believe that pockets of niche or specialty casualty lines may provide more attractive opportunities for stronger or well-positioned reinsurers and that we are well positioned to compete for business we do find attractive, with strong ratings, an expanded product offering, and increased U.S. market presence. For example, market demand for protection in financial lines, particularly in respect of mortgage reinsurance, has grown in recent periods, contributing to our recent specialty and casualty growth. However, we cannot assure that these dynamics will continue or that any overall market increase in demand will indeed materialize. Specific renewal terms vary widely by insured account and our ability to shape our portfolio to improve its risk and return characteristics as estimated by us is subject to a range of competitive and commercial factors. Furthermore, we intend to seek to maintain strong underwriting discipline and in light of prevailing market conditions cannot provide assurance we will succeed in growing or maintaining our current combined in-force book of business.

#### General Economic Conditions

Underlying economic conditions in several of the key markets we serve were generally stable or healthy in 2016. It is possible that some of our core markets, including the U.S., could experience further increases in economic growth, interest rates and inflation. These developments in turn could affect the markets we serve in multiple ways, both positively and negatively. However, overall economic performance and future outlook was impacted by significant geopolitical developments during 2016, including the U.S. federal elections and Brexit. We expect a period of uncertainty to continue, and that many of the key markets we serve may continue to be adversely impacted by the financial and fiscal instability of several European jurisdictions and certain large developing economies, potentially including the impacts of political instability in the Middle East, Ukraine, Russia; and potentially other jurisdictions. While we believe that in general, the overall macroeconomic environment might be more favorable in 2017 than in past years, we continue to believe that meaningful risk remains for continued economic weakness or adverse disruptions in general economic and financial market conditions. Moreover, future economic growth may be only at a

comparably suppressed rate for a relatively extended period of time. Declining or weak economic conditions could

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reduce demand for the products sold by us or our customers, or could weaken our overall ability to write business at risk-adequate rates. In addition, persistent low levels of economic activity could adversely impact other areas of our financial performance, such as by contributing to unforeseen premium adjustments, mid-term policy cancellations or commutations, or asset devaluation. Any of the foregoing or other outcomes of a period of economic weakness could adversely impact our financial position or results of operations. In addition, during a period of economic weakness, we believe our consolidated credit risk, reflecting our counterparty dealings with customers, agents, brokers, retrocessionaires, capital providers and parties associated with our investment portfolio, among others, is likely to be increased. Several of these risks could materialize, and our financial results could be negatively impacted, even after the end of any period of economic weakness.

Moreover, we continue to monitor the risk that our principal markets will experience increased inflationary conditions, which would, among other things, cause costs related to our claims and claim expenses to increase, and impact the performance of our investment portfolio. The onset, duration and severity of an inflationary period cannot be estimated with precision.

These economic conditions impact the risk-adjusted attractiveness and absolute returns and yields of our investment portfolio. In addition, our underwriting activities can be impacted, in particular our specialty and casualty reinsurance and Lloyd's portfolios, each of which can be exposed to risks arising from economic weakness or dislocations, including with respect to a potential increase of claims in directors and officers, errors and omissions, surety, casualty clash and other lines of business.

The sustained and continuing environment of low interest rates, as compared to past periods, has lowered the yields at which we invest our assets. However, many market observers have come to forecast the prospect of higher interest rates, potentially returning to more historical levels over time. Accordingly, as we invest cash from new premiums written or reinvest the proceeds of invested assets that mature or that we choose to sell, the yield on our portfolio may be favorably impacted by an increasing interest rate environment. Although, such an increase in prevailing interest rates can contribute to higher realized and unrealized losses associated with our currently invested assets in the near term. While it is possible yields will improve in future periods, we are unable to predict with certainty when conditions will substantially improve, or the pace of any such improvement.

#### Legislative and Regulatory Update

In June 2016, U.S. House of Representatives leadership released a Tax Reform Task Force Blueprint which, among other things, recommended the U.S. move to a consumption or destination-based tax system and adopt corresponding border adjustments taxing imports. During the first quarter of 2017, the House Ways and Means Committee has explored adopting the concepts of the Tax Reform Task Force Blueprint into law. If adopted comprehensively as contemplated by the Tax Reform Task Force Blueprint these proposals could materially adversely impact the insurance and reinsurance industry and our own results of operations. In particular, the enactment of such legislation could substantially decrease the exportability of risk and reduce our access to capital and business as a whole. Such legislation may also result in increased prices for our products and services, which could cause a decrease in demand for these products and services. It is also possible that border adjustments could result in retaliatory actions by other countries.

There are many other comprehensive tax reform proposals being discussed in Congress and by the Trump administration. For example, it is possible that past proposals could return that would limit or deny U.S. insurers and reinsurers the deduction for reinsurance placed with non-U.S. affiliates. It is also possible that consideration could be given to past proposals in respect of PFIC rules previously introduced by, at various times, prior House Ways and Means Chairman Dave Camp or then Senate Finance Committee Chairman Ron Wyden. In general, such changes, if adopted as drafted, would increase taxation of certain activities and structures in our industry. Tax reform proposals remain at an early stage and are subject to very significant uncertainty. At this time we are unable to predict the final form that any legislation would take, or the ultimate impact on our business and results of operations.

In prior Congressional sessions, Congress has considered a range of potential legislation which would, if enacted, provide for matters such as the creation of (i) a federal reinsurance catastrophe fund; (ii) a federal consortium to facilitate qualifying state residual markets and catastrophe funds in securing reinsurance; and (iii) a federal bond guarantee program for state catastrophe funds in qualifying state residual markets. In April 2016, Representative

David Jolly (R-FL) introduced H.R.4947, the Natural Disaster Reinsurance Act of

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2016, which would create a federal reinsurance program to cover any losses insured or reinsured by eligible state programs arising from natural catastrophes, including without limitation losses from floods, earthquakes, tropical storms, tornadoes, volcanic eruption and, winter storms.

If enacted, this bill, or legislation similar to any of these proposals, would, we believe, likely contribute to the growth of state entities offering below market priced insurance and reinsurance in a manner adverse to us and market participants more generally. Such legislation could also encourage cessation, or even reversal, of reforms and stabilization initiatives that have been enacted in Florida and other catastrophe-exposed states in recent years. While we believe such legislation will continue to be vigorously opposed, if adopted these bills would likely diminish the role of private market catastrophe reinsurers and could adversely impact our financial results, perhaps materially. In June 2012, Congress passed the Biggert-Waters Bill, which provided for a five-year renewal of the National Flood Insurance Program (the "NFIP") and effected substantial reforms in the program. Among other things, pursuant to this statute, the Federal Emergency Management Agency ("FEMA") was explicitly authorized to carry out initiatives to determine the capacity of private insurers, reinsurers, and financial markets to assume a greater portion of the flood risk exposure in the U.S., and to assess the capacity of the private reinsurance market to assume some of the program's risk. In March 2014, the U.S. Congress passed the Grimm-Waters Act, which amends, delays or defers some of the provisions of Biggert-Waters Bill. Among other things, the Grimm-Waters Act reverts back to exempting "grandfathered" policies from rate increases that might otherwise have been applied upon the approval of updated flood maps, introduces certain caps on the rate of premium increases even where actuarially indicated; eliminates certain provisions which provided for accelerated rate adequacy on the sale of covered properties; and introduces policy surcharges of \$25 for residences and \$250 for commercial properties near-term. We believe that the passage of the Grimm-Waters Act had an adverse impact on near term prospects for increased U.S. private flood insurance demand, the stability of the NFIP and the primary insurers that produce policies for the NFIP or offer private coverages. However, the Grimm-Waters Act did not amend certain features of the Biggert-Waters Bill which could, over time, support the growth of such demand, albeit at a slower pace and with greater uncertainty, such as the continuation, subject to annual limits, of some potential premium increases and the potential continuation of certain reforms relating to commercial properties and to homes that are not primary residences.

In January 2017, FEMA announced that, acting under authority contemplated by the Biggert-Waters Bill, it had secured reinsurance protection for the NFIP effective January 1, 2017 through January 1, 2018. Under the agreement, participating reinsurers agreed to indemnify FEMA for flood claims on an occurrence basis; the layer is structured to cover 26% of losses between \$4 billion and \$8 billion. It is possible this program will continue in future periods and may encourage other U.S. federal programs to explore private market risk transfer initiatives; however, we cannot assure you that any such developments will in fact occur, or that if they do transpire we will succeed in participating. In March 2016, the House Committee on Financial Services unanimously approved H.R. 2901, the Flood Insurance Market Parity and Modernization Act, which would clarify that flood insurance provided by private firms satisfies the requirement that homeowners maintain flood coverage on mortgaged properties that are backed by a federal guarantee and located in a flood zone. The bill also would direct FEMA to consider policy holders who drop a NFIP policy and then later return to the NFIP as having continuous coverage if they can demonstrate that a flood insurance policy from a private firm was maintained throughout the interim period. If ultimately approved by the full Congress, we believe that such legislation could incrementally contribute to the growth of private residential flood opportunities and the financial stabilization of the NFIP. However, we cannot assure you that such legislation will indeed be enacted or that such benefits will be recognized if it is.

In 2007, the state of Florida enhanced the authority of the FHCF to offer coverage at below-market rates and expanded the ability of the state-sponsored insurer, Citizens, to compete with private insurance companies, and other companies that cede business to us. This legislation reduced the role of the private insurance and reinsurance markets in Florida, a key target market of ours. In succeeding years, Florida legislation has allowed Citizens to increase rates and cut back support for the FHCF. The rate increases and cut back on coverage by the FHCF and Citizens have supported, over this period, a relatively increased role for private insurers in Florida, a market in which we have established substantial market share.





However, we cannot assure you that this increased role will continue or be maintained, or that adverse new legislation will not be passed.

Internationally, in the wake of the large natural catastrophes in 2011, a number of proposals have been introduced to alter the financing of natural catastrophes in several of the markets in which we operate. For example, the Thailand government has announced it is studying proposals for a natural catastrophe fund, under which the government would provide coverage for natural disasters in excess of an industry retention and below a certain limit, after which private reinsurers would continue to participate. The government of the Philippines has announced that it is considering similar proposals. Indonesia's financial services authority has announced a proposal to increase the amount of insurance business placed with domestic reinsurers. A range of proposals from varying stakeholders have been reported to have been made to alter the current regimes for insuring flood risk in the U.K. and Australia, and earthquake risk in New Zealand. A number of these jurisdictions constitute large current or potential future markets for catastrophic coverage. If these proposals are enacted and reduce market opportunities for our clients or for the reinsurance industry, we could be adversely impacted.

#### ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The following risk management discussion and the estimated amounts generated from sensitivities presented are forward-looking statements of market risk assuming certain market conditions occur. Actual results in the future may differ materially from these estimated results due to, among other things, actual developments in the global financial markets and changes in the composition of our investment portfolio, derivatives and product offerings. The results of analysis used by us to assess and mitigate risk should not be considered projections of future events or losses. See "Note On Forward-Looking Statements" for additional discussion regarding forward-looking statements included herein.

We are principally exposed to four types of market risk: interest rate risk; foreign currency risk; credit risk; and equity price risk. Our policies to address these risks in 2016 were not materially different than those used in 2015.

Our guidelines permit investments in derivative instruments such as futures, forward contracts, options, swap agreements and other derivative contracts which may be used to assume risk or for hedging purposes. Refer to "Note 19. Derivative Instruments in our Notes to the Consolidated Financial Statements" for additional information related to derivatives we have entered into.

##### Interest Rate Risk

Interest rate risk is the price sensitivity of a security to changes in interest rates. Our investment portfolio includes fixed maturity investments and short term investments, whose fair values will fluctuate with changes in interest rates. Our liabilities are accrued at a static rate in accordance with GAAP. However, we consider our liabilities, namely our net claims and claims expenses, to have an economic exposure to inflation and interest rate risk. As a result, we are exposed to interest rate risk with respect to our overall net asset position and more generally from an accounting standpoint since the assets are carried at fair value, while liabilities are accrued at a static rate.

We may utilize derivative instruments via an interest rate overlay strategy, for example, to manage or optimize our duration and curve exposures. In addition, we attempt to maintain adequate liquidity in our fixed maturity investments portfolio to fund operations, pay reinsurance and insurance liabilities and claims and provide funding for unexpected events.

The following tables summarize the aggregate hypothetical increase (decrease) in fair value from an immediate parallel shift in the treasury yield curve, assuming credit spreads remain constant, reflecting the use of an immediate time horizon since this presents the worst-case scenario, in our fixed maturity investment and short term investments portfolio for the years indicated:

At December 31, 2016 (in thousands, except percentages)	Interest Rate Shift in Basis Points				
	-100	-50	Base	50	100
Fair value of fixed maturity and short term investments	\$8,468,836	\$8,363,659	\$8,259,623	\$8,156,725	\$8,054,968
Net increase (decrease) in fair value	\$209,213	\$104,036	\$—	\$(102,898 )	\$(204,655 )
Percentage change in fair value	2.5	% 1.3	% —	% (1.2 )	% (2.5 )

At December 31, 2015 (in thousands, except percentages)	Interest Rate Shift in Basis Points				
	-100	-50	Base	50	100
Fair value of fixed maturity and short term investments	\$8,213,329	\$8,101,697	\$7,991,219	\$7,881,894	\$7,773,723
Net increase (decrease) in fair value	\$222,110	\$110,478	\$—	\$(109,325 )	\$(217,496 )
Percentage change in fair value	2.8	% 1.4	% —	% (1.4 )	% (2.7 )

As noted above, we use derivative instruments, namely interest rate futures within our portfolio of fixed maturity investments to manage our exposure to interest rate risk, which can include increasing or decreasing our exposure to this risk. At December 31, 2016, we had \$1,208.3 million of notional long positions and \$727.9 million of notional short positions of primarily Eurodollar, U.S. Treasury and non-U.S. dollar futures contracts (2015 - \$1,012.5 million and \$1,115.9 million, respectively). Refer to “Note 19. Derivative Instruments in our Notes to the Consolidated Financial Statements” for additional information related to interest rate futures entered into by us. The aggregate hypothetical impact of an immediate upward parallel shift in the treasury yield curve of 100 basis points would be a decrease in the market value of our net position in these derivatives of approximately \$2.8 million at December 31, 2016. Conversely, the aggregate hypothetical impact of an immediate downward parallel shift in the treasury yield curve of 100 basis points would be an increase in the market value of our net position in these derivatives of approximately \$4.1 million at December 31, 2016. The foregoing reflects the use of an immediate time horizon, since this presents the worst-case scenario. Credit spreads are assumed to remain constant in these hypothetical examples.

#### Foreign Currency Risk

Our functional currency is the U.S. dollar. We routinely write a portion of our business in currencies other than U.S. dollars and may, from time to time, experience foreign exchange gains and losses in our consolidated financial statements. All changes in exchange rates, with the exception of non-monetary assets and liabilities, are recognized in our consolidated statements of operations. We are primarily impacted by the foreign currency risk exposures noted below, and may, from time to time, enter into foreign currency forward and option contracts to minimize the effect of fluctuating foreign currencies on the value of non-U.S. dollar denominated assets and liabilities. Refer to “Note 19. Derivative Instruments in our Notes to the Consolidated Financial Statements” for additional information related to foreign currency forward and option contracts we have entered into. We may determine to not match a portion of our projected liabilities in foreign currencies with investments in the same currencies, which would increase our exposure to foreign currency fluctuations and increase the volatility of our results of operations.

### Underwriting Operations

Our foreign currency policy with regard to our underwriting operations is generally to hold foreign currency assets, including cash, investments and receivables that approximate the foreign currency liabilities, including claims and claim expense reserves and reinsurance balances payable. When necessary, we may use foreign currency forward and option contracts to minimize the effect of fluctuating foreign currencies on the value of non-U.S. dollar denominated assets and liabilities associated with our underwriting operations.

### Investment Portfolio

Our investment operations are exposed to currency fluctuations through our investments in non-U.S. dollar fixed maturity investments, short term investments and other investments. To economically hedge our exposure to currency fluctuations from these investments, we have entered into foreign currency forward contracts. In certain instances, we may assume foreign exchange risk as part of our investment strategy. Unrealized foreign exchange gains or losses arising from non-U.S. dollar investments classified as available for sale are recorded in accumulated other comprehensive income. Realized and unrealized foreign exchange gains or losses from the sale of our non-U.S. dollar fixed maturity investments trading and other investments, and foreign exchange gains or losses associated with our hedging of these non-U.S. dollar investments are recorded in net foreign exchange (losses) gains in our consolidated statements of operations. In the future, we may choose to increase our exposure to non-U.S. dollar investments. The following tables summarize the principal currencies creating foreign exchange risk for us and our net foreign currency exposures and the impact of a hypothetical 10% change in our net foreign currency exposure, keeping all other variables constant, as of the dates indicated:

At December 31, 2016 (in thousands, except for percentages)	AUD	CAD	EUR	GBP	JPY	NZD	Other	Total
Net assets denominated in foreign currencies	\$1,049	\$42,164	\$(39,844)	\$18,424	\$(14,248)	\$(23,723)	\$(6,989)	\$(23,167)
Net foreign currency derivatives notional amounts	(465 )	(34,877 )	67,662	(16,636 )	26,200	22,668	(2,232 )	62,320
Total net foreign currency exposure	\$584	\$7,287	\$27,818	\$1,788	\$11,952	\$(1,055 )	\$(9,221)	\$39,153
Net foreign currency exposure as a percentage of total shareholders' equity attributable to RenaissanceRe	—	% 0.1	% 0.6	% —	% 0.2	% —	% (0.2 )	% 0.8
Impact of a hypothetical 10% change in total net foreign currency exposure	\$(58 )	\$(729 )	\$(2,782 )	\$(179 )	\$(1,195 )	\$106	\$922	\$(3,915 )

At December 31, 2015 (in thousands, except for percentages)	AUD	CAD	EUR	GBP	JPY	NZD	Other	Total
Net assets denominated in foreign currencies	\$19,707	\$20,885	\$(2,861 )	\$27,450	\$(1,789)	\$(59,223)	\$(9,000)	\$(4,831 )
Net foreign currency derivatives notional amounts	(34,766 )	(18,583 )	(9,659 )	(37,107 )	(83 )	54,150	4,963	(41,085 )
Total net foreign currency exposure	\$(15,059)	\$2,302	\$(12,520)	\$(9,657 )	\$(1,872)	\$(5,073 )	\$(4,037)	\$(45,916)
Net foreign currency exposure as a percentage of total shareholders' equity attributable to RenaissanceRe	(0.3 )%	— %	(0.3 )%	(0.2 )%	— %	(0.1 )%	(0.1 )%	(1.0 )%
Impact of a hypothetical 10% change in total net foreign currency exposure	\$1,506	\$(230 )	\$1,252	\$966	\$187	\$507	\$404	\$4,592

### Credit Risk

Credit risk relates to the uncertainty of a counterparty's ability to make timely payments in accordance with contractual terms of the instrument or contract. We are primarily exposed to direct credit risk within our portfolios of fixed maturity and short term investments, and through customers and reinsurers in the form of premiums receivable and reinsurance recoverables, respectively, as discussed below.

#### Fixed Maturity Investments and Short Term Investments

Credit risk related to our fixed maturity investments and short term investments is the exposure to adverse changes in the creditworthiness of individual investment holdings, issuers, groups of issuers, industries and countries. We manage credit risk in our fixed maturity investments and short term investments through the credit research performed primarily by the investment management service providers and our evaluation of these investment managers adherence to investment mandates provided to them. The management of credit risk in the investment portfolio is integrated in our credit risk management governance framework and the management of credit exposures and concentrations within the investment portfolio are carried out in accordance with our risk policies, limits and risk concentrations as overseen by the Investment and Risk Management Committee of our Board of Directors. In the

investment portfolio, we review on a regular basis our asset concentration, credit quality and adherence to credit limit guidelines. At December 31, 2016, our invested asset portfolio had a dollar weighted average rating of AA (2015 - AA). In addition, we limit the amount of credit exposure to any one financial institution and, except for U.S. Government securities, none of our investments exceeded 10% of shareholders' equity at December 31, 2016.

The following table summarizes the ratings of our fixed maturity investments and short term investments (using ratings assigned by S&P, or Moody's and/or other rating agencies when S&P ratings were not available) as a percentage of total fixed maturity investments and short term investments as of the dates indicated:

At December 31,	2016	2015
AAA	29.0 %	26.7 %
AA	45.8 %	44.8 %
A	7.8 %	9.8 %
BBB	6.9 %	9.6 %
Non-investment grade	10.1 %	8.6 %
Not rated	0.4 %	0.5 %
Total	100.0%	100.0%

We consider the impact of credit spread movements on the fair value of our fixed maturity and short term investments portfolio. As credit spreads widen, the fair value of our fixed maturity and short term investments decreases, and vice versa.

The following tables summarize the aggregate hypothetical increase (decrease) in fair value from an immediate parallel shift in credit spreads, assuming the treasury yield curve remains constant, reflecting the use of an immediate time horizon since this presents the worst-case scenario, in our fixed maturity investments and short term investments portfolio for the years indicated:

At December 31, 2016 (in thousands, except percentages)	Credit Spread Shift in Basis Points				
	-100	-50	Base	50	100
Fair value of fixed income and short term investments	\$8,415,929	\$8,337,776	\$8,259,623	\$8,181,470	\$8,103,317
Net increase (decrease) in fair value	\$156,306	\$78,153	\$—	\$(78,153)	\$(156,306)
Percentage change in fair value	1.9	% 0.9	% —	% (0.9)	% (1.9)

At December 31, 2015 (in thousands, except percentages)	Credit Spread Shift in Basis Points				
	-100	-50	Base	50	100
Fair value of fixed income and short term investments	\$8,164,940	\$8,078,079	\$7,991,219	\$7,904,359	\$7,817,498
Net increase (decrease) in fair value	\$173,721	\$86,860	\$—	\$(86,860)	\$(173,721)
Percentage change in fair value	2.2	% 1.1	% —	% (1.1)	% (2.2)

We also employ credit derivatives in our investment portfolio to either assume credit risk or hedge our credit exposure. At December 31, 2016, we had outstanding credit derivatives of \$Nil in notional long positions and \$75.2 million in notional short positions, denominated in U.S. dollars (2015 - \$Nil and \$46.1 million, respectively). Refer to "Note 19. Derivative Instruments in our Notes to the Consolidated Financial Statements" for additional information related to credit derivatives entered into by us. The aggregate hypothetical market value impact from an immediate upward shift in credit spreads of 100 basis points would cause a decrease in the market value of our net position in these derivatives of approximately \$4.9

million at December 31, 2016. Conversely, the aggregate hypothetical market value impact from an immediate downward shift in credit spreads of 100 basis points would cause an increase in the market value of our net position in these derivatives of approximately \$1.2 million at December 31, 2016. The foregoing reflects the use of an immediate time horizon, since this presents the worst-case scenario.

#### Premiums Receivable and Reinsurance Recoverable

Premiums receivable from ceding companies are subject to credit risk. To mitigate credit risk related to reinsurance premiums receivable, we have established standards for ceding companies and, in most cases, have a contractual right of offset allowing us to settle claims net of any reinsurance premiums receivable. We also have reinsurance recoverable amounts from our reinsurers. To mitigate credit risk related to our reinsurance recoverable amounts, we consider the financial strength of our reinsurers when determining whether to purchase coverage from them. We generally obtain reinsurance coverage from companies rated “A-“ or better by S&P unless the obligations are collateralized. We routinely monitor the financial performance and rating status of all material reinsurers. Refer to “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Summary of Critical Accounting Estimates, Reinsurance Recoverables” for additional information with respect to reinsurance recoverable.

#### Equity Price Risk

Equity price risk is the potential loss arising from changes in the market value of equities. As detailed in the table below, we are directly exposed to this risk through our investment in equity investments trading which are traded on nationally recognized stock exchanges; and indirectly exposed to this risk through our investments in: private equity partnerships whose exit strategies often depend on the equity markets; certain hedge funds that have net long equity positions; and other ventures, under equity method. The following table summarizes a hypothetical 10% increase and decline in the carrying value of our equity investments trading, private equity partnerships, hedge funds and investments in other ventures, under equity method, holding all other factors constant, at the dates indicated:

At December 31, (in thousands, except for percentages)	2016	2015
Equity investments trading, at fair value	\$383,313	\$393,877
Private equity investments, at fair value	191,061	214,848
Investments in other ventures, under equity method	124,227	132,351
Hedge funds, at fair value	1,495	2,289
Total carrying value of investments exposed to equity price risk	\$700,096	\$743,365
Impact of a hypothetical 10% increase in the carrying value of investments exposed to equity price risk	\$70,010	\$74,337
Impact of a hypothetical 10% decrease in the carrying value of investments exposed to equity price risk	\$(70,010)	\$(74,337)

#### ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Reference is made to Item 15(a) of this Report for the Consolidated Financial Statements of RenaissanceRe and the Notes thereto, as well as the Schedules to the Consolidated Financial Statements.

#### ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

## ITEM 9A. CONTROLS AND PROCEDURES

### Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(b) and 15d-15(b) of the Exchange Act, as of the end of the period covered by this report. Based upon that evaluation, our management, including our Chief Executive Officer and Chief Financial Officer, concluded that, at December 31, 2016, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in Company reports filed or submitted under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

### Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining effective internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control over financial reporting was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles and to reflect management's judgments and estimates concerning effects of events and transactions that are accounted for or disclosed.

Our internal control over financial reporting includes those policies and procedures that: (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and the dispositions of our assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

There are inherent limitations to the effectiveness of any controls. Our Board of Directors and management, including our Chief Executive Officer and Chief Financial Officer, do not expect that our disclosure controls and procedures or internal control over financial reporting will prevent all errors and all fraud. Controls, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the controls are met. Further, we believe that the design of controls must reflect appropriate resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in controls, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within RenaissanceRe have been detected.

Management, with the participation of the Chief Executive Officer and Chief Financial Officer, assessed our internal control over financial reporting as of December 31, 2016 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013). Based on this assessment, management concluded that RenaissanceRe internal control over financial reporting was effective as of December 31, 2016.

Ernst & Young Ltd., the independent registered public accountants who audited our consolidated financial statements included in this Form 10-K, audited our internal control over financial reporting as of December 31, 2016 and their attestation report on our internal control over financial reporting appears below.

### Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2016, which were identified in connection with our evaluation required pursuant to Rules 13a-15 or 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.





REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of RenaissanceRe Holdings Ltd.:

We have audited RenaissanceRe Holdings Ltd. and Subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the COSO criteria). RenaissanceRe Holdings Ltd. and Subsidiaries' management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, RenaissanceRe Holdings Ltd. and Subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of RenaissanceRe Holdings Ltd. and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2016 of RenaissanceRe Holdings Ltd. and Subsidiaries and our report dated February 22, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young Ltd.

Hamilton, Bermuda

February 22, 2017

ITEM 9B. OTHER INFORMATION

None.

### PART III

#### ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item relating to our directors, executive officers and corporate governance is incorporated herein by reference to information found in our Proxy Statement for the Annual General Meeting of Shareholders to be held on May 17, 2017 (our "Proxy Statement"). We intend to file our Proxy Statement no later than 120 days after the close of the fiscal year.

We have adopted a Code of Ethics within the meaning of Item 406 of Regulation S-K of the Exchange Act that applies to all of our directors and employees, including our principal executive officer, principal financial officer, principal accounting officer, controller and other persons performing similar functions. The Code of Ethics is available free of charge on our website [www.renre.com](http://www.renre.com). We will also provide a printed version of the Code of Ethics to any shareholder who requests it. We intend to disclose any amendments to our Code of Ethics by posting such information on our website. Any waivers of our Code of Ethics applicable to our directors, principal executive officer, principal financial officer, principal accounting officer or controller and other persons who perform similar functions will be disclosed on our website or by filing a Form 8-K, as required.

#### ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item relating to executive compensation is incorporated herein by reference to information included in our Proxy Statement.

#### ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED SHAREHOLDER MATTERS

The information required by this Item relating to security ownership of certain beneficial owners and management and securities authorized for issuance under equity compensation plans is incorporated herein by reference to information included in our Proxy Statement.

#### ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item relating to certain relationships and related transactions and director independence is incorporated herein by reference to information included in our Proxy Statement.

#### ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item relating to principal accountant fees and services is incorporated herein by reference to information included in our Proxy Statement.

### PART IV

#### ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

##### Financial Statements

The Consolidated Financial Statements of RenaissanceRe Holdings Ltd. and related Notes thereto are listed in the accompanying Index to Consolidated Financial Statements and are filed as part of this Form 10-K.

##### Financial Statement Schedules

The Schedules to the Consolidated Financial Statements of RenaissanceRe Holdings Ltd. are listed in the accompanying Index to Schedules to Consolidated Financial Statements and are filed as a part of this Form 10-K.

##### Exhibits

See the Exhibit Index immediately following the Schedules to Consolidated Financial Statements of RenaissanceRe Holdings Ltd. in this Form 10-K.

#### ITEM 16. FORM 10-K SUMMARY

Not applicable.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: February 22, 2017 RENAISSANCERE HOLDINGS LTD.

/s/ Kevin J. O'Donnell  
 Kevin J. O'Donnell  
 Chief Executive Officer and President

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Kevin J. O'Donnell Kevin J. O'Donnell	Chief Executive Officer, President and Director (Principal Executive Officer)	February 22, 2017
/s/ Robert Qutub Robert Qutub	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 22, 2017
/s/ James C. Fraser James C. Fraser	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 22, 2017
/s/ James L. Gibbons James L. Gibbons	Non-Executive Chair of the Board of Directors	February 22, 2017
/s/ David C. Bushnell David C. Bushnell	Director	February 22, 2017
/s/ Brian G. J. Gray Brian G. J. Gray	Director	February 22, 2017
/s/ William F. Hagerty IV William F. Hagerty IV	Director	February 22, 2017
/s/ Jean D. Hamilton Jean D. Hamilton	Director	February 22, 2017
/s/ Henry Klehm, III Henry Klehm, III	Director	February 22, 2017
/s/ Ralph B. Levy Ralph B. Levy	Director	February 22, 2017

Ralph B. Levy

/s/ Carol P. Sanders      Director

February 22,  
2017

Carol P. Sanders

/s/ Anthony M.      Director  
Santomero

February 22,  
2017

Anthony M. Santomero

/s/ Edward J. Zore      Director

February 22,  
2017

Edward J. Zore

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
TO THE BOARD OF DIRECTORS AND SHAREHOLDERS OF RENAISSANCERE HOLDINGS LTD.**

We have audited the accompanying consolidated balance sheets of RenaissanceRe Holdings Ltd. and Subsidiaries as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of RenaissanceRe Holdings Ltd. and Subsidiaries at December 31, 2016 and 2015, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), RenaissanceRe Holdings Ltd.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) and our report dated February 22, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young Ltd.  
Hamilton, Bermuda  
February 22, 2017

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RenaissanceRe Holdings Ltd. and Subsidiaries

Consolidated Balance Sheets

At December 31, 2016 and 2015

(in thousands of United States Dollars, except per share amounts)

	December 31, 2016	December 31, 2015
<b>Assets</b>		
Fixed maturity investments trading, at fair value - amortized cost \$6,920,690 at December 31, 2016 (2015 - \$6,825,877) (Notes 5 and 6)	\$ 6,891,244	\$ 6,765,005
Fixed maturity investments available for sale, at fair value - amortized cost \$Nil at December 31, 2016 (2015 - \$15,943) (Notes 5 and 6)	—	17,813
Short term investments, at fair value (Notes 5 and 6)	1,368,379	1,208,401
Equity investments trading, at fair value (Notes 5 and 6)	383,313	393,877
Other investments, at fair value (Notes 5 and 6)	549,805	481,621
Investments in other ventures, under equity method (Note 5)	124,227	132,351
Total investments	9,316,968	8,999,068
Cash and cash equivalents	421,157	506,885
Premiums receivable	987,323	778,009
Prepaid reinsurance premiums (Note 7)	441,260	230,671
Reinsurance recoverable (Notes 7 and 8)	279,564	134,526
Accrued investment income	38,076	39,749
Deferred acquisition costs	335,325	199,380
Receivable for investments sold	105,841	220,834
Other assets	175,382	181,011
Goodwill and other intangible assets (Note 4)	251,186	265,154
Total assets	\$ 12,352,082	\$ 11,555,287
<b>Liabilities, Noncontrolling Interests and Shareholders' Equity</b>		
<b>Liabilities</b>		
Reserve for claims and claim expenses (Note 8)	\$ 2,848,294	\$ 2,767,045
Unearned premiums	1,231,573	889,102
Debt (Note 9)	948,663	960,495
Reinsurance balances payable	673,983	523,974
Payable for investments purchased	305,714	391,378
Other liabilities	301,684	245,145
Total liabilities	6,309,911	5,777,139
Commitments and Contingencies (Note 20)		
Redeemable noncontrolling interests (Note 10)	1,175,594	1,045,964
<b>Shareholders' Equity (Note 12)</b>		
Preference shares: \$1.00 par value – 16,000,000 shares issued and outstanding at December 31, 2016 (2015 – 16,000,000)	400,000	400,000
Common shares: \$1.00 par value – 41,187,413 shares issued and outstanding at December 31, 2016 (2015 – 43,701,064)	41,187	43,701
Additional paid-in capital	216,558	507,674
Accumulated other comprehensive income	1,133	2,108
Retained earnings	4,207,699	3,778,701
Total shareholders' equity attributable to RenaissanceRe	4,866,577	4,732,184
Total liabilities, noncontrolling interests and shareholders' equity	\$ 12,352,082	\$ 11,555,287
See accompanying notes to the consolidated financial statements		





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RenaissanceRe Holdings Ltd. and Subsidiaries

Consolidated Statements of Operations

For the years ended December 31, 2016, 2015, and 2014

(in thousands of United States Dollars, except per share amounts)

	2016	2015	2014
Revenues			
Gross premiums written	\$2,374,576	\$2,011,310	\$1,550,572
Net premiums written (Note 7)	\$1,535,312	\$1,416,183	\$1,068,236
Increase in unearned premiums	(131,882 )	(15,632 )	(5,820 )
Net premiums earned (Note 7)	1,403,430	1,400,551	1,062,416
Net investment income (Note 5)	181,726	152,567	124,316
Net foreign exchange (losses) gains	(13,788 )	(3,051 )	6,260
Equity in earnings of other ventures (Note 5)	963	20,481	26,075
Other income (loss)	14,178	13,472	(423 )
Net realized and unrealized gains (losses) on investments (Note 5)	141,328	(68,918 )	41,433
Total revenues	1,727,837	1,515,102	1,260,077
Expenses			
Net claims and claim expenses incurred (Notes 7 and 8)	530,831	448,238	197,947
Acquisition expenses	289,323	238,592	144,476
Operational expenses	197,749	219,112	190,639
Corporate expenses	37,402	76,514	22,749
Interest expense (Note 9)	42,144	36,270	17,402
Total expenses	1,097,449	1,018,726	573,213
Income before taxes	630,388	496,376	686,864
Income tax (expense) benefit (Note 15)	(340 )	45,866	(608 )
Net income	630,048	542,242	686,256
Net income attributable to redeemable noncontrolling interests (Note 10)	(127,086 )	(111,050 )	(153,538 )
Net income attributable to RenaissanceRe	502,962	431,192	532,718
Dividends on preference shares (Note 12)	(22,381 )	(22,381 )	(22,381 )
Net income available to RenaissanceRe common shareholders	\$480,581	\$408,811	\$510,337
Net income available to RenaissanceRe common shareholders per common share – basic (Note 13)	\$11.50	\$9.36	\$12.77
Net income available to RenaissanceRe common shareholders per common share – diluted (Note 13)	\$11.43	\$9.28	\$12.60
Dividends per common share (Note 12)	\$1.24	\$1.20	\$1.16

See accompanying notes to the consolidated financial statements

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RenaissanceRe Holdings Ltd. and Subsidiaries  
 Consolidated Statements of Comprehensive Income  
 For the years ended December 31, 2016, 2015 and 2014  
 (in thousands of United States Dollars)

	2016	2015	2014
Comprehensive income			
Net income	\$630,048	\$542,242	\$686,256
Change in net unrealized gains on investments	(975 )	(1,308 )	(715 )
Comprehensive income	629,073	540,934	685,541
Net income attributable to redeemable noncontrolling interests	(127,086 )	(111,050 )	(153,538 )
Comprehensive income attributable to redeemable noncontrolling interests	(127,086 )	(111,050 )	(153,538 )
Comprehensive income attributable to RenaissanceRe	\$501,987	\$429,884	\$532,003
Disclosure regarding net unrealized gains			
Total net realized and unrealized holding gains (losses) on investments	\$403	\$(982 )	\$(715 )
Net realized gains on fixed maturity investments available for sale	(1,378 )	(326 )	—
Change in net unrealized gains on investments	\$(975 )	\$(1,308 )	\$(715 )

See accompanying notes to the consolidated financial statements



RenaissanceRe Holdings Ltd. and Subsidiaries  
Consolidated Statements of Changes in Shareholders' Equity  
For the years ended December 31, 2016, 2015 and 2014  
(in thousands of United States Dollars)

	2016	2015	2014
Preference shares			
Balance – January 1	\$400,000	\$400,000	\$400,000
Balance – December 31	400,000	400,000	400,000
Common shares			
Balance – January 1	43,701	38,442	43,646
Issuance of shares	—	7,435	—
Repurchase of shares	(2,741)	(2,473)	(5,355)
Exercise of options and issuance of restricted stock awards (Notes 12 and 17)	227	297	151
Balance – December 31	41,187	43,701	38,442
Additional paid-in capital			
Balance – January 1	507,674	—	—
Issuance of shares	—	754,384	—
Repurchase of shares	(306,693)	(257,401)	(11,702)
Change in redeemable noncontrolling interest	(1,655)	(762)	1,274
Exercise of options and issuance of restricted stock awards (Notes 12 and 17)	17,232	11,453	10,428
Balance – December 31	216,558	507,674	—
Accumulated other comprehensive income			
Balance – January 1	2,108	3,416	4,131
Change in net unrealized gains on investments	(975)	(1,308)	(715)
Balance – December 31	1,133	2,108	3,416
Retained earnings			
Balance – January 1	3,778,701	3,423,857	3,456,607
Net income	630,048	542,242	686,256
Net income attributable to redeemable noncontrolling interests (Note 10)	(127,086)	(111,050)	(153,538)
Repurchase of shares	—	—	(497,175)
Dividends on common shares	(51,583)	(53,967)	(45,912)
Dividends on preference shares	(22,381)	(22,381)	(22,381)
Balance – December 31	4,207,699	3,778,701	3,423,857
Total shareholders' equity	\$4,866,577	\$4,732,184	\$3,865,715

See accompanying notes to the consolidated financial statements

RenaissanceRe Holdings Ltd. and Subsidiaries  
Consolidated Statements of Cash Flows  
For the years ended December 31, 2016, 2015 and 2014  
(in thousands of United States Dollars)

	2016	2015	2014
Cash flows provided by operating activities			
Net income	\$ 630,048	\$ 542,242	\$ 686,256
Adjustments to reconcile net income to net cash provided by operating activities			
Amortization, accretion and depreciation	29,304	18,179	47,771
Equity in undistributed losses (earnings) of other ventures	5,504	(10,087 )	(19,990 )
Net realized and unrealized (gains) losses on investments	(141,328 )	68,918	(41,433 )
Net unrealized (gains) losses included in net investment income	(11,542 )	13,549	1,393
Net unrealized losses included in other income (loss)	—	426	1,612
Change in:			
Premiums receivable	(209,314 )	(105,281 )	34,080
Prepaid reinsurance premiums	(210,589 )	(128,410 )	(28,678 )
Reinsurance recoverable	(145,038 )	(64,104 )	34,331
Deferred acquisition costs	(135,945 )	(89,241 )	(28,375 )
Reserve for claims and claim expenses	81,249	(43,310 )	(151,220 )
Unearned premiums	342,471	144,040	34,498
Reinsurance balances payable	150,009	64,924	161,558
Other	85,000	2,892	(71,146 )
Net cash provided by operating activities	469,829	414,737	660,657
Cash flows (used in) provided by investing activities			
Proceeds from sales and maturities of fixed maturity investments trading	8,102,514	9,481,742	7,682,573
Purchases of fixed maturity investments trading	(8,282,720 )	(9,683,068 )	(7,639,178 )
Proceeds from sales and maturities of fixed maturity investments available for sale	17,692	8,688	7,088
Net sales (purchases) of equity investments trading	184,788	(147,558 )	(20,003 )
Net (purchases) sales of short term investments	(118,617 )	669,116	45,023
Net (purchases) sales of other investments	(68,589 )	15,843	59,120
Net (purchases) sales of investments in other ventures	—	(10,150 )	1,030
Net sales of other assets	400	4,500	6,000
Net purchase of Platinum	—	(678,152 )	—
Net cash (used in) provided by investing activities	(164,532 )	(339,039 )	141,653
Cash flows used in financing activities			
Dividends paid – RenaissanceRe common shares	(51,583 )	(53,967 )	(45,912 )
Dividends paid – preference shares	(22,381 )	(22,381 )	(22,381 )
RenaissanceRe common share repurchases	(309,434 )	(259,874 )	(514,678 )
Issuance of debt	—	445,589	—
Net third party redeemable noncontrolling interest share transactions	(2,990 )	(193,032 )	(111,707 )
Net cash used in financing activities	(386,388 )	(83,665 )	(694,678 )
Effect of exchange rate changes on foreign currency cash	(4,637 )	(10,732 )	9,920
Net (decrease) increase in cash and cash equivalents	(85,728 )	(18,699 )	117,552
Cash and cash equivalents, beginning of year	506,885	525,584	408,032
Cash and cash equivalents, end of year	\$ 421,157	\$ 506,885	\$ 525,584
See accompanying notes to the consolidated financial statements			

RENAISSANCERE HOLDINGS LTD. AND SUBSIDIARIES  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS  
December 31, 2016

(unless otherwise noted, amounts in tables expressed in thousands of United States (“U.S.”) dollars, except per share amounts and percentages)

NOTE 1. ORGANIZATION

RenaissanceRe Holdings Ltd. (“RenaissanceRe”) was formed under the laws of Bermuda on June 7, 1993. Together with its wholly owned and majority-owned subsidiaries and DaVinciRe (as defined below), which are collectively referred to herein as the “Company”, RenaissanceRe provides reinsurance and insurance coverages and related services to a broad range of customers.

On March 2, 2015, RenaissanceRe completed its acquisition of Platinum Underwriters Holdings, Ltd. (“Platinum”). As a result of the acquisition, Platinum and its subsidiaries became wholly owned subsidiaries of RenaissanceRe, including Renaissance Reinsurance U.S. Inc., formerly known as Platinum Underwriters Reinsurance, Inc. (“Renaissance Reinsurance U.S.”). The Company accounted for the acquisition of Platinum under the acquisition method of accounting in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic Business Combinations and the Company's consolidated results of operations include those of Platinum from March 2, 2015. Refer to “Note 3. Acquisition of Platinum” for more information.

Renaissance Reinsurance Ltd. (“Renaissance Reinsurance”), a Bermuda-domiciled reinsurance company, is the Company’s principal reinsurance subsidiary and provides property and casualty and specialty reinsurance coverages to insurers and reinsurers on a worldwide basis. Effective October 1, 2016, each of Renaissance Reinsurance Specialty Risks Ltd. (“RenaissanceRe Specialty Risks”) and Platinum Underwriters Bermuda, Ltd. (“Platinum Bermuda”) merged into Renaissance Reinsurance, with Renaissance Reinsurance being the sole surviving entity.

Renaissance Reinsurance U.S. is a reinsurance company domiciled in the state of Maryland that provides property and casualty and specialty reinsurance coverages to insurers and reinsurers, primarily in the Americas.

RenaissanceRe Underwriting Managers U.S. LLC, a specialty reinsurance agency domiciled in the state of Connecticut, provides specialty treaty reinsurance solutions on both a quota share and excess of loss basis; and writes business on behalf of RenaissanceRe Specialty U.S. Ltd. (“RenaissanceRe Specialty U.S.”), a Bermuda-domiciled reinsurer, which operates subject to U.S. federal income tax, and RenaissanceRe Syndicate 1458 (“Syndicate 1458”). Syndicate 1458 is the Company’s Lloyd’s syndicate. RenaissanceRe Corporate Capital (UK) Limited (“RenaissanceRe CCL”), a wholly owned subsidiary of RenaissanceRe, is Syndicate 1458’s sole corporate member and RenaissanceRe Syndicate Management Ltd. (“RSML”), a wholly owned subsidiary of RenaissanceRe, is the managing agent for Syndicate 1458.

The Company also manages property, casualty and specialty reinsurance business written on behalf of joint ventures, which principally include Top Layer Reinsurance Ltd. (“Top Layer Re”), recorded under the equity method of accounting, and DaVinci Reinsurance Ltd. (“DaVinci”). Because the Company owns a noncontrolling equity interest in, but controls a majority of the outstanding voting power of DaVinci’s parent, DaVinciRe Holdings Ltd. (“DaVinciRe”), the results of DaVinci and DaVinciRe are consolidated in the Company’s financial statements. Redeemable noncontrolling interest – DaVinciRe represents the interests of external parties with respect to the net income and shareholders’ equity of DaVinciRe. Renaissance Underwriting Managers, Ltd. (“RUM”), a wholly owned subsidiary, acts as exclusive underwriting manager for these joint ventures in return for fee-based income and profit participation. RenaissanceRe Medici Fund Ltd. (“Medici”) is an exempted fund, incorporated under the laws of Bermuda. Medici’s objective is to seek to invest substantially all of its assets in various insurance based investment instruments that have returns primarily tied to property catastrophe risk. Third party investors have subscribed for the majority of the participating, non-voting common shares of Medici. Because the Company owns a noncontrolling equity interest in, but controls a majority of the





outstanding voting power of Medici, the results of Medici are consolidated in the Company's financial statements and all significant inter-company transactions have been eliminated. Redeemable noncontrolling interest - Medici represents the interests of external parties with respect to the net income and shareholders' equity of Medici.

Effective January 1, 2013, the Company formed and launched a managed joint venture, Upsilon RFO Re Ltd., formerly known as Upsilon Reinsurance II Ltd. ("Upsilon RFO"), a Bermuda domiciled special purpose insurer ("SPI"), to provide additional capacity to the worldwide aggregate and per-occurrence primary and retrocessional property catastrophe excess of loss market. Upsilon RFO is considered a variable interest entity ("VIE") and the Company is considered the primary beneficiary. As a result, Upsilon RFO is consolidated by the Company and all significant inter-company transactions have been eliminated.

Effective November 13, 2014, the Company incorporated RenaissanceRe Upsilon Fund Ltd. ("Upsilon Fund"), an exempted Bermuda limited segregated accounts company. Upsilon Fund was formed to provide a fund structure through which third party investors can invest in reinsurance risk managed by the Company. As a segregated accounts company, Upsilon Fund is permitted to establish segregated accounts to invest in and hold identified pools of assets and liabilities. Each pool of assets and liabilities in each segregated account is structured to be ring-fenced from any claims from the creditors of Upsilon Fund's general account and from the creditors of other segregated accounts within Upsilon Fund. Third party investors purchase redeemable, non-voting preference shares linked to specific segregated accounts of Upsilon Fund and own 100% of these shares. Upsilon Fund is an investment company and is considered a VIE. The Company is not considered the primary beneficiary of Upsilon Fund and, as a result, the Company does not consolidate the financial position and results of operations of Upsilon Fund.

Effective November 7, 2016, Fibonacci Reinsurance Ltd. ("Fibonacci Re"), a Bermuda-domiciled SPI, was formed to provide collateralized capacity to Renaissance Reinsurance and its affiliates. Fibonacci Re raised capital from third party investors and the Company, via a private placement of participating notes which are listed on the Bermuda Stock Exchange. Fibonacci Re is considered a VIE. The Company is not considered the primary beneficiary of Fibonacci Re and, as a result, the Company does not consolidate the financial position and results of operations of Fibonacci Re.

## NOTE 2. SIGNIFICANT ACCOUNTING POLICIES

### BASIS OF PRESENTATION

These consolidated financial statements have been prepared on the basis of accounting principles generally accepted in the United States ("GAAP"). All significant intercompany accounts and transactions have been eliminated from these statements.

Certain comparative information has been reclassified to conform to the current presentation.

### USE OF ESTIMATES IN FINANCIAL STATEMENTS

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported and disclosed amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from those estimates. The major estimates reflected in the Company's consolidated financial statements include, but are not limited to, the reserve for claims and claim expenses; reinsurance recoverables, including allowances for reinsurance recoverables deemed uncollectible; estimates of written and earned premiums; fair value, including the fair value of investments, financial instruments and derivatives; impairment charges; and the Company's deferred tax valuation allowance.

### PREMIUMS AND RELATED EXPENSES

Premiums are recognized as income, net of any applicable reinsurance or retrocessional coverage purchased, over the terms of the related contracts and policies. Premiums written are based on contract and policy terms and include estimates based on information received from both insureds and ceding

companies. Subsequent differences arising on such estimates are recorded in the period in which they are determined. Unearned premiums represent the portion of premiums written that relate to the unexpired terms of contracts and policies in force. Amounts are computed by pro rata methods based on statistical data or reports received from ceding companies. Reinstatement premiums are estimated after the occurrence of a significant loss and are recorded in accordance with the contract terms based upon paid losses and case reserves. Reinstatement premiums are earned when written.

Acquisition costs are incurred when a contract or policy is issued and only the costs directly related to the successful acquisition of new and renewal contract or policies are deferred and amortized over the same period in which the related premiums are earned. Acquisition costs are shown net of commissions and profit commissions earned on ceded reinsurance, and consist principally of commissions, brokerage and premium tax expenses incurred at the time a contract or policy is issued. Deferred policy acquisition costs are limited to their estimated realizable value based on the related unearned premiums. Anticipated claims and claim expenses, based on historical and current experience, and anticipated investment income related to those premiums are considered in determining the recoverability of deferred acquisition costs.

#### CLAIMS AND CLAIM EXPENSES

The reserve for claims and claim expenses includes estimates for unpaid claims and claim expenses on reported losses as well as an estimate of losses incurred but not reported. The reserve is based on individual claims, case reserves and other reserve estimates reported by insureds and ceding companies as well as management estimates of ultimate losses. Inherent in the estimates of ultimate losses are expected trends in claim severity and frequency and other factors which could vary significantly as claims are settled. Also, during the past few years, the Company has increased its casualty and specialty reinsurance businesses, but does not have the benefit of a significant amount of its own historical experience in certain of these lines of business. Accordingly, the reserving for incurred losses in these lines of business could be subject to greater variability.

Ultimate losses may vary materially from the amounts provided in the consolidated financial statements. These estimates are reviewed regularly and, as experience develops and new information becomes known, the reserves are adjusted as necessary. Such adjustments, if any, are reflected in the consolidated statements of operations in the period in which they become known and are accounted for as changes in estimates.

#### REINSURANCE

Amounts recoverable from reinsurers are estimated in a manner consistent with the claim liability associated with the reinsured policies. For multi-year retrospectively rated contracts, the Company accrues amounts (either assets or liabilities) that are due to or from assuming companies based on estimated contract experience. If the Company determines that adjustments to earlier estimates are appropriate, such adjustments are recorded in the period in which they are determined. Reinsurance recoverables on dual trigger reinsurance contracts require the Company to estimate its ultimate losses applicable to these contracts as well as estimate the ultimate amount of insured industry losses that will be reported by the applicable statistical reporting agency, as per the contract terms. Amounts recoverable from reinsurers are recorded net of a valuation allowance for estimated uncollectible recoveries.

Assumed and ceded reinsurance contracts that lack a significant transfer of risk are treated as deposits.

Certain assumed and ceded reinsurance contracts that do not meet all of the criteria to be accounted for as reinsurance in accordance with FASB ASC Topic Financial Services - Insurance have been accounted for at fair value under the fair value option in accordance with FASB ASC Topic Financial Instruments.

#### INVESTMENTS, CASH AND CASH EQUIVALENTS

##### Fixed Maturity Investments

Investments in fixed maturities are classified as trading or available for sale and are reported at fair value. Investment transactions are recorded on the trade date with balances pending settlement reflected in the balance sheet as a receivable for investments sold or a payable for investments purchased. Net investment income includes interest and dividend income together with amortization of market premiums and discounts

and is net of investment management and custody fees. The amortization of premium and accretion of discount for fixed maturity securities is computed using the effective yield method. For mortgage-backed securities and other holdings for which there is prepayment risk, prepayment assumptions are evaluated quarterly and revised as necessary. Any adjustments required due to the change in effective yields and maturities are recognized on a prospective basis through yield adjustments. Fair values of investments are based on quoted market prices, or when such prices are not available, by reference to broker or underwriter bid indications and/or internal pricing valuation techniques. The net unrealized appreciation or depreciation on fixed maturity investments trading is included in net realized and unrealized gains (losses) on investments in the consolidated statements of operations. The net unrealized appreciation or depreciation on fixed maturity investments available for sale is included in accumulated other comprehensive income. Realized gains or losses on the sale of investments are determined on the basis of the first in first out cost method and, for fixed maturity investments available for sale, include adjustments to the cost basis of investments for declines in value that are considered to be other-than-temporary.

#### Short Term Investments

Short term investments, which are managed as part of the Company's investment portfolio and have a maturity of one year or less when purchased, are carried at fair value. The net unrealized appreciation or depreciation on short term investments is included in net realized and unrealized gains on investments in the consolidated statements of operations.

#### Equity Investments, Classified as Trading

Equity investments are accounted for at fair value in accordance with FASB ASC Topic Financial Instruments. Fair values are primarily priced by pricing services, reflecting the closing price quoted for the final trading day of the period. Net investment income includes dividend income and the net realized and unrealized appreciation or depreciation on equity investments is included in net realized and unrealized gains (losses) on investments in the consolidated statements of operations.

#### Other Investments

The Company accounts for its other investments at fair value in accordance with FASB ASC Topic Financial Instruments with interest, dividend income, income distributions and realized and unrealized gains and losses included in net investment income. The fair value of certain of the Company's fund investments, which principally include private equity funds, senior secured bank loan funds and hedge funds, is recorded on its balance sheet in other investments, and is generally established on the basis of the net valuation criteria established by the managers of such investments, if applicable. The net valuation criteria established by the managers of such investments is established in accordance with the governing documents of such investments. Certain of the Company's fund managers, fund administrators, or both, are unable to provide final fund valuations as of the Company's current reporting date. The typical reporting lag experienced by the Company to receive a final net asset value report is one month for hedge funds and senior secured bank loan funds and three months for private equity funds, although, in the past, in respect of certain of the Company's private equity funds, the Company has on occasion experienced delays of up to six months at year end, as the private equity funds typically complete their respective year-end audits before releasing their final net asset value statements.

In circumstances where there is a reporting lag between the current period end reporting date and the reporting date of the latest fund valuation, the Company estimates the fair value of these funds by starting with the prior month or quarter-end fund valuations, adjusting these valuations for actual capital calls, redemptions or distributions, as well as the impact of changes in foreign currency exchange rates, and then estimating the return for the current period. In circumstances in which the Company estimates the return for the current period, all information available to the Company is utilized. This principally includes preliminary estimates reported to the Company by its fund managers, obtaining the valuation of underlying portfolio investments where such underlying investments are publicly traded and therefore have a readily observable price, using information that is available to the Company with respect to the underlying investments, reviewing various indices for similar investments or asset classes, as well as estimating returns based on the results of similar types of investments for which the Company has obtained reported results, or other valuation methods, where possible. Actual final fund valuations may differ, perhaps materially so, from the



Company's estimates and these differences are recorded in the Company's statement of operations in the period in which they are reported to the Company as a change in estimate.

The Company's other investments also include investments in catastrophe bonds which are recorded at fair value and the fair value is based on broker or underwriter bid indications.

#### Investments in Other Ventures, Under Equity Method

Investments in which the Company has significant influence over the operating and financial policies of the investee are classified as investments in other ventures, under equity method, and are accounted for under the equity method of accounting. Under this method, the Company records its proportionate share of income or loss from such investments in its results for the period. Any decline in value of investments in other ventures, under equity method considered by management to be other-than-temporary is charged to income in the period in which it is determined.

#### Cash and Cash Equivalents

Cash equivalents include money market instruments with a maturity of ninety days or less when purchased.

#### STOCK INCENTIVE COMPENSATION

The Company is authorized to issue restricted stock awards and units, performance shares, stock options and other equity-based awards to its employees and directors. The fair value of the compensation cost is measured at the grant date and expensed over the period for which the employee is required to provide services in exchange for the award. In addition, the Company is authorized to issue cash settled restricted stock units ("CSRSU") to its employees. The fair value of CSRSUs is determined using the fair market value of RenaissanceRe common shares at the end of each reporting period and is expensed over the period for which the employee is required to provide service in exchange for the award. The fair value of these awards is recorded on the Company's consolidated balance sheet as a liability as it is expensed and until the point payment is made to the employee.

Forfeiture benefits are estimated on a quarterly basis and incorporated in the determination of stock-based compensation.

#### DERIVATIVES

The Company enters into derivative instruments such as futures, options, swaps, forward contracts and other derivative contracts in order to manage its foreign currency exposure, obtain exposure to a particular financial market, for yield enhancement, or for trading and speculation. The Company accounts for its derivatives in accordance with FASB ASC Topic Derivatives and Hedging, which requires all derivatives to be recorded at fair value on the Company's balance sheet as either assets or liabilities, depending on their rights or obligations, with changes in fair value reflected in current earnings. The Company does not currently apply hedge accounting. The fair value of the Company's derivatives is estimated by reference to quoted prices or broker quotes, where available, or in the absence of quoted prices or broker quotes, the use of industry or internal valuation models.

#### FAIR VALUE

The Company accounts for certain of its assets and liabilities at fair value in accordance with FASB ASC Topic Fair Value Measurements and Disclosures. The Company recognizes the change in unrealized gains and losses arising from changes in fair value in its statements of operations, with the exception of changes in unrealized gains and losses on its fixed maturity investments available for sale, which are recognized as a component of accumulated other comprehensive income in shareholders' equity.

#### BUSINESS COMBINATIONS, GOODWILL AND OTHER INTANGIBLE ASSETS

The Company accounts for business combinations in accordance with FASB ASC Topic Business Combinations, and goodwill and other intangible assets that arise from business combinations in accordance with FASB ASC Topic Intangibles – Goodwill and Other. A purchase price that is in excess of

the fair value of the net assets acquired arising from a business combination is recorded as goodwill, and is not amortized. Other intangible assets with a finite life are amortized over the estimated useful life of the asset. Other intangible assets with an indefinite useful life are not amortized.

Goodwill and other indefinite life intangible assets are tested for impairment on an annual basis or more frequently if events or changes in circumstances indicate that the carrying amount may not be recoverable. Finite life intangible assets are reviewed for indicators of impairment on an annual basis or more frequently if events or changes in circumstances indicate that the carrying amount may not be recoverable, and tested for impairment if appropriate. For purposes of the annual impairment evaluation, goodwill is assigned to the applicable reporting unit of the acquired entities giving rise to the goodwill. Goodwill and other intangible assets recorded in connection with investments accounted for under the equity method, are recorded as "Investments in other ventures, under equity method" on the Company's consolidated balance sheets.

The Company has established the beginning of the fourth quarter as the date for performing its annual impairment tests. The Company has the option to first assess qualitative factors to determine whether it is necessary to perform the quantitative goodwill impairment test. Under this option, the Company would not be required to calculate the fair value of a reporting unit unless the Company determines, based on its qualitative assessment, that it is more likely than not that a reporting unit's fair value is less than its carrying amount. If goodwill or other intangible assets are impaired, they are written down to their estimated fair value with a corresponding expense reflected in the Company's consolidated statements of operations.

#### NONCONTROLLING INTERESTS

The Company accounts for redeemable noncontrolling interests in the mezzanine section of the Company's consolidated balance sheet in accordance with United States Securities and Exchange Commission ("SEC") guidance which is applicable to SEC registrants. The SEC guidance requires shares, not required to be accounted for in accordance with FASB ASC Topic Distinguishing Liabilities from Equity, and having redemption features that are not solely within the control of the issuer, to be classified outside of permanent equity in the mezzanine section of the balance sheet. Because the share classes related to the redeemable noncontrolling interest portion of the issuer are not considered liabilities in accordance with FASB ASC Topic Distinguishing Liabilities from Equity and have redemption features that are not solely within the control of the issuer, the redeemable noncontrolling interests are presented in the mezzanine section on the Company's consolidated balance sheet in accordance with the SEC guidance noted above. The SEC guidance does not impact the accounting for redeemable noncontrolling interest on the consolidated statements of operations; therefore, the provisions of FASB ASC Topic Consolidation with respect to the consolidated statements of operations still apply, and net income attributable to redeemable noncontrolling interests is presented separately in the Company's consolidated statements of operations.

#### VARIABLE INTEREST ENTITIES

The Company accounts for VIEs in accordance with FASB ASC Topic Consolidation, which requires the consolidation of all VIEs by the primary beneficiary, that being the investor that has the power to direct the activities of the VIE and that will absorb a portion of the VIE's expected losses or residual returns that could potentially be significant to the VIE. For VIEs the Company determines it has a variable interest in, it determines whether it is the primary beneficiary of a VIE by performing an analysis that principally considers: (i) the VIE's purpose and design, including the risks the VIE was designed to create and pass through to its variable interest holders; (ii) the VIE's capital structure; (iii) the terms between the VIE and its variable interest holders and other parties involved with the VIE; (iv) which variable interest holders have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; (v) which variable interest holders have the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE; and (vi) related party relationships. The Company reassesses its initial determination of whether the Company is the primary beneficiary of a VIE upon changes in facts and circumstances that could potentially alter the Company's assessment.

#### EARNINGS PER SHARE

The Company calculates earnings per share in accordance with FASB ASC Topic Earnings per Share. Basic earnings per share are based on weighted average common shares and exclude any dilutive effects





of options and restricted stock. Diluted earnings per share assumes the exercise of all dilutive stock options and restricted stock grants.

The two-class method is used to determine earnings per share based on dividends declared on common shares and participating securities (i.e., distributed earnings) and participation rights of participating securities in any undistributed earnings. Each unvested restricted share granted by the Company to its employees is considered a participating security and the Company uses the two-class method to calculate its net income available to RenaissanceRe common shareholders per common share – basic and diluted.

#### FOREIGN EXCHANGE

The Company's functional currency is the U.S. dollar. Revenues and expenses denominated in foreign currencies are revalued at the prevailing exchange rate at the transaction date. Monetary assets and liabilities denominated in foreign currencies are remeasured at exchange rates in effect at the balance sheet date, which may result in the recognition of exchange gains or losses which are included in the determination of net income.

#### TAXATION

Income taxes have been provided for in accordance with the provisions of FASB ASC Topic Income Taxes. Deferred tax assets and liabilities result from temporary differences between the amounts recorded in the consolidated financial statements and the tax basis of the Company's assets and liabilities. Such temporary differences are primarily due to net operating loss carryforwards and GAAP versus tax basis accounting differences relating to interest expense, underwriting results, accrued expenses and investments. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance against deferred tax assets is recorded if it is more likely than not that all, or some portion, of the benefits related to deferred tax assets will not be realized.

Uncertain tax positions are also accounted for in accordance with FASB ASC Topic Income Taxes. Uncertain tax positions must meet a more likely than not recognition threshold to be recognized.

#### RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS

Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period

In June 2014, the FASB issued ASU No. 2014-12, Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period ("ASU 2014-12"). The objective of ASU 2014-12 is to resolve the diverse accounting treatment of share-based payment awards in situations where an employee would be eligible to vest in the award regardless of whether the employee is rendering service on the date the performance target is achieved. For example, if an employee is eligible to retire or otherwise terminate employment before the end of the period in which a performance target could be achieved and still be eligible to vest in the award, ASU 2014-12 will resolve if and when the performance target is achieved. ASU 2014-12 became effective for all entities in annual and interim periods beginning after December 15, 2015. Early adoption was permitted. The Company adopted ASU 2014-12 effective January 1, 2016, and prospectively applied the amendments in ASU 2014-12 to all awards granted or modified after the effective date. The adoption of ASU 2014-12 did not have a material impact on the Company's consolidated statements of operations and financial position.

Amendments to the Consolidation Analysis

In February 2015, the FASB issued ASU No. 2015-02, Amendments to the Consolidation Analysis ("ASU 2015-02"). ASU 2015-02 affects reporting entities that are required to evaluate whether they should consolidate certain legal entities. All legal entities are subject to reevaluation under ASU 2015-02. ASU 2015-02 set forth amendments: modifying the evaluation of whether limited partnerships and similar legal entities are VIEs; eliminating the presumption that a general partner should consolidate a limited partnership; affecting the consolidation analysis of reporting entities that are involved with VIEs, particularly those that have fee arrangement and related party relationships; and providing a scope exception from consolidation guidance for reporting entities with interests in certain investment funds. ASU 2015-02 became effective for public business entities for fiscal years, and for interim periods within those fiscal



years, beginning after December 15, 2015. Early adoption was permitted. The Company adopted ASU 2015-02 effective January 1, 2016 and it did not have a material impact on the Company's consolidated statements of operations and financial position.

#### Simplifying the Presentation of Debt Issuance Costs

In April 2015, the FASB issued ASU No. 2015-03, Simplifying the Presentation of Debt Issuance Costs ("ASU 2015-03"). The objective of ASU 2015-03 is to simplify the presentation of debt issuance costs by requiring debt issuance costs related to a recognized debt liability to be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The recognition and measurement guidance for debt issuance costs are not affected by the amendments in ASU 2015-03. ASU 2015-03 became effective for public business entities in annual and interim periods beginning after December 15, 2015 with retroactive application. The Company retrospectively adopted ASU 2015-03 effective January 1, 2016 and the impact on the Company's consolidated balance sheet at December 31, 2015 was to reduce each of other assets and debt by \$5.6 million, respectively, which represented the deferred debt issuance costs previously recorded in other assets and reclassified as an offset to debt. In addition, for the year ended December 31, 2015, corporate expense was reduced by \$0.6 million and interest expense was increased by \$0.6 million (2014 - \$0.2 million and \$0.2 million, respectively) to reclassify the amortization of deferred debt issuance costs from corporate expense to interest expense. There was no net impact on the Company's consolidated statements of operations or financial position as a result of the retrospective adoption of ASU 2015-03.

#### Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)

In May 2015, the FASB issued ASU No. 2015-07, Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent) ("ASU 2015-07"). ASU 2015-07 removes the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. ASU 2015-07 also removes the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. Rather, those disclosures are limited to investments for which the entity has elected to measure the fair value using that practical expedient. ASU 2015-07 became effective for public business entities for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. A reporting entity should apply the amendments retrospectively to all periods presented. The retrospective approach requires that an investment for which fair value is measured using the net asset value per share practical expedient be removed from the fair value hierarchy in all periods presented in an entity's financial statements. Earlier application was permitted. The Company retrospectively adopted ASU 2015-07 effective January 1, 2016; since this update is disclosure-related only, it did not have a material impact on the Company's statements of operations and financial position.

#### Disclosures about Short-Duration Contracts

In May 2015, the FASB issued ASU No. 2015-09, Disclosures about Short-Duration Contracts ("ASU 2015-09"). ASU 2015-09 requires insurance entities to disclose for annual reporting periods additional information about the liability for unpaid claims and claim adjustment expenses, including: (1) incurred and paid claims development information by accident year, on a net basis, for the number of years for which claims incurred typically remain outstanding, not exceeding 10 years; (2) a reconciliation of incurred and paid claims development information to the aggregate carrying amount of the liability for claims and claim adjustment expenses, with separate disclosure of reinsurance recoverable on unpaid claims for each period presented in the statement of financial position; (3) for each accident year presented of incurred claims development information, the total of incurred but not reported liabilities plus expected development on reported claims including in the liability for unpaid claims and claim adjustment expenses, accompanied by a description of the reserving methodologies; (4) for each accident year presented of incurred claims development information, quantitative information about claim frequency accompanied by a qualitative description of methodologies used for determining claim frequency information; and (5) for all claims, the average annual percentage payout of incurred claims by age for the same number of accident years presented in (3) and (4) above. ASU 2015-09 also requires insurance entities to disclose information about significant changes in methodologies and assumptions used to calculate the liability for unpaid claims and claim adjustment expenses, including the reasons for the change and the effects on the financial



statements. In addition, ASU 2015-09 requires insurance entities to disclose for annual and interim reporting periods a rollforward of the liability for unpaid claims and claim adjustment expenses. ASU 2015-09 is effective for public business entities in annual periods beginning after December 31, 2015, and interim periods within annual periods beginning after December 31, 2016. Early adoption was permitted. ASU 2015-09 should be applied retrospectively by providing comparative disclosures for each period presented, except for those requirements that apply only to the current period. The Company adopted ASU 2015-09 effective December 31, 2016. As this guidance is disclosure-related only, the adoption of this guidance did not have a material impact on the Company's consolidated statements of operations and financial position.

#### Simplifying the Accounting for Measurement-Period Adjustments

In September 2015, the FASB issued ASU No. 2015-16, Simplifying the Accounting for Measurement-Period Adjustments ("ASU 2015-16"). ASU 2015-16 removes the requirement to retrospectively account for adjustments made to provisional amounts recognized in a business combination. Rather, those adjustments are to be recognized by the acquirer in the reporting period in which the adjustment amounts are determined. A reporting entity is also required to disclose, in the reporting period in which the adjustment amounts are recorded, the effect on earnings of changes in depreciation, amortization, or other income effects, as a result of the change to provisional amounts, calculated as if the accounting had been completed at the acquisition date. In addition, the reporting entity would present on the face of the income statement or disclose in the notes the amounts that would have been recorded in previous reporting periods if the adjustment to provisional amounts had been recognized as of the acquisition date. ASU 2015-16 was effective for public business entities in annual and interim periods beginning after December 15, 2015. ASU 2015-16 should be applied prospectively to adjustments for provisional amounts that occur after the effective date, with earlier application permitted for financial statements that have not been issued. The Company adopted ASU 2015-16 effective January 1, 2016 and it did not have a material impact on the Company's consolidated statements of operations and financial position.

#### RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS NOT YET ADOPTED

##### Revenue from Contracts with Customers

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers ("ASU 2014-09"). ASU 2014-09 provides comprehensive guidance on the recognition of revenue from customers arising from the transfer of goods and services. The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 also provides guidance on accounting for certain contract costs and will also require new disclosures. ASU 2014-09 was to be effective for public business entities in annual and interim periods beginning after December 15, 2016, however in July 2015, the FASB decided to defer by one year the effective dates of ASU 2014-09, and as a result, ASU 2014-09 will be effective for public business entities in annual and interim period beginning after December 15, 2017. Early adoption is permitted. The Company is currently evaluating the impact of this guidance; however, it is not expected to have a material impact on the Company's consolidated statements of operations and financial position.

##### Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities ("ASU 2016-01"). ASU 2016-01 requires equity investments (except those accounted for under the equity method of accounting or those that result in the consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income, simplifies the impairment assessment of equity investments without readily determinable values by requiring a qualitative assessment to identify impairment, eliminates the requirement to disclose the methods and significant assumptions used to estimate the fair value for financial instruments measured at amortized cost, requires the use of the exit price notion when measuring the fair value of financial instruments for disclosure purposes, requires separate presentation in other comprehensive income of the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the organization has elected to measure the liabilities in accordance with the fair value option, requires the separate presentation of financial assets and financial liabilities by measurement category and for form of



financial asset on the balance sheet or the accompanying notes to the financial statements and clarifies that the reporting organization should evaluate the need for a valuation allowance on a deferred tax asset related to available for sale securities in combination with the organization's other deferred tax assets. ASU 2016-01 is effective for public business entities in annual and interim periods beginning after December 15, 2017. Earlier adoption is generally not permitted, except for certain specific provisions of ASU 2016-01. The Company is currently evaluating the impact of this guidance; however, it is not expected to have a material impact on the Company's consolidated statements of operations and financial position.

#### Improvements to Employee Share-Based Payment Accounting

In March 2016, the FASB issued ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting ("ASU 2016-09"). ASU 2016-09 was issued to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statements of cash flows. ASU 2016-09 is effective for public business entities in annual and interim periods beginning after December 15, 2016. Early adoption is permitted. The Company is currently evaluating the impact of this guidance; however, it is not expected to have a material impact on the Company's consolidated statements of operations and financial position.

### NOTE 3. ACQUISITION OF PLATINUM

#### Overview

On March 2, 2015, RenaissanceRe acquired 100% of the outstanding common shares of Platinum for \$76 per Platinum common share, or aggregate consideration of \$1.93 billion. In connection with an intercompany restructuring, effective July 1, 2015, Platinum was merged with RenaissanceRe, with RenaissanceRe continuing as the surviving company.

Prior to the closing of the acquisition of Platinum, Platinum was a publicly traded company listed on the New York Stock Exchange and headquartered in Bermuda. Platinum, through its wholly owned subsidiaries, provided property and casualty reinsurance coverage through reinsurance brokers to insurers and select reinsurers on a worldwide basis. The Company believes the acquisition of Platinum has benefited the combined companies' clients through an expanded product offering and enhanced broker relationships and it has also accelerated the growth of the Company's U.S. specialty and casualty reinsurance platform.

The aggregate consideration for the transaction consisted of the issuance of 7.435 million RenaissanceRe common shares valued at \$761.8 million (based on the share price as of March 2, 2015) and \$1.16 billion of cash. The cash consideration was partially funded through a pre-closing dividend from Platinum of \$10.00 per share, or \$253.2 million (the "Special Dividend"), RenaissanceRe available funds of \$604.4 million and a short term bridge loan of \$300.0 million. On March 24, 2015, RenaissanceRe Finance Inc. ("RenaissanceRe Finance"), a wholly owned subsidiary of RenaissanceRe, issued \$300.0 million of its 3.700% Senior Notes due 2025 (together with cash on hand) to replace the short term bridge loan used to fund part of the cash consideration. Refer to "Note 9. Debt and Credit Facilities" for additional information related to the 3.700% Senior Notes due 2025.

In connection with the acquisition of Platinum, RenaissanceRe incurred transaction, integration and compensation related expenses totaling \$2.1 million during 2016 (2015 - \$53.5 million). These expenses have all been reported as a component of corporate expenses.

## Purchase Price

The Company's total purchase price for Platinum at March 2, 2015 was calculated as follows:

Special Dividend		
Number of Platinum common shares and Platinum equity awards canceled in the acquisition of Platinum	25,320,312	
Special Dividend per outstanding common share of Platinum and Platinum equity award	\$ 10.00	
Special Dividend paid to common shareholders of Platinum and holders of Platinum equity awards		\$ 253,203
RenaissanceRe common shares		
Common shares issued by RenaissanceRe	7,434,561	
Common share price of RenaissanceRe as of March 2, 2015	\$ 102.47	
Market value of RenaissanceRe common shares issued by RenaissanceRe to common shareholders of Platinum and holders of Platinum equity awards		761,819
Platinum common shares		
Fair value of Platinum common shares owned by RenaissanceRe and canceled in connection with the acquisition of Platinum		12,950
Cash consideration		
Number of Platinum common shares and Platinum equity awards canceled in the acquisition of Platinum	25,320,312	
Platinum common shares owned by RenaissanceRe and canceled in connection with the acquisition of Platinum	(169,220 )	
Number of Platinum common shares and Platinum equity awards canceled in the acquisition of Platinum excluding those owned by RenaissanceRe and canceled in connection with the acquisition of Platinum	25,151,092	
Agreed cash price paid to common shareholders of Platinum and holders of Platinum equity awards	\$ 35.96	
Cash consideration paid by RenaissanceRe to common shareholders of Platinum and holders of Platinum equity awards		904,433
Total purchase price		1,932,405
Less: Special Dividend paid by Platinum		(253,203 )
Net purchase price		\$ 1,679,202

## Fair Value of Net Assets Acquired and Liabilities Assumed

The purchase price was allocated to the acquired assets and liabilities of Platinum based on estimated fair values on March 2, 2015, the date the transaction closed, as detailed below. The Company recognized goodwill of \$191.7 million primarily attributable to Platinum's assembled workforce and synergies expected to result upon integration of Platinum into the Company's operations. There were no other adjustments to carried goodwill during the period ended December 31, 2016 reflected on the Company's consolidated balance sheet at December 31, 2016. The Company recognized identifiable finite lived intangible assets of \$75.2 million, which are being amortized over a weighted average period of eight years, identifiable indefinite lived intangible assets of \$8.4 million, and certain other adjustments to the fair values of the assets acquired, liabilities assumed and shareholders' equity of Platinum at March 2, 2015 as summarized in the table below:



Shareholders' equity of Platinum prior to Special Dividend	\$1,737,278
Cash and cash equivalents (Special Dividend on Platinum common shares and Platinum equity awards)	(253,203 )
Adjusted shareholders' equity of Platinum at March 2, 2015	1,484,075
Adjustments for fair value, by applicable balance sheet caption:	
Deferred acquisition costs	(44,486 )
Debt	(28,899 )
Reserve for claims and claim expenses	(21,725 )
Other assets - deferred debt issuance costs	(1,046 )
Total adjustments for fair value by applicable balance sheet caption before tax impact	(96,156 )
Other assets - net deferred tax asset related to fair value adjustments	29,069
Total adjustments for fair value by applicable balance sheet caption	(67,087 )
Adjustments for fair value of the identifiable intangible assets:	
Identifiable indefinite lived intangible assets (insurance licenses)	8,400
Identifiable finite lived intangible assets (non-contractual relationships, renewal rights, value of business acquired, trade name, internally developed and used computer software and covenants not to compete)	75,200
Identifiable intangible assets before tax impact	83,600
Other liabilities - deferred tax liability on identifiable intangible assets	(13,115 )
Total adjustments for fair value of the identifiable intangible assets	70,485
Total adjustments for fair value by applicable balance sheet caption and identifiable intangible assets	3,398
Shareholders' equity of Platinum at fair value	1,487,473
Total net purchase price paid by RenaissanceRe	1,679,202
Excess purchase price over the fair value of net assets acquired assigned to goodwill	\$191,729

An explanation of the significant fair value adjustments is as follows:

• Deferred acquisition costs - to eliminate Platinum's deferred acquisition costs;

• Debt - to reflect Platinum's existing senior notes at fair value using indicative market pricing obtained from third-party service providers;

• Reserve for claims and claim expenses - to reflect an increase in net claims and claim expenses due to the addition of a market based risk margin that represented the cost of capital required by a market participant to assume the net claims and claim expenses of Platinum, partially offset by a deduction which represents the discount due to the present value calculation of the unpaid claims and claim expenses based on the expected payout of the net unpaid claims and claim expenses;

• Other assets - to eliminate deferred debt issuance costs related to Platinum's existing senior notes and to reflect net deferred tax assets related to fair value adjustments;

• Identifiable indefinite lived and finite lived intangible assets - to establish the fair value of identifiable intangible assets related to the acquisition of Platinum described in detail below; and

• Other liabilities - to reflect the deferred tax liability on identifiable intangible assets.

Identifiable intangible assets at March 2, 2015 and at December 31, 2016, consisted of the following, and are included in goodwill and other intangible assets on the Company's consolidated balance sheet:

	Amount	Economic Useful Life
Key non-contractual relationships	\$30,400	10 years
Value of business acquired	20,200	2 years
Renewal rights	15,800	15 years
Insurance licenses	8,400	Indefinite
Internally developed and used computer software	3,500	2 years
Other non-contractual relationships	2,300	3 years
Non-compete agreements	1,900	2.5 years
Trade name	1,100	6 months
Identifiable intangible assets, before amortization, at March 2, 2015	83,600	
Amortization (from March 2, 2015 through December 31, 2016)	(31,873 )	
Net identifiable intangible assets at December 31, 2016 related to the acquisition of Platinum	\$51,727	

An explanation of the identifiable intangible assets is as follows:

Key non-contractual relationships - these relationships included Platinum's top four brokers (Aon plc, Marsh & McLennan Companies, Inc., Willis Group Holdings plc. and Jardine Lloyd Thompson Group plc.) and consideration was given to the expectation of the renewal of these relationships and the associated expenses;

Value of business acquired ("VOBA") - the expected future losses and expenses associated with the policies that were in-force as of the closing date of the transaction were estimated and compared to the future premium remaining expected to be earned. The difference between the risk-adjusted future loss and expenses, discounted to present value and the unearned premium reserve, was estimated to be the VOBA;

Renewal rights - the value of policy renewal rights taking into consideration written premium on assumed retention ratios and the insurance cash flows and the associated equity cash flows from these renewal policies over the expected life of the renewals;

Insurance licenses - the value of insurance licenses acquired providing the ability to write reinsurance in all 50 states of the U.S. and the District of Columbia;

Internally developed and used computer software - represents the value of internally developed and used computer software to be utilized by the Company;

Other non-contractual relationships - these relationships consisted of Platinum's brokers with the exception of those previously listed above as key non-contractual relationships and consideration was given to the expectation of the renewal of these relationships and the associated expenses;

Non-compete agreements - represent non-compete agreements with key employees of Platinum; and

Trade name - represents the value of the Platinum brand acquired.

As part of the allocation of the purchase price, included in the adjustment to other assets in the table above is a deferred tax asset of \$29.1 million related to certain other adjustments to the fair values of the assets acquired, liabilities assumed and shareholders' equity, summarized in the table above, which was partially offset by a deferred tax liability of \$13.1 million related to the estimated fair value of the intangible assets recorded. Other net deferred tax assets recorded primarily relate to differences between financial reporting and tax basis of the acquired assets and liabilities as of the acquisition date, March 2, 2015. The Company estimates that none of the goodwill that was recorded will be deductible for income tax purposes.

### Financial Results

FASB ASC Topic Business Combinations prescribes disclosure of the amounts of revenue and earnings of the acquiree since the acquisition date included in the consolidated statement of operations for the reporting period. However, the Company believes this disclosure has become impracticable given the acquired subsidiaries of Platinum have been fully integrated into the Company's organizational structure through an internal reorganization, resulting in capital and assets being reallocated throughout the organization. In addition, reinsurance contracts have been renewed using both previously existing and acquired subsidiaries and the Company does not discretely manage the Platinum subsidiaries acquired, thereby rendering it impracticable to accurately estimate the amounts of revenue and earnings of Platinum since March 2, 2015 included in the consolidated statement of operations for the reporting period.

### Supplemental Pro Forma Information

Platinum's results are included in the Company's consolidated financial statements from March 2, 2015 to December 31, 2015 and for the year ended December 31, 2016. As such, the following table presents unaudited pro forma consolidated financial information for the years ended December 31, 2015 and 2014, and assumes the acquisition of Platinum occurred on January 1, 2014. The unaudited pro forma consolidated financial information is provided for informational purposes only and is not necessarily, and should not be assumed to be, an indication of the results that would have been achieved had the transaction been completed as of January 1, 2014 or that may be achieved in the future. The unaudited pro forma consolidated financial information does not give consideration to the impact of possible revenue enhancements, expense efficiencies, synergies or asset dispositions that may result from the acquisition of Platinum. In addition, unaudited pro forma consolidated financial information does not include the effects of costs associated with any restructuring or integration activities resulting from the acquisition of Platinum, as they are nonrecurring.

Year ended December 31,	2015	2014
Total revenues	\$1,593,735	\$1,872,612
Net income available to RenaissanceRe common shareholders	423,768	685,735

Among other adjustments, and in addition to the fair value adjustments and recognition of goodwill and identifiable intangible assets noted above, other material nonrecurring pro forma adjustments directly attributable to the acquisition of Platinum principally included certain adjustments to recognize transaction related costs, align accounting policies, amortize fair value adjustments, amortize identifiable indefinite lived intangible assets and recognize related tax impacts.

## NOTE 4. GOODWILL AND OTHER INTANGIBLE ASSETS

The following table shows an analysis of goodwill and other intangible assets:

	Goodwill and other intangible assets		
	Goodwill	Other intangible assets	Total
Balance as of December 31, 2014			
Gross amount	\$8,160	\$ 12,999	\$21,159
Accumulated impairment losses and amortization	(2,299 )	(10,958 )	(13,257 )
	5,861	2,041	7,902
Acquired during the year	191,729	83,600	275,329
Amortization	—	(18,077 )	(18,077 )
Balance as of December 31, 2015			
Gross amount	199,889	96,599	296,488
Accumulated impairment losses and amortization	(2,299 )	(29,035 )	(31,334 )
	197,590	67,564	265,154
Amortization	—	(13,968 )	(13,968 )
Balance as of December 31, 2016			
Gross amount	199,889	96,599	296,488
Accumulated impairment losses and amortization	(2,299 )	(43,003 )	(45,302 )
	\$197,590	\$ 53,596	\$251,186

During the first quarter of 2015, the Company recognized goodwill of \$191.7 million primarily attributable to Platinum's assembled workforce and synergies expected to result upon integration of Platinum into the Company's operations. Also during 2015, the Company recognized identifiable finite lived intangible assets of \$75.2 million and identifiable indefinite lived intangible assets of \$8.4 million in connection with its acquisition of Platinum. There were no adjustments to carried goodwill reflected in the above table during the year ended December 31, 2016. See "Note 3. Acquisition of Platinum" for additional information related to the Company's acquisition of Platinum and other intangible assets acquired.

The following table shows an analysis of goodwill and other intangible assets included in investments in other ventures, under equity method:

	Goodwill and other intangible assets included in investments in other ventures, under equity method		
	Goodwill	Other intangible assets	Total
Balance as of December 31, 2014			
Gross amount	\$ 12,318	\$ 45,400	\$ 57,718
Accumulated impairment losses and amortization	—	(32,466 )	(32,466 )
	12,318	12,934	25,252
Acquired during the year	—	6,396	6,396
Amortization	—	(2,900 )	(2,900 )
Impairment losses	(4,500 )	(1,094 )	(5,594 )
Balance as of December 31, 2015			
Gross amount	12,318	51,796	64,114
Accumulated impairment losses and amortization	(4,500 )	(36,460 )	(40,960 )
	7,818	15,336	23,154
Amortization	—	(3,474 )	(3,474 )
Balance as of December 31, 2016			
Gross amount	12,318	51,796	64,114
Accumulated impairment losses and amortization	(4,500 )	(39,934 )	(44,434 )
	\$ 7,818	\$ 11,862	\$ 19,680

During the fourth quarter of 2015, the Company recognized impairment losses in corporate expenses of \$4.5 million and \$1.1 million related to goodwill and other intangible assets, respectively, associated with its investment in a commodity related risk management company. The other intangible assets primarily related to customer lists. In accordance with the Company's established accounting policy, the beginning of the fourth quarter was used as the date for performing the annual impairment test. The Company first assessed qualitative factors to determine whether it was necessary to perform a quantitative impairment test. Based on its qualitative assessment, the Company determined it was more likely than not that the fair value of the goodwill and other intangible assets in question were less than their respective carrying amounts. The qualitative assessment included the following factors which the Company determined had significantly deteriorated given specific facts and circumstances: macroeconomic conditions; industry and market conditions; costs factors; and overall financial performance. In light of the qualitative assessment, the Company performed a quantitative analysis using a discounted cash flow model and concluded that the full amount of the goodwill and other intangible assets associated with this equity method investment were impaired.

The gross carrying value and accumulated amortization by major category of other intangible assets is shown below:

At December 31, 2016	Other intangible assets		
	Gross carrying value	Accumulated amortization and impairment losses	Total
Customer relationships and customer lists	\$95,458	\$ (42,142 )	\$53,316
Value of business acquired	20,200	(19,527 )	673
Licenses	10,267	—	10,267
Software	12,230	(11,938 )	292
Patents and intellectual property	4,500	(4,500 )	—
Covenants not-to-compete	4,030	(3,523 )	507
Trademarks and trade names	1,710	(1,307 )	403
	\$148,395	\$ (82,937 )	\$65,458

At December 31, 2015	Other intangible assets		
	Gross carrying value	Accumulated amortization and impairment losses	Total
Customer relationships and customer lists	\$95,458	\$ (33,294 )	\$62,164
Value of business acquired	20,200	(13,467 )	6,733
Software	12,230	(10,188 )	2,042
Licenses	10,267	—	10,267
Patents and intellectual property	4,500	(4,500 )	—
Covenants not-to-compete	4,030	(2,763 )	1,267
Trademarks and trade names	1,710	(1,283 )	427
	\$148,395	\$ (65,495 )	\$82,900

The remaining useful life of intangible assets with finite lives ranges from one to 17 years, with a weighted-average amortization period of 8.5 years. Expected amortization of the other intangible assets, including other intangible assets recorded in investments in other ventures, under equity method, is shown below:

2017	Other intangibles	Other intangible assets included in investments in other ventures, under equity method	
		Total	Total
	\$ 8,041	\$ 2,935	\$10,976

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2018	5,727	2,596	8,323
2019	5,446	2,427	7,873
2020	5,237	1,564	6,801
2021	4,910	702	5,612
2022 and thereafter	13,968	1,638	15,606
Total remaining amortization expense	\$ 43,329	\$ 11,862	\$55,191
Indefinite lived	10,267	—	10,267
Total	\$ 53,596	\$ 11,862	\$65,458

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## NOTE 5. INVESTMENTS

## Fixed Maturity Investments Trading

The following table summarizes the fair value of fixed maturity investments trading:

	December 31, 2016	December 31, 2015
U.S. treasuries	\$ 2,617,894	\$ 2,064,944
Agencies	90,972	137,976
Municipal	519,069	583,282
Non-U.S. government (Sovereign debt)	333,224	334,981
Non-U.S. government-backed corporate	133,300	138,994
Corporate	1,877,243	2,055,323
Agency mortgage-backed	462,493	504,368
Non-agency mortgage-backed	258,944	262,235
Commercial mortgage-backed	409,747	554,625
Asset-backed	188,358	128,277
Total fixed maturity investments trading	\$ 6,891,244	\$ 6,765,005

Contractual maturities of fixed maturity investments trading are described in the following table. Expected maturities will differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

At December 31, 2016	Amortized Cost	Fair Value
Due in less than one year	\$485,939	\$483,642
Due after one through five years	3,927,373	3,900,915
Due after five through ten years	1,024,285	1,028,249
Due after ten years	161,405	158,896
Mortgage-backed	1,133,746	1,131,184
Asset-backed	187,942	188,358
Total	\$6,920,690	\$6,891,244



## Fixed Maturity Investments Available For Sale

The Company did not have any fixed maturity investments available for sale at December 31, 2016 and at December 31, 2015, the Company did not have any fixed maturity investments available for sale in an unrealized loss position. The following table summarizes the amortized cost, fair value and related unrealized gains and losses and non-credit other-than-temporary impairments of fixed maturity investments available for sale at December 31, 2015:

At December 31, 2015	Amortized Cost	Included in Accumulated Other Comprehensive Income		Fair Value	Non-Credit Other-Than-Temporary Impairments (1)
		Gross Unrealized Gains	Gross Unrealized Losses		
Agency mortgage-backed	\$ 143	\$ 7	\$ —	\$ 150	\$ —
Non-agency mortgage-backed	7,005	1,523	—	8,528	550
Commercial mortgage-backed	6,578	293	—	6,871	—
Asset-backed	2,217	47	—	2,264	—
Total fixed maturity investments available for sale	\$ 15,943	\$ 1,870	\$ —	\$ 17,813	\$ 550

Represents the non-credit component of other-than-temporary impairments recognized in accumulated other (1)comprehensive income adjusted for subsequent sales of securities. It does not include the change in fair value subsequent to the impairment measurement date.

## Equity Investments Trading

The following table summarizes the fair value of equity investments trading:

	December 31, 2016	December 31, 2015
Financials	\$ 275,065	\$ 193,716
Communications and technology	36,770	65,833
Industrial, utilities and energy	30,303	51,168
Consumer	20,501	40,918
Healthcare	17,245	36,148
Basic materials	3,429	6,094
Total	\$ 383,313	\$ 393,877

## Pledged Investments

At December 31, 2016, \$2.7 billion of cash and investments at fair value were on deposit with, or in trust accounts for the benefit of, various counterparties, including with respect to the Company's standby letter of credit facility and bilateral letter of credit facility (2015 - \$2.5 billion). Of this amount, \$842.6 million is on deposit with, or in trust accounts for the benefit of, U.S. state regulatory authorities (2015 - \$664.6 million).

## Reverse Repurchase Agreements

At December 31, 2016, the Company held \$78.7 million (2015 - \$26.2 million) of reverse repurchase agreements. These loans are fully collateralized, are generally outstanding for a short period of time and are presented on a gross basis as part of short term investments on the Company's consolidated balance sheets. The required collateral for these loans typically include high-quality, readily marketable instruments at a minimum amount of 102% of the loan principal. Upon maturity, the Company receives principal and interest income.



## Net Investment Income

The components of net investment income are as follows:

Year ended December 31,	2016	2015	2014
Fixed maturity investments	\$ 160,661	\$ 134,800	\$ 100,855
Short term investments	5,127	1,227	944
Equity investments	4,235	8,346	3,450
Other investments			
Private equity investments	6,155	9,455	18,974
Other	20,181	12,472	11,037
Cash and cash equivalents	788	467	395
	197,147	166,767	135,655
Investment expenses	(15,421 )	(14,200 )	(11,339 )
Net investment income	\$ 181,726	\$ 152,567	\$ 124,316

## Net Realized and Unrealized Gains (Losses) on Investments

Net realized and unrealized gains (losses) on investments are as follows:

Year ended December 31,	2016	2015	2014
Gross realized gains	\$ 72,739	\$ 50,488	\$ 45,568
Gross realized losses	(38,315 )	(53,630 )	(14,868 )
Net realized gains (losses) on fixed maturity investments	34,424	(3,142 )	30,700
Net unrealized gains (losses) on fixed maturity investments trading	26,954	(64,908 )	19,680
Net realized and unrealized (losses) gains on investments-related derivatives	(15,414 )	5,443	(30,931 )
Net realized gains on equity investments trading	14,190	16,348	10,908
Net unrealized gains (losses) on equity investments trading	81,174	(22,659 )	11,076
Net realized and unrealized gains (losses) on investments	\$ 141,328	\$ (68,918)	\$ 41,433

## Other Investments

The table below shows the fair value of the Company's portfolio of other investments:

At December 31,	2016	2015
Catastrophe bonds	\$ 335,209	\$ 241,253
Private equity partnerships	191,061	214,848
Senior secured bank loan funds	22,040	23,231
Hedge funds	1,495	2,289
Total other investments	\$ 549,805	\$ 481,621

Interest income, income distributions and net realized and unrealized gains on other investments are included in net investment income and totaled \$26.3 million (2015 – \$21.9 million, 2014 – \$30.0 million) of which \$11.5 million related to net unrealized gains (2015 – gains of \$10.4 million, 2014 – gains of \$17.7 million). Included in net investment income for 2016 is a loss of \$3.4 million (2015 - \$2.5 million, 2014 - \$0.6 million) representing the change in estimate during the period related to the difference between the Company's estimated fair value due to the lag in reporting, as discussed in "Note 2. Significant Accounting Policies," and the actual amount as reported in the final net asset values provided by the Company's fund managers.

The Company has committed capital to private equity partnerships and other entities of \$794.2 million, of which \$554.7 million has been contributed at December 31, 2016. The Company's remaining commitments to these funds at December 31, 2016 totaled \$249.4 million. In the future, the Company may enter into additional commitments in respect of private equity partnerships or individual portfolio company investment opportunities.

#### Investments in Other Ventures, under Equity Method

The table below shows the Company's portfolio of investments in other ventures, under equity method:

At December 31,	2016			2015		
	Investment	Ownership	% Carrying Value	Investment	Ownership	% Carrying Value
THIG	\$50,000	25.0	% \$19,286	\$50,000	25.0	% \$19,155
Tower Hill	10,000	32.3	% 21,590	10,000	31.3	% 19,981
Tower Hill Re	4,250	25.0	% 2,903	4,250	25.0	% 4,136
Tower Hill Signature	500	25.0	% 9,085	500	25.0	% 7,315
Total Tower Hill Companies	64,750		52,864	64,750		50,587
Top Layer Re	65,375	50.0	% 60,360	65,375	50.0	% 68,936
Other	23,923	41.8	% 11,003	23,607	43.5	% 12,828
Total investments in other ventures, under equity method	\$154,048		\$124,227	\$153,732		\$132,351

On July 1, 2008, the Company invested \$50.0 million in Tower Hill Insurance Group, LLC ("THIG") representing a 25.0% equity ownership. Included in the purchase price was \$40.0 million of other intangibles and \$7.8 million of goodwill, which, in accordance with generally accepted accounting principles, are recorded as "Investments in other ventures, under equity method" rather than "Goodwill and other intangibles" on the Company's consolidated balance sheet.

The Company originally invested \$13.1 million in Top Layer Re, representing a 50.0% ownership. In December 2010, March 2011 and December 2011, primarily as a result of net claims and claim expenses incurred by Top Layer Re with respect to the September 2010 New Zealand Earthquake, the February 2011 New Zealand Earthquake and the Tohoku Earthquake and Tsunami, respectively, the Company invested an additional \$13.8 million, \$20.5 million and \$18.0 million, respectively, in Top Layer Re, maintaining the Company's 50.0% ownership interest.

The table below shows the Company's equity in earnings of other ventures, under equity method:

Year ended December 31,	2016	2015	2014
Tower Hill Companies	\$10,379	\$13,116	\$18,376
Top Layer Re	(8,576 )	8,026	10,411
Other	(840 )	(661 )	(2,712 )
Total equity in earnings of other ventures	\$963	\$20,481	\$26,075

During 2016, the Company received \$9.4 million of dividends from its investments in other ventures, under equity method (2015 – \$13.3 million, 2014 – \$10.3 million). Losses from the Company's investments in other ventures, under equity method, net of dividends and distributions received, were \$5.5 million at December 31, 2016 (2015 - earnings of \$10.1 million). Except for Top Layer Re, the equity in earnings of the Company's investments in other ventures are reported one quarter in arrears.

#### NOTE 6. FAIR VALUE MEASUREMENTS

The use of fair value to measure certain assets and liabilities with resulting unrealized gains or losses is pervasive within the Company's consolidated financial statements. Fair value is defined under accounting guidance currently applicable to the Company to be the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between open market participants at the measurement date. The Company recognizes the change in unrealized gains and losses arising from changes in fair value in its consolidated statements of operations, with the exception of changes in unrealized gains and losses on its fixed maturity investments available for sale, which are recognized as a component of accumulated other comprehensive income in shareholders' equity.

FASB ASC Topic Fair Value Measurements and Disclosures prescribes a fair value hierarchy that prioritizes the inputs to the respective valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to valuation techniques that use at least one significant input that is unobservable (Level 3). The three levels of the fair value hierarchy are described below:

Fair values determined by Level 1 inputs utilize unadjusted quoted prices obtained from active markets for identical assets or liabilities for which the Company has access. The fair value is determined by multiplying the quoted price by the quantity held by the Company;

Fair values determined by Level 2 inputs utilize inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets and liabilities in active markets, and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals, broker quotes and certain pricing indices; and

Level 3 inputs are based all or in part on significant unobservable inputs for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. In these cases, significant management assumptions can be used to establish management's best estimate of the assumptions used by other market participants in determining the fair value of the asset or liability.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the level in the fair value hierarchy within which the fair value measurement in its entirety falls has been determined based on the lowest level input that is significant to the fair value measurement of the asset or liability.

The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and the Company considers factors specific to the asset or liability.

In order to determine if a market is active or inactive for a security, the Company considers a number of factors, including, but not limited to, the spread between what a seller is asking for a security and what a buyer is bidding for the same security, the volume of trading activity for the security in question, the price of the security compared to its par value (for fixed maturity investments), and other factors that may be indicative of market activity.

There have been no material changes in the Company's valuation techniques, nor have there been any transfers between Level 1 and Level 2, or Level 2 and Level 3 during the period represented by these consolidated financial statements.

Below is a summary of the assets and liabilities that are measured at fair value on a recurring basis and also represents the carrying amount on the Company's consolidated balance sheets:

At December 31, 2016	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed maturity investments				
U.S. treasuries	\$2,617,894	\$2,617,894	\$—	\$—
Agencies	90,972	—	90,972	—
Municipal	519,069	—	519,069	—
Non-U.S. government (Sovereign debt)	333,224	—	333,224	—
Non-U.S. government-backed corporate	133,300	—	133,300	—
Corporate	1,877,243	—	1,877,243	—
Agency mortgage-backed	462,493	—	462,493	—
Non-agency mortgage-backed	258,944	—	258,944	—
Commercial mortgage-backed	409,747	—	409,747	—
Asset-backed	188,358	—	188,358	—
Total fixed maturity investments	6,891,244	2,617,894	4,273,350	—
Short term investments	1,368,379	—	1,368,379	—
Equity investments trading	383,313	383,313	—	—
Other investments				
Catastrophe bonds	335,209	—	335,209	—
Private equity partnerships (1)	191,061	—	—	—
Senior secured bank loan funds (1)	22,040	—	—	—
Hedge funds (1)	1,495	—	—	—
Total other investments	549,805	—	335,209	—
Other assets and (liabilities)				
Assumed and ceded (re)insurance contracts (2)	(13,004 )	—	—	(13,004 )
Derivatives (3)	(8,922 )	(646 )	(8,276 )	—
Other	(13,105 )	—	(13,105 )	—
Total other assets and (liabilities)	(35,031 )	(646 )	(21,381 )	(13,004 )
	\$9,157,710	\$3,000,561	\$5,955,557	\$ (13,004 )

Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated balance sheet.

(1) Included in assumed and ceded (re)insurance contracts at December 31, 2016 are \$4.4 million and \$17.4 million of other assets and other liabilities, respectively.

(2) See "Note 19. Derivative Instruments" for additional information related to the fair value, by type of contract, of derivatives entered into by the Company.

At December 31, 2015	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed maturity investments				
U.S. treasuries	\$2,064,944	\$2,064,944	\$—	\$ —
Agencies	137,976	—	137,976	—
Municipal	583,282	—	583,282	—
Non-U.S. government (Sovereign debt)	334,981	—	334,981	—
Non-U.S. government-backed corporate	138,994	—	138,994	—
Corporate	2,055,323	—	2,047,705	7,618
Agency mortgage-backed	504,518	—	504,518	—
Non-agency mortgage-backed	270,763	—	270,763	—
Commercial mortgage-backed	561,496	—	561,496	—
Asset-backed	130,541	—	130,541	—
Total fixed maturity investments	6,782,818	2,064,944	4,710,256	7,618
Short term investments	1,208,401	—	1,208,401	—
Equity investments trading	393,877	393,877	—	—
Other investments				
Catastrophe bonds	241,253	—	241,253	—
Private equity partnerships (1)	214,848	—	—	—
Senior secured bank loan fund (1)	23,231	—	—	—
Hedge funds (1)	2,289	—	—	—
Total other investments	481,621	—	241,253	—
Other assets and (liabilities)				
Assumed and ceded (re)insurance contracts (2)	(5,899 )	—	—	(5,899 )
Derivatives (3)	1,486	(1,234 )	2,720	—
Other	(12,320 )	—	(12,320 )	—
Total other assets and (liabilities)	(16,733 )	(1,234 )	(9,600 )	(5,899 )
	\$8,849,984	\$2,457,587	\$6,150,310	\$ 1,719

Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated balance sheet.

(1) Included in assumed and ceded (re)insurance contracts at December 31, 2015 are \$3.5 million and \$9.4 million of other assets and other liabilities, respectively.

(2) See “Note 19. Derivative Instruments” for additional information related to the fair value by type of contract, of derivatives entered into by the Company.

#### Level 1 and Level 2 Assets and Liabilities Measured at Fair Value

##### Fixed Maturity Investments

Fixed maturity investments included in Level 1 consist of the Company’s investments in U.S. treasuries. Fixed maturity investments included in Level 2 are agencies, municipal, non-U.S. government, non-U.S. government-backed corporate, corporate, agency mortgage-backed, non-agency mortgage-backed, commercial mortgage-backed and asset-backed.

The Company's fixed maturity investments are primarily priced using pricing services, such as index providers and pricing vendors, as well as broker quotations. In general, the pricing vendors provide pricing for a high volume of liquid securities that are actively traded. For securities that do not trade on an

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exchange, the pricing services generally utilize market data and other observable inputs in matrix pricing models to determine month end prices. Observable inputs include benchmark yields, reported trades, broker-dealer quotes, issuer spreads, bids, offers, reference data and industry and economic events. Index pricing generally relies on market traders as the primary source for pricing; however, models are also utilized to provide prices for all index eligible securities. The models use a variety of observable inputs such as benchmark yields, transactional data, dealer runs, broker-dealer quotes and corporate actions. Prices are generally verified using third party data. Securities which are priced by an index provider are generally included in the index.

In general, broker-dealers value securities through their trading desks based on observable inputs. The methodologies include mapping securities based on trade data, bids or offers, observed spreads, and performance on newly issued securities. Broker-dealers also determine valuations by observing secondary trading of similar securities. Prices obtained from broker quotations are considered non-binding, however they are based on observable inputs and by observing secondary trading of similar securities obtained from active, non-distressed markets.

The Company considers these Level 2 inputs as they are corroborated with other market observable inputs. The techniques generally used to determine the fair value of the Company's fixed maturity investments are detailed below by asset class.

#### U.S. treasuries

Level 1 - At December 31, 2016, the Company's U.S. treasuries fixed maturity investments were primarily priced by pricing services and had a weighted average effective yield of 1.4% and a weighted average credit quality of AA (2015 - 1.3% and AA, respectively). When pricing these securities, the pricing services utilize daily data from many real time market sources, including active broker dealers. Certain data sources are regularly reviewed for accuracy to attempt to ensure the most reliable price source is used for each issue and maturity date.

#### Agencies

Level 2 - At December 31, 2016, the Company's agency fixed maturity investments had a weighted average effective yield of 2.0% and a weighted average credit quality of AA (2015 - 1.7% and AA, respectively). The issuers of the Company's agency fixed maturity investments primarily consist of the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation and other agencies. Fixed maturity investments included in agencies are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources and integrate other observations from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The fair value of each security is individually computed using analytical models which incorporate option adjusted spreads and other daily interest rate data.

#### Municipal

Level 2 - At December 31, 2016, the Company's municipal fixed maturity investments had a weighted average effective yield of 2.4% and a weighted average credit quality of AA (2015 - 2.0% and AA, respectively). The Company's municipal fixed maturity investments are primarily priced by pricing services. When evaluating these securities, the pricing services gather information regarding the security from third party sources such as trustees, paying agents or issuers. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The pricing services also consider the specific terms and conditions of the securities, including any specific features which may influence risk. In certain instances, securities are individually evaluated using a spread over widely accepted market benchmarks.

#### Non-U.S. government (Sovereign debt)

Level 2 - At December 31, 2016, the Company's non-U.S. government fixed maturity investments had a weighted average effective yield of 1.6% and a weighted average credit quality of AAA (2015 - 1.4% and AA, respectively). The issuers of securities in this sector are non-U.S. governments and their respective agencies as well as supranational organizations. Securities held in these sectors are primarily priced by pricing services that employ proprietary discounted cash flow models to value the securities. Key

quantitative inputs for these models are daily observed benchmark curves for treasury, swap and high issuance credits. The pricing services then apply a credit spread for each security which is developed by in-depth and real time market analysis. For securities in which trade volume is low, the pricing services utilize data from more frequently traded securities with similar attributes. These models may also be supplemented by daily market and credit research for international markets.

#### Non-U.S. government-backed corporate

Level 2 - At December 31, 2016, the Company's non-U.S. government-backed corporate fixed maturity investments had a weighted average effective yield of 1.5% and a weighted average credit quality of AAA (2015 - 1.3% and AA, respectively). Non-U.S. government-backed fixed maturity investments are primarily priced by pricing services that employ proprietary discounted cash flow models to value the securities. Key quantitative inputs for these models are daily observed benchmark curves for treasury, swap and high issuance credits. The pricing services then apply a credit spread to the respective curve for each security which is developed by in-depth and real time market analysis. For securities in which trade volume is low, the pricing services utilize data from more frequently traded securities with similar attributes. These models may also be supplemented by daily market and credit research for international markets.

#### Corporate

Level 2 - At December 31, 2016, the Company's corporate fixed maturity investments principally consisted of U.S. and international corporations and had a weighted average effective yield of 3.7% and a weighted average credit quality of BBB (2015 - 3.8% and BBB, respectively). The Company's corporate fixed maturity investments are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources regarding the issuer of the security and obtain credit data, as well as other observations, from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The pricing services also consider the specific terms and conditions of the securities, including any specific features which may influence risk. In certain instances, securities are individually evaluated using a spread which is added to the U.S. treasury curve or a security specific swap curve as appropriate.

#### Agency mortgage-backed

Level 2 - At December 31, 2016, the Company's agency mortgage-backed fixed maturity investments included agency residential mortgage-backed securities with a weighted average effective yield of 2.9%, a weighted average credit quality of AA and a weighted average life of 6.9 years (2015 - 2.7%, AA and 6.1 years, respectively). The Company's agency mortgage-backed fixed maturity investments are primarily priced by pricing services using a mortgage pool specific model which utilizes daily inputs from the active to be announced market which is very liquid, as well as the U.S. treasury market. The model also utilizes additional information, such as the weighted average maturity, weighted average coupon and other available pool level data which is provided by the sponsoring agency. Valuations are also corroborated with daily active market quotes.

#### Non-agency mortgage-backed

Level 2 - The Company's non-agency mortgage-backed fixed maturity investments include non-agency prime residential mortgage-backed and non-agency Alt-A fixed maturity investments. The Company has no fixed maturity investments that were classified as sub-prime held at the time of purchase in its fixed maturity investments portfolio. At December 31, 2016, the Company's non-agency prime residential mortgage-backed fixed maturity investments had a weighted average effective yield of 4.3%, a weighted average credit quality of BBB, and a weighted average life of 5.1 years (2015 - 3.8%, non-investment grade and 4.3 years, respectively). The Company's non-agency Alt-A fixed maturity investments held at December 31, 2016 had a weighted average effective yield of 5.2%, a weighted average credit quality of non-investment grade and a weighted average life of 6.0 years (2015 - 4.7%, non-investment grade and 5.4 years, respectively). Securities held in these sectors are primarily priced by pricing services using an option adjusted spread model or other relevant models, which principally utilize inputs including benchmark yields, available trade information or broker quotes, and issuer spreads. The pricing services also review collateral prepayment speeds, loss severity and delinquencies among other collateral performance indicators for the securities valuation, when applicable.



#### Commercial mortgage-backed

Level 2 - At December 31, 2016, the Company's commercial mortgage-backed fixed maturity investments had a weighted average effective yield of 2.6%, a weighted average credit quality of AAA, and a weighted average life of 3.9 years (2015 - 2.9%, AAA and 3.7 years, respectively). Securities held in these sectors are primarily priced by pricing services. The pricing services apply dealer quotes and other available trade information such as bids and offers, prepayment speeds which may be adjusted for the underlying collateral or current price data, the U.S. treasury curve and swap curve as well as cash settlement. The pricing services discount the expected cash flows for each security held in this sector using a spread adjusted benchmark yield based on the characteristics of the security.

#### Asset-backed

Level 2 - At December 31, 2016, the Company's asset-backed fixed maturity investments had a weighted average effective yield of 2.3%, a weighted average credit quality of AAA and a weighted average life of 2.6 years (2015 - 2.1%, AAA and 2.5 years, respectively). The underlying collateral for the Company's asset-backed fixed maturity investments primarily consists of student loans, credit card receivables, auto loans and other receivables. Securities held in these sectors are primarily priced by pricing services. The pricing services apply dealer quotes and other available trade information such as bids and offers, prepayment speeds which may be adjusted for the underlying collateral or current price data, the U.S. treasury curve and swap curve as well as cash settlement. The pricing services determine the expected cash flows for each security held in this sector using historical prepayment and default projections for the underlying collateral and current market data. In addition, a spread is applied to the relevant benchmark and used to discount the cash flows noted above to determine the fair value of the securities held in this sector.

#### Short Term Investments

Level 2 - At December 31, 2016, the Company's short term investments had a weighted average effective yield of 0.7% and a weighted average credit quality of AAA (2015 - 0.4% and AAA, respectively). The fair value of the Company's portfolio of short term investments is generally determined using amortized cost which approximates fair value and, in certain cases, in a manner similar to the Company's fixed maturity investments noted above.

#### Equity Investments, Classified as Trading

Level 1 - The fair value of the Company's portfolio of equity investments, classified as trading is primarily priced by pricing services, reflecting the closing price quoted for the final trading day of the period. When pricing these securities, the pricing services utilize daily data from many real time market sources, including applicable securities exchanges. All data sources are regularly reviewed for accuracy to attempt to ensure the most reliable price source was used for each security.

#### Other investments

##### Catastrophe bonds

Level 2 - The Company's other investments include investments in catastrophe bonds which are recorded at fair value based on broker or underwriter bid indications.

#### Other assets and liabilities

##### Derivatives

Level 1 and Level 2 - Other assets and liabilities include certain derivatives entered into by the Company. The fair value of these transactions includes certain exchange traded futures contracts which are considered Level 1, and foreign currency contracts and certain credit derivatives, determined using standard industry valuation models and considered Level 2, as the inputs to the valuation model are based on observable market inputs. For credit derivatives, these inputs include credit spreads, credit ratings of the underlying referenced security, the risk free rate and the contract term. For foreign currency contracts, these inputs include spot rates and interest rate curves.

## Other

Level 2 - The liabilities measured at fair value and included in Level 2 at December 31, 2016 of \$13.1 million are comprised of cash settled restricted stock units (“CSRSU”) that form part of the Company’s compensation program. The fair value of the Company’s CSRSUs is determined using observable exchange traded prices for the Company’s common shares.

## Level 3 Assets and Liabilities Measured at Fair Value

Below is a summary of quantitative information regarding the significant observable and unobservable inputs (Level 3) used in determining the fair value of assets and liabilities measured at fair value on a recurring basis:

December 31, 2016	Fair Value (Level 3)	Valuation Technique	Unobservable (U) and Observable (O) Inputs	Low	High	Weighted Average or Actual
Other assets and (liabilities)						
Assumed and ceded (re)insurance contracts	\$(574 )	Internal valuation model	Bond price (U)	\$100.82	\$103.58	\$102.29
			Liquidity discount (U)	n/a	n/a	1.3 %
Assumed and ceded (re)insurance contracts	(12,430 )	Internal valuation model	Net undiscounted cash flows (U)	n/a	n/a	\$(12,396)
			Expected loss ratio (U)	n/a	n/a	35.2 %
			Net acquisition expense ratio (O)	n/a	n/a	(20.7 )%
			Contract period (O)	2.0 years	4.7 years	4.5 years
			Discount rate (U)	n/a	n/a	1.9 %
Total other assets and (liabilities)	\$(13,004)					

## Fixed Maturity Investments

## Corporate

Level 3 - Previously included in the Company’s corporate fixed maturity investments was an investment in the preferred equity of an insurance holding company. The Company measured the fair value of this investment using a discounted cash flow model and sold this investment during the year ended December 31, 2016 as detailed in the fixed maturity investments trading column in the rollforward table below.

## Other assets and liabilities

## Assumed and ceded (re)insurance contracts

Level 3 - At December 31, 2016 the Company had a \$0.6 million net liability related to an assumed reinsurance contract accounted for at fair value, with the fair value obtained through the use of an internal valuation model. The inputs to the internal valuation model are principally based on indicative pricing obtained from independent brokers and pricing vendors for similarly structured marketable securities. The most significant unobservable inputs include prices for similar marketable securities and a liquidity premium. The Company considers the prices for similar securities to be unobservable, as there is little, if any market activity for these similar assets. In addition, the Company has estimated a liquidity premium that would be required if the Company attempted to effectively exit its position by executing a short sale of these securities. Generally, an increase in the prices for similar marketable securities or a decrease in the liquidity premium would result in an increase in the expected profit and ultimate fair value of this assumed reinsurance contract.

Level 3 - At December 31, 2016 the Company had a \$12.4 million net liability related to assumed and ceded (re)insurance contracts accounted for at fair value, with the fair value obtained through the use of an



internal valuation model. The inputs to the internal valuation model are principally based on proprietary data as observable market inputs are generally not available. The most significant unobservable inputs include the assumed and ceded expected net cash flows related to the contracts, including the expected premium, acquisition expenses and losses; the expected loss ratio and the relevant discount rate used to present value the net cash flows. The contract period and acquisition expense ratio are considered observable inputs as each is defined in the contract. The negative acquisition expense ratio used to determine the fair value of the contracts at December 31, 2016 is the result of override commissions on the contracts being higher than the gross acquisition expenses. Generally, an increase in the net expected cash flows and expected term of the contract and a decrease in the discount rate, expected loss ratio or acquisition expense ratio, would result in an increase in the expected profit and ultimate fair value of these assumed and ceded (re)insurance contracts.

Below is a reconciliation of the beginning and ending balances, for the periods shown, of assets and liabilities measured at fair value on a recurring basis using Level 3 inputs. Interest and dividend income are included in net investment income and are excluded from the reconciliation.

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)		
	Fixed maturity investments trading	Other assets and (liabilities)	Total
Balance - January 1, 2015	\$15,660	\$ (8,934 )	\$6,726
Total unrealized (losses) gains			
Included in net investment income	(542 )	183	(359 )
Included in other income (loss)	—	(426 )	(426 )
Total realized gains			
Included in other income (loss)	—	6,628	6,628
Total foreign exchange gains	—	7	7
Purchases	—	80,996	80,996
Sales	—	(84,353 )	(84,353 )
Settlements	(7,500 )	—	(7,500 )
Balance - December 31, 2015	\$7,618	\$ (5,899 )	\$1,719
Change in unrealized gains for the period included in earnings for assets held at the end of the period included in net investment income	\$(359 )	\$ —	\$(359 )
Change in unrealized losses for the period included in earnings for assets held at the end of the period included in other loss	\$—	\$ (426 )	\$(426 )

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)		
	Fixed maturity investments trading	Other assets and (liabilities)	Total
Balance - January 1, 2016	\$7,618	\$ (5,899 )	\$1,719
Total unrealized losses			
Included in net investment income	(118 )	—	(118 )
Total realized gains			
Included in other income (loss)	—	6,339	6,339
Purchases	—	(13,444 )	(13,444 )

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Settlements	(7,500 )	—	(7,500 )
Balance - December 31, 2016	\$—	\$(13,004 )	\$(13,004)

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### Financial Instruments Disclosed, But Not Carried, at Fair Value

The Company uses various financial instruments in the normal course of its business. The Company's insurance contracts are excluded from the fair value of financial instruments accounting guidance, unless the Company elects the fair value option, and therefore, are not included in the amounts discussed herein. The carrying values of cash and cash equivalents, accrued investment income, receivables for investments sold, certain other assets, payables for investments purchased, certain other liabilities, and other financial instruments not included herein approximated their fair values.

#### Debt

Included on the Company's consolidated balance sheet at December 31, 2016 were debt obligations of \$948.7 million (December 31, 2015 - \$960.5 million). At December 31, 2016, the fair value of the Company's debt obligations was \$964.8 million (December 31, 2015 - \$973.3 million).

The fair value of the Company's debt obligations is determined using indicative market pricing obtained from third-party service providers, which the Company considers Level 2 in the fair value hierarchy. There have been no changes during the period in the Company's valuation technique used to determine the fair value of the Company's debt obligations. Refer to "Note 9. Debt and Credit Facilities" for additional information related to the Company's debt obligations.

#### The Fair Value Option for Financial Assets and Financial Liabilities

The Company has elected to account for certain financial assets and financial liabilities at fair value using the guidance under FASB ASC Topic Financial Instruments as the Company believes it represents the most meaningful measurement basis for these assets and liabilities. Below is a summary of the balances the Company has elected to account for at fair value:

	2016	2015
Other investments	\$549,805	\$481,621
Other assets	\$4,379	\$3,463
Other liabilities	\$17,383	\$9,362

Included in net investment income for 2016 was net unrealized gains of \$11.5 million related to the changes in fair value of other investments (2015 - gains of \$10.4 million, 2014 - gains of \$17.7 million). Included in other income (loss) for 2016 were net unrealized gains of \$Nil related to the changes in the fair value of other assets and liabilities (2015 - losses of \$0.4 million, 2014 - \$Nil).

#### Measuring the Fair Value of Other Investments Using Net Asset Valuations

The table below shows the Company's portfolio of other investments measured using net asset valuations as a practical expedient:

At December 31, 2016	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period (Minimum Days)	Redemption Notice Period (Maximum Days)
Private equity partnerships	\$191,061	\$223,636	See below	See below	See below
Senior secured bank loan funds	22,040	25,806	See below	See below	See below
Hedge funds	1,495	—	See below	See below	See below
Total other investments measured using net asset valuations	\$214,596	\$249,442			

Private equity partnerships - The Company's investments in private equity partnerships included alternative asset limited partnerships (or similar corporate structures) that invest in certain private equity asset classes including U.S. and global leveraged buyouts; mezzanine investments; distressed securities; real estate; and oil, gas and power. The Company generally has no right to redeem its interest in any of these private equity partnerships in advance of

dissolution of the applicable private equity partnership. Instead, the nature of

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these investments is that distributions are received by the Company in connection with the liquidation of the underlying assets of the respective private equity partnership. It is estimated that the majority of the underlying assets of the limited partnerships would liquidate over 7 to 10 years from inception of the respective limited partnership. Senior secured bank loan funds – At December 31, 2016 the Company had \$22.0 million invested in closed end funds which invests primarily in loans. The Company has no right to redeem its investment in these funds. It is estimated that the majority of the underlying assets in these closed end funds would liquidate over 4 to 5 years from inception of the fund.

Hedge funds – The Company invests in hedge funds that pursue multiple strategies. The Company’s investments in hedge funds at December 31, 2016 were \$1.5 million of “side pocket” investments which are not redeemable at the option of the shareholder. The Company will retain its interest in the side pocket investments until the underlying investments attributable to such side pockets are liquidated, realized or deemed realized at the discretion of the fund manager.

#### NOTE 7. REINSURANCE

The Company purchases reinsurance and other protection to manage its risk portfolio and to reduce its exposure to large losses. The Company currently has in place contracts that provide for recovery of a portion of certain claims and claim expenses, generally in excess of various retentions or on a proportional basis. In addition to loss recoveries, certain of the Company’s ceded reinsurance contracts provide for payments of additional premiums, for reinstatement premiums and for lost no-claims bonuses, which are incurred when losses are ceded to the respective reinsurance contracts. The Company remains liable to the extent that any reinsurance company fails to meet its obligations. The following table sets forth the effect of reinsurance and retrocessional activity on premiums written and earned and on net claims and claim expenses incurred:

Year ended December 31,	2016	2015	2014
Premiums written			
Direct	\$208,282	\$130,681	\$76,511
Assumed	2,166,294	1,880,629	1,474,061
Ceded	(839,264 )	(595,127 )	(482,336 )
Net premiums written	\$1,535,312	\$1,416,183	\$1,068,236
Premiums earned			
Direct	\$157,112	\$98,182	\$66,027
Assumed	1,874,993	1,769,088	1,450,047
Ceded	(628,675 )	(466,719 )	(453,658 )
Net premiums earned	\$1,403,430	\$1,400,551	\$1,062,416
Claims and claim expenses			
Gross claims and claim expenses incurred	\$710,651	\$544,972	\$228,581
Claims and claim expenses recovered	(179,820 )	(96,734 )	(30,634 )
Net claims and claim expenses incurred	\$530,831	\$448,238	\$197,947

The reinsurers with the three largest balances accounted for 27.1%, 19.9% and 7.7%, respectively, of the Company’s reinsurance recoverable balance at December 31, 2016 (2015 - 21.5%, 13.8% and 13.1%, respectively). The valuation allowance recorded against reinsurance recoverable was \$4.2 million at December 31, 2016 (2015 - \$1.6 million). The three largest company-specific components of the valuation allowance represented 27.1%, 17.9% and 5.6%, respectively, of the Company’s total valuation allowance at December 31, 2016 (2015 - 22.7%, 8.3% and 3.2%, respectively).

## NOTE 8. RESERVE FOR CLAIMS AND CLAIM EXPENSES

## General Description

The Company believes the most significant accounting judgment made by management is its estimate of claims and claim expense reserves. Claims and claim expense reserves represent estimates, including actuarial and statistical projections at a given point in time, of the ultimate settlement and administration costs for unpaid claims and claim expenses arising from the insurance and reinsurance contracts the Company sells. The Company establishes its claims and claim expense reserves by taking claims reported to the Company by insureds and ceding companies, but which have not yet been paid (“case reserves”), adding estimates for the anticipated cost of claims incurred but not yet reported to the Company, or incurred but not enough reported to the Company (collectively referred to as “IBNR”) and, if deemed necessary, adding costs for additional case reserves which represent the Company’s estimates for claims related to specific contracts previously reported to the Company which it believes may not be adequately estimated by the client as of that date, or adequately covered in the application of IBNR.

On March 2, 2015 the Company acquired Platinum and the transaction was accounted under the acquisition method of accounting in accordance with FASB ASC Topic Business Combinations. Total consideration paid was allocated among acquired assets and assumed liabilities based on their fair values, including Platinum’s claims and claim expense reserves, which totaled \$1.4 billion at March 2, 2015, and consisted of \$179.7 million and \$1.2 billion included in the Company’s Property and Casualty and Specialty segments, respectively. These claims and claim expense reserves are subject to the reserving methodologies for each respective line of business as described below. The following table summarizes the Company’s claims and claim expense reserves by segment, allocated between case reserves, additional case reserves and IBNR:

At December 31, 2016	Case Reserves	Additional Case Reserves	IBNR	Total
Property	\$214,954	\$ 186,308	\$226,512	\$627,774
Casualty and Specialty	591,705	105,419	1,498,002	2,195,126
Other	6,935	—	18,459	25,394
Total	\$813,594	\$ 291,727	\$ 1,742,973	\$ 2,848,294

  

At December 31, 2015	Case Reserves	Additional Case Reserves	IBNR	Total
Property	\$298,687	\$ 165,838	\$241,676	\$706,201
Casualty and Specialty	553,574	129,866	1,349,726	2,033,166
Other	2,071	—	25,607	27,678
Total	\$854,332	\$ 295,704	\$ 1,617,009	\$ 2,767,045

Activity in the liability for unpaid claims and claim expenses is summarized as follows:

Year ended December 31,	2016	2015	2014
Net reserves as of January 1	\$2,632,519	\$1,345,816	\$1,462,705
Net incurred related to:			
Current year	694,957	610,685	341,745
Prior years	(164,126 )	(162,447 )	(143,798 )
Total net incurred	530,831	448,238	197,947
Net paid related to:			
Current year	83,015	95,747	39,830
Prior years	506,279	425,565	241,286
Total net paid	589,294	521,312	281,116
Amounts acquired (1)	—	1,394,117	—
Foreign exchange	(5,326 )	(34,340 )	(33,720 )
Net reserves as of December 31	2,568,730	2,632,519	1,345,816
Reinsurance recoverable as of December 31	279,564	134,526	66,694
Gross reserves as of December 31	\$2,848,294	\$2,767,045	\$1,412,510

(1) Represents the fair value of Platinum's reserve for claims and claim expenses and reinsurance recoverable acquired at March 2, 2015.

The Company's reserving methodology for each line of business uses a loss reserving process that calculates a point estimate for its ultimate settlement and administration costs for claims and claim expenses. The Company does not calculate a range of estimates and does not discount any of its reserves for claims and claim expenses. The Company uses this point estimate, along with paid claims and case reserves, to record its best estimate of additional case reserves and IBNR in its consolidated financial statements. Under GAAP, the Company is not permitted to establish estimates for catastrophe claims and claim expense reserves until an event occurs that gives rise to a loss.

Reserving for reinsurance claims involves other uncertainties, such as the dependence on information from ceding companies, the time lag inherent in reporting information from the primary insurer to the Company or to the Company's ceding companies, and differing reserving practices among ceding companies. The information received from ceding companies is typically in the form of bordereaux, broker notifications of loss and/or discussions with ceding companies or their brokers. This information may be received on a monthly, quarterly or transactional basis and normally includes paid claims and estimates of case reserves. The Company sometimes also receives an estimate or provision for IBNR. This information is often updated and adjusted from time to time during the loss settlement period as new data or facts in respect of initial claims, client accounts, industry or event trends may be reported or emerge in addition to changes in applicable statutory and case laws.

The Company's estimates of losses from large events are based on factors including currently available information derived from claims information from certain customers and brokers, industry assessments of losses from the events, proprietary models, and the terms and conditions of the Company's contracts. The uncertainty of the Company's estimates for large events is also impacted by the preliminary nature of the information available, the magnitude and relative infrequency of the events, the expected duration of the respective claims development period, inadequacies in the data provided to the relevant date by industry participants and the potential for further reporting lags or insufficiencies; and in certain large events, significant uncertainty as to the form of the claims and legal issues, under the relevant terms of insurance and reinsurance contracts. In addition, a significant portion of the net claims and claim expenses associated with certain large events can be concentrated with a few large clients and therefore the loss estimates for these events may vary significantly based on the claims experience of those clients. The contingent nature of business interruption and other exposures will also impact losses in a meaningful way, which may give rise to significant complexity in respect of claims handling, claims adjustment and other coverage issues, over time. Given the magnitude of certain events, there can be meaningful uncertainty regarding total covered losses for the insurance industry and, accordingly, several of the key assumptions underlying the



Company's loss estimates. Loss reserve estimation in respect of the Company's retrocessional contracts poses further challenges compared to directly assumed reinsurance. In addition, the Company's actual net losses from these events may increase if the Company's reinsurers or other obligors fail to meet their obligations.

Because of the inherent uncertainties discussed above, the Company has developed a reserving philosophy that attempts to incorporate prudent assumptions and estimates, and the Company has generally experienced favorable net development on prior accident years net claims and claim expenses in the last several years. However, there is no assurance that this favorable development on prior accident years net claims and claim expenses will occur in future periods.

The Company establishes a provision for unallocated loss adjustment expenses ("ULAE") when the related reserve for claims and claim expenses is established. ULAE are expenses that cannot be associated with a specific claim but are related to claims paid or in the process of settlement, such as internal costs of the claims function, and are included in the reserve for claims and claim expenses. The determination of the ULAE provision is subject to judgment.

The Company reevaluates its actuarial reserving techniques on a periodic basis. Typically, the quarterly review procedures include reviewing paid and reported claims in the most recent reporting period, reviewing the development of paid and reported claims from prior periods, and reviewing the Company's overall experience by underwriting year and in the aggregate. The Company monitors its expected ultimate claims and claim expense ratios and expected claims reporting assumptions on a quarterly basis and compares them to its actual experience. These actuarial assumptions are generally reviewed annually, based on input from the Company's actuaries, underwriters, claims personnel and finance professionals, although adjustments may be made more frequently if needed. Assumption changes are made to adjust for changes in the pricing and terms of coverage the Company provides, changes in industry results for similar business, as well as its actual experience to the extent the Company has enough data to rely on its own experience. If the Company determines that adjustments to an earlier estimate are appropriate, such adjustments are recorded in the period in which they are identified.

#### Incurred and Paid Claims Development and Reserving Methodology

The information provided herein about incurred and paid accident year claims development for the years ended prior to December 31, 2016 on a consolidated basis and by segment is presented as supplementary information. The Company has applied a retrospective approach with respect to its acquisition of Platinum, presenting all relevant historical information for all periods presented. In addition, included in the incurred claims and claim expenses and cumulated paid claims and claim expenses tables below is a reconciling item that represents the unamortized balance of fair value adjustments recorded in connection with the acquisition of Platinum to reflect an increase in net claims and claim expenses due to the addition of a market based risk margin that represented the cost of capital required by a market participant to assume the net claims and claim expenses of Platinum.

For incurred and paid accident year claims denominated in foreign currency, the Company has used the current year-end balance sheet foreign exchange rate for all periods provided, thereby eliminating the effects of changes in foreign currency translation rates from the incurred and paid accident year claims development information included in the tables below.

The following table details the Company's consolidated incurred claims and claim expenses and cumulative paid claims and claim expenses as of December 31, 2016, net of reinsurance, as well as IBNR plus ACR included within the net incurred claims amounts.

Incurred claims and claim expenses, net of reinsurance

For the year ended December 31,

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	At December 31, 2016
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	IBNR and ACR
2007	\$1,113,667	\$1,025,247	\$958,206	\$911,337	\$868,747	\$806,487	\$778,185	\$766,845	\$774,396	\$770,219	\$6,000,000
2008	—	1,469,251	1,429,241	1,408,748	1,390,282	1,317,055	1,294,396	1,272,298	1,262,048	1,247,506	48,000,000
2009	—	—	704,560	639,182	622,181	582,725	557,623	536,393	527,374	522,566	30,000,000
2010	—	—	—	988,403	946,271	898,572	867,523	864,328	854,924	863,129	79,000,000
2011	—	—	—	—	1,611,509	1,533,946	1,454,063	1,377,450	1,349,227	1,314,451	11,000,000
2012	—	—	—	—	—	862,333	767,534	705,316	679,446	651,764	13,000,000
2013	—	—	—	—	—	—	614,066	552,965	504,401	465,948	12,000,000
2014	—	—	—	—	—	—	—	657,958	613,360	600,956	15,000,000
2015	—	—	—	—	—	—	—	—	635,553	620,623	34,000,000
2016	—	—	—	—	—	—	—	—	—	675,378	54,000,000
Total										\$7,732,540	\$1,000,000

Cumulative paid claims and claim expenses, net of reinsurance

For the year ended December 31,

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	
2007	\$91,877	\$281,119	\$371,280	\$469,657	\$541,511	\$588,997	\$613,200	\$638,348	\$657,017	\$682,644	
2008	—	275,968	591,482	797,242	937,678	1,013,041	1,060,160	1,090,977	1,118,434	1,140,094	
2009	—	—	96,378	267,983	319,313	363,190	395,580	434,257	455,919	462,192	
2010	—	—	—	126,401	309,807	425,914	495,847	549,898	620,545	709,672	
2011	—	—	—	—	249,556	522,071	861,359	1,013,577	1,101,596	1,145,239	
2012	—	—	—	—	—	165,581	265,612	356,102	415,911	459,269	
2013	—	—	—	—	—	—	86,344	177,423	240,046	283,707	
2014	—	—	—	—	—	—	—	110,863	199,632	268,806	
2015	—	—	—	—	—	—	—	—	95,712	192,864	
2016	—	—	—	—	—	—	—	—	—	79,422	
Total										\$5,423,909	
Outstanding liabilities from accident year 2006 and prior, net of reinsurance											226,695
Claims and claim expenses, net of reinsurance, from the Company's former Bermuda-based insurance operations											2,114
Adjustment for unallocated claim expenses											20,256
Unamortized fair value adjustments recorded in connection with the acquisition of Platinum											11,034
Liability for claims and claim expenses, net of reinsurance											\$2,568,730

Property Segment

Within the Property segment, the Company principally writes property catastrophe excess of loss reinsurance contracts to insure insurance and reinsurance companies against natural and man-made catastrophes. Under these



contracts, the Company indemnifies an insurer or reinsurer when its aggregate paid claims and claim expenses from a single occurrence of a covered peril exceeds the attachment point specified in the contract, up to an amount per loss specified in the contract. The Company's most significant exposure is to losses from hurricanes, earthquakes and other windstorms, although the Company is also exposed to claims arising from other catastrophes, such as tsunamis, winter storms, freezes, floods, fires, tornadoes, explosions and acts of terrorism. The Company's predominant exposure under such coverage is to property damage. However, other risks, including business interruption and other non-property losses, may also be covered under the Company's catastrophe contracts when arising from a covered peril. The Company's coverages are offered on either a worldwide basis or are limited to selected geographic areas.

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Coverage can also vary from “all property” perils to limited coverage on selected perils, such as “earthquake only” coverage. The Company also enters into retrocessional contracts that provide property catastrophe coverage to other reinsurers or retrocedants. This coverage is generally in the form of excess of loss retrocessional contracts and may cover all perils and exposures on a worldwide basis or be limited in scope to selected geographic areas, perils and/or exposures. The exposures the Company assumes from retrocessional business can change within a contract term as the underwriters of a retrocedant may alter their book of business after the retrocessional coverage has been bound. The Company also offers dual trigger reinsurance contracts which require the Company to pay claims based on claims incurred by insurers and reinsurers in addition to the estimate of insured industry losses as reported by referenced statistical reporting agencies.

Also included in the Property segment is property per risk, property (re)insurance, binding facilities and regional U.S. multi-line reinsurance. The Company's predominant exposure under such coverage is to property damage. However, other risks, including business interruption and other non-property losses, may also be covered when arising from a covered peril. The Company's coverages are offered on either a worldwide basis or are limited to selected geographic areas. The exposures assumed from retrocessional business can change within a contract term as the underwriters of a retrocedant may alter their book of business after the retrocessional coverage has been bound. The Company offers these products principally through proportional coverage. In a proportional reinsurance arrangement (also referred to as quota share reinsurance or pro rata reinsurance), the reinsurer shares a proportional part of the original premiums and losses of the reinsured.

Claims and claim expenses in the Company's Property segment are generally characterized by loss events of low frequency and high severity. Initial reporting of paid and incurred claims in general, tends to be relatively prompt. The Company considers this business “short-tail” as compared to the reporting of claims for “long-tail” products, which tends to be slower. However, the timing of claims payment and reporting also varies depending on various factors, including: whether the claims arise under reinsurance of primary insurance companies or reinsurance of other reinsurance companies; the nature of the events (e.g., hurricanes, earthquakes or terrorism); the geographic area involved; post-event inflation which may cause the cost to repair damaged property to increase significantly from current estimates, or for property claims to remain open for a longer period of time, due to limitations on the supply of building materials, labor and other resources; complex policy coverage and other legal issues; and the quality of each client's claims management and reserving practices. Management's judgments regarding these factors are reflected in the Company's reserve for claims and claim expenses.

Reserving for most of the Company's Property segment generally does not involve the use of traditional actuarial techniques. Rather, claims and claim expense reserves are estimated by management after a catastrophe occurs by completing an in-depth analysis of the individual contracts which may potentially be impacted by the catastrophic event. The in-depth analysis generally involves: 1) estimating the size of insured industry losses from the catastrophic event; 2) reviewing reinsurance contract portfolios to identify contracts which are exposed to the catastrophic event; 3) reviewing information reported by customers and brokers; 4) discussing the event with customers and brokers; and 5) estimating the ultimate expected cost to settle all claims and administrative costs arising from the catastrophic event on a contract-by-contract basis and in aggregate for the event. Once an event has occurred, during the then current reporting period, the Company records its best estimate of the ultimate expected cost to settle all claims arising from the event. The Company's estimate of claims and claim expense reserves is then determined by deducting cumulative paid losses from its estimate of the ultimate expected loss for an event. The Company's estimate of IBNR is determined by deducting cumulative paid losses, case reserves and additional case reserves from its estimate of the ultimate expected loss for an event. Once the Company receives a notice of loss or payment request under a catastrophe reinsurance contract, it is generally able to process and pay such claims promptly.

Because the events from which claims arise under policies written within the Property segment are typically prominent, public occurrences such as hurricanes and earthquakes, the Company is often able to use independent reports as part of its loss reserve estimation process. The Company also reviews catastrophe bulletins published by various statistical reporting agencies to assist in determining the size of the industry loss, although these reports may not be available for some time after an event.



For smaller events including localized severe weather events such as windstorms, hail, ice, snow, flooding, freezing and tornadoes, which are not necessarily prominent, public occurrences, the Company initially places greater reliance on catastrophe bulletins published by statistical reporting agencies to assist in determining what events occurred during the reporting period than the Company does for large events. This includes reviewing catastrophe bulletins published by Property Claim Services (“PCS”) for U.S. catastrophes. The Company sets its initial estimates of reserves for claims and claim expenses for these smaller events based on a combination of its historical market share for these types of losses and the estimate of the total insured industry property losses as reported by statistical reporting agencies, although management may make significant adjustments based on the Company's current exposure to the geographic region involved as well as the size of the loss and the peril involved. This approach supplements the Company's approach for estimating losses for larger catastrophes, which as discussed above, includes discussions with brokers and ceding companies and reviewing individual contracts impacted by the event. Approximately one year from the date of loss for these small events, the Company typically estimates IBNR for these events by using the paid Bornhuetter-Ferguson actuarial method. The loss development factors for the paid Bornhuetter-Ferguson actuarial method are selected based on a review of the Company's historical experience and these factors are reviewed at least annually. There were no significant changes to the Company's paid loss development factors over the last three years. In general, reserves for the Company's more recent reinsured catastrophic events are subject to greater uncertainty and, therefore, greater potential variability, and are likely to experience material changes from one period to the next. This is due to the uncertainty as to the size of the industry losses from the event, uncertainty as to which contracts have been exposed to the catastrophic event, uncertainty due to complex legal and coverage issues that can arise out of large or complex catastrophic events, and uncertainty as to the magnitude of claims incurred by the Company's customers. As the Company's claims age, more information becomes available and the Company believes its estimates become more certain.

The following table details the Company's Property segment incurred claims and claim expenses and cumulative paid claims and claim expenses as of December 31, 2016, net of reinsurance, as well as IBNR plus ACR included within the net incurred claims amounts.

Incurred claims and claim expenses, net of reinsurance

For the year ended December 31,

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	At December 31, 2016 IBNR and ACR
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	
2007	\$387,866	\$309,228	\$250,975	\$246,823	\$234,120	\$213,228	\$206,168	\$199,792	\$198,666	\$199,383	\$397,000
2008	—	851,049	752,349	752,501	748,918	715,285	700,312	691,030	683,658	684,281	919,000
2009	—	—	218,607	163,124	144,352	138,131	134,013	134,722	134,059	134,359	411,000
2010	—	—	—	605,753	557,062	522,678	527,126	545,333	549,097	558,982	35,715,000
2011	—	—	—	—	1,230,463	1,153,960	1,103,441	1,056,822	1,036,122	1,007,368	48,082,000
2012	—	—	—	—	—	436,244	343,561	310,842	293,136	275,504	38,243,000
2013	—	—	—	—	—	—	223,542	192,681	170,629	149,197	15,879,000
2014	—	—	—	—	—	—	—	182,518	153,770	146,689	14,820,000
2015	—	—	—	—	—	—	—	—	224,669	192,593	62,748,000
2016	—	—	—	—	—	—	—	—	—	251,774	178,460,000
Total										\$3,600,130	\$395,000

Cumulative paid claims and claim expenses, net of reinsurance

For the year ended December 31,

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	
2007	\$45,530	\$150,938	\$172,512	\$187,998	\$190,603	\$194,327	\$197,533	\$197,735	\$198,654	\$199,893	
2008	—	247,162	391,008	538,944	628,673	661,664	675,595	679,303	681,131	682,539	
2009	—	—	56,065	99,400	113,279	120,839	126,433	130,858	131,823	132,731	
2010	—	—	—	91,585	211,124	289,918	332,275	367,495	393,497	469,028	
2011	—	—	—	—	201,650	409,111	716,364	838,968	896,001	921,820	
2012	—	—	—	—	—	100,044	144,861	188,744	208,115	218,060	
2013	—	—	—	—	—	—	48,550	91,436	115,043	125,744	
2014	—	—	—	—	—	—	—	55,101	95,758	118,304	
2015	—	—	—	—	—	—	—	—	62,173	108,173	
2016	—	—	—	—	—	—	—	—	—	47,480	
Total										\$3,023,772	
Outstanding liabilities from accident year 2006 and prior, net of reinsurance											3,865
Adjustment for unallocated claim expenses											2,394
Unamortized fair value adjustments recorded in connection with the acquisition of Platinum											1,419
Liability for claims and claim expenses, net of reinsurance											\$584,036

Casualty and Specialty Segment

The Company offers its casualty and specialty reinsurance products principally on a proportional basis, and it also provides excess of loss coverage. The Company offers casualty and specialty reinsurance products to insurance and reinsurance companies and provides coverage for specific geographic regions or on a worldwide basis. Principally all

of the business is reinsurance, although from time to time, the Company writes direct insurance business. As with the Company's Property segment, its Casualty and Specialty segment reinsurance contracts can include coverage for relatively large limits or exposures. As a result of the foregoing, the Company's casualty and specialty reinsurance business can be subject to significant claims volatility. In periods of low

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claims frequency or severity, the Company's results will generally be favorably impacted while in periods of high claims frequency or severity the Company's results will generally be negatively impacted.

More recently, the Company has accepted a wider range of proportional risks, facilitating the Company's efforts to expand its product offerings. In addition, on March 2, 2015 the Company acquired Platinum and recorded \$1.4 billion of claims and claim expense reserves related to the acquisition, of which \$1.2 billion was recorded in the Casualty and Specialty segment, with the balance recorded in the Company's Property segment. While the Company remains focused on underwriting discipline, and seeks to remain focused on opportunities amenable to stochastic representation and supported by strong data and analytics, the Company's expanded casualty and specialty product suite and the addition of the claims and claim expense reserves acquired through the Platinum transaction, may pose new, unmodelled or unforeseen risks for which the Company may not be adequately compensated and may also result in a higher level of attritional claims and claim expenses and the potential for reserve development, either adverse or favorable.

The Company's processes and methodologies in respect of loss estimation for the coverages offered through its Casualty and Specialty segment differ from those used for its Property segment. For example, the Company's casualty and specialty coverages are more likely to be impacted by factors such as long-term inflation and changes in the social and legal environment, which the Company believes gives rise to greater uncertainty in its reserves for claims and claim expenses. Moreover, in many lines of business the Company does not have the benefit of a significant amount of its own historical experience and may have little or no related corporate reserving history in many of its newer or growing lines of business. The Company believes this makes its Casualty and Specialty segment reserving subject to greater uncertainty than its Property segment.

The Company calculates multiple point estimates for claims and claim expense reserves using a variety of actuarial reserving techniques for many, but not all, of its classes of business for each underwriting year within the Casualty and Specialty segment. The Company does not believe that these multiple point estimates are, or should be considered a range. Rather, the Company considers each class of business and determines the most appropriate point estimate for each underwriting year based on the characteristics of the particular class including: (1) loss development patterns derived from historical data; (2) the credibility of the selected loss development pattern; (3) the stability of the loss development patterns; (4) how developed the underwriting year is; and (5) the observed loss development of other underwriting years for the same class. The Company also considers other relevant factors, including: (1) historical ultimate loss ratios; (2) the presence of individual large losses; and (3) known occurrences that have not yet resulted in reported losses. The Company makes determinations of the most appropriate point estimate of loss for each class based on an evaluation of relevant information and do not ascribe any particular portion of the estimate to a particular factor or consideration. In addition, the Company believes that a review of individual contract information improves the loss estimates for some classes of business.

When developing claims and claims expense reserves for the Company's Casualty and Specialty segment, it considers several actuarial techniques such as the expected loss ratio method, the Bornhuetter-Ferguson actuarial method and the paid and reported chain ladder actuarial method.

For classes of business and underwriting years where the Company has limited historical claims experience, estimates of ultimate losses that are not related to a specific event are generally initially determined based on the loss ratio method applied to each underwriting year and to each class of business. Unless the Company has credible claims experience or unfavorable development, it generally selects an ultimate loss based on its initial view of the loss. The selected ultimate losses are determined by multiplying the initial expected loss ratio by the earned premium. The initial expected loss ratios are key inputs that involve management judgment and are based on a variety of factors, including: (1) contract by contract expected loss ratios developed during the Company's pricing process; (2) historical loss ratios and combined ratios adjusted for rate change and trend; and (3) industry benchmarks for similar business. These judgments take into account management's view of past, current and future factors that may influence ultimate losses, including: (1) market conditions; (2) changes in the business underwritten; (3) changes in timing of the emergence of claims; and (4) other factors that may influence ultimate loss ratios and losses.

The determination of when reported losses are sufficient and credible to warrant selection of an ultimate loss ratio different from the initial expected loss ratios also requires judgment. The Company generally makes adjustments for

reported loss experience indicating unfavorable variances from initial expected loss

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ratios sooner than reported loss experience indicating favorable variances. This is because the reporting of losses in excess of expectations tends to have greater credibility than an absence or lower than expected level of reported losses. Over time, as a greater number of claims are reported and the credibility of reported losses improves, actuarial estimates of IBNR are typically based on the Bornhuetter-Ferguson actuarial method or the reported chain ladder actuarial method.

The Bornhuetter-Ferguson method allows for greater weight to be applied to expected results in periods where little or no actual experience is available, and, hence, is less susceptible to the potential pitfall of being excessively swayed by one year or one quarter of actual paid and/or reported loss data, compared to the chain ladder actuarial method. The Bornhuetter-Ferguson method uses initial expected loss ratio expectations to the extent that the expected paid or reported losses are zero, and it assumes that past experience is not fully representative of the future. As the Company's reserves for claims and claim expenses age, and actual claims experience becomes available, this method places less weight on expected experience and places more weight on actual experience. This experience, which represents the difference between expected reported claims and actual reported claims, is reflected in the respective reporting period as a change in estimate. The utilization of the Bornhuetter-Ferguson method requires the Company to estimate an expected ultimate claims and claim expense ratio and select an expected loss reporting pattern. The Company selects its estimates of the expected ultimate claims and claim expense ratios as described above and selects its expected loss reporting patterns by utilizing actuarial analysis, including management's judgment, and historical patterns of paid losses and reporting of case reserves to the Company, as well as industry loss development patterns. The estimated expected claims and claim expense ratio may be modified to the extent that reported losses at a given point in time differ from what would be expected based on the selected loss reporting pattern.

The reported chain ladder actuarial method utilizes actual reported losses and a loss development pattern to determine an estimate of ultimate losses that is independent of the initial expected ultimate loss ratio and earned premium. The Company believes this technique is most appropriate when there are a large number of reported losses with significant statistical credibility and a relatively stable loss development pattern. Information that may cause future loss development patterns to differ from historical loss development patterns is considered and reflected in the Company's selected loss development patterns as appropriate. For certain reinsurance contracts, historical loss development patterns may be developed from ceding company data or other sources.

In addition, certain casualty and specialty coverages may be impacted by natural and man-made catastrophes. The Company estimates reserves for claim and claim expenses for these losses after the event giving rise to these losses occurs, following a process that is similar to its Property segment described above.

The following table details the Company's Casualty and Specialty segment incurred claims and claim expenses and cumulative paid claims and claim expenses as of December 31, 2016, net of reinsurance, as well as IBNR plus ACR included within the net incurred claims amounts.

Incurred claims and claim expenses, net of reinsurance

For the year ended December 31,

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	At December 31, 2016
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	IBNR and ACR
2007	\$725,801	\$716,019	\$707,231	\$664,514	\$634,627	\$593,259	\$572,017	\$567,053	\$575,730	\$570,836	\$67,322
2008	—	618,202	676,892	656,247	641,364	601,770	594,084	581,268	578,390	563,225	47,739
2009	—	—	485,953	476,058	477,829	444,594	423,610	401,671	393,315	388,207	29,595
2010	—	—	—	382,650	389,209	375,894	340,397	318,995	305,827	304,147	44,094
2011	—	—	—	—	381,046	379,986	350,622	320,628	313,105	307,083	65,301
2012	—	—	—	—	—	426,089	423,973	394,474	386,310	376,260	94,318
2013	—	—	—	—	—	—	390,524	360,284	333,772	316,751	112,092
2014	—	—	—	—	—	—	—	475,440	459,590	454,267	140,782
2015	—	—	—	—	—	—	—	—	410,884	428,030	281,182
2016	—	—	—	—	—	—	—	—	—	423,604	363,611
Total										\$4,132,410	\$1,240,000

Cumulative paid claims and claim expenses, net of reinsurance

For the year ended December 31,

Accident Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)
2007	\$46,347	\$130,181	\$198,768	\$281,659	\$350,908	\$394,670	\$415,667	\$440,613	\$458,363	\$482,751
2008	—	28,806	200,474	258,298	309,005	351,377	384,565	411,674	437,303	457,555
2009	—	—	40,313	168,583	206,034	242,351	269,147	303,399	324,096	329,461
2010	—	—	—	34,816	98,683	135,996	163,572	182,403	227,048	240,644
2011	—	—	—	—	47,906	112,960	144,995	174,609	205,595	223,419
2012	—	—	—	—	—	65,537	120,751	167,358	207,796	241,209
2013	—	—	—	—	—	—	37,794	85,987	125,003	157,963
2014	—	—	—	—	—	—	—	55,762	103,874	150,502
2015	—	—	—	—	—	—	—	—	33,539	84,691
2016	—	—	—	—	—	—	—	—	—	31,942
Total										\$2,400,137
Outstanding liabilities from accident year 2006 and prior, net of reinsurance										222,830
Adjustment for unallocated claim expenses										17,862
Unamortized fair value adjustments recorded in connection with the acquisition of Platinum										9,615
Liability for claims and claim expenses, net of reinsurance										\$1,982,580

Prior Year Development of the Reserve for Net Claims and Claim Expenses

The Company's estimates of claims and claim expense reserves are not precise in that, among other things, they are based on predictions of future developments and estimates of future trends and other variable factors. Some, but not all, of the Company's reserves are further subject to the uncertainty inherent in actuarial methodologies and estimates. Because a reserve estimate is simply an insurer's estimate at a point in time of its ultimate liability, and because there

are numerous factors that affect reserves and claims payments that cannot be determined with certainty in advance, the Company's ultimate payments will vary, perhaps materially, from its estimates of reserves. If the Company determines in a subsequent period that adjustments to its previously established reserves are appropriate, such adjustments are recorded in the period in which they are identified. On a net basis, the Company's cumulative favorable or unfavorable

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development is generally reduced by offsetting changes in its reinsurance recoverables, as well as changes to loss related premiums such as reinstatement premiums and redeemable noncontrolling interest for changes in claims and claim expenses that impact DaVinciRe, all of which generally move in the opposite direction to changes in the Company's ultimate claims and claim expenses.

As detailed in the tables and discussion detail below, changes to prior year estimated claims reserves increased the Company's net income by \$164.1 million during the year ended December 31, 2016, (2015 - \$162.4 million, 2014 - \$143.8 million), excluding the consideration of changes in reinstatement, adjustment or other premium changes, profit commissions, redeemable noncontrolling interest - DaVinciRe and income tax.

The following table details the Company's prior year development by segment of its liability for unpaid claims and claim expenses:

Year ended December 31,	2016	2015	2014
Property	\$(104,876)	\$(93,786 )	\$(87,258 )
Casualty and Specialty	(58,140 )	(67,791 )	(50,403 )
Other	(1,110 )	(870 )	(6,137 )
Total favorable development of prior accident years net claims and claim expenses	\$(164,126)	\$(162,447)	\$(143,798)

## Property Segment

The following table details the development of the Company's liability for unpaid claims and claim expenses for its Property segment, allocated between large and small catastrophe net claims and claim expenses and attritional net claims and claim expenses, included in the other line item:

Year ended December 31,	2016 (Favorable) adverse development	2015 (Favorable) adverse development	2014 (Favorable) adverse development
Catastrophe net claims and claim expenses			
Large catastrophe events			
Thailand Floods (2011)	\$ (15,131 )	\$ (18,823 )	\$ (11,754 )
Tohoku Earthquake and Tsunami (2011)	(7,314 )	(5,313 )	(5,408 )
New Zealand Earthquake (2011)	1,987	22,754	(3,088 )
2011 International Events	(20,458 )	(1,382 )	(20,250 )
Storm Sandy (2012)	(10,849 )	(12,503 )	(24,232 )
April and May U.S. Tornadoes (2011)	(4,213 )	(10,190 )	(14,272 )
New Zealand Earthquake (2010)	6,904	1,095	24,692
Other	(5,310 )	(11,300 )	(23,947 )
Total large catastrophe events	(33,926 )	(34,280 )	(58,009 )
Small catastrophe events			
U.S. PCS 13/14 Wind and Thunderstorm (2013)	(6,286 )	(1,882 )	(4,239 )
Tianjin Explosion (2015)	(5,686 )	—	—
U.S. PCS 15 Wind and Thunderstorm (2013)	(5,648 )	418	2,400
U.S. PCS 81 Wind and Thunderstorm (2015)	(5,098 )	—	—
U.S. PCS 70 and 73 Wind and Thunderstorm (2012)	(3,772 )	(1,220 )	13,362
U.S. PCS 24 Wind and Thunderstorm (2013)	(229 )	(809 )	(6,712 )
European Floods (2013)	(40 )	(2,466 )	(8,496 )
Other	(44,191 )	(52,046 )	(25,564 )
Total small catastrophe events	(70,950 )	(58,005 )	(29,249 )
Total catastrophe net claims and claim expenses	(104,876 )	(92,285 )	(87,258 )
Actuarial assumption changes	—	(1,501 )	—
Total net favorable development of prior accident years net claims and claim expenses	\$ (104,876 )	\$ (93,786 )	\$ (87,258 )

The net favorable development of prior accident years net claims and claim expenses within the Company's Property segment in 2016 of \$104.9 million was principally driven by favorable development of \$15.1 million from the 2011 Thailand Floods, \$10.8 million from Storm Sandy in 2012, \$7.3 million from the 2011 Tohoku Earthquake and Tsunami, and \$5.7 million related to the 2015 Tianjin Explosion, partially offset by adverse development of \$6.9 million related to the 2010 New Zealand Earthquake, each principally the result of changes in estimated ultimate losses for each respective event. Included in the favorable development of prior accident years net claims and claim expenses related to small catastrophe events were a number of wind and thunderstorm events, primarily from the 2012, 2013 and 2015 accident years totaling \$21.0 million, each principally the result of changes in estimated ultimate losses for each respective event, with the remainder due to a number of other large and small catastrophe events related to lines of business where the Company principally estimates net claims and claim expenses using traditional actuarial methods.

The favorable development of prior accident years net claims and claim expenses within the Company's Property segment in 2015 of \$93.8 million was comprised of \$34.3 million and \$58.0 million related to large and small catastrophe events, respectively. Included in the favorable development of prior accident years



net claims and claim expenses related to large catastrophe events was \$12.5 million related to Storm Sandy and \$10.2 million related to the April and May 2011 U.S. Tornadoes, each principally the result of changes in the Company's estimated ultimate loss for each respective event. In addition, the Company experienced \$69.3 million of favorable development related to a number of other large and small catastrophe events related to lines of business where the Company principally estimates net claims and claim expenses using traditional actuarial methods. Net favorable development of prior accident years net claims and claim expenses related to the 2011 New Zealand Earthquake, the 2011 Thailand Floods and the 2011 Tohoku Earthquake and Tsunami (collectively the "2011 International Events") was \$1.4 million and included reductions in reported losses on the 2011 Thailand Floods and Tohoku Earthquake and Tsunami, offset by a net increase in reported losses on the 2011 New Zealand Earthquake, with each respective movement principally driven by the same counterparties re-allocating losses between the 2011 International Events. The favorable development of prior accident years net claims and claim expenses within the Company's Property segment in 2014 of \$87.3 million was comprised of \$58.0 million and \$29.2 million related to large and small catastrophe events, respectively. Included in the favorable development of prior accident years net claims and claim expenses related to large catastrophe events was \$24.2 million, \$14.3 million and \$11.8 million related to Storm Sandy, the 2011 April and May U.S. Tornadoes and the 2011 Thailand Floods, partially offset by adverse development of \$24.7 million related to the 2010 New Zealand Earthquake, each principally the result of changes in estimated ultimate losses for each respective event. Included in the favorable development of prior accident years net claims and claim expenses related to small catastrophe events was \$8.5 million and \$6.7 million related to the 2013 European Floods and a 2013 U.S. wind and thunderstorm event, respectively, partially offset by adverse development of \$13.4 million related to certain 2012 U.S. wind and thunderstorm events, each principally the result of changes in estimated ultimate losses for each respective event. In addition, the Company's Property segment experienced \$51.4 million of favorable development related to a number of other large and small catastrophe events.

#### Casualty and Specialty Segment

The following table details the development of the Company's liability for unpaid claims and claim expenses for its Casualty and Specialty segment:

Year ended December 31,	2016 (Favorable) adverse development	2015 (Favorable) adverse development	2014 (Favorable) adverse development
Actuarial methods - actual reported claims less than expected claims	\$ (52,601 )	\$ (72,551 )	\$ (50,403 )
Actuarial assumption changes	(5,539 )	4,760	—
Total favorable development of prior accident years net claims and claim expenses	\$ (58,140 )	\$ (67,791 )	\$ (50,403 )

The favorable development of prior accident years net claims and claim expenses within the Company's Casualty and Specialty segment in 2016 of \$58.1 million was driven by \$52.6 million related to the application of the Company's formulaic actuarial reserving methodology with attritional net claims and claim expenses reported coming in lower than expected on prior accident years events and \$5.5 million of favorable development associated with actuarial assumption changes.

The favorable development of prior accident years net claims and claim expenses within the Company's Casualty and Specialty segment in 2015 of \$67.8 million was driven by \$72.6 million related to the application of the Company's formulaic actuarial reserving methodology with attritional net claims and claim expenses reported coming in lower than expected on prior accident years events, partially offset by adverse development of \$4.8 million associated with actuarial assumption changes.

The favorable development of prior accident years net claims and claim expenses within the Company's Casualty and Specialty segment in 2014 of \$50.4 million was driven by the application of the Company's formulaic actuarial reserving methodology with attritional net claims and claim expenses reported coming in lower than expected on prior accident years events. There were no actuarial reserving assumption changes in 2014.





## Other

The following table details the development of the Company's liability for unpaid claims and claim expenses for its Other category:

Year ended December 31, 2016	2015	2014
(Favorable) adverse development	(Favorable) adverse development	(Favorable) adverse development
Other	\$ (1,110 )	\$ (870 )
		\$ (6,137 )

The Company's Other category experienced net favorable development on prior accident years net claims and claim expense of \$1.1 million in 2016 (2015 - \$0.9 million; 2014 - \$6.1 million). The net favorable development on prior accident years of \$6.1 million in 2014 was principally the result of a reduction in the estimated ultimate losses on a proportional property contract.

#### Reconciliation of the Disclosure of Incurred and Paid Claims Development to the Reserve for Claims and Claim Expenses

The reconciliation of the net incurred and paid claims development tables to the reserve for claims and claim expenses in the consolidated balance sheet is as follows:

#### At December 31, 2016

Net reserve for claims and claim expenses	
Property	\$584,036
Casualty and Specialty	1,982,580
Other	2,114
Total net reserve for claims and claim expenses	2,568,730
Reinsurance recoverable	
Property	\$43,738
Casualty and Specialty	212,546
Other	23,280
Total reinsurance recoverable	279,564
Total gross reserve for claims and claim expenses	\$2,848,294

#### Historical Claims Duration

The following is unaudited supplementary information about average historical claims duration by segment:

At December 31, 2016	Average annual percentage payout of incurred claims by age, net of reinsurance (number of years)									
	1	2	3	4	5	6	7	8	9	10
Property	26.5%	23.7%	20.9%	10.2%	5.0%	2.9%	5.3%	0.3%	0.3%	0.6%
Casualty and Specialty	10.2%	19.3%	11.1%	10.6%	8.8%	8.1%	4.5%	3.7%	3.4%	4.3%

#### Claims Frequency

Each of the Company's reportable segments are broadly considered to be assumed reinsurance, where multiple claims are often aggregated, perhaps multiple times through retrocessional reinsurance, before ultimately being ceded to the Company. In addition, the nature, size, terms and conditions of contracts entered into by the Company changes from one accident year to the next and the quantum of contractual or policy limits, and accordingly the potential amount of claims and claim expenses associated with a reported claim, can range from nominal, to significant. These factors can impact the amount and timing of the claims and claim expenses to be recorded and accordingly, developing claim

frequency information is highly subjective and is not prepared or utilized for internal purposes. In addition, the Company does not have

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direct access to claim frequency information underlying certain of its proportional contracts given the nature of that business. As a result, the Company does not believe providing claim frequency information is practicable as it relates to its proportional contracts.

Notwithstanding the factors noted above, the Company has developed claims frequency information associated with its excess of loss reinsurance contracts. As each accident year develops, the Company would expect the cumulative number of reported claims to increase in certain of its excess of loss reinsurance contracts, most notably in its Casualty and Specialty segment. In determining claims frequency for its excess of loss reinsurance contracts, the Company has made the following assumptions:

• Claims below the insured layer of a contract are excluded;

• If an insured loss event results in claims associated with a number of layers of a contract, the Company would consider this to be a single claim; and

• If an insured loss event results in claims associated with a number of the Company's operating subsidiaries, the Company considers each operating subsidiary to have a reported claim.

The following table details the Company's cumulative number of reported claims for its excess of loss reinsurance contracts allocated by segment:

	At December 31, 2016	
	Cumulative number of reported claims	
Accident Year	Property	Casualty and Specialty
2007	908	1,388
2008	1,350	1,368
2009	742	1,082
2010	781	1,030
2011	1,178	1,356
2012	667	1,253
2013	622	1,187
2014	523	1,353
2015	555	988
2016	548	365

#### Assumed Reinsurance Contracts Classified As Deposit Contracts

Net claims and claim expenses incurred were reduced by \$0.2 million during 2016 (2015 – \$0.3 million, 2014 – \$0.3 million) related to income earned on assumed reinsurance contracts that were classified as deposit contracts with underwriting risk only. Other income was increased by \$6.2 million during 2016 (2015 – other income increased by \$6.2 million, 2014 – other loss decreased by \$0.1 million) related to premiums and losses incurred on assumed reinsurance contracts that were classified as deposit contracts with timing risk only. Aggregate deposit liabilities of \$25.7 million are included in reinsurance balances payable at December 31, 2016 (2015 – \$32.3 million) and aggregate deposit assets of \$Nil are included in other assets at December 31, 2016 (2015 – \$Nil) associated with these contracts.

## NOTE 9. DEBT AND CREDIT FACILITIES

## Debt Obligations

A summary of the Company's debt obligations on its consolidated balance sheets is set forth below:

	December 31, 2016		December 31, 2015	
	Fair Value	Carrying Value	Fair Value	Carrying Value
3.700% Senior Notes due 2025	\$291,750	\$296,948	\$287,100	\$296,577
5.75% Senior Notes due 2020	270,875	248,941	270,000	248,610
Series B 7.50% Senior Notes due 2017	257,500	255,352	267,500	268,196
4.750% Senior Notes due 2025 (DaVinciRe)	144,675	147,422	148,742	147,112
	\$964,800	\$948,663	\$973,342	\$960,495

## 3.700% Senior Notes due 2025 of RenaissanceRe Finance

On March 24, 2015, RenaissanceRe Finance issued \$300.0 million of its 3.700% Senior Notes due April 1, 2025, with interest on the notes payable on April 1 and October 1 of each year. The notes are fully and unconditionally guaranteed by RenaissanceRe and may be redeemed by RenaissanceRe Finance prior to maturity, subject to the payment of a "make-whole" premium if the notes are redeemed prior to January 1, 2025. The notes contain various covenants, including limitations on mergers and consolidations, and restrictions as to the disposition of, and the placing of liens on, stock of designated subsidiaries.

The net proceeds from the offering of the notes (together with cash on hand) were applied by RenaissanceRe to repay in full a \$300.0 million bridge loan that Barclays Bank PLC provided to RenaissanceRe on February 25, 2015 in order to finance a portion of the cash consideration paid by RenaissanceRe in connection with the acquisition of Platinum. Refer to "Note 3. Acquisition of Platinum" for additional information related to the cash consideration paid by RenaissanceRe in connection with the acquisition of Platinum.

## 5.75% Senior Notes due 2020 of RenRe North America Holdings Inc. ("RRNAH") and RenaissanceRe Finance

On March 17, 2010, RenRe North America Holdings Inc. ("RRNAH") issued \$250.0 million of its 5.75% Senior Notes due March 15, 2020 (the "RRNAH Notes"), with interest on the notes payable on March 15 and September 15 of each year. RenaissanceRe Finance became a co-obligor of the notes as of July 3, 2015. The notes, which are senior obligations, are fully and unconditionally guaranteed by RenaissanceRe and may be redeemed prior to maturity, subject to the payment of a "make-whole" premium. The notes contain various covenants, including limitations on mergers and consolidations, and restrictions as to the disposition of, and the placing of liens on, stock of designated subsidiaries.

## Series B 7.50% Notes due 2017 of Platinum Underwriters Finance, Inc.

On November 2, 2005, Platinum Underwriters Finance, Inc. ("Platinum Finance") issued \$250.0 million in aggregate principal amount of its Series B 7.50% Notes due June 1, 2017 (the "Platinum Finance Notes").

Interest on the Platinum Finance Notes is payable on June 1 and December 1 of each year. The Platinum Finance Notes, which are senior obligations, are fully and unconditionally guaranteed by RenaissanceRe, and may be redeemed by Platinum Finance prior to maturity, subject to the payment of a "make-whole" premium. The Platinum Finance Notes contain various covenants, including limitations on mergers and consolidations, and restrictions as to the disposition of, and the placing of liens on, the stock of designated subsidiaries.

## DaVinciRe Senior Notes

On May 4, 2015, DaVinciRe issued \$150.0 million of its 4.750% Senior Notes due May 1, 2025, with interest on the notes payable on May 1 and November 1, commencing with November 1, 2015 (the "DaVinciRe Senior Notes"). The DaVinciRe Senior Notes, which are senior obligations, may be redeemed

prior to maturity, subject to the payment of a “make-whole” premium if the notes are redeemed before February 1, 2025. The DaVinciRe Senior Notes contain various covenants including restrictions as to the disposition of, and the placing of liens on, the stock of designated subsidiaries, limitations on mergers, amalgamations and consolidations, limitations on third party investor redemptions, a leverage covenant and a covenant to maintain certain ratings. The net proceeds from this offering were used to repay, in full, \$100.0 million outstanding under the loan agreement, dated as of March 30, 2011, between DaVinciRe and RenaissanceRe, and the remainder of the net proceeds may be used to repurchase DaVinciRe shares or for general corporate purposes.

#### Credit Facilities

The outstanding amounts issued or drawn under each of the Company’s significant credit facilities is set forth below:

At December 31, 2016	Issued or Drawn
RenaissanceRe Revolving Credit Facility	\$—
Uncommitted Standby Letter of Credit Facility with Wells Fargo	140,829
Uncommitted Standby Letter of Credit Facility with NAB	4,855
Bilateral Letter of Credit Facility with Citibank Europe	244,909
Funds at Lloyd’s Letter of Credit Facilities	
Renaissance Reinsurance FAL Facility	380,000
Total credit facilities in U.S. dollars	\$770,593
Funds at Lloyd’s Letter of Credit Facilities	
Renaissance Reinsurance FAL Facility	£90,000
Specialty Risks FAL Facility	10,000
Total credit facilities in British Pounds	£100,000

#### RenaissanceRe Revolving Credit Facility

On May 15, 2015, RenaissanceRe entered into an amended and restated credit agreement (the “Revolving Credit Agreement”) with various banks, financial institutions and Wells Fargo Bank, National Association (“Wells Fargo”) as administrative agent, which amended and restated the credit agreement, dated as of May 17, 2012, as amended. The Revolving Credit Agreement provides for a revolving commitment to RenaissanceRe of \$250.0 million.

RenaissanceRe has the right, subject to satisfying certain conditions, to increase the size of the facility to \$350.0 million. Amounts borrowed under the Revolving Credit Agreement bear interest at a rate selected by RenaissanceRe equal to the Base Rate or LIBOR (each as defined in the Revolving Credit Agreement) plus a margin, as more fully set forth in the Revolving Credit Agreement. At December 31, 2016, RenaissanceRe had \$Nil outstanding under the Revolving Credit Agreement.

The Revolving Credit Agreement contains representations, warranties and covenants customary for bank loan facilities of this type, including limits on the ability of RenaissanceRe and its subsidiaries to merge, consolidate, sell a substantial amount of assets, incur liens and declare or pay dividends under certain circumstances. The Revolving Credit Agreement also contains certain financial covenants which generally provide that the ratio of consolidated debt to capital shall not exceed 0.35:1 and that the consolidated net worth of RenaissanceRe shall equal or exceed approximately \$2.9 billion. The net worth requirement is recalculated effective as of the end of each fiscal year. If certain events of default occur, in some circumstances the lenders’ obligations to make loans may be terminated and the outstanding obligations of RenaissanceRe under the Revolving Credit Agreement may be accelerated. The scheduled commitment maturity date of the Revolving Credit Agreement is May 15, 2020.

RRNAH, RenaissanceRe Finance, and Platinum Finance guarantee RenaissanceRe's obligations under the Revolving Credit Agreement. Subject to certain exceptions, additional subsidiaries of RenaissanceRe are required to become guarantors if such subsidiaries issue or incur certain types of indebtedness.

Uncommitted Standby Letter of Credit Facility with Wells Fargo Bank, National Association

Renaissance Reinsurance, DaVinci and Renaissance Reinsurance U.S. (collectively, the "Applicants") and RenaissanceRe are parties to a Standby Letter of Credit Agreement, as amended (the "Standby Letter of Credit Agreement") with Wells Fargo which provides for a secured, uncommitted facility under which letters of credit may be issued from time to time for the respective accounts of the Applicants. RenaissanceRe has unconditionally guaranteed the payment obligations of the Applicants, other than DaVinci.

The Standby Letter of Credit Agreement contains representations, warranties and covenants that are customary for facilities of this type. At all times during which it is a party to the Standby Letter of Credit Agreement, each Applicant is required to pledge to Wells Fargo eligible collateral having a value (determined as provided in such agreement) that equals or exceeds the aggregate face amount of the outstanding letters of credit issued for its account plus all of such Applicant's payment and reimbursement obligations in respect of such letters of credit. In the case of an event of default, Wells Fargo may exercise certain remedies, including conversion of collateral of a defaulting Applicant into cash.

On May 15, 2015, all amounts outstanding under the Third Amended and Restated Credit Agreement, dated as of April 9, 2014, among Platinum, the subsidiaries of Platinum party thereto, the lenders party thereto, and Wells Fargo, as administrative agent were repaid and satisfied in full, the facility was terminated and all letters of credit that were issued and outstanding under the facility were transferred over to, and are now governed by the terms and conditions of, the Standby Letter of Credit Agreement.

Effective October 12, 2016, in connection with the merger of RenaissanceRe Specialty Risks and Platinum Bermuda into Renaissance Reinsurance, Renaissance Reinsurance assumed all of the obligations of RenaissanceRe Specialty Risks and Platinum Bermuda under the Standby Letter of Credit Agreement.

At December 31, 2016, the Applicants had \$140.8 million of letters of credit outstanding under the Standby Letter of Credit Agreement.

National Australia Bank Limited Standby Letter of Credit Agreement

Effective as of May 19, 2015, Renaissance Reinsurance, RenaissanceRe Specialty Risks, DaVinci and Platinum Bermuda (collectively, the "NAB Facility Applicants") and RenaissanceRe entered into a Standby Letter of Credit Agreement (the "NAB Standby Letter of Credit Agreement") with National Australia Bank Limited ("NAB"). The NAB Standby Letter of Credit Agreement provides for a secured, uncommitted facility under which letters of credit may be issued from time to time for the respective accounts of the NAB Facility Applicants in multiple currencies. RenaissanceRe has unconditionally guaranteed the payment obligations of the NAB Facility Applicants, other than DaVinci.

The NAB Standby Letter of Credit Agreement contains representations, warranties and covenants that are customary for facilities of this type. At all times during which it is a party to the NAB Standby Letter of Credit Agreement, each NAB Facility Applicant is required to pledge to NAB eligible collateral having a value (determined as provided in such agreement) that equals or exceeds the aggregate stated amount of the letters of credit issued thereunder for its account, plus all of its reimbursement and payment obligations under the NAB Standby Letter of Credit Agreement. In the case of an event of default under the NAB Standby Letter of Credit Agreement, NAB may exercise certain remedies, including conversion of collateral of a defaulting NAB Facility Applicant into cash.

Concurrently with the effectiveness of the NAB Standby Letter of Credit Agreement, all amounts outstanding under the Facility Agreement, dated as of July 31, 2012, among Platinum Bermuda, Platinum, the lenders party thereto and NAB, as agent for the finance parties were repaid and satisfied in full, the facility was terminated and all letters of credit that were issued and outstanding under the facility were transferred over to, and are now governed by the terms and conditions of, the NAB Standby Letter of Credit Agreement.

Effective October 3, 2016, in connection with the merger of RenaissanceRe Specialty Risks and Platinum Bermuda into Renaissance Reinsurance, Renaissance Reinsurance assumed all of the obligations of RenaissanceRe Specialty Risks and Platinum Bermuda under the NAB Standby Letter of Credit Agreement.



At December 31, 2016, the NAB Facility Applicants had \$4.9 million outstanding under the NAB Standby Letter of Credit Agreement.

#### Bilateral Letter of Credit Facility with Citibank Europe

Pursuant to the facility letter, dated September 17, 2010, as amended, among Citibank Europe plc (“CEP”) and certain subsidiaries and affiliates of RenaissanceRe (the “Facility Letter”), CEP has established a letter of credit facility (the “Bilateral Facility”) under which CEP provides a commitment to issue letters of credit for the account of one or more of the Bilateral Facility Participants (as defined below) and their respective subsidiaries in multiple currencies. The “Bilateral Facility Participants” include Renaissance Reinsurance, DaVinci, RenaissanceRe Specialty Risks, Renaissance Reinsurance of Europe, RenaissanceRe Specialty U.S., Platinum Bermuda and Renaissance Reinsurance U.S. The aggregate commitment amount is \$300.0 million, subject to a combined sublimit of \$25.0 million for letters of credit issued for the accounts of Platinum Bermuda and Renaissance Reinsurance U.S.

Effective March 31, 2015, the principal agreements evidencing the bilateral letter of credit facility that had previously been in place among CEP, Platinum Bermuda and Renaissance Reinsurance U.S. (the “Platinum/CEP Bilateral Facility”) were terminated. In addition, effective March 31, 2015, certain letters of credit issued on behalf of Platinum Bermuda and Renaissance Reinsurance U.S. under the Platinum/CEP Bilateral Facility were deemed to be letters of credit issued under, and governed by the terms of, the Bilateral Facility.

The Bilateral Facility is scheduled to expire on December 31, 2018. At all times during which it is a party to the Bilateral Facility, each Bilateral Facility Participant is obligated to pledge to CEP securities with a value (determined as provided in such facility) that equals or exceeds the aggregate face amount of its then-outstanding letters of credit. In the case of an event of default under the Bilateral Facility with respect to a Bilateral Facility Participant, CEP may exercise certain remedies, including terminating its commitment to such Bilateral Facility Participant and taking certain actions with respect to the collateral pledged by such Bilateral Facility Participant (including the sale thereof). In the Facility Letter, each Bilateral Facility Participant makes representations and warranties that are customary for facilities of this type and agrees that it will comply with certain informational and other undertakings, including those regarding the delivery of quarterly and annual financial statements.

Effective October 1, 2016, in connection with the merger of RenaissanceRe Specialty Risks and Platinum Bermuda into Renaissance Reinsurance, Renaissance Reinsurance assumed all of the obligations of RenaissanceRe Specialty Risks and Platinum Bermuda under the Bilateral Facility.

At December 31, 2016, \$244.9 million aggregate face amount of letters of credit was outstanding and, subject to the sublimits described above, \$55.1 million remained unused and available to the Bilateral Facility Participants under the Bilateral Facility.

#### Funds at Lloyd’s Letter of Credit Facilities

Effective November 23, 2015, Renaissance Reinsurance entered into a letter of credit facility with Bank of Montreal (“BMO”), CEP and ING Bank N.V. (“ING”) as lenders (the “Renaissance Reinsurance FAL Facility”), evidenced by a letter of credit reimbursement agreement (the “Reimbursement Agreement”), which provides for the issuance by the lenders of two letters of credit to support the business written by Syndicate 1458. Effective May 31, 2016, the Funds at Lloyd’s letters of credit issued for the account of Renaissance Reinsurance were increased from \$360.0 million and £85.0 million to \$380.0 million and £90.0 million, respectively. The Renaissance Reinsurance FAL Facility and the letters of credit issued thereunder replaced the letter of credit facility established to support Syndicate 1458 by Renaissance Reinsurance with CEP on April 29, 2009, pursuant to an Insurance Letters of Credit Master Agreement and related agreements, and the two letters of credit previously issued thereunder.

At all times during the term of the Renaissance Reinsurance FAL Facility, Renaissance Reinsurance is obligated to pledge to the lenders certain eligible securities with a collateral value (determined as provided in the Reimbursement Agreement) that, until a Full Collateralization Event (as defined in the Reimbursement Agreement) occurs, is at Renaissance Reinsurance’s election, either (i) greater than or equal to 100% of the aggregate amount of its then-outstanding letters of credit or (ii) greater than or equal to 60% but less than 100% of the aggregate amount of its then-outstanding letters of credit. Upon the





occurrence of a Full Collateralization Event, Renaissance Reinsurance is obligated to collateralize the Renaissance Reinsurance FAL Facility at 100%. Effective as of November 8, 2016, the latest date upon which Renaissance Reinsurance will become obligated to collateralize the Facility at 100% was extended to December 31, 2017 from December 31, 2016.

In the Reimbursement Agreement, Renaissance Reinsurance makes representations and warranties that are customary for facilities of this type and agrees that it will comply with certain informational undertakings and other covenants, including maintaining a minimum net worth. In the case of an event of default under the Renaissance Reinsurance FAL Facility, the lenders may exercise certain remedies, including declaring all outstanding obligations of Renaissance Reinsurance under the Reimbursement Agreement and related credit documents due and payable and taking certain actions with respect to the collateral pledged by Renaissance Reinsurance (including the sale thereof). At December 31, 2016, letters of credit issued by CEP under the Renaissance Reinsurance FAL Facility were outstanding in the face amount of \$380.0 million and £90.0 million, respectively.

Effective November 24, 2014, RenaissanceRe Specialty Risks and CEP entered into a letter of credit facility (the “Specialty Risks FAL Facility”), evidenced by a Master Agreement (the “Specialty Risks Master Agreement”), and a related Pledge Agreement (the “Specialty Risks Pledge Agreement”), which provide for the issuance and renewal by CEP for the account of RenaissanceRe Specialty Risks of letters of credit that are used to support business written by Syndicate 1458. Effective October 1, 2016, in connection with the merger of RenaissanceRe Specialty Risks and Platinum Bermuda into Renaissance Reinsurance, Renaissance Reinsurance assumed all of the obligations of RenaissanceRe Specialty Risks and Platinum Bermuda under the Specialty Risks FAL Facility. At all times during the term of the Specialty Risks FAL Facility, RenaissanceRe Specialty Risks has agreed to pledge to CEP certain qualifying securities with a value (determined as provided in the Specialty Risks Pledge Agreement) equal to the aggregate face amount of the then-outstanding letters of credit. The Specialty Risks Master Agreement and the Specialty Risks Pledge Agreement contain representations, warranties and covenants that are customary for facilities of this type. At December 31, 2016, letters of credit issued by CEP under the Specialty Risks FAL Facility were outstanding in the face amount of £10.0 million.

#### Top Layer Re

Renaissance Reinsurance is party to a collateralized letter of credit and reimbursement agreement in the amount of \$37.5 million that supports the Company’s Top Layer Re joint venture. Renaissance Reinsurance is obligated to make a mandatory capital contribution of up to \$50.0 million in the event that a loss reduces Top Layer Re’s capital below a specified level.

#### Interest Paid and Scheduled Debt Maturity

Interest paid on the Company’s debt totaled \$54.0 million for 2016 (2015 – \$40.8 million, 2014 – \$17.2 million). The following table sets forth the scheduled maturity of the Company’s aggregate amount of its debt obligation reflected on its consolidated balance sheet at December 31, 2016:

2017	\$250,000
2018	—
2019	—
2020	250,000
2021	—
After 2021	450,000
Unamortized fair value adjustments	5,352
Unamortized discount on debt issuance	(6,689 )
	\$948,663

## NOTE 10. NONCONTROLLING INTERESTS

A summary of the Company's redeemable noncontrolling interests on its consolidated balance sheets is set forth below:

	December 31, 2016	December 31, 2015
Redeemable noncontrolling interest - DaVinciRe	\$ 994,458	\$ 930,955
Redeemable noncontrolling interest - Medici	181,136	115,009
Redeemable noncontrolling interests	\$ 1,175,594	\$ 1,045,964

A summary of the Company's redeemable noncontrolling interests on its consolidated statements of operations is set forth below:

	2016	2015	2014
Redeemable noncontrolling interest - DaVinciRe	\$ 118,748	\$ 106,399	\$ 149,817
Redeemable noncontrolling interest - Medici	8,338	4,651	3,721
Net income attributable to redeemable noncontrolling interests	\$ 127,086	\$ 111,050	\$ 153,538

## Redeemable Noncontrolling Interest – DaVinciRe

In October 2001, the Company formed DaVinciRe and DaVinci with other equity investors. RenaissanceRe owns a noncontrolling economic interest in DaVinciRe; however, because RenaissanceRe controls a majority of DaVinciRe's outstanding voting rights, the consolidated financial statements of DaVinciRe are included in the consolidated financial statements of the Company. The portion of DaVinciRe's earnings owned by third parties is recorded in the consolidated statements of operations as net income attributable to redeemable noncontrolling interests. The Company's noncontrolling economic ownership in DaVinciRe was 24.0% at December 31, 2016 (2015 - 26.3%). DaVinciRe shareholders are party to a shareholders agreement which provides DaVinciRe shareholders, excluding RenaissanceRe, with certain redemption rights that enable each shareholder to notify DaVinciRe of such shareholder's desire for DaVinciRe to repurchase up to half of such shareholder's initial aggregate number of shares held, subject to certain limitations, such as limiting the aggregate of all share repurchase requests to 25% of DaVinciRe's capital in any given year and satisfying all applicable regulatory requirements. If total shareholder requests exceed 25% of DaVinciRe's capital, the number of shares repurchased will be reduced among the requesting shareholders pro-rata, based on the amounts desired to be repurchased. Shareholders desiring to have DaVinci repurchase their shares must notify DaVinciRe before March 1 of each year. The repurchase price will be based on GAAP book value as of the end of the year in which the shareholder notice is given, and the repurchase will be effective as of January 1 of the following year. The repurchase price is generally subject to a true-up for potential development on outstanding loss reserves after settlement of all claims relating to the applicable years.

## 2015

During January 2015, DaVinciRe redeemed a portion of its outstanding shares from certain existing DaVinciRe shareholders, including the RenaissanceRe. The net redemption as a result of these transactions was \$225.0 million. In connection with the redemption, DaVinciRe retained a \$22.5 million holdback. The Company's noncontrolling economic ownership in DaVinciRe subsequent to these transactions was 26.3%, effective January 1, 2015.

## 2016

During January 2016, DaVinciRe redeemed a portion of its outstanding shares from certain existing DaVinciRe shareholders, including RenaissanceRe, while new DaVinciRe shareholders purchased shares in DaVinciRe from RenaissanceRe. The net redemption as a result of these transactions was \$100.0 million. In connection with the redemption, DaVinciRe retained a \$10.0 million holdback. The Company's noncontrolling economic ownership in DaVinciRe subsequent to these transactions was 24.0%, effective



January 1, 2016. The Company expects its noncontrolling economic ownership in DaVinciRe to fluctuate over time. See “Note 23. Subsequent Events” for additional information related to DaVinciRe shareholder transactions which occurred subsequent to December 31, 2016.

The activity in redeemable noncontrolling interest – DaVinciRe is detailed in the table below:

	2016	2015
Balance – January 1	\$930,955	\$1,037,306
Redemption of shares from redeemable noncontrolling interest	(98,285 )	(212,750 )
Sale of shares to redeemable noncontrolling interest	43,040	—
Net income attributable to redeemable noncontrolling interest	118,748	106,399
Balance – December 31	\$994,458	\$930,955

#### Redeemable Noncontrolling Interest - Medici

Medici is an exempted company incorporated under the laws of Bermuda and its objective is to seek to invest substantially all of its assets in various insurance-based investment instruments that have returns primarily tied to property catastrophe risk. RenaissanceRe owns a noncontrolling economic interest in Medici; however, because RenaissanceRe controls all of Medici’s outstanding voting rights, the financial statements of Medici are included in the consolidated financial statements of the Company. The portion of Medici’s earnings owned by third parties is recorded in the consolidated statements of operations as net income attributable to redeemable noncontrolling interests. Any shareholder may redeem all or any portion of its shares as of the last day of any calendar month, upon at least 30 calendar days’ prior irrevocable written notice to Medici.

#### 2015

During 2015, third-party investors subscribed for \$36.1 million and redeemed \$20.1 million of the participating, non-voting common shares of Medici. As a result of these net subscriptions, the Company’s noncontrolling economic ownership in Medici was 46.1%, effective December 31, 2015.

#### 2016

During the year ended December 31, 2016, third-party investors subscribed for \$79.5 million and redeemed \$21.7 million of the participating, non-voting common shares of Medici. As a result of these net subscriptions, the Company’s noncontrolling economic ownership in Medici was 36.5% at December 31, 2016. The Company expects its noncontrolling economic ownership in Medici to fluctuate over time.

See “Note 23. Subsequent Events” for additional information related to Medici transactions which occurred subsequent to December 31, 2016.

The activity in redeemable noncontrolling interest – Medici is detailed in the table below:

	2016	2015
Balance – January 1	\$115,009	\$94,402
Redemption of shares from redeemable noncontrolling interest	(21,729 )	(20,117 )
Sale of shares to redeemable noncontrolling interest	79,518	36,073
Net income attributable to redeemable noncontrolling interest	8,338	4,651
Balance – December 31	\$181,136	\$115,009

## NOTE 11. VARIABLE INTEREST ENTITIES

### Upsilon RFO

Effective January 1, 2013, the Company formed and launched Upsilon RFO, a managed joint venture, and a Bermuda domiciled SPI, to provide additional capacity to the worldwide aggregate and per-occurrence primary and retrocessional property catastrophe excess of loss market.

The shareholders (other than the Class A shareholder) participate in substantially all of the profits or losses of Upsilon RFO while their shares remain outstanding. The shareholders (other than the Class A shareholder) indemnify Upsilon RFO against losses relating to insurance risk and therefore these shares have been accounted for as prospective reinsurance under FASB ASC Topic Financial Services - Insurance.

Upsilon RFO is considered a VIE as it has insufficient equity capital to finance its activities without additional financial support. The Company is the primary beneficiary of Upsilon RFO as it: (i) has the power over the activities that most significantly impact the economic performance of Upsilon RFO and (ii) has the obligation to absorb expected losses and the right to receive expected benefits that could be significant to Upsilon RFO, in accordance with the accounting guidance. As a result, the Company consolidates Upsilon RFO and all significant inter-company transactions have been eliminated. Other than its equity investment in Upsilon RFO, the Company has not provided financial or other support to Upsilon RFO that it was not contractually required to provide.

### 2015

During 2015, Upsilon RFO returned capital to all of the investors who participated in risks incepting during 2014, including the Company. The total amount of capital returned was \$420.2 million, including \$132.3 million to the Company.

In conjunction with risks incepting during 2015, \$153.7 million of Upsilon RFO non-voting preference shares were issued to unaffiliated third-party investors through their investment in Upsilon Fund. Additionally, \$42.5 million of the non-voting preference shares were issued to the Company, representing a 21.7% participation in the risks assumed by Upsilon RFO incepting during 2015. At December 31, 2015, the Company's consolidated total assets included \$135.7 million of capital raised from third party investors and received by Upsilon RFO prior to December 31, 2014 for risks incepted during the first quarter of 2015.

### 2016

During 2016, Upsilon RFO returned \$242.5 million of capital to its investors, including \$59.8 million to the Company. In addition, during 2016, \$166.6 million of Upsilon RFO non-voting preference shares were issued to existing investors therein, including \$55.2 million to the Company. At December 31, 2016, the Company's participation in the risks assumed by Upsilon RFO was 28.8%.

At December 31, 2016, the Company's consolidated balance sheet included total assets and total liabilities of Upsilon RFO of \$193.0 million and \$193.0 million, respectively (2015 - \$250.6 million and \$250.5 million, respectively). See "Note 23. Subsequent Events" for additional information related to Upsilon RFO transactions which occurred subsequent to December 31, 2016.

### Mona Lisa Re Ltd. ("Mona Lisa Re")

On March 14, 2013, Mona Lisa Re was licensed as a Bermuda domiciled SPI to provide reinsurance capacity to subsidiaries of RenaissanceRe, namely Renaissance Reinsurance and DaVinci, through reinsurance agreements which will be collateralized and funded by Mona Lisa Re through the issuance of one or more series of principal-at-risk variable rate notes to third-party investors.

Upon issuance of a series of notes by Mona Lisa Re, all of the proceeds from the issuance were deposited into collateral accounts, separated by series, to fund any potential obligation under the reinsurance agreements entered into with Renaissance Reinsurance and/or DaVinci underlying such series of notes. The outstanding principal amount of each series of notes generally will be returned to holders of such notes upon the expiration of the risk period underlying such notes, unless an event occurs which causes a loss

under the applicable series of notes, in which case the amount returned will be reduced by such noteholder's pro rata share of such loss, as specified in the applicable governing documents of such notes. In addition, holders of such notes are generally entitled to interest payments, payable quarterly, as determined by the applicable governing documents of each series of notes.

The Company concluded that Mona Lisa Re meets the definition of a VIE as it does not have sufficient equity capital to finance its activities. The Company evaluated its relationship with Mona Lisa Re and concluded it does not have a variable interest in Mona Lisa Re. As a result, the financial position and results of operations of Mona Lisa Re are not consolidated by the Company. The Company has not provided financial or other support to Mona Lisa Re that it was not contractually required to provide.

At December 31, 2016, the total assets and total liabilities of Mona Lisa Re were \$184.2 million and \$184.2 million, respectively (2015 - \$184.0 million and \$184.0 million, respectively).

The only transactions related to Mona Lisa Re that are recorded in the Company's consolidated financial statements are the ceded reinsurance agreements entered into by Renaissance Reinsurance and DaVinci which are accounted for as prospective reinsurance under FASB ASC Topic Financial Services - Insurance. Renaissance Reinsurance and DaVinci have together entered into ceded reinsurance contracts with Mona Lisa Re with gross premiums ceded of \$7.4 million and \$5.1 million, respectively, during 2016 (2015 - \$7.3 million and \$5.0 million, respectively). In addition, Renaissance Reinsurance and DaVinci recognized ceded premiums earned related to the ceded reinsurance contracts with Mona Lisa Re of \$7.3 million and \$5.0 million, respectively, during 2016 (2015 - \$7.3 million and \$5.0 million, respectively).

#### Fibonacci Re

Effective November 7, 2016, Fibonacci Re, a Bermuda-domiciled SPI, was formed to provide collateralized capacity to Renaissance Reinsurance and its affiliates. Fibonacci Re raised capital from third party investors and the Company via a private placement of participating notes that are listed on the Bermuda Stock Exchange. Under the terms of this arrangement, RUM receives an origination and structuring fee.

Upon issuance of a series of notes by Fibonacci Re, all of the proceeds from the issuance are deposited into collateral accounts, separated by series, to fund any potential obligation under the reinsurance agreements entered into with Renaissance Reinsurance underlying such series of notes. The outstanding principal amount of each series of notes generally will be returned to holders of such notes upon the expiration of the risk period underlying such notes, unless an event occurs which causes a loss under the applicable series of notes, in which case the amount returned will be reduced by such noteholder's pro rata share of such loss, as specified in the applicable governing documents of such notes. In addition, holders of such notes are generally entitled to interest payments, payable quarterly, as determined by the applicable governing documents of each series of notes.

The Company concluded that Fibonacci Re meets the definition of a VIE as it does not have sufficient equity capital to finance its activities. The Company evaluated its relationship with Fibonacci Re and concluded it is not the primary beneficiary of Fibonacci Re as it does not have power over the activities that most significantly impact the economic performance of Fibonacci Re. As a result, the Company does not consolidate the financial position or results of operations of Fibonacci Re.

The only transactions related to Fibonacci Re that will be recorded in the Company's consolidated financial statements will be the ceded reinsurance agreements entered into by Renaissance Reinsurance that are accounted for as prospective reinsurance under FASB ASC Topic Financial Services - Insurance, and the fair value of the participating notes owned by the Company. There were no material balances included in the financial statements of Fibonacci Re at December 31, 2016. Other than its investment in the participating notes of Fibonacci Re, the Company has not provided financial or other support to Fibonacci Re that it was not contractually required to provide.

See "Note 23. Subsequent Events" for additional information related to Fibonacci Re transactions which occurred subsequent to December 31, 2016.

## NOTE 12. SHAREHOLDERS' EQUITY

## Authorized Capital

The aggregate authorized capital of RenaissanceRe is 325 million shares consisting of 225 million common shares and 100 million preference shares. The following table is a summary of changes in common shares issued and outstanding:

Year ended December 31, (thousands of shares)	2016	2015	2014
Issued and outstanding shares – January 1	43,701	38,442	43,646
Issuance of shares	—	7,435	—
Repurchase of shares	(2,741 )	(2,473 )	(5,355 )
Exercise of options and issuance of restricted stock awards	227	297	151
Issued and outstanding shares – December 31	41,187	43,701	38,442

## Dividends

The Board of Directors of RenaissanceRe declared a dividend of \$0.31 per common share to common shareholders of record on March 15, 2016, June 15, 2016, September 15, 2016 and December 15, 2016, respectively, and RenaissanceRe paid a dividend of \$0.31 per common share to common shareholders on March 31, 2016, June 30, 2016, September 30, 2016 and December 30, 2016, respectively. Dividends declared and paid on common shares amounted to \$1.24 per common share for 2016 (2015 - \$1.20, 2014 - \$1.16), or \$51.6 million on all common shares outstanding (2015 - \$54.0 million, 2014 - \$45.9 million). During 2016, RenaissanceRe declared and paid \$22.4 million in preference share dividends (2015 - \$22.4 million, 2014 - \$22.4 million).

## Share Repurchases

The Company's share repurchase program may be effected from time to time, depending on market conditions and other factors, through open market purchases and privately negotiated transactions. On August 2, 2016, RenaissanceRe's Board of Directors approved a renewal of the authorized share repurchase program to an aggregate amount of \$500.0 million. Unless terminated earlier by resolution of RenaissanceRe's Board of Directors, the program will expire when the Company has repurchased the full value of the shares authorized. The Company's decision to repurchase common shares will depend on, among other matters, the market price of the common shares and the capital requirements of the Company. During 2016, the Company repurchased an aggregate of 2.7 million shares in open market transactions at an aggregate cost of \$309.4 million, and at an average share price of \$112.87. At December 31, 2016, \$500.0 million remained available for repurchase under the Board authorized share repurchase program.

See "Note 23. Subsequent Events" for additional information related to share repurchases subsequent to December 31, 2016 and an increase in the Company's authorized share repurchase program.

## Preference Shares

In March 2004, RenaissanceRe raised \$250.0 million through the issuance of 10 million Series C Preference Shares at \$25 per share and in May 2013, RenaissanceRe raised \$275.0 million through the issuance of 11 million Series E Preference Shares at \$25 per share. On June 27, 2013, RenaissanceRe redeemed 5 million Series C Preference Shares for \$125.0 million plus accrued and unpaid dividends thereon. Following the redemption, 5 million Series C Preference Shares remain outstanding.

The Series E Preference Shares and the remaining Series C Preference Shares may be redeemed at \$25 per share plus certain dividends at RenaissanceRe's option on or after June 1, 2018 and March 23, 2009, respectively. Dividends on the Series C Preference Shares are cumulative from the date of original issuance and are payable quarterly in arrears at 6.08% per annum, when, if, and as declared by the Board of Directors. Dividends on the Series E Preference Shares are payable from the date of original issuance on a non-cumulative basis, only when, as and if declared by the Board of Directors, quarterly in arrears at 5.375% per annum. Unless certain dividend payments are made on the preference shares, RenaissanceRe





will be restricted from paying any dividends on its common shares. The preference shares have no stated maturity and are not convertible into any other securities of RenaissanceRe. Generally, the preference shares have no voting rights. Whenever dividends payable on the preference shares are in arrears (whether or not such dividends have been earned or declared) in an amount equivalent to dividends for six full dividend periods (whether or not consecutive), the holders of the preference shares, voting as a single class regardless of class or series, will have the right to elect two directors to the Board of Directors of RenaissanceRe.

#### NOTE 13. EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings per common share:

Year ended December 31, (thousands of shares)	2016	2015	2014
Numerator:			
Net income available to RenaissanceRe common shareholders	\$480,581	\$408,811	\$510,337
Amount allocated to participating common shareholders (1)	(5,666 )	(4,721 )	(6,760 )
Net income allocated to RenaissanceRe common shareholders	\$474,915	\$404,090	\$503,577
Denominator:			
Denominator for basic income per RenaissanceRe common share - weighted average common shares	41,314	43,157	39,425
Per common share equivalents of employee stock options and performance shares	245	369	543
Denominator for diluted income per RenaissanceRe common share - adjusted weighted average common shares and assumed conversions	41,559	43,526	39,968
Basic income per RenaissanceRe common share	\$11.50	\$9.36	\$12.77
Diluted income per RenaissanceRe common share	\$11.43	\$9.28	\$12.60

Represents earnings attributable to holders of unvested restricted shares issued under the Company's 2001 Stock (1) Incentive Plan, 2010 Performance-Based Equity Incentive Plan, 2016 Long-Term Incentive Plan and to the Company's non-employee directors.

#### NOTE 14. RELATED PARTY TRANSACTIONS AND MAJOR CUSTOMERS

The Company has equity interests in the Tower Hill Companies as described in "Note 5. Investments". The Company has entered into reinsurance arrangements with certain subsidiaries and affiliates of Tower Hill and has also entered into reinsurance arrangements with respect to business produced by the Tower Hill Companies. For 2016, the Company recorded \$32.8 million (2015 - \$32.2 million, 2014 - \$40.0 million) of gross premium written assumed from Tower Hill and its subsidiaries and affiliates. Gross premiums earned totaled \$32.3 million (2015 - \$35.8 million, 2014 - \$41.9 million) and expenses incurred were \$3.8 million (2015 - \$4.1 million, 2014 - \$4.7 million) for 2016. The Company had a net related outstanding receivable balance of \$14.2 million as of December 31, 2016 (2015 - \$14.3 million). During 2016, the Company recovered net claims and claim expenses of \$1.5 million (2015 - assumed net claims and claim expenses of \$1.6 million, 2014 - assumed net claims and claim expenses of \$3.6 million) and, as of December 31, 2016, had a net reserve for claims and claim expenses of \$36.8 million (2015 - \$38.2 million). In addition, the Company received distributions of \$9.0 million from THIG during 2016 (2015 - \$13.1 million). During 2016, the Company received distributions from Top Layer Re of \$Nil (2015 - \$Nil, 2014 - \$Nil), and recorded a management fee of \$2.6 million (2015 - \$2.6 million, 2014 - \$2.8 million). The management fee reimburses the Company for services it provides to Top Layer Re.

During 2016, the Company received 80.8% of its gross premiums written (2015 - 81.5%, 2014 - 87.2%) from three brokers. Subsidiaries and affiliates of AON, Marsh, and Willis Towers Watson accounted for approximately 46.4%, 23.6% and 10.8%, respectively, of gross premiums written in 2016 (2015 - 48.1%, 21.7% and 11.7%, respectively, 2014 - 51.5%, 21.5% and 14.2%, respectively).

## NOTE 15. TAXATION

Under current Bermuda law, RenaissanceRe and its Bermuda subsidiaries are not subject to any income or capital gains taxes. In the event that such taxes are imposed, RenaissanceRe and its Bermuda subsidiaries would be exempted from any such tax until March 2035 pursuant to the Bermuda Exempted Undertakings Tax Protection Act 1966, and Amended Acts of 1987 and 2011, respectively.

RenaissanceRe Finance and its subsidiaries are subject to income taxes imposed by U.S. federal and state authorities and file a consolidated U.S. federal income tax return. Should the U.S. subsidiaries pay a dividend to RenaissanceRe, withholding taxes would apply to the extent of current year or accumulated earnings and profits at an expected tax rate of 5.0%. The Company also has operations in Ireland, the U.K., and Singapore which are subject to income taxes imposed by the respective jurisdictions in which they operate. Withholding taxes would not be expected to apply to dividends paid to RenaissanceRe from its subsidiaries in Ireland, the U.K., and Singapore.

The following is a summary of the Company's income (loss) before taxes allocated between domestic and foreign operations:

Year ended December 31, 2016	2015	2014	
Domestic			
Bermuda	\$652,758	\$511,114	\$701,476
Foreign			
U.K.	(24,278 )	(22,712 )	(3,166 )
U.S.	(1,236 )	12,523	(10,977 )
Ireland	964	188	1,549
Singapore	2,180	(4,737 )	(2,018 )
Income before taxes	\$630,388	\$496,376	\$686,864

Income tax (expense) benefit is comprised as follows:

Year ended December 31, 2016	Current	Deferred	Total
Total income tax (expense) benefit	\$(2,090)	\$1,750	\$(340 )
Year ended December 31, 2015			
Total income tax (expense) benefit	\$(3,471)	\$49,337	\$45,866
Year ended December 31, 2014			
Total income tax (expense) benefit	\$(699 )	\$91	\$(608 )

The Company's expected income tax provision computed on pre-tax income at the weighted average tax rate has been calculated as the sum of the pre-tax income in each jurisdiction multiplied by that jurisdiction's applicable statutory tax rate. Statutory tax rates of 0.0%, 35.0%, 12.5%, 20.0% and 17.0% have been used for Bermuda, the U.S., Ireland, the U.K. and Singapore, respectively.

The Company's effective income tax rate, which it calculates as income tax expense divided by net income before taxes, may fluctuate significantly from period to period depending on the geographic distribution of pre-tax net income (loss) in any given period between different jurisdictions with comparatively higher tax rates and those with comparatively lower tax rates. The geographic distribution of pre-tax net income (loss) can vary significantly between periods due to, but not limited to, the following factors: the business mix of net premiums written and earned; the geographic location, the size and the nature of net claims and claim expenses incurred; the amount and geographic location of operating expenses, net investment income, net realized and unrealized gains (losses) on investments; outstanding debt and related interest expense; and the amount of specific adjustments to determine the income tax basis in each of the Company's operating jurisdictions. In addition, a significant portion of the Company's gross and net premiums are currently written and earned in Bermuda, which does not have a corporate income tax, including the majority of the Company's catastrophe business, which can result in significant volatility to its pre-tax net income (loss) in any given period.



A reconciliation of the difference between the provision for income taxes and the expected tax provision at the weighted average tax rate is as follows:

Year ended December 31,	2016	2015	2014
Expected income tax benefit	\$4,856	\$1,011	\$4,725
Tax exempt income	4,487	4,939	671
Transaction costs	(131 )	3,654	—
Change in valuation allowance	(924 )	43,808	(5,554 )
Non-taxable foreign exchange (losses) gains	(1,126 )	(1,897 )	885
Withholding tax	(2,578 )	(3,036 )	(327 )
Other	(4,924 )	(2,613 )	(1,008 )
Income tax (expense) benefit	\$(340 )	\$45,866	\$(608 )

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below:

At December 31,	2016	2015
Deferred tax assets		
Tax loss and credit carryforwards	\$51,620	\$40,512
Reserve for claims and claim expenses	26,265	29,833
Deferred interest expense	18,408	18,901
Accrued expenses	9,386	15,730
Unearned premiums	7,496	8,946
Deferred underwriting results	—	421
	113,175	114,343
Deferred tax liabilities		
Deferred acquisition expenses	(7,485 )	(10,741 )
Amortization and depreciation	(3,605 )	(5,899 )
Deferred underwriting results	(2,964 )	—
Investments	(223 )	(1,479 )
	(14,277 )	(18,119 )
Net deferred tax asset before valuation allowance	98,898	96,224
Valuation allowance	(18,776 )	(17,852 )
Net deferred tax asset	\$80,122	\$78,372

During 2016, the Company recorded a net increase to the valuation allowance of \$0.9 million (2015 – decrease of \$43.8 million, 2014 – increase of \$5.6 million). The Company's net deferred tax asset primarily relates to net operating loss carryforwards and GAAP versus tax basis accounting differences relating to reserves for claims and claim expenses, deferred interest expense, accrued expenses, unearned premiums, deferred underwriting results, deferred acquisition expenses, amortization and depreciation and investments. The Company's valuation allowance assessment is based on all available information including projections of future GAAP taxable income from each tax-paying component in each tax jurisdiction. Losses incurred within the U.S. tax-paying subsidiaries in the fourth quarter of 2011 were significant enough to result in a cumulative GAAP taxable loss at the U.S. tax-paying subsidiaries for the three year period ended December 31, 2011. The Company concluded that a valuation allowance was required from 2011 through the period ended December 31, 2014 based on the relevant evidence during that time period, primarily that the Company remained in a cumulative GAAP taxable loss position for this period, among other facts. As of December 31, 2014, the U.S. valuation allowance was \$48.5 million. In the first quarter of 2015, as a result of expected profits in the U.S. based operations due principally to the Platinum acquisition, the Company determined it was more likely than not it would be able to recover a substantial portion of the U.S. net deferred tax asset and thus

reduced the U.S. valuation allowance from \$48.5 million to \$1.0 million. Factors that led to this determination included the combined cumulative GAAP

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taxable income position of the Company's U.S.-based operations (including the entities acquired) along with the future expected profits of the combined operations.

A valuation allowance has been provided against deferred tax assets in Ireland, the U.K., and Singapore. These deferred tax assets relate primarily to net operating loss carryforwards.

In the U.S., the Company has net operating loss carryforwards of \$91.4 million. Under applicable law, the U.S. net operating loss carryforwards will begin to expire in 2031. In the U.K., Ireland and Singapore, the Company has net operating loss carryforwards of \$90.9 million, \$10.4 million and \$7.6 million, respectively. Under applicable law, the U.K., Irish and Singapore net operating losses can be carried forward for an indefinite period.

The Company had a net refund for U.S. federal, Irish, U.K. and Singapore income taxes of \$1.1 million for the year ended 2016 (2015 – net payment of \$10.3 million, 2014 – net payment of \$1.1 million).

The Company has unrecognized tax benefits of \$Nil as of December 31, 2016 (2015 – \$Nil). Interest and penalties related to unrecognized tax benefits would be recognized in income tax expense. At December 31, 2016, interest and penalties accrued on unrecognized tax benefits were \$Nil (2015 – \$Nil). Income tax returns filed for tax years 2013 through 2015, 2012 through 2015, 2015, and 2012 through 2015, are open for examination by the IRS, Irish tax authorities, U.K. tax authorities, and Singapore tax authorities, respectively. The Company does not expect the resolution of these open years to have a significant impact on its results from operations and financial condition.

#### NOTE 16. SEGMENT REPORTING

The Company continually monitors and reviews its segment reporting structure in accordance with authoritative guidance to determine whether any changes have occurred that would impact its reportable segments. As a result of the evolution of the Company following its acquisition of Platinum, the integration of Platinum's activities within the Company, the growth of the Company's casualty and specialty lines of business, the current management structure including recent management changes and current underwriting platforms, the Company has changed its reportable segments to "Property" and "Casualty and Specialty". Comparative segment reporting information has been reclassified to conform to the current presentation, however the change in reportable segments had no impact on the Company's historical consolidated financial positions, results of operations or cash flows, as previously reported.

The Company's reportable segments are defined as follows: (1) Property, which is comprised of catastrophe and other property reinsurance and insurance written on behalf of the Company's operating subsidiaries and certain joint ventures managed by the Company's ventures unit, and (2) Casualty and Specialty, which is comprised of casualty and specialty reinsurance and insurance written on behalf of the Company's operating subsidiaries and certain joint ventures managed by the Company's ventures unit. In addition to its reportable segments, the Company has an Other category, which primarily includes its strategic investments, investments unit, corporate expenses, capital servicing costs, noncontrolling interests, certain expenses related to the acquisition of Platinum, and the remnants of its former Bermuda-based insurance operations.

The Company's Property segment is managed by the Chief Underwriting Officer - Property and the Casualty and Specialty segment is managed by the Chief Underwriting Officer - Casualty and Specialty. Each of the Chief Underwriting Officer - Property and Chief Underwriting Officer - Casualty and Specialty operate under the direction of the Company's Group Chief Underwriting Officer, who in turn reports to the Company's President and Chief Executive Officer.

The underwriting results of Platinum are included in the Company's Property and Casualty and Specialty segments from March 2, 2015, as appropriate.

The Company does not manage its assets by segment; accordingly, net investment income and total assets are not allocated to the segments.

A summary of the significant components of the Company's revenues and expenses is as follows:

Year ended December 31, 2016	Property	Casualty and Specialty	Other	Total	
Gross premiums written	\$ 1,111,263	\$ 1,263,313	\$—	\$ 2,374,576	
Net premiums written	\$ 725,321	\$ 809,848	\$ 143	\$ 1,535,312	
Net premiums earned	\$ 720,951	\$ 682,337	\$ 142	\$ 1,403,430	
Net claims and claim expenses incurred	151,545	380,396	(1,110 )	530,831	
Acquisition expenses	97,594	191,729	—	289,323	
Operational expenses	108,642	88,984	123	197,749	
Underwriting income	\$ 363,170	\$ 21,228	\$ 1,129	385,527	
Net investment income			181,726	181,726	
Net foreign exchange losses			(13,788 )	(13,788 )	
Equity in earnings of other ventures			963	963	
Other income			14,178	14,178	
Net realized and unrealized gains on investments			141,328	141,328	
Corporate expenses			(37,402 )	(37,402 )	
Interest expense			(42,144 )	(42,144 )	
Income before taxes and redeemable noncontrolling interests				630,388	
Income tax expense			(340 )	(340 )	
Net income attributable to redeemable noncontrolling interests			(127,086 )	(127,086 )	
Dividends on preference shares			(22,381 )	(22,381 )	
Net income available to RenaissanceRe common shareholders				\$ 480,581	
Net claims and claim expenses incurred – current accident year	\$ 256,421	\$ 438,536	\$—	\$ 694,957	
Net claims and claim expenses incurred – prior accident years	(104,876 )	(58,140 )	(1,110 )	(164,126 )	
Net claims and claim expenses incurred – total	\$ 151,545	\$ 380,396	\$(1,110)	\$ 530,831	
Net claims and claim expense ratio – current accident year	35.6	% 64.3	%	49.5	%
Net claims and claim expense ratio – prior accident years	(14.6 )	)% (8.6 )	)%	(11.7 )	)%
Net claims and claim expense ratio – calendar year	21.0	% 55.7	%	37.8	%
Underwriting expense ratio	28.6	% 41.2	%	34.7	%
Combined ratio	49.6	% 96.9	%	72.5	%



Year ended December 31, 2015	Property	Casualty and Specialty	Other	Total	
Gross premiums written	\$1,072,159	\$939,241	\$ (90 )	\$2,011,310	
Net premiums written	\$726,145	\$690,086	\$ (48 )	\$1,416,183	
Net premiums earned	\$805,985	\$594,614	\$ (48 )	\$1,400,551	
Net claims and claim expenses incurred	128,290	320,818	(870 )	448,238	
Acquisition expenses	94,249	144,095	248	238,592	
Operational expenses	118,666	100,180	266	219,112	
Underwriting income	\$464,780	\$29,521	\$ 308	494,609	
Net investment income			152,567	152,567	
Net foreign exchange losses			(3,051 )	(3,051 )	
Equity in earnings of other ventures			20,481	20,481	
Other income			13,472	13,472	
Net realized and unrealized losses on investments			(68,918)	(68,918 )	
Corporate expenses			(76,514)	(76,514 )	
Interest expense			(36,270)	(36,270 )	
Income before taxes and redeemable noncontrolling interests				496,376	
Income tax benefit			45,866	45,866	
Net income attributable to redeemable noncontrolling interests			(111,050)	(111,050 )	
Dividends on preference shares			(22,381)	(22,381 )	
Net income available to RenaissanceRe common shareholders				\$408,811	
Net claims and claim expenses incurred – current accident year	\$222,076	\$388,609	\$ —	\$610,685	
Net claims and claim expenses incurred – prior accident years	(93,786 )	(67,791 )	(870 )	(162,447 )	
Net claims and claim expenses incurred – total	\$128,290	\$320,818	\$ (870 )	\$448,238	
Net claims and claim expense ratio – current accident year	27.6	% 65.4	%	43.6	%
Net claims and claim expense ratio – prior accident years	(11.7	)% (11.4	)%	(11.6	)%
Net claims and claim expense ratio – calendar year	15.9	% 54.0	%	32.0	%
Underwriting expense ratio	26.4	% 41.0	%	32.7	%
Combined ratio	42.3	% 95.0	%	64.7	%

Year ended December 31, 2014	Property	Casualty and Specialty	Other	Total	
Gross premiums written	\$ 1,074,890	\$ 475,373	\$ 309	\$ 1,550,572	
Net premiums written	\$ 662,552	\$ 405,340	\$ 344	\$ 1,068,236	
Net premiums earned	\$ 698,416	\$ 363,632	\$ 368	\$ 1,062,416	
Net claims and claim expenses incurred	16,643	187,441	(6,137 )	197,947	
Acquisition expenses	66,262	84,762	(6,548 )	144,476	
Operational expenses	117,943	72,393	303	190,639	
Underwriting income	\$ 497,568	\$ 19,036	\$ 12,750	529,354	
Net investment income			124,316	124,316	
Net foreign exchange gains			6,260	6,260	
Equity in earnings of other ventures			26,075	26,075	
Other loss			(423 )	(423 )	)
Net realized and unrealized gains on investments			41,433	41,433	
Corporate expenses			(22,749 )	(22,749 )	)
Interest expense			(17,402 )	(17,402 )	)
Income before taxes and redeemable noncontrolling interests				686,864	
Income tax expense			(608 )	(608 )	)
Net income attributable to redeemable noncontrolling interests			(153,538)	(153,538 )	)
Dividends on preference shares			(22,381 )	(22,381 )	)
Net income available to RenaissanceRe common shareholders				\$ 510,337	
Net claims and claim expenses incurred – current accident year	\$ 103,901	\$ 237,844	\$ —	\$ 341,745	
Net claims and claim expenses incurred – prior accident years	(87,258 )	(50,403 )	(6,137 )	(143,798 )	)
Net claims and claim expenses incurred – total	\$ 16,643	\$ 187,441	\$ (6,137 )	\$ 197,947	
Net claims and claim expense ratio – current accident year	14.9	% 65.4	%	32.2	%
Net claims and claim expense ratio – prior accident years	(12.5	)% (13.9	)%	(13.6	)%
Net claims and claim expense ratio – calendar year	2.4	% 51.5	%	18.6	%
Underwriting expense ratio	26.4	% 43.3	%	31.6	%
Combined ratio	28.8	% 94.8	%	50.2	%

The following is a summary of the Company's gross premiums written allocated to the territory of coverage exposure:

Year ended December 31,	2016	2015	2014
<b>Property</b>			
U.S. and Caribbean	\$743,226	\$671,887	\$635,069
Worldwide	210,168	234,801	210,441
Worldwide (excluding U.S.) (1)	55,043	76,370	137,466
Japan	44,536	32,830	33,967
Europe	37,611	32,973	33,115
Australia and New Zealand	13,729	15,869	22,746
Other	6,950	7,429	2,086
<b>Total Property</b>	<b>1,111,263</b>	<b>1,072,159</b>	<b>1,074,890</b>
<b>Casualty and Specialty</b>			
U.S. and Caribbean	757,052	522,778	228,062
Worldwide	471,301	320,452	226,652
Worldwide (excluding U.S.) (1)	13,840	87,597	6,946
Europe	5,541	936	238
Australia and New Zealand	5,073	1,627	7,865
Other	10,506	5,851	5,610
<b>Total Casualty and Specialty</b>	<b>1,263,313</b>	<b>939,241</b>	<b>475,373</b>
Other category	—	(90	) 309
<b>Total gross premiums written</b>	<b>\$2,374,576</b>	<b>\$2,011,310</b>	<b>\$1,550,572</b>

(1) The category "Worldwide (excluding U.S.);" consists of contracts that cover more than one geographic region (other than the U.S.).

#### NOTE 17. STOCK INCENTIVE COMPENSATION AND EMPLOYEE BENEFIT PLANS

##### Stock Incentive Compensation Plans and Awards

The Company is authorized to issue restricted stock awards and units, performance shares, stock options and other equity-based awards to its employees and directors pursuant to various stock incentive compensation plans.

On May 16, 2016, the Company's shareholders approved the Company's 2016 Long-Term Incentive Plan (the "2016 Long-Term Incentive Plan"). Pursuant to the 2016 Long-Term Incentive Plan, the Company is authorized to issue up to 1,625,000 common shares plus the number of shares that were subject to awards outstanding under the Company's 2001 Stock Incentive Plan, as amended (the "2001 Stock Incentive Plan") and the Company's 2010 Performance-Based Equity Incentive Plan, as amended (the "2010 Performance Plan") as of the effective date of the 2016 Long-Term Incentive Plan that are forfeited, canceled, settled in cash, or otherwise terminated without delivery after the effective date. The 2016 Long-Term Incentive Plan permits the grant of stock options, restricted stock, restricted stock units, performance awards (including cash-based performance awards) and other share-based awards to employees, officers, non-employee directors and consultants or advisors of the Company and its affiliates.

The 2001 Stock Incentive Plan, which permitted the grant of stock options, restricted stock awards and other share-based awards to employees of RenaissanceRe and its subsidiaries, expired in accordance with its terms on February 6, 2016 and no additional awards may be made under this plan. The 2010 Performance Plan, pursuant to which the Company granted performance shares, was terminated on May 16, 2016 upon approval of the 2016 Long-Term Incentive Plan, and no additional awards will be made under this plan. The terms and conditions of outstanding awards granted under the 2001 Share Incentive Plan and the 2010 Performance Plan were not affected by the respective expiration and termination of these plans.

In 2010, the Company instituted a cash settled restricted stock unit (“CSRSU”) plan, the 2010 Restricted Stock Unit Plan, which allowed for the issuance of equity awards in the form of CSRSUs. In November 2016, the 2010 Restricted Stock Plan was terminated and replaced with a new cash settled restricted stock unit plan, the 2016 Restricted Stock Unit Plan. The terms and conditions of CSRSU awards outstanding under the 2010 Restricted Stock Unit Plan at the time of termination were not affected, but no additional awards will be made under the 2010 Restricted Stock Unit Plan.

The Company’s 2004 Stock Option Incentive Plan (the “Premium Option Plan”) was terminated on August 15, 2007 with respect to future option grants. Options outstanding at the time of the termination remained outstanding and unmodified until they expired. The Premium Option Plan expired on May 20, 2014 and at December 31, 2014, 2015 and 2016, there were no options outstanding under the Premium Option Plan.

#### Options

The Company has not granted stock options since 2008. Outstanding stock options were granted pursuant to the 2001 Stock Incentive Plan and allow for the purchase of RenaissanceRe common shares at a price that is equal to, or not less than, the fair market value of RenaissanceRe common shares as of the effective grant date. Options generally vested over four years and expire 10 years from the date of grant.

#### Restricted Stock Awards

Restricted stock awards granted periodically under the 2001 Stock Incentive Plan and the 2016 Long-Term Incentive Plan generally vest ratably over a four year period. The Company has also granted restricted stock awards to non-employee directors, which generally vest ratably over a three year period.

#### Performance Shares

Performance share awards made periodically to certain of the Company’s executive officers pursuant to the 2010 Performance Plan, 2001 Share Incentive Plan and 2016 Long-Term Incentive Plan are subject to vesting conditions based on both continued service and the attainment of pre-established performance goals. If performance goals are achieved, the performance shares will vest up to a maximum of 250% of target. Grants under this plan generally cliff vest at the end of a three year vesting period based on the attainment of annual performance goals over the vesting period. The performance shares have a market condition, which is the Company’s total shareholder return relative to its peer group. Total shareholder return is based on the average closing share price over the 20 trading days preceding and including the start and end of the annual performance period.

In 2012 and 2013, the Chief Executive Officer received certain special equity awards relating to promotions, which included grants of performance shares which vest over a period of four years, but otherwise have similar terms to other performance share awards.

#### Cash Settled Restricted Stock Units

CSRSUs are liability awards with fair value measurement based on the fair market value of the Company’s common shares at the end of each reporting period. CSRSUs granted periodically by the Board of Directors pursuant to the 2010 Restricted Stock Unit Plan and 2016 Restricted Stock Unit Plan generally vest ratably over four years.

## Valuation Assumptions

## Performance Shares

The fair value of performance shares is measured on the date of grant using a Monte Carlo simulation model which requires certain of the same inputs underlying the Black-Scholes methodology, that being: share price; expected volatility; expected term; expected dividend yield; and risk-free interest rates. The following are the weighted average-assumptions used to estimate the fair value for all performance shares issued in each respective year.

	Performance Shares	
Year ended December 31,	2016	2015
Expected volatility (1)	14.3% - 14.7%	14.3% - 14.4%
Expected term (in years)	n/a	n/a
Expected dividend yield	n/a	n/a
Risk-free interest rate (1)	0.38% - 1.18%	0.07% - 1.02%

(1)The expected volatility and risk-free interest rate applied are specific to each tranche of performance shares.

Expected volatility: The expected volatility is estimated by the Company based on RenaissanceRe's historical stock volatility.

Expected term: The expected term is not applicable as the length of the performance periods are fixed and not subject to future employee behavior. Each tranche of the performance shares has a one year period during which performance is measured.

Expected dividend yield: The expected dividend yield is not applicable to performance shares as dividends are paid at the end of the vesting period and do not affect the value of the performance shares.

Risk-free interest rate: The risk free rate is estimated based on the yield on a U.S. treasury zero-coupon issued with a remaining term equal to the vesting period of the performance shares.

The total cost of the performance shares is determined on the grant date based on the fair value calculated by the Monte Carlo simulation model. The Company recognizes cost equal to fair value per performance share multiplied by the target number of performance shares on the grant date. The cost is then amortized as an expense over the requisite service period net of estimated service-based forfeitures. When estimating forfeitures, the Company considers its historical forfeitures as well as expectations about employee behavior. For 2016, the Company used a 0% forfeiture rate for performance shares (2015 - 0%).

## Restricted Stock Awards

The fair value of restricted stock awards is determined based on the fair market value of RenaissanceRe common shares on the grant date. The estimated fair value of restricted stock awards, net of estimated forfeitures, is amortized as an expense over the requisite service period net of estimated service-based forfeitures. When estimating forfeitures, the Company considers its historical forfeitures as well as expectations about employee behavior. For 2016, the Company used a 0% forfeiture rate for restricted stock awards (2015 - 0%).

## Cash Settled Restricted Stock Units

CSRSUs are revalued at the end of each quarterly reporting period based on the then fair market value of RenaissanceRe's common shares. The total cost is adjusted each quarter for unvested CSRSUs to reflect the current share price, and this total cost is amortized as an expense over the requisite service period, net of estimated forfeitures. When estimating forfeitures, the Company considers its historical forfeitures as well as expectations about employee behavior. For 2016, the Company used a 13% forfeiture rate for its CSRSUs (2015 - 13%).

## Summary of Stock Compensation Activity

The following is a summary of activity under the Company's stock compensation plans.

## Options

	Weighted options outstanding	Weighted average exercise price	Weighted average remaining contractual life	Aggregate intrinsic value	Range of exercise prices
Balance, December 31, 2013	828,092	\$ 48.77	2.9	\$ 40,221	\$37.51 - \$59.66
Options granted	—	—			—
Options forfeited	—	—			
Options expired	—	—			
Options exercised	(60,262 )	49.52		\$ 2,900	
Balance, December 31, 2014	767,830	\$ 48.71	2.0	\$ 37,246	\$37.51 - \$59.66
Options granted	—	—			—
Options forfeited	—	—			
Options expired	—	—			
Options exercised	(359,618 )	45.09		\$ 21,205	
Balance, December 31, 2015	408,212	\$ 51.90	1.6	\$ 25,020	\$42.66 - \$59.66
Options granted	—	—			—
Options forfeited	—	—			
Options expired	—	—			
Options exercised	(201,417 )	\$ 50.59		\$ 14,806	
Balance, December 31, 2016	206,795	\$ 53.17	0.9	\$ 17,174	\$50.71 - \$59.66
Total options exercisable at December 31, 2016	206,795	\$ 53.17	0.9	\$ 17,174	\$50.71 - \$59.66

## Premium Option Plan Awards

	Weighted options outstanding	Weighted average exercise price	Weighted average remaining contractual life	Aggregate intrinsic value	Range of exercise prices
Balance, December 31, 2013	572,000	\$ 73.62		\$ 13,567	\$73.06 - \$74.24
Options granted	—	—			
Options forfeited	—	—			
Options expired	—	—			
Options exercised	(572,000 )	73.62		13,414	
Balance, December 31, 2014	—	\$ —		\$ —	\$ —
Options granted	—	—			
Options forfeited	—	—			
Options expired	—	—			
Options exercised	—	—		—	
Balance, December 31, 2015	—	\$ —		\$ —	\$ —
Options granted	—	—			
Options forfeited	—	—			
Options expired	—	—			

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Options exercised	—	—	—	—	—	—
Balance, December 31, 2016	—	\$ —	0.0	\$ —	\$ —	—
Total options exercisable at December 31, 2016	—	\$ —	0.0	\$ —	\$ —	—

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Cash Settled Restricted Stock Units

	Number of shares
Nonvested at December 31, 2013	394,145
Awards granted	119,382
Awards vested	(159,094)
Awards forfeited	(16,110 )
Nonvested at December 31, 2014	338,323
Awards granted	160,817
Awards vested	(144,440)
Awards forfeited	(28,622 )
Nonvested at December 31, 2015	326,078
Awards granted	135,119
Awards vested	(133,278)
Awards forfeited	(19,575 )
Nonvested at December 31, 2016	308,344

Performance Shares