

PARTNERRE LTD  
Form 20-F  
March 20, 2019

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

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FORM 20-F

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

OR

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

For the fiscal year ended December 31, 2018

OR

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

OR

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

Commission file number 001-14536

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PartnerRe Ltd.  
(Exact name of registrant as specified in its charter)

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Bermuda  
(Jurisdiction of incorporation or organization)

90 Pitts Bay Road, Pembroke, Bermuda  
(Address of principal executive offices)

Mario Bonaccorso  
Executive Vice President and Chief Financial Officer  
90 Pitts Bay Road, Pembroke, HM 08, Bermuda Telephone: +1 441-292-0888, Email:  
mario.bonaccorso@partnerre.com  
(Name, Telephone, E-mail and/or Facsimile Number and Address of Company Contact Person)

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

Title of each class	Name of each exchange on which registered
5.875% Series F Non-Cumulative Preferred Shares, \$1.00 par value	New York Stock Exchange
6.50% Series G Cumulative Preferred Shares, \$1.00 par value	New York Stock Exchange
7.25% Series H Cumulative Preferred Shares, \$1.00 par value	New York Stock Exchange
5.875% Series I Non-Cumulative Preferred Shares, \$1.00 par value	New York Stock Exchange

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

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Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

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Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report: 100,000,000 common shares and 345,644 Class B common shares

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

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If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 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 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 whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer  Non-accelerated filer

Emerging growth company

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

<sup>†</sup> The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

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

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

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act.) Yes  No

## TABLE OF CONTENTS

	Page
PART I	
Item 1. <u>Identity of Directors, Senior Management and Advisers</u>	<u>4</u>
Item 2. <u>Offer Statistics and Expected Timetable</u>	<u>4</u>
Item 3. <u>Key Information</u>	<u>4</u>
Item 4. <u>Information on the Company</u>	<u>17</u>
Item 4A. <u>Unresolved Staff Comments</u>	<u>34</u>
Item 5. <u>Operating and Financial Review and Prospects</u>	<u>34</u>
Item 6. <u>Directors, Senior Management and Employees</u>	<u>69</u>
Item 7. <u>Major Shareholders and Related Party Transactions</u>	<u>73</u>
Item 8. <u>Financial Information</u>	<u>74</u>
Item 9. <u>The Offer and Listing</u>	<u>74</u>
Item 10. <u>Additional Information</u>	<u>74</u>
Item 11. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	<u>79</u>
Item 12. <u>Description of Securities Other than Equity Securities</u>	<u>84</u>
PART II	
Item 13. <u>Defaults, Dividend Arrearages and Delinquencies</u>	<u>84</u>
Item 14. <u>Material Modifications to the Rights of Security Holders and Use of Proceeds</u>	<u>84</u>
Item 15. <u>Controls and Procedures</u>	<u>84</u>
Item 16A. <u>Audit Committee Financial Expert</u>	<u>85</u>
Item 16B. <u>Code of Ethics</u>	<u>85</u>
Item 16C. <u>Principal Accountant Fees and Services</u>	<u>85</u>
Item 16D. <u>Exemptions from the Listing Standards for Audit Committees</u>	<u>86</u>
Item 16E. <u>Purchases of Equity Securities by the Issuer and Affiliated Purchasers</u>	<u>86</u>
Item 16F. <u>Change in Registrant's Certifying Accountant</u>	<u>86</u>
Item 16G. <u>Corporate Governance</u>	<u>86</u>
Item 16H. <u>Mine Safety Disclosure</u>	<u>86</u>
PART III	
Item 17. <u>Financial Statements</u>	<u>87</u>
Item 18. <u>Financial Statements</u>	<u>87</u>
Item 19. <u>Exhibits</u>	<u>153</u>

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Table of Contents

## PART I

## ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

## ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

## ITEM 3. KEY INFORMATION

## A. Selected Financial Data

The selected consolidated financial data of PartnerRe Ltd. and its subsidiaries (the Company or PartnerRe) below should be read in conjunction with the Consolidated Financial Statements, and the accompanying Notes to the Consolidated Financial Statements in Item 18 and with other information contained in this report, including Operating and Financial Review and Prospects in Item 5 of this report.

The selected consolidated financial data for 2018, 2017, 2016, 2015 and 2014 (in millions of United States (U.S.) dollars) is as follows:

Statement of Operations Data	For the years ended December 31,				
	2018	2017	2016	2015	2014
Net premiums earned	\$5,514	\$5,025	\$4,970	\$5,269	\$5,609
Net investment income	416	402	411	450	480
Net realized and unrealized investment (losses) gains	(390 )	232	26	(297 )	372
Other income	50	15	15	9	16
Total revenues	\$5,590	\$5,675	\$5,422	\$5,431	\$6,477
Net (loss) income	\$(86 )	\$264	\$447	\$107	\$1,068
Net (loss) income attributable to common shareholder	\$(132 )	\$218	\$387	\$47	\$998
	At December 31,				
Balance Sheet Data	2018	2017	2016	2015	2014
Total assets	\$22,760	\$22,981	\$21,939	\$21,406	\$22,270
Total shareholders' equity	\$6,517	\$6,745	\$6,688	\$6,901	\$7,049
Common shareholder's equity <sup>(1)</sup>	\$5,812	\$6,041	\$5,984	\$6,047	\$6,195

(1) Common shareholder's equity is calculated as Total shareholders' equity less preferred shareholders' equity of \$704 million, the liquidation value of preferred shares.

On March 18, 2016, the Company's common shares were acquired by Exor N.V. (subsequently renamed EXOR Nederland N.V.). As a result, all of the Company's publicly traded common shares and all treasury shares were canceled. At December 31, 2018 and 2017, EXOR Nederland N.V. held 100% of the 100 million common shares of \$0.00000001 par value each (Class A shares) for a total share capital of \$1.00, included in Share capital in the Consolidated Balance Sheets. Accordingly, per share data is no longer meaningful and is no longer presented by the Company.

In 2017 and 2018, the Company issued Class B shares to certain executives of the Company (see also Share Ownership section in Item 6 and Note 14 to the Consolidated Financial Statements in Item 18 of this report).

## B. Capitalization and Indebtedness

Not applicable.

## C. Reasons for the Offer and Use of Proceeds

Not applicable.

## Table of Contents

### D. Risk Factors

We expose ourselves to significant risks that can impact our financial strength as measured by United States generally accepted accounting principles (“U.S. GAAP”) or regulatory and rating agencies’ capital requirements. Risk sources for which management has established key risk limits approved by the Board of Directors (the “Board”), and the related approved limits and actual limits deployed, at December 31, 2018 and 2017 are presented in the Risk Management section below in Item 4B.

The following risks should be read in conjunction with the Safe Harbor Statement and the Operating and Financial Review and Prospects section in Item 5, and the Notes to the Consolidated Financial Statements in Item 18 of this report. These risks may affect our financial condition and operating results and, individually or in the aggregate, could cause our actual results to differ materially from past and projected future results. Some of these risks and uncertainties could affect particular business operations or segments, while others could affect all of our businesses. Although risks are discussed separately, many are interrelated.

Except as may be required by law, we undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events, or otherwise. It is impossible to predict or identify all risk factors and, consequently, the following factors should not be construed as a complete discussion of risks and uncertainties that may affect us.

As used in these Risk Factors, the terms “the Company”, “PartnerRe”, “we”, “our” or “us” may, depending upon the context, refer solely to the Company, to one or more of the Company’s consolidated subsidiaries or to all of them taken as a whole. The terms EXOR and Exor Group relate to the Company’s ultimate parent, EXOR N.V. and its affiliated companies (see Information on the Company in Item 4 of this report).

#### Risks Related to Our Company

The catastrophe business that we underwrite will result in volatility of our earnings and could impair our financial condition.

Catastrophic losses result from events such as windstorms, hurricanes, tsunamis, earthquakes, floods, hailstorms, tornadoes, severe winter weather, fires, drought, explosions and other natural and man-made disasters, the incidence and severity of which are inherently unpredictable. We also have substantial exposure to unexpected, large losses resulting from future man-made catastrophic events, such as acts of terrorism, acts of war, nuclear accidents and political instability, or from other perils. Because catastrophe reinsurance accumulates large aggregate exposures to both man-made and natural disasters, our loss experience in this line of business could be characterized as low frequency and high severity. Although we may attempt to exclude losses from terrorism and certain other similar risks from some coverage we write, we continue to have exposure to such unforeseen or unpredictable events. Irrespective of the clarity and inclusiveness of policy language, there can be no assurance that a court or arbitration panel will not limit enforceability of policy language or otherwise issue a ruling adverse to us.

This is likely to result in substantial volatility in our financial results and potentially significant net losses from time to time, and may also result in a material decline of our book value or impairment of our financial condition that may limit our ability to make dividend payments and payments of interest and principal on our debt securities and limit the funds available to make payments on policyholder claims.

Should we incur a very large catastrophic loss or a series of catastrophic losses, our ability to write future business may be adversely impacted if we are unable to replenish our capital.

If actual losses exceed our estimated loss reserves, our net income and capital position will be reduced.

Our success depends upon our ability to accurately assess the risks associated with the businesses that we reinsure. We establish loss reserves to cover our estimated liability for the payment of all losses and loss expenses incurred with respect to premiums earned on the reinsurance contracts that we write. Loss reserves are estimates involving actuarial and statistical projections at a given time to reflect our expectation of the costs of the ultimate settlement and administration of claims. Although we use actuarial models as well as historical reinsurance and insurance industry loss statistics, we also rely heavily on data provided by counterparties and on management’s experience and judgment to assist in the establishment of appropriate claims and claim expense reserves. Because of the many assumptions and estimates involved in establishing reserves, the reserving process is inherently uncertain. 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.

Estimates of losses are based on, among other things, a review of potentially exposed contracts, information reported by and discussions with counterparties, and our estimate of losses related to those contracts and are subject to change as more information is reported and becomes available. Losses for casualty and liability lines often take a long time to be reported, and frequently can be impacted by lengthy, unpredictable litigation and by the inflation of loss costs over time. 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. As a consequence, actual losses and loss expenses paid may deviate substantially from the reserve estimates reflected in our financial statements.

Table of Contents

Through various acquisitions, we assumed certain asbestos and environmental exposures. Our non-life reserves include an estimate of our ultimate liability for asbestos and environmental claims for which we cannot estimate the ultimate value using traditional reserving techniques, and for which there are significant uncertainties in estimating the amount of our potential losses. These liabilities are especially hard to estimate for many reasons, including the long delays between exposure and manifestation of any bodily injury or property damage, difficulty in identifying the source of the asbestos or environmental contamination, long reporting delays and difficulty in properly allocating liability for the asbestos or environmental damage. Certain of our subsidiaries have received and continue to receive notices of potential reinsurance claims from ceding insurance companies, which have in turn received claims asserting asbestos and environmental losses under primary insurance policies, in part reinsured by us. Such claims notices are often precautionary in nature and are generally unspecific, and the primary insurers often do not attempt to quantify the amount, timing or nature of the exposure. Given the lack of specificity in some of these notices, and the legal and tort environment that affects the development of claims reserves, the uncertainties inherent in valuing asbestos and environmental claims are not likely to be resolved in the near future. As of December 31, 2018, the Company's net non-life reserves included \$47 million related to asbestos and environmental claims.

It is difficult to predict the timing of such events, or estimate the amount of loss any given occurrence will generate. Under U.S. GAAP, we are not permitted to establish reserves for potential losses associated with catastrophic events until an event that may give rise to such losses occurs. If such an event were to occur, our reported income would decrease in the affected period. In particular, unforeseen large losses could reduce our profitability or impair our financial condition.

If ultimate losses and loss expenses exceed the reserves currently established, we will be required to increase loss reserves in the period in which we identify the deficiency to cover any such claims. As a result, even when losses are identified and reserves are established for any line of business, ultimate losses and loss expenses may deviate, perhaps substantially, from estimates reflected in loss reserves in our financial statements. Variations between our loss reserve estimates and actual emergence of losses could be material and could have a material adverse effect on our results of operations and financial condition.

See Note 8 to the Consolidated Financial Statements in Item 18 of this report for further details.

Given the inherent uncertainty of models, the usefulness of our proprietary and third-party models as a tool to evaluate risk is subject to a high degree of uncertainty that could result in actual losses that are materially different than our estimates, including probable maximum losses (PMLs), significantly impacting our financial results and condition.

We use our own proprietary catastrophe models and third-party vendor analytic and modeling capabilities to provide an objective risk assessment relating to risks in our reinsurance portfolio. We use these models to help us control risk accumulation and inform management and other stakeholders of capital requirements and to improve the risk/return profile. However, given the inherent uncertainty of modeling techniques and the application of such techniques, these models and databases may not accurately address a variety of matters that might impact certain of our coverages.

For example, catastrophe models that simulate loss estimates based on a set of assumptions are important tools used by us to estimate our PMLs. These assumptions address a number of factors that impact loss potential including, but not limited to, the characteristics of the natural catastrophe event; demand surge resulting from an event; the types, function, location and characteristics of exposed risks; susceptibility of exposed risks to damage from an event with specific characteristics; and the financial and contractual provisions of the reinsurance contracts that cover losses arising from an event. We run many model simulations in order to understand the impact of these assumptions on its catastrophe loss potential. Furthermore, there are risks associated with catastrophic events, which are either poorly represented or not represented at all by catastrophe models. Each modeling assumption or un-modeled risk introduces uncertainty into PML estimates that management must consider. These uncertainties can include, but are not limited to, the following:

- The models do not address all the possible hazard characteristics of a catastrophe peril (e.g., the precise path and wind speed of a hurricane);
- The models may not accurately reflect the true frequency of events;
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The models may not accurately reflect a risk's vulnerability or susceptibility to damage for a given event characteristic;

• The models may not accurately represent loss potential to reinsurance contract coverage limits, terms and conditions; and

• The models may not accurately reflect the impact on the economy of the area affected or the financial, judicial, political, or regulatory impact on insurance claim payments during or following a catastrophe event.

Our PMLs are selected after assessment of multiple third party vendor model outputs, internally constructed independent models, including our CatFocus® suite of models, and other qualitative and quantitative assessments by management, including assessments of exposure not typically modeled in vendor or internal models. Our methodology for estimating PMLs may differ from methods used by other companies and external parties given the various assumptions and judgments required to estimate a PML.

Table of Contents

As a result of these factors and contingencies, our reliance on assumptions and data used to evaluate our entire reinsurance portfolio, and specifically to estimate a PML, is subject to a high degree of uncertainty that could result in actual losses that are materially different from our PML estimates and, as a result, our financial results and financial condition may be significantly and adversely impacted. See further information on PMLs in Risk Management section in Item 4B. below for further details.

There may be increases in the frequency and severity of natural catastrophes and the losses that result from them, which would impact our financial condition and cause our reported income to decrease in the affected period.

There may be increases in the frequency and severity of natural catastrophes and the losses that result from them. We monitor and adjust, as we believe appropriate, our risk management models to reflect our judgment of how to interpret current developments and information, such as these studies. We believe that factors including increases in the value and geographic concentration of insured property, particularly along coastal regions, the increasing risk of extreme weather events reflecting changes in climate and ocean temperatures, and the effects of inflation may continue to increase the severity of claims from catastrophic events in the future.

Our Life products expose us to volatility in net income arising from changes in the value of the Life and health reserves liability that are directly affected by market risk and other factors and are based upon various assumptions. The pricing and establishment of reserves for our Life and Health segment related to future policy benefits and the valuation of life insurance and annuity products are based upon various assumptions, including but not limited to market changes, mortality rates, morbidity rates and policyholder behavior. The process of establishing reserves for future policy benefits relies on our ability to accurately estimate insured events that have not yet occurred but that are expected to occur in future periods, as well as assumptions for investment returns. Significant deviations in actual experience from assumptions used for pricing and for establishing reserves for future policy benefits could have an adverse effect on the profitability of our products, our business and our financial results and condition.

Under reinsurance programs covering variable annuity guarantees we assume the risk of guaranteed minimum death benefits (GMDB). Our net income is directly impacted by changes in the reserves calculated in connection with the reinsurance of GMDB liabilities. Reported liabilities for GMDB reinsurance are determined using internal valuation models. Such valuations require considerable judgment and are subject to significant uncertainty. The valuation of these products is subject to fluctuations arising from, among other factors, changes in interest rates, changes in equity markets, changes in credit markets, changes in the allocation of the investments underlying annuitant's account values, and assumptions regarding future policyholder behavior. Adverse changes in market factors and policyholder behavior will have an impact on both life underwriting income and net income. These risks may increase as we seek to expand our Life and Health business.

The reserves described above are included in Life and health reserves on the Consolidated Balance Sheets with changes in these reserves included in Losses and loss expenses within the Consolidated Statements of Operations.

In addition, the reserves that we have established may be inadequate. If ultimate losses and loss expenses exceed the reserves currently established, we will be required to increase loss reserves in the period in which we identify the deficiency to cover any such claims. As a result, even when losses are identified and reserves are established for any line of business, ultimate losses and loss expenses may deviate, perhaps substantially, from estimates reflected in loss reserves in our financial statements. Variations between our loss reserve estimates and actual emergence of losses could be material and could have a material adverse effect on our results of operations and financial condition.

See Liquidity and Capital Resources—Reserves in Item 5 and Notes 2(b) and 8 to the Consolidated Financial Statements in Item 18 of this report for further details.

We rely on a few reinsurance brokers for a large percentage of our business; loss of business provided by these brokers would reduce our premium volume and net income.

We produce our business both through brokers and through direct relationships with insurance company clients. For the year ended December 31, 2018, more than 70% of our gross premiums written were produced through brokers. The Company has two brokers that each individually accounted for 22% of the Company's total gross premiums written for 2018 (see Note 19 to the Consolidated Financial Statements in Item 18 of this report for further details). Because broker-produced business is concentrated with a small number of brokers, we are exposed to concentration risk. A significant reduction in the business produced by these brokers could potentially reduce our premium volume

and net income.

We are exposed to credit risk relating to our reinsurance brokers and cedants.

In accordance with industry practice, we may pay amounts owed under our reinsurance policies to brokers, and they in turn pay these amounts to the ceding insurer. In some jurisdictions, if the broker fails to make such an onward payment, we might remain liable to the ceding insurer for the deficiency. Conversely the ceding insurer may pay premiums to the broker for onward payment to

7

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Table of Contents

us in respect of reinsurance policies issued by us. In certain jurisdictions, these premiums are considered to have been paid to us at the time that payment is made to the broker, and the ceding insurer will no longer be liable to us for those amounts, whether or not we have actually received the premiums. We may not be able to collect all premiums receivable due from any particular broker at any given time. We also assume credit risk by writing business on a funds-withheld basis. At December 31, 2018, Funds held by reinsured companies recorded in the Consolidated Balance Sheet was \$830 million. Under such arrangements, the cedant retains the premium they would otherwise pay to us to cover future loss payments.

If we are downgraded by rating agencies, our standing with brokers and customers could be negatively impacted and may adversely impact our results of operations.

Rating agencies assess and rate the claims-paying ability and financial strength of insurers and reinsurers, such as our principal operating subsidiaries. These ratings are based upon criteria established by the rating agencies and have become an important factor in establishing our competitive position in the market. Insured, insurers, ceding insurers and intermediaries use these ratings as one measure by which to assess the financial strength and quality of insurers and reinsurers. However, these ratings are not an evaluation directed to investors of our preferred shares or debt securities, and are not a recommendation to buy, sell or hold our preferred shares or debt securities.

Our financial strength ratings are subject to periodic review as rating agencies evaluate us to confirm that we continue to meet their criteria for ratings assigned to us by them. Such ratings may be revised downward or revoked at the sole discretion of such ratings agencies in response to a variety of factors, including capital adequacy, management strategy, operating earnings and risk profile. In addition, from time to time, one or more rating agencies may effect changes in their capital models and rating methodologies that could have a detrimental impact on our ratings. It is also possible that rating agencies may in the future heighten the level of scrutiny they apply when analyzing companies in our industry, may increase the frequency and scope of their reviews, may request additional information from the companies that they rate, and may adjust upward the capital and other requirements employed in their models for maintenance of certain rating levels. There can be no assurance that our ratings will remain at their current levels. If our ratings were downgraded, our competitive position in the reinsurance industry may suffer, and it could result in a reduction in demand for our products. In addition, certain business that we write contains terms that give the ceding company or derivative counterparty the right to terminate cover and/or require collateral if our ratings are downgraded.

See Liquidity and Capital Resources in Item 5 of this report for our current financial strength ratings. The status of any further changes to ratings or outlooks will depend on various factors.

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

Our future capital requirements depend on many factors, including rating agencies and regulatory requirements, our ability to write new business successfully, the frequency and severity of catastrophic events, and our ability to establish premium rates and reserves at levels sufficient to cover losses. We may need to raise additional funds through financings or curtail our growth and reduce our assets. Any equity or debt financing, if available at all, may be on terms that are not favorable to us. Financings could result in the issuance of securities that have rights, preferences and privileges that are senior to those of our other securities. Disruption in the increasingly volatile financial markets may limit our ability to access capital required to operate our business and we may be forced to delay raising capital or bear a higher cost of capital, which could decrease our profitability and significantly reduce our financial flexibility. The large amounts of industry-wide catastrophe losses in 2018 (resulting from, among other things, typhoons Jebi and Trami, hurricanes Florence and Michael, and California wildfires) has made access to capital more challenging, potentially making it more difficult and more expensive for us to raise additional financing if necessary. In addition, if we experience a credit rating downgrade, withdrawal or negative watch/outlook in the future, we could incur higher borrowing costs and may have more limited means to access capital. If we cannot obtain adequate capital on favorable terms or at all, our business, operating results and financial condition could be adversely affected. In such a severe event, we may be reliant on our parent company, EXOR Nederland N.V., to provide a further capital injection or contribution to us. However, all EXOR Group portfolio companies are managed independently and autonomously, and there can be no guarantee that EXOR Nederland N.V. would provide any additional capital.

Our investments are subject to interest rate, credit, equity and real estate related risks, which may adversely affect our net income and may adversely affect the adequacy of our capital.

We invest the net premiums we receive unless, or until such time as, we pay out losses and/or until they are made available for distribution to common and preferred shareholders, to pay interest on or redemption of debt and preferred shares, or otherwise used for general corporate purposes. Investment results comprise a substantial portion of our income. For the year ended December 31, 2018, we had net investment income of \$416 million, which represented approximately 7% of total revenues. In addition, we recorded net realized and unrealized losses on investments of \$390 million during 2018, which are included in the net loss for the year. We are accordingly exposed to significant financial and capital market risks, including changes in interest rates, credit spreads,

## Table of Contents

equity and real estate prices, foreign exchange rates, market volatility, the performance of the economy in general, and other factors outside our control.

Interest rates are highly sensitive to many factors, including fiscal and monetary policies of major economies, inflation, economic and political conditions and other factors outside our control. Changes in interest rates can negatively affect net investment income in that, in a declining interest rate environment, investments in fixed maturities and short-term investments (fixed maturity portfolio) would earn interest income at lower rates. In a declining interest rate environment, the market value of our fixed income portfolio would increase; however, in a rising interest rate environment, the market value of our fixed income portfolio will decline. Depending on our liquidity needs and investment strategy, we may liquidate investments prior to maturity at a loss in order to cover liabilities as they become due or to invest in other investment opportunities that have better expected longer term profitability.

Actions by regulators or law enforcement agencies in the U.K. and elsewhere may result in changes to the manner in which the London Interbank Offered Rate (“LIBOR”) is determined or the establishment of alternative reference rates. In July 2017, the U.K. Financial Conduct Authority (the “FCA”) announced that the FCA intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR after 2021, which is expected to result in these widely used reference rates no longer being available. Potential changes to LIBOR, as well as uncertainty around such changes and the establishment of alternative reference rates, may adversely affect us. The discontinuance of LIBOR could have an adverse impact on the market for LIBOR-based securities or the value of our investment portfolio. There is currently no definitive information regarding the future utilization of LIBOR or of any particular replacement rate, and as such, the potential effect of any such event cannot yet be determined.

Our fixed maturity portfolio is primarily invested in high quality, investment grade securities. However, we invest a portion of the portfolio in securities that are below investment grade. We also invest a portion of our portfolio in other investments such as fixed income type funds, notes receivable, loans receivable, private placement bond investments, derivatives, and other specialty asset classes. These securities generally pay a higher rate of interest or return and may have a higher degree of credit or default risk. These securities may also be less liquid in times of economic weakness or market disruptions.

We also invest a portion of our portfolio in preferred and common stocks or equity-like securities. The value of these assets fluctuates with equity markets, which are increasingly volatile. In times of economic weakness, the market value and liquidity of these assets may decline, and may impact net income and capital. We use the term equity-like investments to describe our investments that have market risk characteristics similar to equities and are not investment grade fixed maturity securities. This category includes high-yield and convertible fixed maturity investments and private placement equity investments. Fluctuations in the fair value of our equity-like investments may reduce our income in any period or year and cause a reduction in our capital. As global equity markets are close to historically high levels, there can be no assurance that our equity-like investments will maintain their current levels.

In addition, we invest directly and indirectly in real estate assets, which are subject to overall market conditions. We have investments in real estate in various locations (including New York and Brazil) through investments in limited partnerships as well as through directly-owned investments in real estate and an equity method investment in a privately held real estate investment and development group, Almacantar Group S.A. (Almacantar) in London. These real estate assets are exposed to various risks, including the supply and demand of leasable commercial and residential space and fluctuations in real estate prices globally. See Item 4.D and Note 18 to the Consolidated Financial Statements in Item 18 below in this report for further details.

Foreign currency fluctuations may reduce our net income and our capital levels.

Through our multinational reinsurance operations, we conduct business in a variety of foreign (non-U.S.) currencies, the principal exposures being the Euro, British pound, Canadian dollar, Japanese yen and Swiss Franc. Accordingly, we are subject to market risks associated with devaluations and fluctuations in currency exchange rates. Our assets and liabilities denominated in foreign currencies are therefore exposed to changes in currency exchange rates, which may be material. Our reporting currency is the U.S. dollar, and exchange rate fluctuations relative to the U.S. dollar may materially impact our financial results and condition. We employ various strategies, including the use of foreign exchange forward contracts and other derivative financial instruments, to manage our exposure to foreign currency

exchange risk. To the extent that these exposures are not fully offset or hedged, or the hedges are ineffective at mitigating adverse effects, our financial results and condition may be negatively impacted by fluctuations in foreign currency exchange rates.

We may suffer losses due to defaults by various counterparties, including issuers of investment securities, reinsurance contracts and derivatives.

Issuers or borrowers whose securities we hold, reinsurers, clearing agents, clearing houses, joint venture partners, derivative instrument counterparties and other financial intermediaries may default on their obligations to us due to bankruptcy, insolvency, lack of liquidity, adverse economic conditions, operational failure, fraud or other reasons.

Even if we are entitled to collateral when a counterparty defaults, such collateral may be illiquid or proceeds from such collateral when liquidated may not be sufficient to

## Table of Contents

recover the full amount of the obligation. All or any of these types of default could have a material adverse effect on our results of operations, financial condition and liquidity.

Our debt, credit and International Swap Dealers Association (ISDA) agreements may limit our financial and operational flexibility, which may affect our ability to conduct our business.

We have incurred indebtedness, and may incur additional indebtedness in the future. At December 31, 2018 and 2017, our total Debt related to senior notes and capital efficient notes was approximately \$1.4 billion.

Additionally, we have entered into letter of credit facilities and ISDA agreements (including, without limitation, weather derivatives) with various institutions. Under these credit facilities, the institutions provide revolving lines of credit to us and our major operating subsidiaries and issue letters of credit to our clients in the ordinary course of business.

The agreements relating to our debt, letter of credit facilities and ISDA agreements contain various covenants that may limit our ability, among other things, to borrow money, make particular types of investments or other restricted payments, sell assets, merge or consolidate. Some of these agreements also require us to maintain specified ratings and financial ratios. If we fail to comply with these covenants or meet required financial ratios, the lenders or counterparties under these agreements could declare a default and demand immediate repayment of all amounts owed to them. See Liquidity and Capital Resources—Shareholders' Equity and Capital Resources Management—Credit Agreements in Item 5 of this report.

If we are in default under the terms of these agreements, we may also be restricted in our ability to declare or pay any dividends, redeem, purchase or acquire any shares or make a liquidation payment.

If any one of the financial institutions that we use in our operations, including those that participate in our credit facilities, fails or is otherwise unable to meet their commitments, we could incur substantial losses and reduced liquidity.

We maintain cash balances significantly in excess of the U.S. Federal Deposit Insurance Corporation insurance limits at various depository institutions. We also have funding commitments from a number of banks and financial institutions that participate in our credit facilities. See Liquidity and Capital Resources—Shareholders' Equity and Capital Resources Management—Credit Agreements in Item 5 and Note 17 to the Consolidated Financial Statements in Item 18 of this report for details. Access to funds under these existing credit facilities is dependent on the ability of the banks that are parties to the facilities to meet their funding requirements. Those banks may not be able to meet their funding requirements if they experience shortages of capital and liquidity or if they experience excessive volumes of borrowing requests within a short period of time, and we might be forced to replace credit sources in a difficult market. If we cannot obtain adequate financing or sources of credit on favorable terms, or at all, our business, operating results and financial condition could be adversely impacted.

Strategic investments and merger and acquisition (M&A) activities could disrupt our ongoing business and present risks not originally contemplated.

We have made, and in the future may make, strategic investments or acquisitions. Such endeavors involve significant risks and uncertainties, including those related to distraction of management from current operations, greater than expected liabilities and expenses, inadequate return of capital and unidentified issues not discovered in due diligence. In addition, the integration of any acquired companies may place significant demands on our management, systems, internal controls and financial and physical resources. These new ventures or M&A activities are inherently risky and may not achieve the expected benefits.

Operational risks, including human or systems failures, are inherent in our business.

Operational risks and losses can result from many sources including fraud, errors by employees, failure to document transactions properly or to obtain proper internal authorization, failure to comply with regulatory requirements or information technology failures.

Our modeling, underwriting and information technology and application systems are critical to our business and reputation. Moreover, our technology and applications are an important part of our underwriting process and our ability to compete successfully. We have also licensed certain systems and data from third parties. We cannot be certain that we will have access to these, or comparable service providers, or that our technology or applications will continue to operate as intended. In addition, we cannot be certain that we would be able to replace these service



providers or consultants without slowing our underwriting response time. A major defect or failure in our internal controls or information technology and application systems could result in management distraction, harm to our reputation, a loss or delay of revenues or increased expense.

## Table of Contents

Cybersecurity events could disrupt business operations, result in the loss of critical and confidential information, and adversely impact our reputation and results of operations.

We are dependent upon the effective functioning and availability of our information technology and application systems platforms. These platforms include, but are not limited to, our proprietary software programs such as catastrophe models as well as those licensed from third-party vendors including data storage, analytic and modeling systems. We rely on the security of such platforms for the secure processing, storage and transmission of confidential information. Examples of cybersecurity incidents are unauthorized access, computer viruses, deceptive communications (phishing), malware or other malicious code or cyber-attack, destructive attack, system failures and disruptions and other events that could have security consequences. A cybersecurity incident could materially impact our ability to adequately price products and services, establish reserves, provide efficient and secure services to our clients, brokers, vendors and regulators, value our investments and timely and accurately report our financial results. Although we have implemented controls and have taken protective measures to reduce the risk of cybersecurity incidents, we cannot reasonably anticipate or prevent all cybersecurity incidents. Cybersecurity incidents could expose us to a risk of loss or misuse of our information, litigation, reputational damage, violations of applicable privacy and other laws, fines, penalties or losses that are either not insured against or not fully covered by insurance maintained. We may be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities.

We believe there are frequent attempts to breach our cybersecurity measures. For example, in 2018 we encountered a phishing attempt where someone impersonating a senior executive sought payment; although the payment was initiated, we were able to detect the incident in time and stop the payment from being released. We cannot assure that our systems and processes will be able to identify and prevent such attempts in the future.

The loss of key management personnel could adversely affect us.

Our success has depended, and will continue to depend, partly upon our ability to attract and retain management personnel. If any of these key management employees ceased to continue in their present role, we could be adversely affected.

Our ability to execute our business strategy is dependent on our ability to attract and retain a staff of qualified executive officers, underwriters, actuaries and other key personnel. The skills, experience and knowledge of the reinsurance industry of our management team constitute important competitive strengths. If some or all of these managers leave their positions, and even if we were able to find persons with suitable skills to replace them, our operations could be adversely affected.

We may be adversely impacted by inflation.

Deficit spending by governments in our major markets and monetary stimulus provided by central banks exposes us to a heightened risk of inflation. We monitor the risk that the principal markets in which we operate could experience increased inflationary conditions, which would, among other things, cause policyholder loss costs to increase, and negatively impact the performance of our investment portfolio. Inflation related to medical costs, construction costs and tort issues in particular impact the property and casualty industry, and broader market inflation has the potential risk of increasing overall loss costs. 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.

### Risks Related to Our Industry

Our profitability is affected by the cyclical nature of the reinsurance industry.

Historically, the reinsurance industry has experienced significant fluctuations in operating results due to competition, levels of available capacity, trends in cash flows and losses, general economic conditions and other factors, particularly in the Non-life lines of business. Demand for reinsurance is influenced significantly by underwriting results of primary insurers, including catastrophe losses, and prevailing general economic conditions. The supply of reinsurance is related directly to prevailing prices and levels of capacity that, in turn, may fluctuate in response to changes in rates of return on investments being realized in the reinsurance industry. In addition, the cycle of our

industry may fluctuate as a result of changes in the economic, legal, political and social landscape. Since cyclicity is due in large part to the collective actions of insurers, reinsurers and general economic conditions and the occurrence of unpredictable events, we cannot predict the timing or duration of changes in the market cycle. If any of these factors were to result in a decline in the demand for reinsurance or an overall increase in reinsurance capacity, our profitability could be impacted. In the recent past, we have experienced a generally softening market cycle, with increased competition, surplus underwriting capacity, deteriorating rates and less favorable terms and conditions, all having an impact on our ability to write business.

## Table of Contents

Although we are currently experiencing improving market conditions with increased or constant pricing in most Non-life classes, primarily in those markets that have been exposed to the catastrophe losses in 2018, as a result of the persisting competition and excess capacity in the industry, it is not possible to forecast if improving pricing conditions will continue.

Competition, pricing pressure and any other negative factors noted above may adversely affect our profitability and results of operations in future periods, and the impact may be material.

We operate in a highly competitive environment.

The reinsurance industry is highly competitive and we compete with a number of worldwide reinsurance companies, including, Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft (Munich Re), Swiss Re Ltd. (Swiss Re), Hannover Rück SE (Hannover Re), SCOR SE, Transatlantic Reinsurance Company Inc. (Transatlantic), General Reinsurance Corporation (GenRe), Reinsurance Group of America, Incorporated (RGA), Everest Re Group, Ltd. (Everest Re) and RenaissanceRe Holdings Ltd. (RenRe).

The lack of strong barriers to entry into the reinsurance business means that we may also compete with new companies that may be formed to enter the reinsurance market. In addition, we may experience increased competition as a result of the consolidation in the insurance and reinsurance industry. These consolidated entities may try to use their enhanced market power and relationships to negotiate price reductions for our products and services and/or obtain a larger market share through increased line sizes. Consolidated companies may also purchase less reinsurance product and services, due to increased levels of capital.

Competition in the types of reinsurance that we underwrite is based on many factors, including the perceived and relative financial strength, pricing and other terms and conditions, services provided, ratings assigned by independent rating agencies, speed of claims payment, geographic scope of business, client and broker relationships, reputation and experience in the lines of business to be written. If competitive pressures reduce our prices, we may expect to write less business. In addition, competition for customers would become more intense and we could incur additional expenses relating to customer acquisition and retention, further reducing our operating margins.

Further, insurance-linked securities, derivatives and other non-traditional risk transfer mechanisms and alternative vehicles are being developed and offered by other parties, which could impact the demand for traditional insurance or reinsurance. A number of new, proposed or potential industry or legislative developments could further increase competition in our industry. New competition from these developments could cause the demand for reinsurance and/or prices to fall or the costs related to client acquisition and retention to increase, either of which could have a material adverse effect on our growth and profitability.

All of the above factors may adversely affect our profitability and results of operations in future periods, the impact of which may be material, and may adversely affect our ability to successfully execute our strategy as a global diversified reinsurance company.

### Legal and Regulatory Risks

Political, regulatory, governmental and industry initiatives could adversely affect our business.

Our reinsurance operations are subject to extensive laws and regulations that are administered and enforced by a number of different governmental and non-governmental self-regulatory authorities and associations in each of their respective jurisdictions and internationally. Our businesses in each jurisdiction are subject to varying degrees of regulation and supervision. The laws and regulations of the jurisdictions in which our reinsurance subsidiaries are domiciled require, among other things, maintenance of minimum levels of statutory capital, surplus, and liquidity; various solvency standards; and periodic examinations of subsidiaries' financial condition. In some jurisdictions, laws and regulations also restrict payments of dividends and reductions of capital. Applicable statutes, regulations, and policies may also restrict the ability of these subsidiaries to write insurance and reinsurance policies, to make certain investments, and to distribute funds.

Some of these authorities regularly consider enhanced or new regulatory requirements intended to prevent future crises or otherwise assure the stability of institutions under their supervision. These authorities may also seek to exercise their supervisory authority in new and more robust ways, and new regulators could become authorized to oversee parts of our business.

It is not possible to predict all future impacts of these types of changes but they could affect the way we conduct our business and manage our capital, and may require us to satisfy increased capital requirements or to incur additional expenses, any of which, in turn, could affect our results of operations, financial condition and liquidity. Our material subsidiaries' regulatory environments are described in detail in Business Overview—Regulation in Item 4 of this report. For example, our regulated reinsurance subsidiaries across the European Union (EU) are subject to the Directive 2009/138/EC (EU directive) of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II).

## Table of Contents

If our compliance with any particular regulatory regime is challenged, we may be subject to monetary or other penalties. In addition, in order to ensure compliance with applicable regulatory requirements or as a result of any investigation, including remediation efforts, we could be required to incur expenses and undertake additional work, which in turn may divert resources from our business. These, and other regulations relating to each of our material subsidiaries may in effect restrict each of those subsidiaries' ability to write new business, to make certain investments and to distribute funds or assets to us. In 2018, two of our European subsidiaries were found to breach certain Solvency II requirements related to the 2016 regulatory filings, resulting in an administrative sanction of EUR1.5 million. For further information see Business Overview—Regulation in Item 4 of this report.

On March 12, 2019, the EU announced that it had added Bermuda to its list of non-compliant jurisdictions for tax purposes due to a certain deficiency with Bermuda's Economic Substance Legislation. If the EU believes this deficiency is not fully addressed and Bermuda remains on the list, Bermuda companies could be subject to penalties and sanctions as well as suffer reputational damage.

Recent government intervention and the possibility of future government intervention have created uncertainty in the insurance and reinsurance markets. Government regulators are generally concerned with the protection of policyholders to the exclusion of other interested parties, including shareholders and debt holders of reinsurers. We believe it is likely there will continue to be increased regulation of, and other forms of government participation in, our industry in the future, which could materially adversely affect our business by, among other things:

- Providing reinsurance capacity in markets and to clients that we target or requiring our participation in industry pools and guaranty associations;

- Further restricting our operational or capital flexibility;

- Expanding the scope of coverage under existing policies;

- Regulating the terms of reinsurance policies;

- Adopting further or changing compliance requirements which may result in additional costs which may adversely impact our results of operation; or

- Disproportionately benefiting the companies domiciled in one country over those domiciled in another.

Legislative and regulatory activity in healthcare may affect our profitability as a provider of accident and health reinsurance products.

We derive revenues, in part, from the provision of accident and health reinsurance in the U.S. to institutions that participate in the U.S. healthcare delivery infrastructure. The Patient Protection and Affordable Care Act of 2010 (the Healthcare Act) made significant changes to the regulation of health insurance and may negatively affect our U.S. health reinsurance business including, but not limited to, the healthcare delivery system and the healthcare cost reimbursement structure in the U.S. In addition, we may be subject to regulations, guidance or determinations emanating from the various regulatory authorities authorized under the Healthcare Act. It is difficult to predict the effect that the Healthcare Act, any regulatory pronouncement made thereunder or changes to the Healthcare Act will have on our results of operations or financial condition. In addition, it is not possible to predict whether new legislation, rules or regulatory changes will be adopted or enacted in the future or what impact, if any, such legislation, rules or changes could have on our business, financial condition or results of operations.

Legal and enforcement activities relating to the insurance industry could affect our business and our industry.

The insurance industry has experienced substantial volatility as a result of litigation, investigations and regulatory activity by various insurance, governmental and enforcement authorities concerning certain practices within the insurance industry.

These investigations have resulted in changes in the insurance and reinsurance markets and industry business practices. While at this time, none of these changes have caused an adverse effect on our business, we are unable to predict the potential effects, if any, that future investigations may have upon our industry. As noted above, because we frequently assume the credit risk of the counterparties with whom we do business throughout our insurance and reinsurance operations, our results of operations could be adversely affected if the credit quality of these counterparties is severely impacted by investigations in the reinsurance or insurance industry or by changes to industry practices.

Emerging claim and coverage issues could adversely affect our business.

Unanticipated developments in the law, as well as changes in social and environmental conditions could potentially result in unexpected claims for coverage under our reinsurance and other contracts. These developments and changes may adversely affect our business by either extending coverage beyond our underwriting intent or by increasing the number or size of claims. With respect to our casualty businesses, these legal, social and environmental changes may not become apparent until sometime after

13

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Table of Contents

their occurrence. Our exposure to these uncertainties could be exacerbated by an increase in insurance and reinsurance contract disputes, arbitration and litigation.

The full effects of these and other unforeseen emerging claim and coverage issues are extremely hard to predict. In some instances, these coverage changes may not become apparent until after we have issued reinsurance contracts that are affected by such changes. As a result, the full extent of our liability under such reinsurance contracts and, in particular, our casualty reinsurance contracts, may not be known for many years after a contract is issued.

The reinsurance industry is also affected by political, judicial and legal developments that may create new and expanded theories of liability, which may result in unexpected claim frequency and severity and delays or cancellations of products and services we provide, which could adversely affect our business.

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

As a result of Brexit, negotiations to determine the terms of the U.K.'s withdrawal from the EU and its future relationship with the EU are ongoing. 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 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 to Brexit 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.

Our business is subject to applicable laws and regulations relating to sanctions, foreign corrupt practices and money laundering, the violation of which could adversely affect our operations.

Our activities are subject to applicable economic and trade sanctions, anti-bribery and money laundering laws and regulations in the jurisdictions where we operate including the U.S. and the EU, among others. Compliance with these regulations may impose significant costs, limit or restrict our ability to do business or engage in certain activities, or subject us to the possibility of civil or criminal actions or proceedings. Although we have policies and controls in place designed to comply with applicable laws and regulations, there can be no assurance that we, or an employee or agent acting on our behalf would fully comply with applicable laws and regulations as interpreted by the relevant authorities. The divergence of regulatory requirements between U.S. and EU entities and persons regarding business with Iran has increased these risks. Failure to accurately interpret or comply with or obtain appropriate authorizations and/or exemptions under such laws or regulations could expose us to investigations, civil penalties, criminal penalties and other sanctions, including fines, injunctions, loss of licenses or other punitive actions. In addition, such violations could damage our business and/or our reputation. Such criminal or civil sanctions, penalties, other sanctions, and damage to our business and/or reputation could have a material adverse effect on our financial condition and results of operations.

Our business is subject to applicable laws and regulations relating to data privacy and protection and cybersecurity, the changes or the violation of which could affect our operations.

Regulatory authorities around the world have implemented or are considering a number of legislative changes or regulations concerning data protection and cybersecurity which have required or may require us to incur additional expenses. We are subject to numerous U.S. federal and state laws and non-U.S. regulations governing the protection of personal and confidential information of our clients or employees, including in relation to medical records and financial information. Existing cybersecurity regulations vary by region or country in which PartnerRe operates and cover different aspects of business operations.

Our business is subject to General Data Protection Regulation (GDPR) which regulates data protection for all individuals within the EU, including foreign companies processing data of EU residents; it enhances individuals' rights, introduces complex and far-reaching company obligations and increases penalties significantly in case of



violation. The GDPR sets out a number of requirements that must be complied with when handling personal data including: the obligation to appoint data protection officers in certain circumstances and the principal of accountability and the obligation to make public notification of significant data breaches. The interpretation and application of data protection laws in the U.S., Europe and elsewhere are developing and are often uncertain and in flux. It is possible that these laws or cybersecurity regulations may be interpreted and applied in a manner that is inconsistent with our data protection or security practices. If so, in addition to the possibility of fines, this will result in an order requiring that we change our data practices, which could have an adverse effect on our business and results of operations. Complying with these various laws will cause us to incur additional costs and could require us to change our business practices.

## Table of Contents

As a group operating worldwide, we strive to comply with all applicable data protection laws and regulations. It is however possible that we fail to comply with all applicable laws and regulations. The failure or perceived failure to comply may result in inquiries and other proceedings or actions against us by government entities or others, including monetary fees, or could cause us to lose clients which could potentially have an adverse effect on our business and results of operations.

See also Business Overview—Regulation in Item 4 for further details on cybersecurity requirements.

Changes in current accounting practices and future pronouncements may materially impact our reported financial results.

Developments in accounting practices may require considerable additional time and cost to comply, particularly if we are required to prepare information relating to prior periods for comparative purposes or to apply the new requirements retroactively. The impact of changes in current accounting practices and future pronouncements may be significant. The impact may affect the results of our operations, including among other things, the calculation of net income, and may affect our financial position, including among other things, the calculation of unpaid losses and loss expenses, policy benefits for life and annuity contracts and total shareholders' equity. See Note 2(r) to the Consolidated Financial Statements in Item 18 in this report for details of recent accounting pronouncements.

### Risks Related to Our Preferred Shares

PartnerRe Ltd. is a holding company, and if our subsidiaries do not pay dividends or make other distributions to us, we may not be able to pay dividends on our preferred shares or settle principal payments as they become due.

PartnerRe Ltd. is a holding company with no operations to generate income to provide liquidity other than the cash received for issuance of common shares and preferred shares. We have cash outflows in the form of other expenses and dividends to both common and preferred shareholders. We rely primarily on cash dividends and payments from our subsidiaries to meet our cash outflows. We expect future dividends and other permitted payments from our subsidiaries to be the principal source of funds to pay expenses and dividends. The ability of our subsidiaries to pay dividends or to advance or repay funds to us is subject to general economic, financial, competitive, regulatory and other factors beyond our control. In particular, the payment of dividends by our reinsurance subsidiaries is limited under Bermuda and Irish laws and certain statutes of U.S. states in which our U.S. subsidiaries are domiciled, which statutes include minimum solvency and liquidity thresholds (see Note 12 to the Consolidated Financial Statements in Item 18 of this report for a description of various regulatory and statutory restrictions on dividend payments applicable to our reinsurance subsidiaries). Because we are a holding company, our right, and hence the right of our creditors and shareholders, to participate in any distribution of assets by any of our subsidiaries, upon our liquidation or reorganization or otherwise, is subject to the prior claims of policyholders and creditors of these subsidiaries. Our controlling shareholder owns a significant majority of our common shares, and its interest may differ from the interests of our preferred shareholders.

EXOR Nederland N.V. owns approximately 99.7% of the outstanding common shares of the Company. As a result, EXOR Nederland N.V. has power to elect our directors and to determine the outcome of any action requiring shareholder approval. EXOR's interests may differ from the interests of the holders of our preferred shares and, given EXOR Nederland N.V.'s majority controlling interest in the Company, circumstances may arise under which EXOR Nederland N.V. may exercise its control in a manner that is not favorable to the interests of the holders of the preferred shares.

Preferred shareholders may encounter difficulties in service of process and enforcement of judgments against us in the United States.

We are a Bermuda company and some of our directors and officers are residents of various jurisdictions outside the U.S. All, or a substantial portion, of the assets of our officers and directors and of our assets are or may be located in jurisdictions outside the U.S. Although we have appointed an agent and irrevocably agreed that the agent may be served with process in New York with respect to actions against us arising out of violations of the U.S. Federal securities laws in any Federal or state court in the U.S., it could be difficult for investors to effect service of process within the U.S. on our directors and officers who reside outside the U.S. It could also be difficult for investors to

enforce against us or our directors and officers judgments of a U.S. court predicated upon civil liability provisions of U.S. Federal securities laws.

There is no treaty in force between the U.S. and Bermuda providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. As a result, whether a U.S. judgment would be enforceable in Bermuda against us or our directors and officers depends on whether the U.S. court that entered the judgment is recognized by the Bermuda court as having jurisdiction over us or our directors and officers, as determined by reference to Bermuda conflict of law rules. A judgment debt from a U.S. court that is final and for a sum certain based on U.S. Federal securities laws will not be enforceable in Bermuda unless the judgment debtor had submitted to the jurisdiction of the U.S. court, and the issue of submission and jurisdiction is a matter of Bermuda law and not U.S. law.

## Table of Contents

In addition to and irrespective of jurisdictional issues, Bermuda courts will not enforce a U.S. Federal securities law that is either penal or contrary to public policy. An action brought pursuant to a public or penal law, the purpose of which is the enforcement of a sanction, power or right at the instance of the state in its sovereign capacity will not be entered by a Bermuda court. Certain remedies available under the laws of U.S. jurisdictions, including certain remedies under U.S. Federal securities laws, would not be available under Bermuda law or enforceable in Bermuda court, as they would be contrary to Bermuda public policy. Further, no claim can be brought in Bermuda against us or our directors and officers in the first instance for violation of U.S. Federal securities laws because these laws have no extra jurisdictional effect under Bermuda law and do not have force of law in Bermuda. A Bermuda court may, however, impose civil liability on us or our directors and officers if the facts alleged in a complaint constitute or give rise to a cause of action under Bermuda law.

### Taxation Risks

Changes in our effective income tax rate could affect our results of operations.

Our effective income tax rate could be adversely affected in the future by net income being lower than anticipated in jurisdictions where we have a relatively lower statutory tax rate and net income being higher than anticipated in jurisdictions where we have a relatively higher statutory tax rate, or by changes in corporate tax rates and tax regulations in any of the jurisdictions in which we operate. We are subject to regular audit by tax authorities in the various jurisdictions in which we operate. Any adverse outcome of such an audit could have an adverse effect on our net income, effective income tax rate and financial condition.

In addition, the determination of our provisions for income taxes requires significant judgment, and the ultimate tax determination related to some tax positions taken is uncertain. Although we believe our provisions are reasonable, the ultimate tax outcome may differ from the amounts recorded in our consolidated financial statements and may materially affect our net income and effective income tax rate in the period such determination is made.

If our non-U.S. operations become subject to U.S. income taxation, our net income will decrease.

We believe that we and our non-U.S. subsidiaries, other than certain business sourced by Partner Reinsurance Europe SE (PartnerRe Europe) and PartnerRe Ireland dac (PartnerRe Ireland) through the U.S., and a foreign reinsurance entity that has elected under I.R.C Section 953(d) to be treated as a domestic corporation (953(d) electing reinsurer), have operated, and will continue to operate, our respective businesses in a manner that will not cause us to be viewed as engaged in a trade or business in the U.S. and, on this basis, we do not expect that either we or our non-U.S. subsidiaries (other than PartnerRe Europe, PartnerRe Ireland, and the 953(d) electing reinsurer) will be required to pay U.S. corporate income taxes (other than potential withholding taxes on certain types of U.S. source passive income) or branch profits taxes. Because there is considerable uncertainty as to the activities that constitute being engaged in a trade or business within the U.S., the IRS may contend that either we or our non-U.S. subsidiaries are engaged in a trade or business in the U.S. In addition, legislation regarding the scope of non-U.S. entities and operations subject to U.S. income tax has been proposed in the past, and may be proposed again in the future. If either we or our non-U.S. subsidiaries are subject to U.S. income tax, our net income and shareholders' equity will be reduced by the amount of such taxes, which might be material.

The Organization for Economic Co-operation and Development's (OECD) initiative to limit harmful tax competition may result in higher taxation and increased complexity, burden and cost of compliance.

The OECD has published reports and launched a global initiative among member and non-member countries on measures to limit harmful tax competition, known as the Base Erosion and Profit Shifting (BEPS) project. On June 21, 2016, the EU's ministers of Finance and Economic Affairs unanimously approved the Anti-Tax Avoidance Directive to harmonize potential BEPS changes in the EU. These measures are largely directed at counteracting the effects of tax havens and preferential tax regimes in countries around the world. We expect that countries may change their tax laws in response to this project, and several countries have already changed or proposed changes to their tax laws. Changes to tax laws and additional reporting requirements could increase the complexity, burden and cost of doing business with our Bermuda companies and/or subject our Bermuda companies to increased tax and compliance burdens.

Our tax position could be adversely impacted by changes in tax laws, tax treaties or tax regulations or the interpretation or enforcement thereof.

We could be adversely impacted by changes in tax laws, tax treaties or tax regulations or the interpretation or enforcement thereof by taxation authorities. Changes could have a material and adverse change in our worldwide effective tax rate and we may have to take further action to seek to mitigate the effect of such changes. Any future amendments to existing income tax treaties between the jurisdictions in which we operate, could subject us to increased taxation and/or potentially significant expense.

Table of Contents

## ITEM 4. INFORMATION ON THE COMPANY

## A. History and Development of the Company

PartnerRe Ltd., an exempt company incorporated under the laws of Bermuda in 1993 with limited liability, is the holding company for our international reinsurance group (PartnerRe group). The principal office is located at 90 Pitts Bay Road, Pembroke, Bermuda (telephone number: +1 441-292-0888). The Company predominantly provides reinsurance on a worldwide basis through its principal wholly-owned subsidiaries, including Partner Reinsurance Company Ltd. (PartnerRe Bermuda), Partner Reinsurance Europe SE (PartnerRe Europe), Partner Reinsurance Company of the U.S. (PartnerRe U.S.) and Partner Reinsurance Asia Pte. Ltd. (PartnerRe Asia). The Company's principal office in the U.S. is located at 200 First Stamford Place, Stamford, Connecticut (telephone number: +1 203-485-4200).

The Company maintains an internet site at [www.partnerre.com](http://www.partnerre.com) that contains the Company's Annual Reports on Form 20-F filed with the U.S. Securities and Exchange Commission (SEC) and Current Reports on Form 6-K furnished with the SEC. These Reports are also available on the internet site maintained by the SEC at [www.sec.gov](http://www.sec.gov).

The Company completed the acquisition of Societe Anonyme Francaise de Reassurances (SAFR, subsequently renamed PartnerRe SA) in 1997, the acquisition of Winterthur Re in 1998, the acquisition of PARIS RE Holdings Limited (Paris Re) in 2009, the acquisition of Presidio Reinsurance Group, Inc. (Presidio) in 2012, and the acquisition of Aurigen Capital Limited (Aurigen) in 2017. The acquisition of Aurigen, a North American life reinsurance company, was completed on April 3, 2017 by purchasing 100% of the outstanding ordinary shares for CAD 370 million (or approximately \$278 million), and has enabled the Company to expand its life reinsurance footprint in Canada and the U.S. with limited overlap in market coverage.

On March 18, 2016, following receipt of regulatory approvals, the Company's publicly held common shares were acquired by Exor N.V., a subsidiary of EXOR S.p.A., one of Europe's leading investment companies controlled by the Agnelli family. In October 2016, Exor N.V. changed its name to EXOR Nederland N.V. In December 2016, EXOR S.p.A. merged with and into EXOR HOLDING N.V., a newly formed entity organized in the Netherlands and, in conjunction with the merger, EXOR HOLDING N.V. changed its name to EXOR N.V. EXOR N.V. is listed on the Milan Stock Exchange. As a result of the acquisition, PartnerRe's publicly issued common shares were cancelled and are no longer traded on the NYSE. The Company's preferred shares continue to be traded on the NYSE.

At December 31, 2018 and 2017, the Company's Class A shares owned by EXOR Nederland N.V. are included in Shareholders' Equity in the Consolidated Balance Sheets. In 2017 and 2018, the Company also issued Class B shares to certain executives of the Company which are included in Accounts payable, accrued expenses and other in the Consolidated Balance Sheets (see Share Ownership section in Item 6 and Note 14 to the Consolidated Financial Statements in Item 18 of this report for further details).

## B. Business Overview

The Company provides reinsurance for its clients globally. The Company's principal offices are located in Hamilton (Bermuda), Dublin, Stamford (Connecticut, U.S.), Toronto, Paris, Singapore and Zurich.

The Company provides reinsurance of risks to ceding companies (cedants or reinsureds). Risks reinsured include, but are not limited to, agriculture, aviation/space, casualty, catastrophe, energy, engineering, financial risks, marine, motor, multiline and property as well as mortality, longevity, and accident and health and alternative risk products. The Company's alternative risk products include weather and credit protection to financial, industrial and service companies on a worldwide basis.

Reinsurance is offered on either a proportional or non-proportional basis through treaties or facultative reinsurance: In a proportional (or quota share) treaty reinsurance agreement, the reinsurer assumes a proportional share of the original premiums and losses incurred by the cedant. The reinsurer pays the ceding company a commission, which is generally based on the ceding company's cost of acquiring the business being reinsured (including commissions, premium taxes, assessments and miscellaneous administrative expenses) and may also include a profit.

In a non-proportional (or excess of loss) treaty reinsurance agreement the reinsurer indemnifies the reinsured against all or a specified portion of losses on underlying insurance policies in excess of a specified amount, which is called a retention or attachment point. Non-proportional business is written in layers and a reinsurer or group of reinsurers

accepts a band of coverage up to a specified amount. The total coverage purchased by the cedant is referred to as a program and is typically placed with predetermined reinsurers in pre-negotiated layers. Any liability exceeding the upper limit of the program reverts to the ceding company.

Table of Contents

In a facultative (proportional or non-proportional) reinsurance agreement the reinsurer assumes individual risks. The reinsurer separately rates and underwrites each risk rather than assuming all or a portion of a class of risks, as in the case of treaty reinsurance.

The majority of the Company's gross premiums written were written on a proportional basis for each of the years ended December 31, 2018, 2017 and 2016.

The Company monitors the performance of its operations in three worldwide business units comprised of Property & Casualty (P&C), Specialty, and Life and Health, which represent its segments. Effective July 1, 2018, the Company realigned its Life and Health and P&C segments, to reflect the reallocation of the executive responsibilities for U.S. health business to the P&C segment. Following this realignment, the P&C segment is comprised of property and casualty business, including U.S. health business. The P&C segment includes worldwide property catastrophe and facultative risks. U.S. health business comprises reinsurance coverage to primary life insurers with respect to individual and group health risks, including specialty accident and health business such as Health Maintenance Organizations (HMO) reinsurance, medical reinsurance and provider and employer excess of loss programs. The Company's Life and Health segment includes mortality, morbidity, and longevity business. The Specialty segment is comprised of specialty business, including treaty and facultative contracts. The combined business included in the P&C and Specialty segments is collectively referred to in this report as Non-life business.

See Results by Segment in Item 5 of this report and Note 19 to the Consolidated Financial Statements in Item 18 of this report for further details on Segments.

**Premium Distribution**

The Company's businesses are geographically diversified with premiums written on a worldwide basis. The Company's gross premiums written by segment for the years ended December 31, 2018, 2017 and 2016 are as follows (in millions of U.S. dollars):

	2018		2017 <sup>(1)</sup>		2016 <sup>(1)</sup>	
	\$	%	\$	%	\$	%
Non-life business:						
P&C segment	\$3,015	48 %	\$2,671	48 %	\$2,633	49 %
Specialty segment	2,050	32	1,934	34	1,920	36
Total Non-life business	\$5,065	80 %	\$4,605	82 %	\$4,553	85 %
Life and Health segment	1,235	20	983	18	804	15
	\$6,300	100 %	\$5,588	100 %	\$5,357	100 %

(1) Gross premiums written for U.S. health business for 2018 has been included in the P&C segment and the impacted 2017 and 2016 comparatives have been reclassified from the Life and Health to the P&C segment to conform to current presentation as a result of the reallocation of executive responsibilities referred to above.

See Operating Results—Results by Segment in Item 5 and Note 19 to the Consolidated Financial Statements in Item 18 of this report for results by segment.

**Distribution Channels**

The Company generates business through brokers and through direct relationships with insurance companies. For the years ended December 31, 2018, 2017 and 2016, the Company had two brokers that individually accounted for 10% or more of the Company's total gross premiums written. Each of these two brokers individually accounted for 22% of the Company's total gross premiums written for 2018 (see Note 19 to the Consolidated Financial Statements in Item 18 of this report for further details). No one cedant accounted for more than 10% of the Company's total gross premiums written.

The gross premiums written in each of the Company's segments for the years ended December 31, 2018, 2017 and 2016, and the year-over-year comparisons, are described in Operating Results—Results by Segment in Item 5 of this report.

See Note 19 to the Consolidated Financial Statements in Item 18 of this report for the geographic distribution of the Company's total gross premiums written for the years ended December 31, 2018, 2017 and 2016.

**Competition**



The Company competes with other reinsurers, some of which have greater financial, marketing and management resources than the Company, and also competes with new market entrants, and, specifically in the catastrophe line of business, with alternative capital sources and insurance-linked securities. Competition in the types of reinsurance that the Company underwrites is based on

18

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## Table of Contents

many factors, including the perceived and relative financial strength, pricing and other terms and conditions, services provided, ratings assigned by independent rating agencies, speed of claims payment, and reputation and experience in the lines of business to be written.

Management believes the Company ranks among the world's largest professional reinsurers and is well positioned in terms of client services and highly technical underwriting expertise. Management also believes that the Company's global franchise and diversified platform allows the Company to provide broad risk solutions across many lines of business and geographies, and is increasingly attractive to cedants who are choosing to utilize fewer reinsurers by consolidating their reinsurance panels and focusing on those reinsurers who can cover more than one line of business. Furthermore, the Company's capitalization and strong financial ratios allow the Company to demonstrate a solid balance sheet to its clients.

Management believes that the Company's major competitors for the Company's Non-life business are the larger European, U.S. and Bermuda-based international reinsurance companies, as well as specialty reinsurers and regional companies in certain local markets. These competitors include Munich Re, Swiss Re, Hannover Re, SCOR SE, Transatlantic, GenRe, Everest Re, and RenRe.

For the Company's Life business, the competition differs by location but generally includes multi-national reinsurers and local reinsurers or state-owned insurers in the U.K., Ireland and Continental Europe for its mortality and longevity lines of business. The competition specifically related to the Health business generally includes departments of worldwide reinsurance companies. These competitors include Munich Re, RGA, Swiss Re, Hannover Re, SCOR SE and GenRe.

### Risk Management

In the reinsurance industry, the core of the business model is the assumption and management of risk. A key challenge is to create shareholder value through the intelligent and optimal assumption and management of reinsurance and investment risks while limiting and mitigating those risks that can destroy value, those risks for which the organization is not sufficiently compensated, and those risks that could threaten the ability of the Company to achieve its objectives. The Company defines a capital-based risk appetite and then looks for risks that meet its return targets within that framework. Management believes that this construct allows the Company to deliver to shareholders an adequate risk adjusted return, while ensuring appropriate margins exist to pay policyholders' claims.

Successful risk management is the foundation of the Company's value proposition. The Company's ability to succeed in risk assumption and business management is dependent on its ability to accurately analyze and quantify risk, to understand volatility and how risks aggregate or correlate, and to establish the appropriate capital requirements and limits for the risks assumed. All risks, whether they are reinsurance-related risks or capital market risks, are managed by the Company within an integrated framework of policies and processes to ensure the intelligent and consistent evaluation and valuation of risk, and to ultimately provide an appropriate return to shareholders.

The Company's results are primarily determined by how well the Company understands, prices and manages assumed risk. Management also believes that every organization faces numerous risks that could threaten the successful achievement of its goals and objectives. These include strategic, financial and operational risks that are common to all industries, such as choice of strategy and markets, economic and business cycles, competition, changes in regulation, data quality and security, fraud, business disruption and management continuity. See also Risk Factors above.

The Enterprise Risk Management (ERM) Framework sets forth a cycle that fosters continuous review of the Company's risk profile with tools and processes to effectively manage the Company's risks. The ERM cycle consists of the following components:

**Risk Governance and Risk Culture:** The Company's risk oversight structure and values for managing risks across the organization.

**Risk Strategy:** The Company's effective risk management process to identify and assess risks in order to determine the Company's appropriate risk appetite and tolerance limits to support the Company's business objectives.

**Risk Reporting:** The Company's risk management information reporting process aims to maintain management awareness of top risk exposures and changes in risk profile.

**Risk Governance and Risk Culture**

The Company has a clearly defined governance structure for risk management and the Company's risk culture emphasizes risk ownership throughout levels of the organization. The objective of the approach is to increase transparency over the roles and responsibilities that warrants clear risk ownership.

## Table of Contents

The Company has established an Enterprise Risk Committee (ERC) which, in conjunction with the Board, are responsible for setting the Company's risk appetite and return expectations. The ERC consists of the Executive Leadership Team, in addition to the Head of Capital & Risk, the Chief Legal Counsel and the Chief Audit Officer. The ERC provides oversight through the quarterly monitoring of the Risk Tolerance including the review of the Tier 1 and 2 risk exposures (which are described below) in comparison to the risk appetite as well as the periodic review of the capital model and capital allocation, modelling techniques and internal audit results.

The Company's risk framework, including key risk policies, is recommended by Executive Management through the ERC and approved by the Board. Each of the Company's risk policies relates to a specific risk and describes the Company's approach to risk management, defines roles and responsibilities relating to the assumption, mitigation, and control processes for that risk, and an escalation process for exceptions. Risk management policies and processes are coordinated by the Capital & Risk department and compliance is verified by Internal Audit on a periodic basis. The audit results are monitored by the Audit Committee of the Board.

The Company utilizes a multi-level risk management structure where the Executive Management and Board are responsible for the establishment of the critical exposure limits, capital at risk and key policies. The Business Units (BUs) are responsible for the execution of business activities and related risk mitigation strategies. These activities are represented in risk control practices embedded in the BUs which support the high level policies. Reporting on risk management activities is integrated within the Company's annual planning process, quarterly operations reports, periodic reports on exposures and large losses, and presentations to the Executive Management and Board. The BUs are responsible for these activities and Internal Audit periodically evaluates the effectiveness of the risk control procedures.

### Risk Strategy

The Company performs a risk assessment that is used to identify and assess the Company's key risks. This risk assessment uses the Risk Universe as the structure for the classification of its key risks to be assessed in order to determine the Company's risk profile and the appropriateness of its risk strategy. Additionally, the assessment is strengthened by the performance of risk stresses and scenarios in line with the Company's Stress Testing Framework. The Risk Strategy is further developed through the Risk Appetite and Risk Tolerance Framework which is used to define risk limits.

### Risk Strategy: Risk Universe

The Company structures its risks within a Risk Universe which is comprised of the following risk categories: Strategic, Reinsurance, Financial Market and Credit, Operational, Emerging and Reputational.

### Strategic Risk

Strategic risk is the risk of inadequate decision-making, poor execution of the Company's strategic objectives and the risk of a misalignment between the Company's existing strategy and the external environment that could threaten the competitive position and the ability to ensure ongoing profitability and viability.

Strategic risks are discussed and agreed to between the CEO and the Board, and managed by the CEO, and include the direction and governance of the Company, as well as its response to key external factors faced by the reinsurance industry, such as changes in cedants' risk retention behavior, regulation, competitive structure, and macroeconomic, legal and social trends.

### Reinsurance Risk

The Company's underwriting is conducted at the Business Unit level through specialized underwriting teams with the support of technical staff in disciplines such as actuarial, claims, legal, risk management and finance.

The Company's underwriters develop close working relationships with their ceding company counterparts and brokers through regular visits, gathering detailed information about the cedant's business and local market conditions and practices. As part of the underwriting process, the underwriters also focus on the reputation and quality of the proposed cedant, the likelihood of establishing a long-term relationship with the cedant, the geographic area in which the cedant does business and the cedant's market share, historical loss data for the cedant and, where available, historical loss data for the industry as a whole in the relevant regions, in order to compare the cedant's historical loss experience to industry averages, and to gauge the perceived insurance and reinsurance expertise and financial strength of the cedant. The Company trains its underwriters and strives to maintain continuity of underwriters within specific

geographic markets and areas of specialty.

The Company generally underwrites risks with specified limits per treaty program or facultative contract. Like other reinsurance companies, the Company is exposed to multiple insured losses arising out of a single occurrence, whether a natural event such as hurricane, windstorm, tornado, flood or earthquake, or man-made events. Any such catastrophic event could

20

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## Table of Contents

generate insured losses in one or many of the Company's reinsurance treaties and facultative contracts and in one or more lines of business. The Company considers such event scenarios as part of its evaluation and monitoring of its aggregate exposures to catastrophic events.

### Financial Market and Credit Risk

Financial market risk is defined as the risk of a significant financial loss resulting from changes in financial market prices or rates, such as equity prices, interest rates, credit spreads, foreign exchange rates or real estate prices.

Financial market risk typically originates from investment activities, underwriting activities for certain product segments, and from the sensitivity of the economic value of liabilities to financial market movements. Credit risk is defined as the risk of a significant financial loss due to default or downgrade of a counterparty. The Company is exposed to credit risk through investment activities, structured transactions, retrocession as well as GMDB, mortgage, credit and surety (included in financial risks) underwriting.

Financial market and credit risk management follows both top-down and bottom-up approaches. The top-down approach begins with the Group Risk Tolerance Framework. The framework dictates an overarching Group risk limit with sub-limits for important quantifiable risk pillars including investment risks and other financial risks.

Additionally, it limits downside economic risk resulting from deterministic cross-risk pillar severe stress scenarios (e.g., financial crisis or inflation spike scenarios) before being further delineated and extended to policies and operating guidelines at all levels of the Company. At the same time, investments operating guidelines, supporting the Group Risk Tolerance Framework, follow a bottom-up approach; guidelines are constructed for each investments portfolio then for each legal entity up to the Group level in a consistent manner. These guidelines contain comprehensive specifications and limits that span credit quality, duration, liquidity, liability coverage and concentration (geographic, asset sub-class, single exposure, sector, etc.) among other considerations.

The Company utilizes external and internal tools to quantify financial market and credit risks. In addition to regularly assessing portfolio sensitivities to predetermined changes in market factors (e.g., interest rates and credit spreads), the Company has developed internally several single-year and multi-year scenarios with the goal of quantifying the impact of severe macroeconomic events (e.g., real estate crisis, financial crisis and inflation/interest rate spike) on invested assets, economically sensitive reinsurance business (e.g., mortgage, credit & surety, GMDB, etc.) and inflation sensitive reserves. These scenarios are then often augmented by reinsurance shocks (e.g., Natural Catastrophe event) to assess the impact on the Company's liquidity and/or solvency.

Furthermore, Risk Management employs an external real-world Economic Scenario Generator tool to regularly quantify and monitor the evolution of total return distributions by asset classes, subclass and by risk type (e.g., interest rate risk, equity risk, private equity, spread risk including default and migration risks, currency risk and real estate risk).

Additionally, duration risk is monitored to ensure that the duration of liabilities is perfectly matched with the duration of high quality, high liquid fixed income assets and that duration risk is only assumed through fixed income that is in excess of the liabilities (limited by the guidelines discussed above).

Lastly, currency risk is monitored and hedged through foreign exchange forward contracts by the Treasury team whenever deemed necessary and appropriate.

See Quantitative and Qualitative Disclosures about Market Risk in Item 11 and Note 6 to the Consolidated Financial Statements in Item 18 of this report for further details.

### Operational Risks

Operational risks are inherent to conducting business and represent a potential for a financial loss or reputational impact as a result of operational failures caused by people, processes, systems and external events. These failures, due to weaknesses in financial reporting and controls, include but are not limited to, poor cash management, disaster recovery planning, and reliance on third party vendors. The Company seeks to minimize these risks through robust processes and monitoring throughout the organization.

### Emerging Risk

Emerging risks are new risks or previously known risks that are evolving in unexpected ways with unanticipated consequences. They are monitored and managed through a cross-functional Emerging Risk Committee which is tasked to evaluate and prioritize these risks based on the likelihood of occurrence and the potential impact on the

Company.

Reputational Risk

Management considers that strong governance procedures, including a robust system of processes and internal controls, are appropriate to manage risks related to its reputation and risks related to new initiatives, including acquisitions, new products or markets. The Company seeks to preserve its reputation through high professional and ethical standards and manages the impact of identified risks through the adoption and implementation of a sound and comprehensive assumed risk framework.

21

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Table of Contents

Risk Strategy: Risk Appetite and Risk Tolerance Framework

Risk Appetite

Risk appetite is an integral part of an effective risk management system that defines the overall level of risk the Company is prepared to accept in pursuit of its strategic objectives, and which is managed through a robust Risk Tolerance Framework of risk limits. Executive Management regularly reviews the Company's deployment and may decide to adjust the amount of capacity deployed for each risk driver (within the established risk tolerance) based on strategic considerations and changes in market conditions.

Risk Tolerance Framework

The Company's risk tolerance is expressed as the maximum economic loss that the Company is willing to incur based on various modeled probability return periods. To mitigate the chance of economic losses exceeding the risk tolerance, the Company relies upon diversification of risk sources and risk limits to manage exposures. Diversification enables losses from one risk source to be offset by profits from other risk sources so that the chance of overall losses exceeding the Company's risk tolerance is reduced.

The Company's risk tolerance is approved by the Board and is expected to remain stable. Any changes to the risk tolerance are to be approved by the Board. Definitions for the maximum economic loss and available economic capital are as follows:

**Economic Loss.** The Company defines an economic loss as a decrease in the Company's economic value, which is defined as common shareholder's equity plus the "time value of money" discount of the non-life reserves that is not recognized in the consolidated financial statements in accordance with U.S. GAAP, net of tax, plus the embedded value of the Life portfolio that is not recognized in the consolidated financial statements in accordance with U.S. GAAP, net of tax, less goodwill and intangible assets, net of tax.

**Available Economic Capital.** The Company defines economic capital as the economic value, as defined above, plus preferred shareholders' equity and the carrying value of debt recognized in the consolidated financial statements in accordance with U.S. GAAP.

**The Maximum Economic Loss.** The maximum economic loss is a loss expressed as a percentage of economic capital under various modeled probability return periods.

The Company establishes key risk limits net of any reinsurance/retrocession for any risk source deemed by Management to have the potential to cause economic losses greater than the Company's risk tolerance. The Risk Tolerance Framework is approved by the Board in order to drive consistency in the application of the following Company limits: Overall Group Risk Tolerance, Reinsurance Operations, Financial Assets and Reinsurance Risk Tiers, each of which are described as follows:

**Overall Group Risk Tolerance.** The overall group risk tolerance limit is 35% of the loss of available economic capital based on the internal model 1-in-100 Value at Risk. Additionally, this limit is also monitored through a number of stress scenarios which impact both asset and liabilities of the balance sheet.

**Reinsurance Operations.** This risk category includes reinsurance risks and standard fixed income portfolio.

**Financial assets.** Financial assets is defined as invested assets that can neither be considered as Standard Fixed Income (cash, cash equivalents and publicly-traded investment grade fixed income) or as Insurance Linked Securities (e.g., catastrophe bonds, where the risk is captured on the liabilities side). The Company limits, through self-imposed Group Investments Operating Guidelines, its aggregate exposure to financial asset classes and sub-classes. These include, but are not limited to, public equity, hedge funds, private equity, real estate, strategic ventures, commodities and alternative fixed income.

**Reinsurance Risk Tiers.** The risk tiers consist of a classification of risk drivers which consider the following criteria:

Materiality

Risk driver expertise, and

Potential for superior risk-adjusted return over the cycle.

The three risk tiers are described as follows:

Tier 1 Risks

Tier 1 risks consist of risk drivers which meet all three criteria of the Risk Tolerance Framework: materiality, risk driver expertise and potential for superior risk-adjusted return over the cycle. Additionally, the risk tolerance limit for



this risk tier is

22

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Table of Contents

20% of available capital (annually defined) based on either the internal model 1-in-100 Value at Risk or a 1-in-100 scenario. The following are Tier 1 Risks:

**Natural Catastrophe Risk**

The risk that the aggregate losses from natural perils materially exceed the net premiums that are received to cover such risks. The Company considers both catastrophe losses due to a single large event and catastrophe losses that would occur from multiple (but potentially smaller) events in any year.

**Longevity Risk**

The potential risk of increased actual and future expected annuity payments resulting from annuitants living longer than expected, or the expectation that annuitants will live longer in the future.

**Pandemic Risk**

The risk of increase in mortality over an annual period associated with a rapidly spreading virus (either within a highly populated geographic area or on a global basis) with a high mortality rate.

**Casualty Risk**

The risk that the estimates of ultimate losses for casualty will prove to be too low, leading to the need for substantial reserve strengthening.

**Standard Fixed Income Credit Risk**

The risk of an increased probability of defaults in the Company's standard fixed income credit securities (which includes investment grade corporate bonds and asset-backed securities).

Management monitors Tier 1 Risks on a periodic basis. The approved limits and the actual limits deployed at December 31, 2018 and 2017 were as follows (in billions of U.S. dollars):

Tier 1 Risks	December 31, 2018		December 31, 2017	
	Approved limit (1)	Actual deployed(1)	Approved limit(1)	Actual deployed(1)
Natural Catastrophe Risk	\$ 1.7	\$ 0.8	\$ 1.6	\$ 0.8
Longevity Risk <sup>(2)</sup>	\$ 1.7	\$ 0.8	\$ 1.6	\$ 0.9
Pandemic Risk	\$ 1.7	\$ 0.4	\$ 1.6	\$ 0.4
Casualty Risk	\$ 1.7	\$ 0.7	\$ 1.6	\$ 0.7
Standard Fixed Income Credit	\$ 1.7	\$ 0.7	\$ 1.6	\$ 0.8

(1) The limits approved and the actual limits deployed in the table above are shown net of retrocession.

(2) The longevity risk duration for modelling purposes extends to the full run-off rather than one year.

**Tier 2 Risks**

Tier 2 risks consist of risks drivers which meet two of the three Risk Tolerance Framework criteria. Tier 2 risks are monitored by the ERC. The risk tolerance limit for Tier 2 is 10% of the available capital based on either the internal model 1-in-100 Value at Risk or a 1-in-100 scenario. The following are Tier 2 Risks:

**Mortgage Risk**

The risk that losses from mortgage reinsurance materially exceed the net premiums that are received to cover such risks, which may result in operating and economic losses to the Company.

**Credit and Surety Risk**

The risk that aggregated trade credit losses materially exceed the net premiums that are received to cover such risks, which may result in operating and economic losses to the Company.

**Tier 3 Risks**

All other underwriting risks are considered as Tier 3 Risks with a risk tolerance limit of US\$250 million. These risks are monitored by the Chief Underwriting Officer and corresponding BU.

Table of Contents

## Risk Reporting

The Company diligently monitors risks that could adversely impact operating and economic results. The integrated risk reporting suite provides Management with key risk exposure analysis in order to monitor the Company's risk tolerance limits and risk profile.

## Natural Catastrophe PML

The following discussion of the Company's natural catastrophe PML information contains forward-looking statements based upon assumptions and expectations concerning the potential effect of future events that are subject to uncertainties. See Item 3D of Part I of this report for a list of the Company's risk factors. Any of these risk factors could result in actual losses that are materially different from the Company's PML estimates below.

Natural catastrophe risk is a source of significant aggregate exposure for the Company and is managed by setting risk tolerance and limits, as discussed above. Natural catastrophe perils can impact geographic regions of varying size and can have economic repercussions beyond the geographic region directly impacted.

The Company considers a peril zone to be an area within a geographic region, continent or country in which losses from insurance exposures are likely to be highly correlated to a single catastrophic event. The Company defines peril zones to capture the vast majority of exposures likely to be incorporated by typical modeled events. There is, however, no industry standard and the Company's definitions of peril zones may differ from those of other parties.

The Company has exposures in other peril zones that can potentially generate losses greater than the PML estimates below. The Company's PMLs represent an estimate of loss for a single event for a given return period. The table below discloses the Company's 1-in-250 and 1-in-500 year return period estimated loss for a single occurrence of a natural catastrophe event in a one-year period. In other words, the 1-in-250 and 1-in-500 year return period PMLs mean that there is a 0.4% and 0.2% chance, respectively, in any given year that an occurrence of a natural catastrophe in a specific peril zone will lead to losses exceeding the stated estimate.

The PML estimates below include all significant exposure from our Non-life and Life and Health business operations. This includes coverage for property, marine, energy, engineering, workers' compensation, mortality, and exposure to catastrophe losses from insurance-linked securities. The PML estimates do not include casualty coverage that could be exposed as a result of a catastrophic event. In addition, they do not include estimates for contingent losses to insureds that are not directly impacted by the event (e.g. loss of earnings due to disruption in supply lines).

The Company's single occurrence estimated net PML exposures (net of retrocession and reinstatement premiums) of the top ten natural catastrophe perils as at December 31, 2018 and 2017 were as follows (in millions of U.S. dollars):

Zone	Peril	December 31, 2018		December 31, 2017	
		1-in-250 year PML	1-in-500 year PML	1-in-250 year PML	1-in-500 year PML
		(Earthquake perils only)		(Earthquake perils only)	
U.S. Northeast	Hurricane	\$630		\$573	
U.S. Gulf Coast	Hurricane	586		586	
U.S. Southeast	Hurricane	520		556	
Caribbean	Hurricane	186		175	
Europe	Windstorm	371		403	
Japan	Typhoon	190		209	
California	Earthquake	515	\$ 760	512	\$ 640
Japan	Earthquake	260	290	330	368
Australia	Earthquake	215	270	152	222
British Columbia	Earthquake	163	311	143	306
New Zealand	Earthquake	154	225	140	201

Table of Contents

## Risk Mitigation

## Retrocessional Reinsurance

The Company uses retrocessional reinsurance agreements to reduce its exposure on certain reinsurance risks assumed and to mitigate the effect of any single major event or the frequency of medium-sized events. These agreements provide for the recovery of a portion of losses and loss expenses from retrocessionaires. The majority of the Company's retrocessional reinsurance agreements cover property and specialty lines (e.g. aviation, marine, mortgage and certain financial risks included in the credit/surety line) exposures, predominantly those that are catastrophe exposed. The Company also utilizes retrocessions in the Life and Health segment to manage the amount of per-event and per-life risks to which it is exposed. Retrocessionaires must be pre-approved based on their financial condition and business practices, with stability, solvency and credit ratings considered to be important criteria. Strict limits per retrocessionaire are also put into place and monitored to mitigate counterparty credit risk.

The Company remains liable to its cedants to the extent that the retrocessionaires do not meet their obligations under retrocessional agreements, and therefore retrocessions are subject to credit risk in all cases and to aggregate loss limits in certain cases. The Company holds collateral, including escrow funds, trusts, securities and letters of credit under certain retrocessional agreements. Provisions are made for amounts considered potentially uncollectible and reinsurance losses recoverable from retrocessionaires are reported after allowances for uncollectible amounts.

## Regulation

The business of reinsurance is regulated in all countries in which we operate, although the degree and type of regulation varies significantly from one jurisdiction to another. The laws and regulations of the jurisdictions in which our reinsurance subsidiaries are domiciled impose complex regulatory requirements such as maintenance of minimum levels of statutory capital, surplus, and liquidity; various solvency standards; and periodic examinations of subsidiaries' financial condition. See Risk Factors—Legal and Regulatory Risks in Item 3 of this report.

Bermuda has been deemed Solvency II equivalent under the European Union's (EU) Solvency II Directive, effective January 1, 2016. Bermuda has been granted equivalence for an unlimited period for all three relevant equivalence areas: Articles 172, 227 and 260, with the exception of rules on captives and special purpose insurers, which are subject to a different regulatory regime in Bermuda. This determination has resulted in Bermuda-based reinsurers being exempt from the requirement to post collateral in the EU and allows reinsurance contracts concluded with undertakings having their head office in Bermuda to be treated in the same manner as reinsurance contracts concluded with undertakings authorized in accordance with the Directive (Article 172); EU insurance groups can conduct their EU prudential reporting for a subsidiary in Bermuda under local rules instead of Solvency II if deduction and aggregation is allowed as the method of consolidation of group accounts (Article 227); and Bermuda insurance groups which are active in the EU are exempt from some aspects of group supervision in the EU as Member States will rely on the equivalent supervision exercised by the Bermuda Monetary Authority (BMA) (Article 260).

One of the key concepts of Solvency II is the principal of one "home" regulator over all the operating entities in a particular insurance or reinsurance group (referred to as Group Supervision). The Insurance Act 1978 of Bermuda and related regulations, as amended (the Insurance Act) sets out provisions regarding Group Supervision, including the power of the BMA to include or exclude specified entities from Group Supervision, the power of the BMA to withdraw as group supervisor, the functions of the BMA as Group supervisor and the power of the BMA to make rules regarding Group Supervision for, amongst other things (1) assessing the financial situation and the solvency position of the insurance group and/or its members and (2) regulating intra-group transactions, risk concentration, governance procedures, risk management and regulatory reporting and disclosure. In addition to being tasked with assessing the financial condition of the Company and its subsidiaries, the BMA has the power to impose restrictions on the ability of the Company's subsidiaries to declare dividends to the Company, and the ability of the Company to pay dividends to shareholders. This Group Supervision regime is in addition to the regulation of the Company's various operating subsidiaries in their local jurisdictions. The BMA's Group Supervision rules set out the rules in respect of the assessment of the financial situation and solvency of an insurance group, the system of governance and risk management, and supervisory reporting and disclosures of an insurance group. The Group solvency rules set out the rules in respect of the capital and solvency return and enhanced capital requirements for an insurance group. PartnerRe Bermuda is the designated insurer for the purposes of Group Supervision, and the BMA currently acts as

Group supervisor of the Company and its subsidiaries. As Group supervisor, the BMA will perform a number of supervisory functions including (1) coordinating the gathering and dissemination of information which is of importance for the supervisory task of other competent authorities; (2) carrying out a supervisory review and assessment of the Group; (3) carrying out an assessment of the Group's compliance with the rules on solvency, risk concentration, intra-group transactions and good governance procedures; (4) planning and coordinating, with other competent authorities, supervisory activities in respect of the Group, both as a going concern and in emergency situations; (5) taking into account the nature, scale and complexity of the risks inherent in the business of all companies that are part of the Group; (6) coordinating any enforcement action

Table of Contents

that may need to be taken against the Group or any of its members and (7) planning and coordinating meetings of colleges of supervisors (consisting of insurance regulators) in order to facilitate the carrying out of the functions described above.

PartnerRe Ltd. is not a registered insurer; however, pursuant to its functions as Group supervisor, the BMA includes the Company and may include any member of the group within its Group Supervision.

Significant aspects of the Bermuda insurance regulatory framework and requirements imposed on Insurance and Reinsurance Groups include the solvency assessment. The Company must annually perform an assessment of its own risk and solvency requirements, referred to as a Group's Solvency Self Assessment (GSSA). The GSSA allows the BMA to obtain an insurance group's view of the capital resources required to achieve its business objectives and to assess a group's governance, risk management and controls surrounding this process. In addition, the Company must file with the BMA a Catastrophe Risk Return which assesses an insurer's reliance on vendor models in assessing catastrophe exposure.

Since January 1, 2014, the BMA imposes the Enhanced Capital Requirement (ECR) on the Company pursuant to its function as the Company's group supervisor. The PartnerRe group's ECR may be calculated by either (a) the standard model developed by the BMA known as the Bermuda Solvency Capital Requirement model (BSCR), or (b) an internal capital model which the BMA has approved for use for this purpose. The Company currently uses the BMA standard model in calculating its group ECR requirements. In addition, the Company is required to prepare and submit annual audited group U.S. GAAP financial statements, annual group statutory financial statements, annual group statutory financial return, annual group capital and solvency return and quarterly group unaudited financial returns.

The BSCR model is a risk-based capital model which provides a method for determining an insurer's capital requirements (statutory capital and surplus) by taking into account the risk characteristics of different aspects of the insurer's business. The BSCR formulae establishes, on a consolidated basis, capital requirements for eleven categories of risk: fixed income investment risk, equity investment risk, interest rate/liquidity risk, currency risk, concentration risk, premium risk, reserve risk, credit risk, catastrophe risk, long-term insurance risk and operational risk.

Pursuant to the Insurance (Public Disclosure) Rules 2015, the BMA requires commercial insurers and insurance groups to prepare and publish a Financial Condition Report (FCR). The FCR provides an overview of the company's financial condition including business performance, governance structure, risk profile, solvency valuation and capital management process. The FCR includes, among other disclosures, the respective company's required and available statutory capital. The FCR is required to be filed with the BMA annually and published on the PartnerRe website within fourteen days of filing with the BMA. The FCR must be signed off by the CEO and either the chief risk officer or chief financial officer (CFO) declaring the appropriateness of the information contained in the FCR.

#### Bermuda

The Insurance Act regulates the business of PartnerRe Bermuda. The Insurance Act imposes solvency and liquidity standards and auditing and reporting requirements on Bermuda insurance companies and grants the BMA powers to supervise, investigate and intervene in the affairs of Bermuda registered insurance companies. The Insurance Act makes no distinction between insurance and reinsurance business.

PartnerRe Bermuda is licensed as a Class 4 and Class E insurer in Bermuda and is therefore authorized to carry on general and long-term insurance business. Significant aspects of the Bermuda insurance regulatory framework and requirements imposed on Class 4 and Class E insurers such as PartnerRe Bermuda include the following:

**Minimum Solvency Margin and Enhanced Capital Requirements.** The Insurance Act provides that the value of the statutory assets of an insurer must exceed the value of its statutory liabilities by an amount greater than its prescribed minimum solvency margin (MSM). The MSM that must be maintained by PartnerRe Bermuda with respect to its general business is the greater of (i) \$100 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 its ECR as reported at the end of the relevant year. The MSM that must be maintained by PartnerRe Bermuda with respect to its long-term business is the greater of \$8 million or 2% of the first \$500 million of assets plus 1.5% of assets above \$500 million. Statutory assets are defined as the total assets reported

on an insurer's balance sheet in the relevant year less non-admitted assets, including goodwill and other intangible assets, not considered admissible for solvency purposes.

**Minimum Capital Requirements.** While not specifically referred to in the Insurance Act, the BMA has also established a Target Capital Level (TCL) equal to 120% of its ECR. While an 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 regulatory oversight.

Any applicable insurer which at any time fails to meet the MSM requirements must, upon becoming aware of such failure,

Table of Contents

immediately notify the BMA and, within 14 days thereafter, file a written report with the BMA describing the circumstances that gave rise to the failure and setting out its plan detailing specific actions to be taken and the expected time frame in which the company intends to rectify the failure.

Any applicable insurer which at any time fails to meet the ECR applicable to it will upon becoming aware of that failure, or of having reason to believe that such a failure has occurred, immediately notify the BMA in writing and, within 14 days of such notification, file with the BMA a written report containing particulars of the circumstances leading to the failure; and a plan detailing the manner, specific actions to be taken and time within which the insurer intends to rectify the failure and within 45 days of becoming aware of that failure, or of having reason to believe that such a failure has occurred, furnish the BMA with: (1) unaudited interim standard accounting principles financial statements covering such period as the BMA may require, (2) the opinion of a loss reserve specialist where applicable, (3) a general business solvency certificate in respect of the financial statements and unaudited statutory economic balance sheet prepared in accordance with GAAP, (4) a capital and solvency return reflecting an ECR prepared using post-failure data, where applicable, (5) a long-term business solvency certificate in respect of those statements, where applicable and (6) the opinion of an approved actuary, where applicable.

To enable the BMA to better assess the quality of the insurer's capital resources, applicable insurers are required to disclose the makeup of its capital in accordance with the "3-tiered capital system." Under this system, all of the insurer's capital instruments will be classified as either basic or ancillary capital which in turn will be classified into one of three tiers based on their "loss absorbency" characteristics. Highest quality capital will be classified as Tier 1 Capital, lesser quality capital will be classified as either Tier 2 Capital or Tier 3 Capital. Under this regime, up to certain specified percentages of Tier 1, Tier 2, and Tier 3 Capital may be used to support the insurer's MSM and ECR. The characteristics of the capital instruments that must be satisfied to qualify as Tier 1, Tier 2, and Tier 3 Capital are set out in the Insurance (Eligible Capital) Rules 2012, as amended. Under these rules, Tier 1, Tier 2, and Tier 3 Capital may, until January 1, 2026, include capital instruments that do not satisfy the requirement that the instrument be non-redeemable or settled only with the issuance of an instrument of equal or higher quality upon a breach, or if it would cause a breach, in the ECR.

While the BMA has previously approved the use of certain instruments for capital purposes, the BMA's consent will need to be obtained if such instruments are to remain eligible for use in satisfying the MSM and the ECR.

The BMA implemented an Economic Balance Sheet (EBS) framework which is used as the basis to determine the ECR for all commercial insurers, including PartnerRe Bermuda. The EBS framework applies prudential filters and other EBS valuation adjustments to an insurer's GAAP balance sheet to produce an economic valuation of the assets and liabilities of the insurer.

**Reporting Requirements.** PartnerRe Bermuda must prepare and submit, on an annual basis, both audited GAAP and statutory financial statements. The Insurance Act prescribes rules for the preparation and substance of statutory financial statements (which include, in statutory form, a balance sheet, income statement, a statement of capital and surplus, and notes thereto). The statutory financial statements include detailed information and analysis regarding premiums, claims, reinsurance and investments of the insurer.

Every insurer is also required to deliver to the BMA a declaration of compliance declaring whether or not that insurer has, with respect to the preceding financial year, (i) complied with the minimum criteria applicable to it, (ii) complied with its MSM and ECR as at its financial year-end, and (iii) where an insurer's license has been issued subject to limitations, restrictions or conditions, that the insurer has observed such limitations, restrictions or conditions. The declaration of compliance must be signed by two directors and filed at the same time the insurer submits its statutory financial statements.

**Dividends and Distributions.** The Insurance Act prohibits PartnerRe Bermuda, as an insurer registered as a Class E and as a Class 4 insurer from declaring or paying any dividends during any financial year if it is in breach of its MSM or if the declaration or payment of such dividends would cause such a breach. PartnerRe Bermuda is also prohibited from declaring or paying a dividend where it has failed to comply with the ECR, until such noncompliance is rectified. Furthermore, under the Insurance Act, PartnerRe Bermuda shall not in any financial year pay dividends which would exceed 25% of its total statutory capital and surplus, as shown on its statutory balance sheet in relation to the previous financial year, unless at least 7 days before payment of those dividends it files with the BMA an affidavit signed by at



least two directors, and by PartnerRe Bermuda's principal representative in Bermuda, which states that in the opinion of those signing, declaration of those dividends has not caused the insurer to fail to meet its relevant margins. Generally, an insurer carrying on long-term business, such as PartnerRe Bermuda, is also restricted from declaring or paying a dividend unless the value of its assets in its long-term business fund exceeds the extent of the liabilities of the insurer's long-term business.

## Table of Contents

Further, under the Bermuda Companies Act 1981, as amended, PartnerRe Bermuda may only declare or pay a dividend, or make a distribution out of contributed surplus, if it has no reasonable grounds for believing that: (1) it is, or would after the payment be, unable to pay its liabilities as they become due or (2) the realizable value of its assets would be less than its liabilities.

Economic Substance Legislation. Effective December 31, 2018, the Bermuda Government passed the Economic Substance Act 2018 and corresponding Economic Substance Regulations (Economic Substance Legislation), requiring relevant entities based in Bermuda to comply with certain obligations in regard to economic substance in the jurisdiction. The Economic Substance Legislation was enacted in response to a scoping paper issued by the European Union's Code of Conduct Group (Business Taxation) in June 2018. The paper set out requirements that certain jurisdictions outside the EU (of which Bermuda is one) must adopt with regard to the economic substance of entities based in those jurisdictions, in order to avoid being black-listed by the EU. Broadly equivalent legislation has been passed in all of the major offshore jurisdictions in addition to Bermuda, including the Cayman Islands, BVI and the Channel Islands. However, on March 12, 2019, the EU announced that it had added Bermuda to its list of non-compliant jurisdictions for tax purposes due to a deficiency with Bermuda's Economic Substance Legislation. The Bermuda authorities have announced that they have addressed this issue and expect that Bermuda will be removed from the blacklist in the near future, prior to any imposition of penalties or sanctions.

In this connection, we are required to comply with minimum economic substance requirements, including compliance with the applicable corporate governance requirements of the Companies Act (including keeping records of account, books and papers and financial statements in Bermuda); filing an economic substance declaration; and having adequate employees for holding and managing equity participations, and adequate premises in Bermuda.

In addition to the above, PartnerRe Bermuda maintains an operating branch in Canada and a representative office in Mexico. The Canadian branch is subject to regulation in Canada by the Office of the Superintendent of Financial Institutions (OSFI). For a further discussion of the regulations pertaining to the Canadian branch see below.

### Ireland

The Central Bank of Ireland (the Central Bank) regulates insurance and reinsurance companies authorized in Ireland, including PartnerRe Europe and PartnerRe Ireland. PartnerRe Holdings Europe Limited, a holding company for PartnerRe Europe and PartnerRe Ireland, is not subject to regulation by the Central Bank. PartnerRe Europe is a reinsurance company incorporated under the laws of Ireland and is duly authorized as a reinsurance undertaking to carry on non-life and life reinsurance business in accordance with the European Union (Insurance and Reinsurance) Regulations 2015. PartnerRe Ireland is an insurance company incorporated under the laws of Ireland and is duly authorized as an insurance undertaking to carry on non-life insurance business in accordance with the European Union (Insurance and Reinsurance) Regulations 2015.

Significant aspects of the Irish re/insurance regulatory framework and requirements imposed on PartnerRe Europe and PartnerRe Ireland include the following:

**Solvency Requirements.** The Directive related to the solvency standards applicable to insurers and reinsurers prescribes, at the level of PartnerRe Europe and PartnerRe Ireland, the minimum amounts of financial resources that both companies are required to have in order to cover the risks to which they are exposed and the principles that should guide their overall risk management and reporting. This Directive became effective January 1, 2016. Under the Solvency II requirements, PartnerRe Europe and PartnerRe Ireland have similar governance requirements to those of PartnerRe Bermuda such as Balance Sheet, Own Risk and Solvency Assessment, Solvency and Financial Condition Report and a Regular Supervisory Report.

**Reporting Requirements.** PartnerRe Europe and PartnerRe Ireland must file and submit annual audited financial statements in accordance with International Financial Reporting Standards and related reports to the Irish Companies Registration Office (CRO) together with an annual return of certain core corporate information. Changes to core corporate information during the year must also be notified to the CRO. These requirements are in addition to the regulatory returns required to be filed annually with the Central Bank and additionally, in the case of PartnerRe Ireland, with the National Association of Insurance Commissioners (NAIC) in the U.S.

**Dividends and Distributions.** Pursuant to Irish company law, PartnerRe Europe and PartnerRe Ireland are restricted to declaring dividends only out of "profits available for distribution". Profits available for distribution are, broadly, a

company's accumulated realized profits less its accumulated realized losses. Such profits may not include profits previously utilized.

In addition to the above, PartnerRe Europe has also established operating branches in the U.K., France, Switzerland, Dubai (PartnerRe Europe has decided to close the Dubai branch and such closure is expected to be finalized during 2019) and Hong Kong and a representative office in Brazil, which are subject to Irish reinsurance supervision regulations. In addition, the Hong Kong branch is subject to regulation by the Insurance Authority of Hong Kong. PartnerRe Ireland, pursuant to the Nonadmitted and Reinsurance Reform Act of 2010 (part of the Dodd-Frank Act), is a nonadmitted alien insurer in the U.S. and is eligible to write

Table of Contents

business as an excess and surplus lines insurer in all U.S. states. PartnerRe Ireland has also established an operating branch in the U.K. which is subject to Irish insurance supervision regulations.

PartnerRe Europe and PartnerRe Ireland were parties to a regulatory investigation with the Central Bank related to 2016 regulatory filings. In summary, the matter related to the Central Bank's allegations of contraventions of Corporate Governance Requirements for Insurance Undertakings 2015, the European Union (Insurance and Reinsurance) Regulations 2015 and the Commission Delegated Regulation (EU) 2015/35. The matter closed in August 2018 resulting in an administrative sanction of EUR 1.5 million.

#### United States

PartnerRe U.S. Corporation is a Delaware domiciled holding company for its wholly-owned (re)insurance subsidiaries, PartnerRe U.S., PartnerRe Insurance Company of New York (PRNY) and PartnerRe America Insurance Company (PRAIC) (PartnerRe U.S., PRNY and PRAIC together being the PartnerRe U.S. Insurance Companies). The PartnerRe U.S. Insurance Companies are subject to regulation under the insurance statutes and regulations of their domiciliary states (New York in the case of PartnerRe U.S. and PRNY, and Delaware in the case of PRAIC, and all states where they are licensed, accredited or approved to underwrite insurance and reinsurance).

Currently, the PartnerRe U.S. Insurance Companies are licensed, accredited or approved reinsurers and/or insurers in all fifty states and the District of Columbia, and are subject to the requirements described below.

PartnerRe U.S. Corporation is also the owner of Presidio and its 100% owned subsidiaries Presidio Excess Insurance Services, Inc. (PXS), PartnerRe Management Ltd. (PRM) and Presidio Reinsurance Corporation (PRC). PXS is a managing general underwriter licensed in a number of states. PRM is domiciled in the U.K. and regulated by the Financial Services Authority. PRC is a Montana domiciled captive reinsurer and the Montana Department of Insurance is the domiciliary regulator of PRC. These entities are not subject to any significant regulatory requirements or restrictions that would have a material impact on the Company.

The Company also, through its 100% owned subsidiary PartnerRe U.S. Corporation, owns 100% of PartnerRe Life Reinsurance Company of America (PLRA) a life reinsurance company which is subject to regulation under the insurance statutes and regulations of Arkansas and all states where PLRA is licensed, accredited or approved to underwrite reinsurance.

On August 11, 2017, PartnerRe U.S. entered into a stock purchase agreement, which was amended and restated on May 23, 2018, with respect to the sale of all the outstanding shares of capital stock PRNY to Employers Group, Inc. The sale of PRNY is expected to be consummated upon the satisfaction of certain closing conditions, including, among other things, approval from the New York State Department of Financial Services (NYDFS).

**Risk-Based Capital Requirements.** The Risk-Based Capital (RBC) for Insurers Model Act (the Model RBC Act) or similar legislation has been adopted by the majority of states in the U.S. The main purpose of the Model RBC Act is to provide a tool for insurance regulators to evaluate the capital of insurers with respect to the risks assumed by them and to determine whether there is a need for possible corrective action. U.S. insurers and reinsurers are required to report the results of their RBC calculations as part of the statutory annual statements that such insurers and reinsurers file with state insurance regulatory authorities. The Model RBC Act provides for four different levels of regulatory actions, each of which may be triggered if an insurer's Total Adjusted Capital (as defined in the Model RBC Act) is less than a corresponding level of risk-based capital. Decreases in an insurer's Total Adjusted Capital as a percentage of its Authorized Control Level (as defined in the Model RBC Act) triggers increasing regulatory actions. Such regulatory actions include but are not limited to issuance of orders for corrective action by the insurer, rehabilitation or liquidation of the insurer. No such actions have been taken with respect to the PartnerRe U.S. Insurance Companies or PRLA.

**Insurance Regulatory Information System (IRIS) Ratios.** A committee of state insurance regulators developed the NAIC's IRIS primarily to assist state insurance departments in executing their statutory mandates to oversee the financial condition of insurance or reinsurance companies operating in their respective states. IRIS identifies thirteen industry ratios and specifies usual values for each ratio. Generally, a company will become subject to regulatory scrutiny if it falls outside the usual ranges with respect to four or more of the ratios, and regulators may then act, if the company has insufficient capital, to constrain the company's underwriting capacity. No such action has been taken with respect to the PartnerRe U.S. Insurance Companies or PRLA.

Reporting Requirements. Regulations vary from state to state, but generally require insurance holding companies and insurers and reinsurers that are subsidiaries of insurance holding companies to register and file with their state domiciliary regulatory authorities certain reports, including information concerning their capital structure, ownership, financial condition and general business operations. State regulatory authorities monitor compliance with, and periodically conduct examinations with respect to, state mandated standards of solvency, licensing requirements, investment limitations, and restrictions on the size of risks which may be reinsured, deposits of securities for the benefit of reinsureds, methods of accounting for assets, reserves for unearned premiums and losses, and other purposes. In general, such regulations are for the protection of reinsureds and, ultimately, their policyholders, rather than security holders. In the U.S., the NYDFS is the domiciliary regulator of PartnerRe U.S. and PRNY, the Delaware

Table of Contents

Department of Insurance is the domiciliary regulator of PRAIC and the Arkansas Insurance Department is the domiciliary regulator of PRLA.

**Dividends and Distributions.** Under New York law, the NYDFS must approve any dividend declared or paid by PartnerRe U.S. or PRNY that, together with all dividends declared or distributed by each of them during the preceding twelve months, exceeds the lesser of 10% of their respective statutory surplus as shown on the latest statutory financial statements on file with the NYDFS, or 100% of their respective adjusted net investment income. Under Delaware law the Delaware Commissioner of Insurance must approve any dividend declared or paid by PRAIC that, together with all dividends or distributions made within the preceding 12 months exceeds the greater of (i) ten percent of PRAIC's surplus as regards policyholders as of the preceding December 31 or (ii) the net income, not including realized capital gains, for the 12-month period ending the preceding December 31. Under Arkansas law the Arkansas Insurance Commissioner must approve any dividend declared or paid by PRLA that, together with all dividends and distributions made within the preceding 12 months exceeds the greater of (i) ten percent of PRLA's surplus as regards policyholders as of the preceding December 31 or (ii) the net gain from operations not including capital gains for the twelve-month period ending on the preceding December 31. Arkansas, Delaware and New York do not permit a dividend to be declared or distributed, except out of earned surplus.

In addition to the above, the Dodd-Frank Act currently impacts the PartnerRe U.S. Insurance Companies and PRLA. The Dodd-Frank Act represents a comprehensive overhaul of the financial services industry in the U.S. and established a Federal Insurance Office (FIO) within the U.S. Treasury Department. Although the FIO does not have general supervisory or regulatory authority over the business of insurance or reinsurance, it is charged with monitoring all aspects of the insurance industry, consulting with state insurance regulators, assisting in administration of the Terrorism Risk Insurance Act (TRIA) and other duties. Furthermore, the director of the FIO is a non-voting member of the multi-agency Financial Stability Oversight Council (FSOC), and the FSOC may, among other things, subject an insurance company or an insurance holding company to heightened prudential standards in accordance with Title I of the Dodd-Frank Act following an extended determination process (which can require that such insurance company be subject also to supervision by the Board of Governors of the Federal Reserve System). The Dodd-Frank Act also made small changes to the regulation of credit for reinsurance and surplus lines insurance in the U.S. See Risk Factors in Item 3 of this report.

**Cybersecurity Requirements.** In February 2017, the NYDFS issued final Cybersecurity Requirements for Financial Service Companies that require regulated entities, including PartnerRe U.S. Insurance Companies, to establish and maintain a cybersecurity program designed to protect consumers and ensure the safety and soundness of New York's financial services industry. Among the requirements are the maintenance of a cybersecurity program with governance controls, risk-based minimum data security standards for technology systems, cyber breach preparedness and response requirements, including reporting obligations, vendor oversight, training, and program record keeping and certification obligations. The regulation became effective on March 1, 2017, subject to certain phase-in periods, and we will be required to incur expenses in order to meet its requirements.

#### Canada

Canadian branches of PartnerRe Bermuda and PartnerRe U.S. hold licenses to write reinsurance business in Canada. Each Canadian branch is authorized to insure, in Canada, risks falling within the classes of insurance and reinsurance as specified in their respective licenses and is limited to the business of reinsurance. The Canadian branch of PartnerRe Bermuda is licensed to write life business in Ontario, limited to reinsurance. The Canadian branch of PartnerRe U.S. is licensed to write property and casualty business in Ontario, limited to reinsurance. Each Canadian branch is subject to local regulation for its Canadian branch business, specified principally pursuant to Part XIII of the Insurance Companies Act (the Canadian Insurance Act) applicable to foreign property and casualty companies and to foreign life companies as well as relevant provincial insurance acts. The Office of the Superintendent of Financial Institutions (OSFI) supervises the application of the Canadian Insurance Act.

PartnerRe Bermuda and PartnerRe U.S. maintain sufficient assets, vested in trust at a Canadian financial institution, approved by OSFI, to allow their branches to meet minimum statutory solvency requirements as required by the Act, the regulations made under the Act and applicable guidelines issued by OSFI. Certain statutory information is filed with federal and provincial insurance regulators in respect of both property and casualty and life business written by

branches. This information includes, among other things, a yearly business plan and an annual Dynamic Capital Adequacy Test report from the Appointed Actuary of the branch that tests the adequacy of the assets that are vested under various adverse scenarios or "stress tests". It is also necessary for an own risk and solvency assessment to be prepared each year. Each branch is required to have a Chief Agent in Canada to act as its local representative. PartnerRe Life Reinsurance Company of Canada (PartnerRe Canada) is a Canadian incorporated life reinsurer that is a subsidiary of the Company and is domiciled in Canada. PartnerRe Canada is authorized to insure, in Canada, risks falling within the classes of Life and Accident and Sickness, limited to the business of reinsurance. PartnerRe Canada is required to maintain capital in Canada in a custodial account to meet minimum statutory solvency requirements as required by the Canadian Insurance Act, its regulations and applicable guidelines issued by OSFI. Certain statutory

## Table of Contents

information is filed with OSFI in respect of the life business written by PartnerRe Canada. This information includes, among other things, an annual business plan and Dynamic Capital Adequacy Test report from the Appointed Actuary of PartnerRe Canada that tests the adequacy of assets under various scenarios or "stress tests". It is also necessary for an own risk and solvency assessment to be prepared each year.

### Singapore

The Monetary Authority of Singapore (MAS) regulates insurance and reinsurance companies authorized in Singapore, including PartnerRe Asia.

PartnerRe Asia is the principal reinsurance carrier for the Company's business underwritten in the Asia Pacific region, conducting general insurance business as a reinsurer and life insurance business as a reinsurer. PartnerRe Asia has an established operating branch in Labuan which is subject to regulation by the Labuan Financial Services Authority.

Significant aspects of the Singapore reinsurance regulatory framework and requirements include the following:

**Solvency Requirements.** As a licensed reinsurer, PartnerRe Asia is required to maintain minimum capital of SGD25 million. In addition, PartnerRe Asia is required to establish and maintain separate insurance funds for each class of business that it carries on for both Singapore and offshore policies. The solvency requirement in respect of each insurance fund shall at all times be not less than the total risk requirement of the fund (determined by reference to three components being insurance risks, asset portfolio risks and asset concentration risks). The MAS is entitled to require that a licensed reinsurer holds assets of a certain type and prescribed value in Singapore.

**Reporting Requirements.** PartnerRe Asia must file and submit annual audited financial statements in accordance with Singapore Financial Reporting Standards and related reports to the Accounting and Corporate Regulatory Authority (ACRA) together with an annual return of certain core corporate information. Changes to core corporate information during the year must also be notified to ACRA. These requirements are in addition to the regulatory returns required to be filed annually with the MAS.

**Dividends and Distribution.** Dividends are generally declared from unappropriated profits. The declaration of a dividend by PartnerRe Asia may be subject to relevant conditions and requirements being met as specified under the Insurance Act (Singapore) and its associated regulations. Any proposed reduction of capital or redemption of preference shares requires the prior approval of the MAS. In addition to the above, the laws and initiatives issued by the MAS regarding Corporate Governance, Outsourcings and Technology Risk Management currently impact, or may impact, Partner Re Asia in the future.

### Taxation of the Company and its Subsidiaries

The following summary of the taxation of PartnerRe and its subsidiaries, PartnerRe Bermuda, PartnerRe Europe, PartnerRe Asia, and PartnerRe U.S. Corporation and its subsidiaries (collectively PartnerRe U.S. Companies) is based upon current law. Legislative, judicial or administrative changes may be forthcoming that could affect this summary. Certain subsidiaries, branch offices and representative offices of the Company are subject to taxation related to operations in Brazil, Canada, Chile, China, France, Hong Kong, Ireland, Labuan, Mexico, Singapore, Switzerland and the U.S. The discussion below covers the significant locations for which the Company or its subsidiaries are subject to taxation.

### Bermuda

PartnerRe Ltd. and PartnerRe Bermuda have each received from the Bermuda Minister of Finance an assurance under The Exempted Undertakings Tax Protection Act, 1966 of Bermuda, that in the event that any legislation is enacted in Bermuda imposing tax computed on profits or income, or computed on any capital asset, gain or appreciation, or any tax in the nature of estate duty or inheritance tax, then the imposition of any such tax shall not be applicable to PartnerRe Ltd. or PartnerRe Bermuda or to any of their operations or the shares, debentures or other obligations of PartnerRe Ltd. or PartnerRe Bermuda until March 2035. These assurances are subject to the provision that they are not construed to prevent the application of any tax or duty to such persons as are ordinarily resident in Bermuda (PartnerRe Ltd. and PartnerRe Bermuda are not currently so designated) or to prevent the application of any tax payable in accordance with the provisions of The Land Tax Act, 1967 of Bermuda or otherwise payable in relation to the property leased to PartnerRe Bermuda.

### Canada



The Canadian life branch of PartnerRe Bermuda, the Canadian non-life branch of PartnerRe U.S. and PartnerRe Life Reinsurance Company of Canada are subject to Canadian taxation on their profits. Their profits are taxed at the federal level, as well as the Ontario provincial level at a combined rate of 26.5% in 2018. See also the discussion of taxation in the United States below.

Table of Contents

## France

The French branch of PartnerRe Europe is conducting business in and is subject to taxation in France. Since January 1, 2016, the tax on corporate profits in France has been 34.43%.

The French Bill for 2018, enacted on December 30, 2017, includes a graduated decrease of the statutory corporate income tax rate from 34.43% in 2017 to 25.83% in 2022, including all applicable surtaxes. See also the discussion of taxation in Ireland below.

## Ireland

The Company's Irish subsidiaries, PartnerRe Holdings Europe Limited, PartnerRe Europe, PartnerRe Ireland and PartnerRe Ireland Finance dac conduct business in and are subject to taxation in Ireland. Profits of an Irish trade or business are subject to Irish corporation tax at the rate of 12.5%, whereas profits arising from other than a trade or business are taxable at the rate of 25%. The Swiss, U.S. and French branches and subsidiaries of PartnerRe Europe are subject to taxation in Ireland at the Irish corporation tax rate of 12.5%. However, under Irish domestic tax law, the amount of tax paid in Switzerland, U.S. and France can be credited or deducted against the Irish corporation tax. As a result, the Company does not expect to incur significant taxation in Ireland with respect to the Swiss, U.S. and French branches.

## Singapore

The Company's Singapore subsidiary, PartnerRe Asia, is subject to corporate taxation in Singapore at the rate of 17% on profits arising from onshore business and 10% on profits arising from offshore business. However, tax exemptions may apply to qualifying profits derived from certain lines of business.

## Switzerland

The Swiss branch of PartnerRe Europe is subject to Swiss taxation, mainly on profits and capital. To the extent that net profits are generated, profits are taxed at a rate of 21.15%. The branch pays capital taxes at a rate of approximately 0.17% on its imputed branch capital calculated according to a procured taxation ruling. See also the discussion of taxation in Ireland above.

## United States

PartnerRe U.S. Companies transact business in and are subject to taxation in the U.S. The Canadian non-life branch of PartnerRe U.S. conducts business in Canada and is subject to taxation in Canada as discussed above. Under U.S. tax law, the amount of tax paid in Canada by the Canadian non-life branch of PartnerRe U.S. can be credited or deducted against U.S. corporation tax.

In addition, PartnerRe Europe and PartnerRe Ireland writes certain U.S. and Latin American business through its U.S. reinsurance intermediaries. As a result, PartnerRe Europe is deemed to be engaged in a U.S. trade or business and thus is subject to taxation in the U.S. Finally, PartnerRe Capital Investments Corp. (PCIC) and PartnerRe Life Reinsurance Company of America (PRLA) are also U.S. corporations subject to taxation in the U.S. The current statutory rate of tax on corporate profits in the U.S. is 21%. See the discussion of U.S. branch taxation below and the discussion of taxation in Ireland above.

On this basis, the Company does not expect that it and its subsidiaries, other than the PartnerRe U.S. Companies, PartnerRe Europe and PartnerRe Ireland for business conducted through its U.S. intermediaries, PCIC, PRLA, and the 953(d) electing reinsurer, will be required to pay U.S. corporate income taxes (other than withholding taxes as described below). However, because there is considerable uncertainty as to the activities that constitute a trade or business in the U.S., there can be no assurance that the IRS will not contend successfully that the Company or its non-U.S. subsidiaries (other than PartnerRe Europe, PartnerRe Ireland, and the 953(d) electing reinsurer) are engaged in a trade or business in the U.S. The maximum federal tax rate is currently 21% for a corporation's income that is effectively connected with a trade or business in the U.S. In addition, U.S. branches of foreign corporations may be subject to the branch profits tax, which imposes a tax on U.S. branch after-tax earnings that are deemed repatriated out of the U.S., for a potential maximum effective federal tax rate of approximately 45% on the net income connected with a U.S. trade or business.

Foreign corporations not engaged in a trade or business in the U.S. are subject to U.S. income tax, effected through withholding by the payer, on certain fixed or determinable annual or periodic gains, profits and income derived from sources within the U.S. as enumerated in Section 881(a) of the Internal Revenue Code, such as dividends and interest

on certain investments.

The U.S. imposes a base erosion and anti-abuse tax (BEAT) on certain payments from entities subject to U.S. tax to related foreign persons, also referred to as base erosion payments. Base erosion payments generally include any amounts that are deductible, including reinsurance premiums ceded to a related foreign person. Entities that meet certain thresholds are required to pay the minimum BEAT. The minimum BEAT is based on the excess of a percentage of the entities' modified taxable income over its regular tax liability for the year. Modified taxable income is the taxpayer's regular taxable income increased by any base erosion

Table of Contents

tax benefit with respect to any "base erosion payment" and an adjustment for the taxpayer's net operating loss deduction, if any. The modified taxable income is taxed at 5% in 2018, 10% in 2019 through 2025, and 12.5% thereafter. This provision generally applies to entities that are subject to US net income tax with average annual gross receipts of at least \$500 million and that have made foreign related-party deductible payments totaling 3% or more of the entities' total deductions for the year.

The U.S. also imposes an excise tax on insurance and reinsurance premiums paid to foreign insurers or reinsurers with respect to risks located in the U.S. The rate of tax applicable to reinsurance premiums paid to PartnerRe Bermuda is 1% of gross premiums.

Legal Proceedings

The Company's reinsurance subsidiaries, and the insurance and reinsurance industry in general, are subject to litigation and arbitration in the normal course of their business operations. In addition to claims litigation, the Company and its subsidiaries may be 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. This category of business litigation typically involves, among other things, allegations of underwriting errors or omissions, employment claims or regulatory activity. While the outcome of business litigation cannot be predicted with certainty, the Company will dispute all allegations against the Company and/or its subsidiaries that management believes are without merit.

At December 31, 2018, the Company was not a party to any litigation or arbitration that it believes could have a material effect on the financial condition, results of operations or liquidity of the Company.

Disclosure Pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act

Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012 ("Section 219") added Section 13(r) to the Exchange Act. Section 13(r) requires an issuer to disclose in its annual or quarterly reports filed with the SEC whether the issuer or any of its affiliates have knowingly engaged in certain activities, transactions or dealings with the Government of Iran, relating to Iran or with designated natural persons or entities involved in terrorism or the proliferation of weapons of mass destruction during the period covered by the annual or quarterly report. Disclosure is required even when the activities were conducted outside the U.S. by non-U.S. entities and even when such activities were conducted in compliance with applicable law.

On January 16, 2016, the United States and the EU eased sanctions against Iran pursuant to the Joint Comprehensive Plan of Action ("JCPOA"). On May 8, 2018, the United States announced their withdrawal from the JCPOA (the "U.S. Decision"), thus re-imposing sanctions against Iran after the expiry of the permitted 90 and 180 day wind-down periods, i.e. respectively August 6, 2018 and November 4, 2018. The assessment of the economic situation resulting from the U.S. Decision had led PartnerRe to decide not to pursue business in Iran. Accordingly, contracts entered into by our non-U.S. reinsurance subsidiaries with Iranian entities prior to the U.S. Decision were either not renewed or terminated in a timely manner.

In respect of transactions to be disclosed pursuant to Section 219, carried out in 2018 prior to the U.S. Decision, we can comment as follows:

Through the intermediary of non-Iranian brokers, a non-U.S. subsidiary of PartnerRe Bermuda, entered into a four layer property excess of loss reinsurance treaty with Bimeh Iran which is an entity that has been identified as owned or controlled by the Government of Iran and appears on the List of Persons Identified as Blocked Solely Pursuant to Executive Order 13599. The agreement was executed in 2018 and coverage began January 1, 2018; however, the coverage was terminated by the non-U.S. subsidiary of PartnerRe Bermuda with an effective date of November 4, 2018. Gross revenue was €183 thousand and net profit attributable to the contract was €35 thousand during 2018. This entity was also exposed to a loss pursuant to a marine (cargo and hull) excess of loss reinsurance treaty (the "Treaty") in respect of a collision in January 2018 of two vessels one of which, covered by the Treaty, caught fire and sank. The sunk vessel was owned or controlled by the Government of Iran, appears on the List of Persons Identified as Blocked Solely Pursuant to Executive Order 13599 and was operated by National Iranian Tanker Company. In addition, the sunk vessel was used to transport condensate from Iran to South Korea. To date and to our knowledge, our exposure amounts to €144 thousand. This claim was notified to PartnerRe in early November 2018 and we have blocked payment of this claim due to the position of our financial institution who refuses to settle payments relating to Iran.

C. Organizational Structure

The Company's Class A common shares are owned by EXOR Nederland N.V., whose ultimate parent is EXOR N.V., an investment holding company listed on the Milan Stock Exchange. The Company has also issued Class B shares to certain executives of the Company.

In addition to the Company, significant subsidiaries of EXOR N.V. include Fiat Chrysler Automobiles, CNH Industrial, Ferrari, The Economist Group and Juventus Football Club.

Table of Contents

The Company's principal operating subsidiaries at December 31, 2018 are as follows:

	Jurisdiction	Percentage Interest Held
Partner Reinsurance Company Ltd.	Bermuda	100%
Partner Reinsurance Europe SE	Ireland	100%
Partner Reinsurance Company of the U.S.	New York, United States	100%
Partner Reinsurance Asia Pacific Pte. Ltd.	Singapore	100%

See History and Development of the Company section above and also Share Ownership section in Item 6 and Notes 1 and 14 to the Consolidated Financial Statements in Item 18 of this report for further details.

See Exhibit 8.1 to this annual report on Form 20-F for a listing of the Company's subsidiaries.

#### D. Property, Plants and Equipment

The Company leases office space in Hamilton (Bermuda) where its principal executive offices are located.

Additionally, the Company leases office space in various other locations, principally in Dublin, Stamford, Connecticut in the U.S., Toronto, Paris, Singapore and Zurich.

In 2017, the Company purchased from a related party certain real estate investments located in London, U.K. See Note 18 to the Consolidated Financial Statements in Item 18 for further details.

#### ITEM 4.A UNRESOLVED STAFF COMMENTS

None.

#### ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The financial information for the years ended December 31, 2018, 2017 and 2016 presented below is based on, or has been derived from, and should be read in conjunction with, the U.S. GAAP Consolidated Financial Statements presented in Item 18 of this report. The financial results below are presented in U.S. dollars as the reporting currency. The discussion below includes forward-looking statements, which, although based on assumptions that we consider reasonable, are subject to risks and uncertainties which could cause actual events or conditions to differ materially from those expressed or implied by the forward-looking statements. See G. Safe Harbor section below and Risk Factors in Item 3 of this report for a discussion of risks and uncertainties.

##### Executive Overview

The Company is a leading global reinsurer, with a broadly diversified and balanced portfolio of traditional reinsurance risks and capital markets risks. The Company has three segments: P&C, Specialty, and Life and Health (see Results by Segment below).

The Company is in the business of assessing and assuming risk for an appropriate return. The Company creates value through its ability to understand, evaluate, diversify and distribute risk. The Company's strategy is founded on a capital-based risk appetite and the selected risks that management believes will allow the Company to meet its goals for appropriate profitability and risk management within that appetite. Management believes that this construct allows the Company to balance the cedant's need for confidence of claims payment with shareholder needs for an appropriate return on capital.

The Company's long-term objective is to manage a portfolio of diversified risks that will create shareholder value. The Company's profitability in any particular period can be significantly affected by large catastrophic or other large losses and the impact of changes in interest rates on the fair value of investments (see Key Factors Affecting Year-over-Year Comparability below). Accordingly, the Company's performance during any particular period is not necessarily indicative of its performance over the longer-term reinsurance cycle.

##### Non-life Reinsurance Operations

The Company generates its non-life reinsurance revenue from premiums. Premium rates and overall terms and conditions vary depending on market conditions. The Company writes a large majority of its non-life business on a treaty basis with a majority renewing on January 1. The remainder of this business renews at other times during the year. In addition to treaty business, the Company writes direct and facultative business which renews throughout the year.



Table of Contents

Pricing cycles are driven by supply of capital in the industry and demand for reinsurance and insurance and other risk transfer products. The reinsurance business is also influenced by several other factors, including variations in interest rates and financial markets, changes in legal, regulatory and judicial environments, loss trends, inflation, foreign exchange rate changes, and general economic conditions.

In an increasingly competitive market environment, and considering increased regulatory and rating agency expectations, the Company continues to focus on its risk management strategy, financial strength, underwriting selection process and global presence. The Company removes the volatility associated with those risks from the client, and then manages those risks and the risk-related volatility. Through its broad product and geographic diversification, the Company is able to achieve portfolio diversification of risks, and its execution capabilities and global presence enable the Company to respond quickly to market needs.

A key challenge facing the Company is successfully managing risk through all phases of the reinsurance cycle. The Company believes that its long-term strategy of closely monitoring and being selective in the business that it writes, and maintaining the diversification and balance of its portfolio, will optimize returns over the reinsurance cycle. Individual businesses and markets have their own unique characteristics and are at different stages of the reinsurance pricing cycle at any given point in time. Management believes the Company has an appropriate portfolio diversification by product, geography, type of business, length of tail and distribution channel. Further, management believes that this diversification, in addition to the financial strength of the Company and its strong global franchise, will help to mitigate cyclical declines in underwriting profitability.

The Non-life reinsurance market has historically been highly cyclical in nature as evidenced by hard and soft markets. For many years, with the exception of lines and markets impacted by specific catastrophic or large loss events, the Company has experienced soft market conditions with either general decreases, no changes, or marginal improvements, in pricing and profitability. Price increases were experienced in loss exposed lines of business following losses incurred in 2017 and 2018. However, the availability of capital has reduced the amplitude of cycles compared to the past.

#### Life and Health Reinsurance Operations

The Company's Life and Health segment derives revenues primarily from premiums. Within the Life and Health segment, the Company writes mortality, morbidity and longevity products. Management believes the Life and Health business provides the Company with diversification benefits and balance to its portfolio as they are generally not correlated to the Company's Non-life business.

The profitability of the Life and Health business mainly depends on the volume and amount of death and disability claims incurred, medical claims and expenses, and the ability to adequately price the risk the Company assumes. The majority of the life premium arises from long-term in-force contracts. The life reinsurance policies are often in force for the remaining lifetime of the underlying individuals insured, with premiums earned typically over a period of 10 to 30 years. The volume of the business may be reduced each year by lapses, voluntary surrenders, death of insureds and recaptures by ceding companies. While death claims are reasonably estimated over a period of many years, claims become less predictable over shorter periods and can fluctuate significantly from period to period. Similarly, while the volume of medical claims can be predicted to a certain extent, the amount of claims and expenses depends on various factors, primarily healthcare inflation rates, driven by a shift towards the older population, reliance on expensive medical equipment and technology, and changes in demand for healthcare services over time. Compared to the Non-life markets, the Life and Health reinsurance markets are more concentrated, with fewer market participants. During 2018, the Company continued to execute its growth strategy in the Life and Health segment by continuing to increase new business volume and hiring additional employees to support further growth in this segment.

#### Industry Environment

In spite of the challenging and limited growth environment experienced in the reinsurance industry for a number of years, the need for reinsurance is not diminishing. The reinsurance environment has become more and more complex, as traditional forms of risk are increasingly exposed to globalization and urbanization and as new forms of risks have developed (such as cyber, geopolitical and supply chain). The need for reinsurance is further supported by factors such as primary insurers' needs to reduce volatility in earnings and a high protection gap in the Non-life and Life and Health reinsurance and emerging markets. While the alternative capital market has experienced growth, it cannot



replace traditional reinsurers whose balance sheets can absorb risks more efficiently, especially in medium and long tail lines of business.

Strategic Initiatives

The Company's strategy is to focus on reinsurance of business written by our cedants, and not compete with our clients through directly writing or assuming insurance risks. The Company is focused on striking the right balance between top down and bottom up risk selection by broadening scope and client penetration for well-understood, efficient risk classes and keeping a selective approach for less predictable risk patterns. Among the Company's strategic priorities are growing the non-life footprint

## Table of Contents

with selected clients and brokers, using retrocession to enhance balance sheet strength and relevance, and growing the Life and Health book in targeted product segments and geographies. The Company will continue to execute its growth strategy in the Life and Health segment by continuing to increase new business volume, leveraging new talent hired, to support further growth in this segment.

### Reinsurance Market Outlook

The Company believes that overall, reinsurance will broadly remain a cyclical market, albeit of less amplitude, primarily as a result of excess capital, and that the cycles will become more specific and local, with less global amplitude.

The outlooks for 2019 for each of the Company's segments are summarized as follows:

### 2019 P&C Segment Outlook

During the January 1, 2019 renewals, the Company observed improving pricing trends in most of the North American business. Our European business continued to see low single digit rate decreases. We expect to experience an improved pricing environment for the remainder of 2019, driven by the Japanese and Florida renewals. The expected premium volume outlook for 2019, at constant foreign exchange rates, increased by 15% compared to the prior year. As a result of the persisting competition and excess capacity in the industry, it is not possible to forecast if improving pricing conditions will continue in the future.

### 2019 Specialty Segment Outlook

During the January 1, 2019 renewals, the Company generally observed improved pricing in most lines of business within the Specialty segment (aviation, marine, energy, engineering and property). The expected premium volume outlook for 2019, at constant foreign exchange rates, increased by 10% compared to the prior year. As a result of the persisting competition and excess capacity in the industry, it is not possible to forecast if improving pricing conditions will continue in the future.

### 2019 Life and Health Outlook

The January 1, 2019 renewal for Life business is not significant, as it only impacts the short-term mortality in-force premium, which is a relatively limited portion of the Life portfolio. Management expects moderate continued growth in the Company's Life portfolio in 2019 assuming constant foreign exchange rates, mainly due to growth in Asia, Canada and the United States. Pricing conditions are not expected to materially differ from 2018.

### Investment Operations

The Company generates revenue from its high quality investment portfolio through net investment income, including interest on fixed maturities and dividends on equity securities, interest in earnings of equity method investments, and realized and unrealized gains on investments.

For the Company's investment risks, which include public, private market and real estate investments, diversification of risk is critical to achieving the risk and return objectives of the Company.

From a risk management perspective, the Company allocates its invested assets into two categories: liability funds and capital funds. The Company's investment policy distinguishes between liquid, high quality (investment grade) assets that support the Company's liabilities, and the more diversified, higher risk asset classes that are allowed within the Company's capital funds.

Liability funds represent invested assets supporting the net reinsurance liabilities, and are invested primarily in investment-grade fixed maturity securities and cash and cash equivalents. The preservation of liquidity and protection of capital are the primary investment objectives for these assets. The portfolio managers are required to adhere to investment guidelines as to minimum ratings and issuer and sector concentration limitations. Liability funds are invested in a way that generally matches them to the corresponding liabilities (referred to as asset-liability matching) in terms of both duration and major currency composition to provide the Company with a natural hedge against changes in interest and foreign exchange rates. In addition, the Company utilizes certain derivatives to further protect against changes in interest and foreign exchange rates. Liability funds represented approximately 54% of the total invested assets at December 31, 2018 and 2017.

Capital funds represent total capital of the Company, which includes shareholders' equity and debt liabilities, and are invested in a diversified portfolio with the objective of maximizing investment return, subject to prudent risk constraints. Capital funds contain most of the asset classes typically viewed as offering a higher risk and higher return

profile, subject to risk assumption and portfolio diversification guidelines which include issuer and sector concentration limitations. Capital funds may be invested in investment grade and below investment grade fixed maturity securities, publicly listed and private equities, bond and loan investments, real estate investments, structured credit and certain other specialty asset classes. Capital funds represented approximately 46% of the total invested assets at December 31, 2018 and 2017.

Table of Contents

While there will be periods where such investments may earn less than the risk-free rate of return, or potentially produce negative results, the Company believes the rewards for assuming these risks in a disciplined and measured way will produce a positive excess return to the Company over time. Additionally, since a portion of our investment risks are not fully correlated with the Company's reinsurance risks, this increases the overall diversification of the Company's total risk portfolio.

The Company employs a prudent investment philosophy. It maintains a high quality, well-balanced and liquid portfolio with total investment return achieved through a combination of optimizing current investment income and pursuing capital appreciation.

The Company's investment strategy allows for the use of derivative instruments, subject to strict limitations. The Company may utilize various derivative instruments, such as treasury note and equity futures contracts, credit default swaps, foreign currency option contracts, foreign exchange forward contracts, total return and interest rate swaps, insurance-linked securities and to-be-announced mortgage-backed securities (TBAs) for the purpose of managing and hedging currency risk, market exposure and portfolio duration, hedging certain investments, mitigating the risk associated with underwriting operations, or enhancing investment performance that would be allowed under the Company's investment policy if implemented in other ways. The use of financial leverage, whether achieved through derivatives or margin borrowing, requires approval from the Board. At December 31, 2018, the Company had no financial leverage achieved through derivatives and no margin borrowing has been approved by the Board.

The Company follows prudent investment guidelines through a strategy that seeks to maximize returns while managing investment risk in line with the Company's overall objectives of earnings stability and long-term book value growth. A key challenge for the Company is achieving the right balance in changing market conditions. The Company regularly reviews the allocation of investments to asset classes within its investment portfolio and allocates investments to those asset classes the Company anticipates will outperform in the future, subject to limits and guidelines. Similarly, the Company reduces its exposure to asset classes where returns are deemed unattractive. The Company may also lengthen or shorten the duration of its fixed maturity portfolio in anticipation of changes in interest rates, or increase or decrease the amount of credit risk it assumes, depending on credit spreads and anticipated economic conditions.

In 2018, the Company's investment portfolio benefited by higher reinvestment rates and a change in portfolio mix resulting in higher net investment income. However, 2018 was impacted by unrealized investment losses driven by increases in U.S. risk-free rates, widening of U.S. and European investment grade corporate spreads and losses on London-based real estate assets.

Assuming constant foreign exchange rates and the absence of negative cash flows related to catastrophic or large loss events, management plans to grow net investment income in 2019 compared to 2018 primarily due to changes in the investment portfolio mix aimed at increasing yield and decreasing duration.

#### A. Operating Results

At December 31, 2018 and 2017, EXOR Nederland N.V. holds 100% of the 100 million Class A shares of \$0.00000001 par value each for a total share capital of \$1.00. The common shares are not listed. Accordingly, per share data is not considered meaningful to present.

#### Key Factors Affecting Year-over-Year Comparability

The key factors affecting the year-over-year comparability of the Company's net income or loss for the years ended December 31, 2018, 2017 and 2016 include the following:

- Large catastrophic and large loss events impacting non-life segment underwriting results
- Volatility in capital markets impacting investment results
- Fluctuations in other expenses, and
- Foreign exchange rate fluctuations.

These factors, as well as other factors described below, may continue to affect our results of operations and financial condition in the future. Each of these key factors is discussed further in the Review of Net Income or Loss section below with respect to the impact on Net income or loss for each of the years ended December 31, 2018, 2017 and 2016.

Review of Net Income or Loss

The components of net income or loss for the years ended December 31, 2018, 2017 and 2016 are presented in the Company's Consolidated Statements of Operations, and in the breakdown by segment in Note 19 to the Consolidated Financial Statements, in Item 18 of this report.

Table of Contents

Management analyzes the Company's net income or loss in three parts: underwriting result, investment result, and corporate and other, which comprises the other components of net income or loss not allocated to the Company's Non-life and Life and Health segments.

The net income or loss for the years ended December 31, 2018, 2017 and 2016 was comprised as follows (in millions of U.S. dollars):

	2018	2017 <sup>(1)</sup>	2016 <sup>(1)</sup>
Underwriting result			
P&C	\$(189)	\$(343)	\$ 154
Specialty	142	247	105
Total Non-life	\$(47 )	\$(96 )	\$ 259
Life and Health	20	8	(7 )
	\$(27 )	\$(88 )	\$ 252
Investment result	37	720	414
Corporate and Other	(96 )	(368 )	(219 )
Net (loss) income	\$(86 )	\$264	\$ 447

(1) In 2018, U.S. health business was reallocated from the Life and Health segment to the P&C segment and, as a result, the impacted 2017 and 2016 comparatives have been reclassified to conform to current presentation.

The components of net (loss) income, and changes for the years presented above, are described below.

**Underwriting Result**

Underwriting result consists of technical result (which is net premiums earned less losses and loss expenses and acquisition costs) and other income (loss), less other expenses that are attributable to the respective segment.

Underwriting result is a primary measure of underlying profitability for the Company's core reinsurance operations, separate from the investment results, and is used to manage and evaluate the Company's Non-life segments (P&C and Specialty) and Life and Health segment. The Company believes that in order to enhance the understanding of its profitability, it is useful for our shareholders and other users of this report to evaluate the components of net income or loss separately and in the aggregate. Underwriting result should not be considered a substitute for net income or loss and does not reflect the overall profitability of the business, which is also impacted by investment results and other items included in corporate and other above and discussed in more detail below in Corporate and Other section.

Underwriting result, a key factor affecting net income or loss, is discussed further below in the Results by Segment section for each of the two Non-life segments (P&C and Specialty) and for the Life and Health segment.

**Results by Segment**

The Company monitors the performance of its operations in three segments: P&C, Specialty and Life and Health. Effective July 1, 2018, the executive management responsibility and reporting for U.S. health business was reallocated from the Life and Health segment to the P&C segment as part of an internal organizational change. As a result, the financial results for U.S. health business are reflected in the P&C segment for 2018 and the impacted 2017 and 2016 comparatives have been reclassified from the Life and Health to the P&C segment to conform to current presentation. See Note 19 to the Consolidated Financial Statements included in Item 18 of this report for a description of the Company's segments, a discussion on how the Company measures its segment results, and a breakdown of net income or loss, including underwriting results by segment, for each of the years ended December 31, 2018, 2017 and 2016.

**Non-life Results**

The Non-life underwriting results for 2018, 2017 and 2016 were largely driven by premiums earned reduced for losses and loss expenses (which included losses from large catastrophic losses and large loss events, partially offset by net favorable prior year development), and also reduced for acquisition costs, as more fully described below.

**Large catastrophic and large loss events**

As the Company's reinsurance operations are exposed to low-frequency and high-severity risk events, some of which are seasonal, results for certain periods may include unusually low loss experience, while results for other periods may include modest or significant loss experience driven by catastrophic losses.



Table of Contents

The Company generally considers losses greater than \$35 million, net of retrocession and reinstatement premiums, to be large catastrophic or large loss events. In 2018, losses related to Hurricane Florence and Typhoon Trami were individually less than \$35 million each, but have been included in the large catastrophic and large loss total below as the losses combined with other events noted below were greater than \$35 million based on best estimates as of December 31, 2018.

The combined impact of the large catastrophic and large losses on the Company's operating results for the years ended December 31, 2018, 2017 and 2016 was as follows (in millions of U.S. dollars, except ratios):

	2018			2017 <sup>(1)</sup>			2016 <sup>(1)</sup>		
	P&C segment	Specialty segment	Total Non-life	P&C segment	Specialty segment	Total Non-life	P&C segment	Specialty segment	Total Non-life
Large catastrophic and large losses	\$382	\$ 4	\$ 386	\$508	\$ 61	\$ 569	\$110	\$ 46	\$ 156
Impact on combined ratio			9.0 %			14.1 %			3.7 %

(1) In 2018, U.S. health business was reallocated from the Life and Health segment to the P&C segment and, as a result, the impacted 2017 and 2016 comparatives have been reclassified to conform to current presentation.

Large catastrophic and large losses, net of retrocession and reinstatement premiums, were comprised as follows:

2018: \$176 million related to Typhoons Jebi and Trami, Hurricanes Florence and Michael and \$210 million related to California Wildfires

2017: \$449 million related to Hurricanes Harvey, Irma and Maria (HIM) and \$120 million related to California Wildfires

2016: \$69 million related to Canadian Wildfires, \$45 million related to Hurricane Matthew and \$42 million related to an energy loss.

Losses and loss expenses for 2018, 2017 and 2016 were reduced for net favorable prior year development in both the P&C and Specialty segments. Non-life net favorable development was \$249 million (5.8 points on the combined ratio) for 2018, \$448 million (11.1 points on the combined ratio) for 2017, and \$677 million (16.2 points on the combined ratio) for 2016. See Note 19 to the Consolidated Financial Statements in Item 18 of this report for definition of combined ratio. See Note 8(a) to the Consolidated Financial Statements in Item 18 of this report for a further discussion of the reserve development related to prior accident years.

See results for each of the P&C and Specialty segments below for further details of Non-life underwriting results, and the Life and Health segment results that follows, for discussions on factors impacting net income or loss as it relates to the Company's underwriting results for each of the years ended December 31, 2018, 2017 and 2016. Details of Other income and Other expenses are discussed in the Corporate and Other section below.

In addition to the information presented below, see also Note 19 to the Consolidated Financial Statements in Item 18 of this report for a breakdown of Company's net income, including the Non-life and Life and Health underwriting results, and for details of combined ratios for the Non-life segments for the years ended December 31, 2018, 2017 and 2016.



Table of Contents

## P&amp;C Segment

The components of underwriting result, including technical result, which is calculated as net premiums earned less losses and loss expenses and acquisition costs, and the corresponding ratios (which are calculated as a percentage of net premiums earned) for the P&C segment for the years ended December 31, 2018, 2017 and 2016 were as follows (in millions of U.S. dollars, except ratios):

	2018	2017 <sup>(2)</sup>	2016 <sup>(2)</sup>
Gross premiums written	\$3,015	\$2,671	\$2,633
Premiums ceded	(293 )	(296 )	(254 )
Net premiums written	\$2,722	\$2,375	\$2,379
Net premiums earned	\$2,535	\$2,330	\$2,403
Losses and loss expenses	(2,073 )	(2,051 )	(1,494 )
Acquisition costs	(606 )	(534 )	(595 )
Technical result	\$(144 )	\$(255 )	\$314
Other income	30	—	3
Other expenses <sup>(1)</sup>	(75 )	(88 )	(163 )
Underwriting result	\$(189 )	\$(343 )	\$154
Loss ratio	81.8 %	88.0 %	62.1 %
Acquisition ratio	23.9	22.9	24.8
Technical ratio	105.7 %	110.9 %	86.9 %
Other expense ratio	3.0	3.8	6.8
Combined ratio	108.7 %	114.7 %	93.7 %

(1) The Company allocates certain other expenses that vary with business written by its operating segments. See Other expenses in Corporate and Other section below.

(2) In 2018, U.S. health business was reallocated from the Life and Health segment to the P&C segment and, as a result, the impacted 2017 and 2016 comparatives have been reclassified to conform to current presentation.

## Technical and underwriting results and related ratios

The P&C underwriting and technical results for 2018, 2017 and 2016 were largely driven by premiums written and earned reduced for losses and loss expenses, and, to a lesser extent, acquisition costs.

## 2018 compared to 2017

The reduced technical loss (and the corresponding decrease in the technical ratio) in 2018 compared to 2017 was largely driven by an increase in net premiums earned and a lower loss ratio, partially offset by higher acquisition costs. The reduced underwriting result loss (and a corresponding decrease in the combined ratio) was driven by the increase in the technical result, and, to a lesser extent, a decrease in other expenses. See Corporate and Other section below for further details on Other expenses.

## 2017 compared to 2016

The decrease in the technical result (and the corresponding increase in the technical ratio) in 2017 compared to 2016 was largely driven by a higher loss ratio and, to a lesser extent, a decrease in net premiums earned, partially offset by a decrease in acquisition costs. The decrease in the underwriting result (and a corresponding increase in the combined ratio) was driven by the decrease in the technical result, partially offset by a decrease in other expenses as a result of the efficiency actions undertaken following the closing of the acquisition by Exor N.V. See Corporate and Other section below for further details on Other expenses.

The changes in premiums written and earned and losses and loss expenses are described further below.

## Premiums

The P&C segment represented 47%, 46% and 48% of total net premiums written in 2018, 2017 and 2016, respectively. Business reported in this segment is, to a significant extent, originally denominated in foreign currencies and is reported in U.S. dollars. The U.S. dollar can fluctuate significantly against other currencies and this should be considered when making year-over-year comparisons. See Corporate and Other—Foreign exchange movements section below for further details of movements in foreign exchange.



Table of Contents

2018 compared to 2017

The increase in gross and net premiums written and net premiums earned was driven primarily by new business written, partially offset by cancellations and lower gross reinstatement premiums compared to the prior year relating to large catastrophic losses in 2017. Net premiums written and earned included a reduction for premiums ceded which were marginally lower than the prior year.

2017 compared to 2016

The increase in gross premiums written was driven primarily by new business written for U.S. health, partially offset by decreases in gross premiums written for other lines within in the P&C segment. Gross premiums written for these other lines decreased due to cancellations and renewal changes across all lines, partially offset by new business written and higher reinstatement premiums compared to 2016. Net premiums written and earned were lower in 2017 compared to 2016 as a result of higher premiums ceded in 2017, which included increased cessions for the catastrophe portfolio, partially offset by the factors described for increase in gross premiums written.

Losses and loss expenses

Losses and loss expenses include large catastrophic and large losses described above, partially offset by net favorable prior year development referred to above. See Note 8 to the Consolidated Financial Statements in Item 18 of this report for further details of losses and loss expenses and prior year development.

2018 compared to 2017

The increase in losses and loss expenses was primarily driven by growth in business and a lower level of favorable prior year loss development. This was partially offset by a lower level of large catastrophic and large losses described above and a lower level of losses experienced in U.S. health business in 2018 compared to 2017 where there was an increase in frequency of large claims activity in underwriting years 2015 to 2017.

2017 compared to 2016

The increase in losses and loss expenses was primarily attributable to a higher level of large catastrophic and large losses as described above and a lower level of favorable prior year loss development in addition to the increased loss activity for U.S. health business for 2017 described above.

Acquisition costs

2018 compared to 2017

The increase in acquisition costs was in line with an increase in net premiums earned. The related acquisition cost ratio, calculated as acquisition costs divided by net premiums earned, increased compared to 2017, driven by a lower level of favorable loss sensitive commissions in 2018, and lower levels of reinstatement premiums in 2018, which increased net premiums earned with little to no corresponding impact to acquisition costs.

2017 compared to 2016

The decrease in acquisition costs was in line with a decrease in net premiums earned. The related acquisition cost ratio decreased in 2017 compared to 2016 driven by higher levels of favorable loss sensitive commissions and reinstatement premiums in 2017.

Table of Contents

## Specialty Segment

The components of underwriting result, including technical result, which is calculated as net premiums earned less losses and loss expenses and acquisition costs, and the corresponding ratios, which are calculated as a percentage of net premiums earned, for the Specialty segment for the years ended December 31, 2018, 2017 and 2016 were as follows (in millions of U.S. dollars, except ratios):

	2018	2017	2016	
Gross premiums written	\$2,050	\$1,934	\$1,920	
Premiums ceded	(180 )	(154 )	(144 )	
Net premiums written	\$1,870	\$1,780	\$1,776	
Net premiums earned	\$1,767	\$1,725	\$1,767	
Losses and loss expenses	(1,096 )	(955 )	(1,073 )	
Acquisition costs	(502 )	(489 )	(500 )	
Technical result	\$169	\$281	\$194	
Other loss	—	(1 )	(1 )	
Other expenses <sup>(1)</sup>	(27 )	(33 )	(88 )	
Underwriting result	\$142	\$247	\$105	
Loss ratio	62.0	% 55.4	% 60.8	%
Acquisition ratio	28.4	28.4	28.3	
Technical ratio	90.4	% 83.8	% 89.1	%
Other expense ratio	1.5	1.9	4.9	
Combined ratio	91.9	% 85.7	% 94.0	%

(1) The Company allocates certain other expenses that vary with business written by its operating segments. See Other expenses in Corporate and Other section below.

## Technical and underwriting results and related ratios

The Specialty underwriting and technical results for 2018, 2017 and 2016 were largely driven by premiums written and earned reduced for losses and loss expenses, and, to a lesser extent, acquisition costs.

## 2018 compared to 2017

The decrease in the technical result (and the corresponding increase in the technical ratio) in 2018 compared to 2017 was largely driven by an increase in the loss ratio, partially offset by an increase in net premiums earned. The decrease in the underwriting result (and a corresponding increase in the combined ratio) was driven by the decrease in the technical result, partially offset by a decrease in other expenses. See Corporate and Other section below for further details on Other expenses.

## 2017 compared to 2016

The increase in the technical result (and the corresponding decrease in the technical ratio) in 2017 compared to 2016 was largely driven by a decrease in the loss ratio, partially offset by a decrease in net premiums earned. The increase in the underwriting result (and a corresponding decrease in the combined ratio) was driven by the increase in the technical result and a decrease in other expenses as a result of the efficiency actions undertaken following the closing of the acquisition by Exor N.V. See Corporate and Other section below for further details on Other expenses.

The changes in premiums written and earned and losses and loss expenses are described further below.

## Premiums

The Specialty segment represented 32%, 35% and 36% of total net premiums written in 2018, 2017 and 2016, respectively. Business reported in this segment is, to a significant extent, originally denominated in foreign currencies and is reported in U.S. dollars. The U.S. dollar can fluctuate significantly against other currencies and this should be considered when making year-over-year comparisons. See Corporate and Other—Foreign exchange movements section below for further details of movements in foreign exchange.

Table of Contents

2018 compared to 2017

The increase in gross and net premiums written and earned was driven primarily by new business across all lines. These increases were partially offset by cancellations and renewal changes. Net premiums written and earned were partially offset by higher premiums ceded in 2018 under new and existing contracts.

2017 compared to 2016

The increase in gross and net premiums written was driven primarily by new business written and renewal changes. These increases were largely offset by cancellations and the impact of foreign exchange. Net premiums written and earned are reduced for premiums ceded. Net premiums earned decreased due to higher premiums ceded in 2017 under new and existing contracts.

Losses and loss expenses

2018 compared to 2017

The increase in losses and loss expenses was primarily attributable to higher mid-sized losses in the current accident year and a lower level of favorable prior year loss development in 2018 compared to 2017, partially offset by a lower level of large catastrophic and large losses in 2018 than in 2017, as noted above under Non-life Results section.

2017 compared to 2016

The decrease in losses and loss expenses was primarily attributable to lower mid-sized and attritional losses in the current accident year, partially offset by a higher level of large catastrophic and large losses discussed above in the Non-life Results section in addition to a lower level of favorable prior year loss development in 2017 compared to 2016.

See Note 8 to the Consolidated Financial Statements in Item 18 of this report for further details of losses and loss expenses and prior year development.

Acquisition costs

Acquisition costs and the related acquisition cost ratio, calculated as acquisition costs divided by net premiums earned, remained relatively stable at approximately 28% for the years ended December 31, 2018, 2017 and 2016, as noted in the table above.

Table of Contents

## Life and Health Segment

The Company provides reinsurance of life and health related risks including mortality, morbidity, longevity and non-U.S. health. Reinsurance coverage is provided to primary life insurers and pension funds to protect against individual and group mortality and disability risks. The Company also provides reinsurance coverage to employer sponsored pension schemes and primary life insurers who provide pensions or issue annuity contracts offering long-term retirement benefits to consumers, who, in turn, seek protection against outliving their financial resources. Mortality business is written primarily on a proportional basis through treaty agreements and is subdivided into death and disability covers (with various riders), term assurance and critical illness (TCI) and GMDB. The Company also writes certain treaties on a non-proportional basis.

Longevity business is written on a long-term, proportional basis. The Company's longevity portfolio is subdivided into standard and non-standard annuities. The non-standard annuities are sold to consumers with aggravated health conditions and are usually medically underwritten on an individual basis. The main risk the Company is exposed to by writing longevity business is an increase in the future life span of the insured compared to the expected life span.

The components of the allocated underwriting result for the Life and Health segment for the years ended December 31, 2018, 2017 and 2016 were as follows (in millions of U.S. dollars):

	2018	2017 <sup>(3)</sup>	2016 <sup>(3)</sup>
Gross premiums written	\$1,235	\$983	\$804
Premiums ceded	(24 )	(18 )	(5 )
Net premiums written	\$1,211	\$965	\$799
Net premiums earned	\$1,212	\$970	\$800
Losses and loss expenses	(1,025 )	(835 )	(681 )
Acquisition costs	(129 )	(97 )	(92 )
Technical result	\$58	\$38	\$27
Other income <sup>(1)</sup>	13	14	10
Other expenses <sup>(2)</sup>	(51 )	(44 )	(44 )
Underwriting result	\$20	\$8	\$(7 )
Net investment income	66	60	58
Allocated underwriting result	\$86	\$68	\$51

(1) Other income represents fee income on deposit accounted contracts and longevity swaps.

(2) The Company allocates certain other expenses that vary with business written by its operating segments. See Other expenses in Corporate and Other section below.

(3) In 2018, U.S. health business was reallocated from the Life and Health segment to the P&C segment and, as a result, the impacted 2017 and 2016 comparatives have been reclassified to conform to current presentation as referred to above.

## Allocated underwriting result

The underwriting result for Life and Health is increased by net investment income allocated to this segment to determine allocated underwriting result. See Investments Results section below for further details on net investment income. The Life and Health underwriting and allocated underwriting results for 2018, 2017 and 2016 were largely driven by premiums earned reduced for losses and loss expenses, and, to a much lesser extent, acquisition costs.

## 2018 compared to 2017

The increase in allocated underwriting result was primarily driven by increased profitability and organic growth, including the acquired Aurigen operation, partially offset by higher expenses to support the Company's plans to grow the business.

## 2017 compared to 2016

The increase in the allocated underwriting result was primarily driven by growth in the business including the acquisition of Aurigen in April 2017.

The changes in premiums written and earned, losses and loss expenses are described further below.



Table of Contents

Premiums

The Life and Health segment represented 21%, 19% and 16% of total net premiums written in 2018, 2017 and 2016, respectively. Business reported in this segment is, to a significant extent, originally denominated in foreign currencies and is reported in U.S. dollars. The U.S. dollar can fluctuate significantly against other currencies and this should be considered when making year-over-year comparisons. See Corporate and Other—Foreign exchange movements section below for further details of movements in foreign exchange.

2018 compared to 2017

The increases in gross and net premiums written and net premiums earned were primarily driven by organic growth. The increase is also partly driven by the inclusion of life premiums from the acquisition of Aurigen for a full year in 2018 compared to three quarters in 2017, following the acquisition in April 2017.

2017 compared to 2016

The increases in gross and net premiums written and net premiums earned were driven primarily by the inclusion of Aurigen premiums post acquisition in April 2017.

Losses and loss expenses

2018 compared to 2017

The increase in losses and loss expenses was primarily attributable to growth in the business and the inclusion of losses and loss expenses from the acquisition of Aurigen for a full year in 2018 compared to three quarters in 2017.

2017 compared to 2016

The increase in losses and loss expenses was primarily due to the inclusion of Aurigen losses and loss expenses post acquisition in April 2017.

Acquisition costs

Acquisition costs increased each year in line with increases in net premiums earned.



Table of Contents

## Investment Result

Investment result consists of net investment income, net realized and unrealized investment gains or losses and interest in earnings or losses of equity method investments. Net investment income includes interest, dividends and amortization of premiums and discounts on fixed maturities and short-term investments, as well as investment income on funds held, and is net of investment expenses and withholding taxes. Net realized and unrealized investment gains or losses include amounts realized from sales and redemptions of the Company's fixed maturities, short-term investments, equities and other invested assets, and changes in net unrealized investment gains or losses on these investments. Interest in earnings or losses of equity method investments represents the Company's aggregate share of earnings or losses related to several private placement investments and limited partnership interests.

The components of the investment result for the years ended December 31, 2018, 2017 and 2016 were as follows (in millions of U.S. dollars, except percentages):

	2018	2017	2016
Net investment income <sup>(1)</sup>	\$416	\$402	\$411
Net realized and unrealized investment (losses) gains	(390 )	232	26
Interest in earnings (losses) of equity method investments	11	86	(23 )
Total investment result	\$37	\$720	\$414

(1) Includes amounts allocated to the Life and Health segment as presented in Results by Segment above.

## Net Investment Income

Net investment income is largely driven by interest and amortization on fixed maturities, short-term investments and cash and cash equivalents. Net investment income by asset types for the years ended December 31, 2018, 2017 and 2016 is included in Note 4(b) to the Consolidated Financial Statements in Item 18 of this report and is summarized below (in millions of U.S. dollars):

	2018	2017	2016
Fixed maturities, short-term investments and cash and cash equivalents	\$392	\$388	\$398
Equities, Funds held and other	53	37	48
Investment expenses	(29 )	(23 )	(35 )
Net investment income	\$416	\$402	\$411

## 2018 compared to 2017

Net investment income increased in 2018 compared to 2017 due to higher reinvestment rates and changes in portfolio mix, partially offset by higher investment expenses.

## 2017 compared to 2016

Net investment income decreased in 2017 compared to 2016 due to the partial sale of the principal finance portfolio in the fourth quarter of 2016, which was partially offset by the inclusion of Aurigen's portfolio, increases in reinvestment rates in the U.S. and Canada, a higher allocation to investment grade corporate bonds and lower investment expenses during the year.

## Net Realized and Unrealized Investment (Losses) Gains

The Company's portfolio managers have a total return investment objective, achieved through a combination of optimizing current investment income and pursuing capital appreciation. To meet this objective, it is often desirable to buy and sell securities to take advantage of changing market conditions and to reposition the investment portfolios. Accordingly, recognition of realized gains and losses is considered by the Company to be a normal consequence of its ongoing investment management activities. In addition, the Company recognized changes in fair value for substantially all of its investments as changes in unrealized investment gains or losses in its Consolidated Statements of Operations. Realized and unrealized investment gains and losses are generally a function of multiple factors, with the most significant being prevailing interest rates, credit spreads and equity market conditions.

Table of Contents

See Note 4(a) to the Consolidated Financial Statements in Item 18 of this report for details of realized investment gains and losses and changes in unrealized investment gains and losses by investment type. Investment results for the years ended December 31, 2018, 2017 and 2016 were significantly impacted by the volatility in the capital markets with the Company reporting Net realized and unrealized investment gains or losses, included in net income or loss, were as follows (in millions of U.S. dollars):

	2018	2017	2016
Net realized investment (losses) gains	\$(202)	\$22	\$104
Change in net unrealized investment gains or losses	(182 )	210	(78 )
Impairment loss on investments in real estate	(6 )	—	—
Net realized and unrealized investment (losses) gains	\$(390)	\$232	\$26

The net realized and unrealized investment losses of \$390 million in 2018 were largely driven by increases in U.S. risk-free rates, widening of U.S. and European investment grade corporate spreads and net realized investment losses on fixed maturities and short-term investments due to changes in investment portfolio mix aimed at increasing yield and decreasing duration. The net realized investment losses on fixed maturities and short-term investments were partially offset by net realized gains in equities and other invested assets. The impairment loss on investments in real estate was driven by a write-down in value of London-based real estate investments directly owned by the Company. The net realized and unrealized investment gains of \$232 million in 2017 were primarily due to narrowing of corporate bond spreads and positive performance in public and private equities, partially offset by increases in U.S. risk-free interest rates. The net realized investment gain was primarily driven by gains on sales or redemptions of fixed maturities and short-term investments.

The net realized and unrealized investment gains of \$26 million in 2016 were largely driven by narrowing of credit spreads, partially offset by increases in U.S. risk-free interest rates. Net realized investment gains in 2016 were primarily driven by realized investments gains on fixed maturities and short-term investments.

See also Notes 3 and 4(a) to the Consolidated Financial Statements in Item 18 for further details.

Interest in Earnings (Losses) of Equity Method Investments

The interest in earnings of equity method investments of \$11 million in 2018 was primarily due to gains on private equities, partially offset by a decrease in value related to real estate assets held by an equity method investee, Almacantar, a privately held real estate investment and development group.

The interest in earnings of equity method investments of \$86 million in 2017 was primarily due to gains related to Almacantar driven by appreciation of real estate assets.

The losses of \$23 million in 2016 were due to the Company's aggregate share of earnings or losses related to several private placement investments and limited partnerships.

Table of Contents

Corporate and Other

The following are components of net income (in millions of U.S. dollars) that the Company does not allocate to segments, in line with the way the Company manages its business, as described above.

	2018	2017	2016
Other expense, net of other income, not allocated to the segments <sup>(1)</sup>	\$(146)	\$(181)	\$(174)
Interest expense	(43 )	(42 )	(49 )
Loss on redemption of debt	—	(2 )	(22 )
Amortization of intangible assets	(35 )	(25 )	(26 )