RENAISSANCERE HOLDINGS LTD
Form ARS
April 02, 2019
Table of Contents

2018 Annual Report

RenaissanceRe

Holdings Ltd.

Table of Contents

Contents

Table of Contents

Financial Highlights

Financial Highlights for RenaissanceRe Holdings Ltd. and Subsidiaries

(In thousands of United States dollars, except per share amounts and percentages)		2018	2017	2016
Gross premiums written	$	3,310,427	2,797,540	2,374,576
Net income (loss) available (attributable) to RenaissanceRe common shareholders	$	197,276	(244,770)	480,581
Operating income (loss) available (attributable) to RenaissanceRe common shareholders (1)	$	366,595	(332,300)	342,253
Total assets	$	18,676,196	15,226,131	12,352,082
Total shareholders equity	$	5,045,080	4,391,375	4,866,577
Per common share amounts				
Net income (loss) available (attributable) to RenaissanceRe common shareholders per common share diluted	$	4.91	(6.15)	11.43
Operating income (loss) available (attributable) to RenaissanceRe common shareholders per common share diluted (1)	$	9.17	(8.35)	8.10
Book value per common share	$	104.13	99.72	108.45
Tangible book value per common share (1)	$	97.85	93.23	101.87
	$	117.17	111.23	118.59

Tangible book value per common share plus accumulated dividends (1)				
Dividends per common share	$	1.32	1.28	1.24
Ratios				
Return on average common equity	%	4.7	(5.7)	11.0
Operating return on average common equity (1)	%	8.8	(7.7)	7.9
Net claims and claim expense ratio	%	56.7	108.4	37.8
Underwriting expense ratio	%	30.9	29.5	34.7
Combined ratio	%	87.6	137.9	72.5

(1) Represents a non-GAAP financial measure, which is reconciled in the Comments on Regulation G on pages 9 and 10.

Financial Strength Ratings [1]

	A.M. Best	S&P	Moody s	Fitch
Renaissance Reinsurance Ltd. (2)	A+	A+	A1	A+
DaVinci Reinsurance Ltd. (2)	A	A+	A3	
Renaissance Reinsurance U.S. Inc. (2)	A+	A+		
RenaissanceRe Specialty U.S. Ltd. (2)	A+	A+		

Renaissance Reinsurance of Europe Unlimited Company (2)	A+	A+		
Top Layer Reinsurance Ltd. (2)	A+	AA		
Vermeer Reinsurance Ltd. (2)	A			
RenaissanceRe Syndicate 1458				
Lloyd s Overall Market Rating (3)	A	A+		AA-
RenaissanceRe Holdings Ltd. (4)	Very Strong	Very Strong		

(1) As of March 6, 2019.

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

(3) The A.M. Best, S&P and Fitch ratings for the Lloyd s Overall Market Rating represent RenaissanceRe Syndicate 1458 s financial strength rating.

(4) The A.M. Best rating for RenaissanceRe Holdings Ltd. refers to the Enterprise Risk Management (ERM) A.M. Best score within A.M. Best s credit ratings methodology. The S&P rating for RenaissanceRe Holdings Ltd. represents the rating on its ERM practices.

Table of Contents

Letter to Shareholders

By Kevin O Donnell

President and Chief Executive Officer

Each entity in the Integrated System has a separate and defined purpose and strategic advantage, which maximizes our ability to match the most desirable risk with the most efficient capital.

Dear Shareholders,

In so many ways, 2018 was one of our strongest years to date. Our performance was the result of solid execution, continued investment in strategic imperatives and, in another active year for natural catastrophes around the world, application of our Gross-to-Net Strategy and Integrated System. We furthered our lead as the preferred market for reinsurance buyers, and solidified our recognition as the best underwriter by brokers, customers, investors and partners. At the same time, we crossed a significant milestone, exceeding $3 billion of gross premiums written.

I. Our Performance in 2018

Financial Performance

In 2018, we reported net income available to RenaissanceRe common shareholders of $197 million and operating income available to RenaissanceRe common shareholders of $367 million. Our book value per common share increased by 4.4% and our tangible book value per common share, plus change in accumulated dividends, increased by 6.4%. For the full year, our return on average common equity was 4.7% and our operating return on average common equity was 8.8%.

Throughout the year, we found several meaningful opportunities to invest in our business, and consequently we did not repurchase any of our common shares. Since our formation, however, we have consistently demonstrated good stewardship of our shareholders capital, returning over $3.5 billion in share buybacks and $1 billion in common share dividends. In 2019, we raised our quarterly dividend for the 24th consecutive year in a row.

2018 Losses

Once again, we were reminded that ours is a volatile business, with industry-wide insured catastrophe losses approaching $80 billion. Our results in 2018 benefited from solid underwriting, smart portfolio construction and decades of experience. Additionally, our strong emphasis on a robust Gross-to-Net Strategy reflected our philosophy that it is better to make slightly less money in good years to ensure we are prepared for active ones.

2

An important consideration impacting any reinsurer s performance is the development of significant losses. When losses big or small occur, we rely on, and expect, our customers to manage their claims appropriately. Continuing adverse loss development, however, has compounded the impact of back-to-back large loss years. Most notably, industry losses associated with 2017 s Hurricane Irma continue to grow well over a year following the event, raising significant questions about the long-term health of the Florida market. Absent some large-scale changes to this market, I anticipate its role in our portfolio will continue to diminish. Thankfully, we have preferred access to the best insurance companies in Florida, who have been good partners with us over the years, and with whom we hope to continue to do business in the future.

Gross-to-Net Strategy

In 2018, our Gross-to-Net Strategy was a critical factor in our outperformance. While losses were not as severe as those in 2017, the difference between our gross and net positions was still substantial, resulting in our ceding approximately 70% of the gross losses from the year s catastrophic events. Several years ago, I said there is a cost for doing the right thing. So, while retro purchases may look expensive when there are no losses, it is in years like 2018 where we can reap substantial benefits.

The Gross-to-Net Strategy underpins our corporate strategy in several important ways. Rather than merely assuming business, we construct portfolios of risk. While starting with attractive risk is necessary, it is not sufficient. We need to thoroughly understand the risk characteristics of the assumed business and combine these individual risks into portfolios we design to meet defined capital requirements. These portfolios are then matched with the most appropriate capital, which could include using our rated balance sheets, vehicles we manage for our partners, traditional retrocessional covers (for both ourselves and our partners), or insurance linked securities such as cat bonds. Our Gross-to-Net Strategy may also encompass more innovative routes, such as structured reinsurance products with long-term partners and various aspects of our Integrated System.

The remaining net position is consequently more capital efficient, and therefore more profitable, allowing us to maximize our return on equity. The advantages to our shareholders are significant and our risk partners receive a well-underwritten portfolio that provides them with the benefits of adding diversifying risk to their often much larger portfolios. Less obvious, but equally important, our Gross-to-Net Strategy enables us to provide consistent, efficiently-priced protection to our customers, year after year, regardless of market cycles.

The Integrated System

In addition to our Gross-to-Net Strategy, I frequently discuss the importance of our Integrated System as one of the many unique components of our corporate strategy. I believe our Integrated System critically distinguishes us from our competitors, creates shareholder value and explains our strong long-term performance. As such, I would like to take a little time to explain an important aspect of it in more detail.

If you recall, last year in my letter to shareholders, I discussed the concept of Pareto optimality. A closely related concept is the Pareto efficient frontier, which is the theoretical curve that represents the optimal set of tradeoffs a company can make between different operating parameters. On the Pareto efficient frontier, you cannot improve one parameter without worsening another. It is the point where there are no free lunches, and a company is operating as efficiently as possible given its chosen tradeoffs between activities to deliver a unique mix of value.

Our Integrated System seeks Pareto outcomes by employing multiple balance sheets and funds which occupy different positions on the Pareto efficient frontier, each designed to provide a different, and optimal, mix of value to our customers. Each entity in the Integrated System has a separate and defined purpose and strategic advantage, which maximizes our ability to match the most desirable risk with the most efficient capital. Defining the purpose and benefit of each entity is critical, as it provides the allocation framework and allows us to manage the conflicts inherent in having multiple sources of capital from diverse partners.

3

Table of Contents

Letter to Shareholders (continued)

A good example of the Integrated System is our newest joint venture balance sheet, Vermeer Re, which we manage for PGGM, a leading Dutch pension fund. Vermeer Re will write risk-remote, and therefore capital intensive, U.S. property business. The portfolio we plan to construct for Vermeer Re would be capital consumptive on our existing vehicles, so this addition to our platform fills a gap in our offering and brings a new and more efficient product to our customers. Given our decades of experience, we are capable of effectively structuring vehicles. Once we identified this opportunity, we were able to bring additional, efficient coverage to our customers while making high-quality risk available to an important partner.

Taking a step back to the beginning, the foundation for the Integrated System is our original balance sheet Renaissance Reinsurance Ltd., which we refer to as RRL . RRL is our flagship, rated balance sheet, and is the largest balance sheet for our risk. Every other entity we formed was created to solve a problem more effectively than RRL could.

For example, one of the first additions to our Integrated System was Top Layer Re in 1999, our joint venture with State Farm. We had access to international, risk-remote, property catastrophe risk that was attractive, but capital consumptive on RRL s balance sheet, which made it a less efficient solution for our customers needs. This business, however, was diversifying against U.S. risk, and thus ideal for a partner like State Farm. So, we created Top Layer Re, with a majority of the capital provided by State Farm in the efficient form of a $3.9 billion stop-loss agreement.

DaVinci Re is another good example. We formed this balance sheet because we had access to more desirable risk than our RRL balance sheet could efficiently assume, as it was not sufficiently diversifying against RRL s existing book. Additionally, market capacity was constrained and DaVinci Re supplied new, diversifying capital to this desirable risk, while providing a separate, rated balance sheet to our customers.

It is a similar case with Upsilon. Certain types of business, such as worldwide aggregate retro, provide broad coverage and therefore are capital consumptive against a rated

balance sheet such as RRL. We had access to a deep pool of this risk and are recognized experts in underwriting it, so in 2013 we formed Upsilon, a collateralized balance sheet. Upsilon, as an unrated vehicle, posts a dollar of collateral for every dollar of limit provided, and therefore occupies a very different position on the efficient frontier from a rated balance sheet, providing desirable risk to ILS capital and a greater supply of efficient protection to our customers.

We also have several wholly owned, rated balance sheets, the largest of which are our Lloyds Syndicate 1458 and Renaissance Reinsurance U.S. Inc. For certain lines of business, we needed to be closer to the customer. Syndicate 1458 and Renaissance Reinsurance U.S. helped us accomplish that goal. The Lloyds market is licensed in over 100 countries around the world and has great access to business that requires a market presence. Similarly, Renaissance Reinsurance U.S. is licensed or authorized in all 50 states.

Over the years, we formed several other ventures occupying unique positions on the Pareto efficient frontier. Having served their purpose, they were retired. Many of these were created to fulfill a short-term need, and thus their winding down was the expected conclusion to their limited life cycles. The combination of owned balance sheets and both short-term and long-term managed vehicles allows us to nimbly respond to opportunities and solve more customer problems. Importantly, we never compromise on our underwriting or the discipline required to service each mandate with precision, transparency and a deft ability to manage increasingly complicated conflicts.

Fees and the Integrated System

One of the benefits of our Integrated System is it allows us to earn fees for bridging the gap between risk and capital. The starting point for raising capital and creating entities, however, is always to meet customer needs. We believe the industry yardstick of assets under management as a measure of success is misplaced and can lead to unintended, and potentially deleterious, outcomes. Our vehicles are structured to deliver efficient capital in order to service customers, not to maximize assets under management or fees. So for us, fees are a serendipitous outcome of using our Integrated System to benefit our customers.

Total fee income was about $90 million in 2018, which is up over a third year-on-year. The true earning power of this business is likely higher, given that the catastrophe losses experienced in both 2017 and 2018 reduced our fee income. This is significant for several reasons. First, this is risk-free income against which we do not need to hold capital, which boosts not only our bottom line, but also our return on equity. Second, these vehicles benefit from the underwriting work we already undertake for our wholly owned balance sheets. Since we only need to underwrite a risk once, we can leverage a pre-existing risk curve against many sources of capital. Undoubtedly, there are some marginal costs related to running our fee generating businesses, but these are relatively small. So, not only do we generate a material amount of fee income, but much of it goes straight to our bottom line.

Third-Party Capital & the Price of Risk

While we believe third-party capital is an important component of our business, due to the inherent risk of conflicts of interest, I believe this capital needs to be intermediated by strong underwriting. Strong underwriting is critical because it helps answer the question, What is the correct price of risk? As important as the answer to this question is, it is *a priori* unknowable, and *ex post facto* unactionable.

The best and simplest definition of risk I have seen is from Elroy Dimson of the London Business School Risk means more things can happen than will happen. So, to best understand risk, we build stochastic models that generate probability distributions of outcomes from very good (no loss) to very bad (total loss), and we use these distributions to estimate the price necessary for us to assume a given risk. This pricing process requires us, as underwriters, to determine a final distribution that best represents the set of outcomes that can happen. I highlight this because many market participants have focused solely on expected loss, or mean of the distribution, both of which are fancy ways of saying the average . This is a single number, which we believe is insufficient to understand, much less price, the

assumed risk. It is the equivalent of saying, Many very different things can happen, so let s take the average and assume that is what will happen. In our business, you almost never get the average.

As an example closer to home, assume we are in a world where an underwriter has a choice between two contracts. Each contract has a limit of $100, premium of $2 and expected (average) loss of 1%. In reinsurance terms, each contract has a 50% loss ratio, meaning on average $1 is earned every year. Using only this expected loss statistic, these contracts are indistinguishable. However, with more information about the shape of the risk distribution for each contract, we see they are, in fact, very different.

Assume contract 1 has no standard deviation, so every year you collect $2 in premium and pay $1 in loss. Contract 2, on the other hand, has two possible outcomes. The first outcome is 99% chance of no loss, so you keep the $2 premium most of the time. The second outcome is a 1% chance that you lose $100, which is what we call tail risk, the risk of extreme outcomes. So, both contracts still make $1 per year on average, but, I think with this additional information, a good underwriter would select contract 1 with its guarantee of making $1. In addition, in order to responsibly write contract 2, the underwriter must hold at least $100 in capital, because she never knows when the bad year will happen and must be able to settle the potential for a total loss at any time.

Obviously, this is a simplified view of the world, but it does highlight that understanding the full distribution of potential outcomes, especially the tail risk, is required to appropriately price and underwrite risk, and defaulting to a single measurement is never a good idea. Due to the growing recognition of the importance of underwriting in the third-party capital market, we are increasingly seeing more sophisticated diligence conducted by investors in order to assess the underwriting expertise of their managers. Ultimately, I expect the market to migrate to the hybrid model of rated and collateralized capacity we pioneered with our Integrated System. The benefits of the hybrid model are increasingly recognized, and provide us a significant competitive advantage.

Table of Contents

Letter to Shareholders (continued)

Enhancing Relationships with Key Partners

State Farm

We had a successful year in 2018, building and enhancing relationships with important partners. For example, State Farm agreed to take a substantial equity position, investing $250 million in our common shares. Our association with State Farm stretches back decades. They are founding investors in our joint ventures Top Layer Re and DaVinci Re. This most recent investment establishes them as one of our largest shareholders. Going forward, we believe partnering with the strongest companies in the value chain, like State Farm, will be of increasing importance.

TMR Acquisition

One of our most significant strategic achievements for 2018 was our agreement to acquire Tokio Marine s reinsurance business Tokio Millennium Re, or TMR. Acquisitions are rare for us, with our last one being Platinum Underwriters Holdings Ltd. in 2015. Given our industry reputation, we have been approached to acquire businesses in the past, but, due to the strength of our culture and insistence on strong enterprise risk management, we prefer building businesses from the bottom up. Occasionally though, we have the opportunity to acquire a good business at a competitive price.

The TMR transaction accelerates our strategy by providing greater penetration into the reinsurance market at a time when desirable risk remains scarce, while also permitting us to offer more comprehensive solutions to a larger number of customers. This transaction also enhances our relationship with Tokio Marine, a key partner since 1994. As of this writing, we had not yet closed the TMR transaction, but, if TMR s tangible book value is unchanged from June 30, 2018, we expect to pay a total of about $1.5 billion in cash (including a pre-closing dividend) and stock, or slightly over TMR s tangible book value. We still have work to do in order to realize these benefits, but I feel confident that we have the best team in the business and that TMR will make it even stronger.

II. Looking Forward

Virtual Insurance Enterprises

A critical aspect of our strategy is using our skills to support our partners efforts. In the future, we believe this partnership model will mark its apex in what we call Virtual Insurance Enterprises, where specialists who are best-in-breed in complementary zones of expertise partner to successfully bridge an evolving value chain. A key implication of these Virtual Insurance Enterprises is the recognition there will be more than one winner in any future state, and it will not be possible for one organization to successfully occupy all the links in the value chain. Our competitive advantages lie in creating and pricing portfolios, and sourcing the most efficient capital to back them. Understanding this, we believe we can best maximize shareholder value by focusing on our competitive advantages and bringing them to market in an industry-leading way.

Our identity is quite simply, To be the best underwriter. We know who we are and what we are good at; consequently, we consistently strive to be the preferred market for matching desirable risk with efficient capital. Put bluntly, if underwriting is no longer valuable, we are no longer valuable. Thankfully, we have always been able to add value through underwriting and believe we always will. We have a strong record of being a good partner, and I believe we will best maximize shareholder value in the future by focusing on our strengths and sourcing our risk through partnerships with successful insurers, thereby building Virtual Insurance Enterprises that are more effective and efficient than any actual insurance enterprise.

Market of the Future

I believe, in order to remain relevant, the insurance market must mature, with the most significant advancements focused in two areas. First, the supply chain must become more efficient. Second, providers of risk capital must manage the frictional cost of matching risk and capital more efficiently. From our perspective, we have spent the last five years focusing on the second of these imperatives, working diligently to increase our ability to efficiently match risk with capital. We recognized, as our market matured and

Table of Contents

became more competitive, we needed to reduce the cost of our capital. We accomplished this by moving quickly to increase both our scale and our investment and capital leverage. By doing so, we returned these efficiencies to our equity investors through higher margins. We find continuing success in this effort. Over the previous five years, we more than doubled our gross premiums written while growing shareholders equity approximately 30% and holding the sum of operational and corporate expenses flat.

We expect our operational and capital leverage will continue to improve moving forward and adding the TMR portfolio will allow us to continue to leverage our platforms. While I am delighted with our performance to date, I note, even with the expected contribution of the TMR deal to increased efficiency, you should not expect us to continue to improve at the same pace. We believe we are at a point where our existing resources are constrained, and any continued future growth will require an expanded expense base. Our goal, however, is to grow premium faster than expenses.

Why did we choose to focus on our operational efficiency rather than on supply chain efficiency? Primarily for two reasons:

First, we retain greater control over both the process and the benefit of the efficiencies of an improved platform, which is permanent to us. Others may also close the gap to become more efficient operationally, but that simply reduces our alpha to the market; it does not reduce the benefit accrued to our shareholders.

Second, we believe focusing on the supply chain is less advantageous for us over the long run. Changes that improve the efficiency of the supply chain are likely to become transparent to competitors, and quickly adopted by all market participants, especially if they do not involve any countervailing tradeoffs. Consequently, any benefit will eventually be mutualized, with fleeting advantages to a first mover. Supply chain efficiencies are ultimately competed away, and typically inure to the long-term benefit of the consumer.

Board Evolution

We recently announced the nomination of Cynthia Trudell to our Board of Directors. Cynthia will be a great addition and brings a wealth of experience as a chief executive and leader of organizational talent. Cynthia s expertise and proven experience in Board leadership will contribute significantly to our stewardship of the organization on behalf of all of our shareholders.

We also announced the planned retirement of Edward J. Zore at the end of his term in May 2019, after nearly a decade of service. Ed s industry experience, investment acumen and general wise counsel have been invaluable to me and my team. I would like to thank Ed for his many years of distinguished service.

In Closing

2018 was a difficult year for the industry; however, we outperformed across the board, both financially and strategically. Once again, we benefited from our industry-leading ability to construct efficient portfolios of risk through superior underwriting and the application of our Gross-to-Net Strategy and Integrated System. In 2019, we face the challenges of successfully integrating TMR while continuing to grow the business and maximizing shareholder value, but I believe we will rise to that challenge, just as we did in 2018.

Sincerely,

Kevin J. O Donnell
President and Chief Executive Officer

Table of Contents

Message from the Chair

RenaissanceRe s mission is, and has consistently been, to produce superior returns for our shareholders over the long term. We do this by being a trusted, long-term partner to our customers for assessing and managing risk, delivering responsive solutions and keeping our promises. The principal mission of your Board of Directors is to oversee management s development and execution of a sound strategic plan, consistent with RenaissanceRe s mission and values. In many ways 2018 reflected the rewards and continuing promise of your Company s strategy, as RenaissanceRe delivered what the Board believes to be extraordinary financial results in the context of large industry losses; extended our value proposition and leading market position with clients and partners worldwide; and grew our operations significantly with new market offerings and through expansion of our existing, market leading franchises. In addition, we took a significant step to further accelerate our strategy with the announced acquisition of Tokio Millennium Re, the reinsurance operations of Tokio Marine Holdings, Inc. These achievements are summarized for you in this year s letter from our Chief Executive Officer, Kevin O Donnell.

The value propositions, execution capabilities and risk management discipline of insurers and reinsurers are tested by years of elevated industry losses, such as what we have seen in 2018 and 2017. In the view of the Board, RenaissanceRe more than passed these tests. The Company kept its promises to clients and partners, extended its market reach and presence, and generated strong net returns despite large loss events. As in 2017, investments made over time to support our industry leading portfolio construction, build and deploy new and enhanced risk management tools, and execute our Gross-to-Net Strategy bore fruit in 2018. Not every year will pose challenges of this level, but the Board will remain committed to the development and execution of the Company s strategic plan, including oversight of management s business plans and risk management framework.

The Board is also mindful that, against 2018 s unusually busy backdrop, the RenaissanceRe team pursued potential growth opportunities with discipline, culminating in our successful bid for Tokio Millennium Re. The Board s oversight of this process was vigorous and robust. We share management s confidence that the transaction will accelerate our existing strategy, and that our strategy keeps us well positioned to produce superior long-term financial results. In addition, we join the executive team in welcoming our future colleagues from Tokio Millennium Re to our organization, and in expressing our appreciation of our long-term and expanded relationship with Tokio Marine Holdings.

The Board is also pleased to welcome State Farm Mutual Automobile Insurance Company to our shareholder base, extending the long-standing relationship between our two firms. State Farm s investment further enhances our

decades-old relationship, benefiting both franchises, the markets we respectively serve, and our shareholders. Following the closing of our acquisition of Tokio Millennium Re, we anticipate that we will continue to have the very strong capital and liquidity position you have come to expect from RenaissanceRe.

While our philosophy remains consistent, your Board s composition evolves over time as we consider the skills and experiences that best suit your Company s future needs and as the circumstances of individual directors change. This year, our distinguished colleague Ed Zore announced his plans to retire from your Board after three full terms as a director. Ed served with distinction on each of our committees, bringing both his extraordinary business acumen and his passion for and wisdom in respect of corporate governance. Ed was an outstanding advisor and sounding board for both Kevin and me, and we join every member of the Board in wishing Ed all the best in his retirement.

To succeed Ed, the Board is delighted to unanimously nominate Ms. Cynthia Trudell to serve you as an independent director. Cynthia s remarkable career spans high-performance tenures in chief executive roles and as a leader of organizational talent, which is a perfect suite of experience for RenaissanceRe as we prepare to meaningfully expand our headcount, operating platform and geographic presence. Moreover, Cynthia brings to us an extensive background in governance, including in the financial risk bearing sector and in industries confronting change. We look forward to welcoming Cynthia in conjunction with our May 2019 shareholder meeting.

I also wish, once again, to thank our shareholders and stakeholders who participated over the past year in our continual engagement process. We appreciate your investment in RenaissanceRe, and overseeing management s communications with, disclosure to, and engagement with you is a priority for the Board. Your engagement supports our ongoing efforts to attract, retain and appropriately incent what your Board believes to be the best team in our industry, and to continue to build the confidence and support of our clients and investors.

Kevin s letter demonstrates how RenaissanceRe s strategy, unique culture, distinctive capabilities and values let us thrive amidst the challenges of 2018, and how these attributes and our strategy position us to succeed in an exciting future. Rest assured that our commitment to overseeing these plans and this remarkable franchise on your behalf will continue as well.

Sincerely,
James L. Gibbons
Non-Executive Chair

Table of Contents

Comments on Regulation G

In addition to financial measures prepared in accordance with generally accepted accounting principles (GAAP) set forth in this Annual Report, the Company has included certain non-GAAP financial measures within the meaning of Regulation G. The Company has consistently provided these financial measures in previous investor communications and the Company s management believes that these measures are important to investors and other interested persons, and that investors and such other persons benefit from having a consistent basis for comparison between years and for comparison with other companies within the industry. These measures may not, however, be comparable to similarly titled measures used by companies outside of the insurance industry. Investors are cautioned not to place undue reliance on these non-GAAP measures in assessing the Company s overall financial performance.

The Company uses operating income (loss) available (attributable) to RenaissanceRe common shareholders as a measure to evaluate the underlying fundamentals of its operations and believes it to be a useful measure of its corporate performance. Operating income (loss) available (attributable) to RenaissanceRe common shareholders as used herein differs from net income (loss) available (attributable) to RenaissanceRe common shareholders, which the Company believes is the most directly comparable GAAP measure, by the exclusion of net realized and unrealized gains and losses on investments, and the associated income tax expense or benefit, and the exclusion of the write-down of a portion of the Company s deferred tax asset as a result of the reduction in the U.S. corporate tax rate from 35% to 21% effective January 1, 2018 pursuant to the Tax Cuts and Jobs Act of 2017 (the Tax Bill), which was enacted on December 21, 2017. The Company s management believes that operating income (loss) available (attributable) to RenaissanceRe common shareholders is useful to investors because it more accurately measures and predicts the Company s results of operations by removing the variability arising from fluctuations in the Company s fixed maturity investment portfolio, equity investments trading and investments-related derivatives, the associated income tax expense or benefit of those fluctuations, and the non-recurring impact of the write-down of a portion of the Company s deferred tax assets as a result of the Tax Bill. The Company also uses operating income (loss) available (attributable) to RenaissanceRe common shareholders to calculate operating income (loss) available (attributable) to RenaissanceRe common shareholders per common share diluted and operating return on average common equity annualized . The following is a reconciliation of: 1) net income (loss) available (attributable) to RenaissanceRe common shareholders to operating income (loss) available (attributable) to RenaissanceRe common shareholders; 2) net income (loss) available (attributable) to RenaissanceRe common shareholders per common share diluted to operating income (loss) available (attributable) to RenaissanceRe common shareholders per common share diluted; and 3) return on average common equity annualized to operating return on average common equity annualized:

(in thousands of United States dollars, except per share amounts and percentages)	Year Ended December 31,		
	2018	2017	2016
	$197,276	$ (244,770)	$480,581

Net income (loss) available (attributable) to RenaissanceRe common shareholders			
Adjustment for net realized and unrealized losses (gains) on investments	**175,069**	(135,822)	(141,328)
Adjustment for deferred tax asset write-down (1)	**-**	36,705	-
Adjustment for income tax (benefit) expense (2)	**(5,750)**	11,587	3,000
Operating income (loss) available (attributable) to RenaissanceRe common shareholders	**$ 366,595**	$ (332,300)	$342,253
Net income (loss) available (attributable) to RenaissanceRe common shareholders per common share - diluted	**$ 4.91**	$ (6.15)	$ 11.43
Adjustment for net realized and unrealized losses (gains) on investments	**4.40**	(3.41)	(3.40)
Adjustment for deferred tax asset write-down (1)	**-**	0.92	-
Adjustment for income tax (benefit) expense (2)	**(0.14)**	0.29	0.07
Operating income (loss) available (attributable) to RenaissanceRe common shareholders per common share - diluted	**$ 9.17**	$ (8.35)	$ 8.10
Return on average common equity	**4.7%**	(5.7%)	11.0%
Adjustment for net realized and unrealized losses (gains) on investments	**4.2%**	(3.2%)	(3.2%)
Adjustment for deferred tax asset write-down (1)	**-**	0.9%	-
Adjustment for income tax (benefit) expense (2)	**(0.1%)**	0.3%	0.1%
Operating return on average common equity	**8.8%**	(7.7%)	7.9%

(1) Adjustment for deferred tax asset write-down represents the write-down of a portion of the Company s deferred tax asset as a result of the reduction in the U.S. corporate tax rate from 35% to 21% effective January 1, 2018 pursuant to the Tax Bill, which was enacted on December 22, 2017.

(2) Adjustment for income tax (benefit) expense represents the income tax (benefit) expense associated with the adjustment for net realized and unrealized losses (gains) on investments. The income tax impact is estimated by applying the statutory rates of applicable jurisdictions, after consideration of other relevant factors.

Table of Contents

The Company has included in this Annual Report tangible book value per common share and tangible book value per common share plus accumulated dividends . Tangible book value per common share is defined as book value per common share excluding goodwill and intangible assets per common share. Tangible book value per common share plus accumulated dividends is defined as book value per common share excluding goodwill and intangible assets per common share, plus accumulated dividends. The Company believes book value per common share to be the most directly comparable GAAP measure to tangible book value per common share and tangible book value per common share plus accumulated dividends, respectively. The Company s management believes tangible book value per common share and tangible book value per common share plus accumulated dividends are useful to investors because they provide a more accurate measure of the realizable value of shareholder returns, excluding the impact of goodwill and intangible assets. The following is a reconciliation of book value per common share to tangible book value per common share and tangible book value per common share plus accumulated dividends:

	Year Ended December 31,		
	2018	2017	2016
Book value per common share	**$104.13**	$ 99.72	$108.45
Adjustment for goodwill and other intangibles (1)	**(6.28)**	(6.49)	(6.58)
Tangible book value per common share	**97.85**	93.23	101.87
Adjustment for accumulated dividends	**19.32**	18.00	16.72
	$117.17	$111.23	$118.59

Tangible book value per common share plus accumulated dividends			
Change in book value per common share	**4.4%**	(8.0%)	9.4%
Change in tangible book value per common share plus change in accumulated dividends	**6.4%**	(7.2%)	11.4%

(1) For 2018, 2017 and 2016, goodwill and other intangibles includes $27.7 million, $16.7 million and $19.7 million, respectively, of goodwill and other intangibles included in investments in other ventures, under equity method.

Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K
x 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
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File No. 001-14428
RENAISSANCERE HOLDINGS LTD.
(Exact Name Of Registrant As Specified In Its Charter)

Bermuda	98-014-1974
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification Number)

Renaissance House, 12 Crow Lane, Pembroke HM 19 Bermuda
(Address of Principal Executive Offices)
(441) 295-4513
(Registrant's telephone number)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Shares, Par Value $1.00 per share	New York Stock Exchange, Inc.
Series C 6.08% Preference Shares, Par Value $1.00 per share	New York Stock Exchange, Inc.
Series E 5.375% Preference Shares, Par Value $1.00 per share	New York Stock Exchange, Inc.
Depositary Shares, each representing a 1/1,000th interest in a Series F 5.750% Preference Share, Par Value $1.00 per share	New York Stock Exchange, Inc.

Securities registered pursuant to Section 12(g) of the Act: None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Act. Yes x No o
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 o No x
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 x No o
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x No o
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company, as defined in Rule 12b-2 of the Act. Large accelerated filer x, Accelerated filer o,

Non-accelerated filer o, Smaller reporting company o, Emerging growth company o
If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No x
The aggregate market value of Common Shares held by nonaffiliates of the registrant at June 30, 2018 was $4,752.5 million based on the closing sale price of the Common Shares on the New York Stock Exchange on that date.
The number of Common Shares, par value US $1.00 per share, outstanding at February 4, 2019 was 42,207,390.
DOCUMENTS INCORPORATED BY REFERENCE
Portions of the registrant’s definitive proxy statement for the 2019 Annual General Meeting of Shareholders are incorporated by reference into Part III of this report.

RENAISSANCERE HOLDINGS LTD.
TABLE OF CONTENTS

Table of Contents

NOTE ON FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K for the year ended December 31, 2018 (this “Form 10-K”) of RenaissanceRe Holdings Ltd. (the “Company” or “RenaissanceRe”) contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements are necessarily based on estimates and assumptions that are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which, with respect to future business decisions, are subject to change. These uncertainties and contingencies can affect actual results and could cause actual results to differ materially from those expressed in any forward-looking statements made by, or on behalf of, us. In particular, statements using words such as “may”, “should”, “estimate”, “expect”, “anticipate”, “intend”, “believe”, “predict”, “potential”, or words of similar import generally involve forward-looking statements. For example, we may include certain forward-looking statements in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” with regard to trends in results, prices, volumes, operations, investment results, margins, combined ratios, fees, reserves, market conditions, risk management and exchange rates. This Form 10-K also contains forward-looking statements with respect to our business and industry, such as those relating to our strategy and management objectives, market standing and product volumes, competition and new entrants in our industry, industry capital, insured losses from loss events, government initiatives and regulatory matters affecting the reinsurance and insurance industries.

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

- the failure to obtain regulatory approvals or satisfy other conditions to completion of the proposed TMR Stock Purchase (as defined herein);
- risks that the TMR Stock Purchase disrupts or distracts from current plans and operations;
- the ability to recognize the benefits of the TMR Stock Purchase;
- the amount of the costs, fees, expenses and charges related to the TMR Stock Purchase;
- the frequency and severity of catastrophic and other events we cover;
- the effectiveness of our claims and claim expense reserving process;
- our ability to maintain our financial strength ratings;
- the effect of climate change on our business;
- collection on claimed retrocessional coverage, and new retrocessional reinsurance being available on acceptable terms and providing the coverage that we intended to obtain;
- the effects of United States (“U.S.”) tax reform legislation and possible future tax reform legislation and regulations, including changes to the tax treatment of our shareholders or investors in our joint ventures or other entities we manage;
- the effect of emerging claims and coverage issues;
- continued soft reinsurance underwriting market conditions;
- our reliance on a small and decreasing number of reinsurance brokers and other distribution services for the preponderance of our revenue;
- our exposure to credit loss from counterparties in the normal course of business;
- the effect of continued challenging economic conditions throughout the world;
- a contention by the Internal Revenue Service (the “IRS”) that Renaissance Reinsurance Ltd. (“Renaissance Reinsurance”), or any of our other Bermuda subsidiaries, is subject to taxation in the U.S.;
- the success of any of our acquisitions or strategic investments, including our ability to manage our operations as our product and geographical diversity increases;

1

Table of Contents

- our ability to retain our key senior officers and to attract or retain the executives and employees necessary to manage our business;
- the performance of our investment portfolio;
- losses we could face from terrorism, political unrest or war;
- the effect of cybersecurity risks, including technology breaches or failure, on our business;
- our ability to successfully implement our business strategies and initiatives;
- our ability to determine the impairments taken on our investments;
- the effects of inflation;
- the ability of our ceding companies and delegated authority counterparties to accurately assess the risks they underwrite;
- the effect of operational risks, including system or human failures;
- our ability to effectively manage capital on behalf of investors in joint ventures or other entities we manage;
- foreign currency exchange rate fluctuations;
- our ability to raise capital if necessary;
- our ability to comply with covenants in our debt agreements;
- changes to the regulatory systems under which we operate, including as a result of increased global regulation of the insurance and reinsurance industries;
- changes in Bermuda laws and regulations and the political environment in Bermuda;
- our dependence on the ability of our operating subsidiaries to declare and pay dividends;
- aspects of our corporate structure that may discourage third-party takeovers and other transactions;
- the cyclical nature of the reinsurance and insurance industries;
- adverse legislative developments that reduce the size of the private markets we serve or impede their future growth;
- consolidation of competitors, customers and insurance and reinsurance brokers;
- the effect on our business of the highly competitive nature of our industry, including the effect of new entrants to, competing products for and consolidation in the (re)insurance industry;
- other political, regulatory or industry initiatives adversely impacting us;
- our ability to comply with sanctions and foreign corrupt practices laws with respect to our international operations;
- increasing barriers to free trade and the free flow of capital;
- international restrictions on the writing of reinsurance by foreign companies and government intervention in the natural catastrophe market;
- the effect of Organisation for Economic Co-operation and Development (the “OECD”) or European Union (“EU”) measures to increase our taxes and reporting requirements;
- the effect of the vote by the U.K. to leave the EU;
- changes in regulatory regimes and accounting rules that may impact financial results irrespective of business operations; and
- our need to make many estimates and judgments in the preparation of our financial statements.

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

Table of Contents

PART I

ITEM 1. BUSINESS

In this Form 10-K, references to “RenaissanceRe” refer to RenaissanceRe Holdings Ltd. (the parent company) and references to “we,” “us,” “our” and the “Company” refer to RenaissanceRe Holdings Ltd. together with its subsidiaries, unless the context requires otherwise.

For your convenience, we have included a “Glossary of Selected Insurance and Reinsurance Terms” at the end of “Part I, Item 1. Business” of this Form 10-K.

All dollar amounts referred to in this Form 10-K are in U.S. dollars unless otherwise indicated.

Due to rounding, numbers presented in the tables included in this Form 10-K may not add up precisely to the totals provided.

OVERVIEW

RenaissanceRe is a global provider of reinsurance and insurance. We provide property, casualty and specialty reinsurance and certain insurance solutions to customers, principally through intermediaries. Established in 1993, we have offices in Bermuda, Ireland, Singapore, Switzerland, the United Kingdom (the “U.K.”), and the U.S. Our operating subsidiaries include Renaissance Reinsurance, Renaissance Reinsurance U.S. Inc. (“Renaissance Reinsurance U.S.”), RenaissanceRe Specialty U.S. Ltd. (“RenaissanceRe Specialty U.S.”), Renaissance Reinsurance of Europe Unlimited Company (“Renaissance Reinsurance of Europe”) and our Lloyd’s syndicate, RenaissanceRe Syndicate 1458 (“Syndicate 1458”). We also underwrite reinsurance on behalf of joint ventures, including Top Layer Reinsurance Ltd. (“Top Layer Re”), Upsilon RFO Re Ltd. (“Upsilon RFO”), DaVinci Reinsurance Ltd. (“DaVinci”), Vermeer Reinsurance Ltd. (“Vermeer”) and Fibonacci Reinsurance Ltd. ("Fibonacci Re"). In addition, through RenaissanceRe Medici Fund Ltd. (“Medici”), we invest in various insurance based investment instruments that have returns primarily tied to property catastrophe risk.

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

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

To best serve our clients in the places they do business, we have operating subsidiaries, joint ventures and underwriting platforms around the world, including DaVinci, Renaissance Reinsurance, Top Layer Re, Fibonacci Re, Upsilon RFO and Vermeer in Bermuda, Renaissance Reinsurance U.S. in the U.S., and Syndicate 1458 in the U.K. We write property and casualty and specialty reinsurance through our wholly owned operating subsidiaries, joint ventures and Syndicate 1458 and certain insurance products primarily

3

Table of Contents

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

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

We continually explore appropriate and efficient ways to address the risk needs of our clients and the impact of various regulatory and legislative changes on our operations. We have created and managed, and continue to manage, multiple capital vehicles across a number of jurisdictions and may create additional risk bearing vehicles or enter into additional jurisdictions in the future. In addition, our differentiated strategy and capability position us to pursue bespoke or large solutions for clients, which may be non-recurring. This, and other factors including the timing of contract inception, could result in significant volatility of premiums in both our Property and Casualty and Specialty segments. As our product and geographical diversity increases, we may be exposed to new risks, uncertainties and sources of volatility.

ACQUISTION OF TOKIO MILLENNIUM RE AND STATE FARM STOCK PURCHASE

Acquisition of Tokio Millennium Re

On October 30, 2018, we entered into the a Stock Purchase Agreement by and among the Company, Tokio Marine & Nichido Fire Insurance Co. Ltd. ("Tokio") and, with respect to certain sections only, Tokio Marine Holdings, Inc. (the "TMR Stock Purchase Agreement"), pursuant to which we agreed, subject to the terms and conditions therein, to cause our wholly owned subsidiary RenaissanceRe Specialty Holdings (UK) Limited to purchase all of the share capital of Tokio Millennium Re AG, Tokio Millennium Re (UK) Limited and their subsidiaries (collectively, the "TMR Group Entities") (the "TMR Stock Purchase"). The TMR Group Entities comprise the treaty reinsurance business of Tokio Marine Holdings, Inc., including its third party capital management fronting business. The TMR Stock Purchase is expected to close in the first half of 2019, subject to the closing conditions set forth in the TMR Stock Purchase Agreement, including the receipt of required regulatory approvals. If consummated, the transaction would add a large portfolio of reinsurance risk to our own portfolio, currently representing approximately $1.3 billion of incremental reinsurance premium. Following the closing, we anticipate re-underwriting this portfolio over time, and currently estimate that, in light of our existing risk appetite, we will target approximately $700.0 million of gross reinsurance premiums. We will continue to evaluate the TMR Group Entities' operations in the period prior to closing, and it is possible that our analysis or views will evolve. We cannot assure you that the current cedants or other business partners of the TMR Group Entities will renew their business with us, and renewal of the current TMR Group Entities portfolio is not a condition to closing of the TMR Stock Purchase. Moreover, in the near to medium term we expect operational expenses to increase as we undertake the process of integrating the TMR Group Entities and their operations into our own after the closing. See "Note 20. Acquisition of Tokio Millennium Re" for additional information regarding the TMR Stock Purchase.

State Farm Stock Purchase

On December 20, 2018, we issued 1,947,496 of our common shares to State Farm Mutual Automobile Insurance Company (“State Farm”) in exchange for $250.0 million in a private placement pursuant to an Investment Agreement we entered into with State Farm on October 30, 2018.

Table of Contents

CORPORATE STRATEGY

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

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

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

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

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

SEGMENTS

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

For the year ended December 31, 2018, our Property and Casualty and Specialty segments accounted for 53.2% and 46.8%, respectively, of our gross premiums written. Operating results relating to our segments are included in "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

5

Table of Contents

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

Year ended December 31,	2018	2017	2016
(in thousands)			
Property	$1,760,926	$1,440,437	$1,111,263
Casualty and Specialty	1,549,501	1,357,110	1,263,313
Other category	—	(7)	—
Total gross premiums written	$3,310,427	$2,797,540	$2,374,576

We write proportional business as well as excess of loss business. In addition, we maintain delegated authority arrangements through Syndicate 1458, which are included in our Property and Casualty and Specialty segments, as appropriate. Our relative mix of business between proportional business and excess of loss business has fluctuated in the past and will likely vary in the future. Proportional and delegated authority business typically have relatively higher premiums per unit of expected underwriting income, together with a higher acquisition expense ratio and combined ratio, than traditional excess of loss reinsurance, as these coverages tend to be exposed to relatively more attritional, and frequent, losses while being subject to less expected severity.
The following table shows gross premiums written allocated between excess of loss, proportional and delegated authority for each of our segments:

Year ended December 31, 2018	Property	Casualty and Specialty	Other	Total
(in thousands)				
Excess of loss	$1,473,381	$366,635	$ —	$1,840,016
Proportional	220,458	965,141	—	1,185,599
Delegated authority	67,087	217,725	—	284,812
Total gross premiums written	$1,760,926	$1,549,501	$ —	$3,310,427
Year ended December 31, 2017				
Excess of loss	$1,192,980	$262,415	$ (7)	$1,455,388
Proportional	195,473	894,810	—	1,090,283
Delegated authority	51,984	199,885	—	251,869
Total gross premiums written	$1,440,437	$1,357,110	$ (7)	$2,797,540
Year ended December 31, 2016				
Excess of loss	$932,725	$218,816	$ —	$1,151,541
Proportional	148,555	900,819	—	1,049,374
Delegated authority	29,983	143,678	—	173,661
Total gross premiums written	$1,111,263	$1,263,313	$ —	$2,374,576

Table of Contents

Property Segment

Our Property segment includes our catastrophe class of business, principally comprised of excess of loss reinsurance and excess of loss retrocessional reinsurance to insure insurance and reinsurance companies against natural and man-made catastrophes, and our other property class of business, primarily comprised of proportional reinsurance, property per risk, property (re)insurance, binding facilities and regional U.S. multi-line reinsurance. The following table shows gross premiums written in our Property segment allocated by class of business:

Year ended December 31,	2018	2017	2016
(in thousands)			
Catastrophe	$1,349,324	$1,104,450	$884,361
Other property	411,602	335,987	226,902
Total Property segment gross premiums written	$1,760,926	$1,440,437	$1,111,263

We write catastrophe reinsurance and insurance coverage protecting against large natural catastrophes, such as earthquakes, hurricanes and tsunamis, as well as claims arising from other natural and man-made catastrophes such as winter storms, freezes, floods, fires, windstorms, tornadoes, explosions and acts of terrorism. We offer this coverage to insurance companies and other reinsurers primarily on an excess of loss basis. This means we begin paying when our customers’ claims from a catastrophe exceed a certain retained amount. We also offer proportional coverages and other structures on a catastrophe-exposed basis and may increase these offerings on an absolute or relative basis in the future.

As noted above, our excess of loss property contracts generally cover all natural perils, and our predominant exposure under such coverage is to property damage. However, other risks, including business interruption and other non-property losses, may also be covered under our property reinsurance contracts when arising from a covered peril. We offer our coverages on a worldwide basis. Because of the wide range of possible catastrophic events to which we are exposed, including the size of such events and the potential for multiple events to occur in the same time period, our property business is volatile and our financial condition and results of operations reflect this volatility. To moderate the volatility of our risk portfolio, we may increase or decrease our presence in the property business based on market conditions and our assessment of risk-adjusted pricing adequacy. We frequently purchase reinsurance or other protection for our own account for a number of reasons, including to optimize the expected outcome of our underwriting portfolio, to manage capital requirements for regulated entities and to reduce the financial impact that a large catastrophe or a series of catastrophes could have on our results.

Casualty and Specialty Segment

We write casualty and specialty reinsurance and insurance covering primarily targeted classes of business where we believe we have a sound basis for underwriting and pricing the risk we assume. Principally all of the business is reinsurance, however our book of insurance business has been increasing in recent periods, and may continue to do so. The following table shows gross premiums written in our Casualty and Specialty segment allocated by class of business:

Year ended December 31,	2018	2017	2016
(in thousands)			
Professional liability (1)	$485,851	$452,310	$377,580
General casualty (2)	453,097	417,880	327,939
Financial lines (3)	352,902	303,800	413,068
Other (4)	257,651	183,120	144,726
Total Casualty and Specialty segment gross premiums written	$1,549,501	$1,357,110	$1,263,313

(1) Includes directors and officers, medical malpractice, and professional indemnity.

(2) Includes automobile liability, casualty clash, employer’s liability, umbrella or excess casualty, workers’ compensation and general liability

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

(4) Includes accident and health, agriculture, aviation, cyber, energy, marine, satellite and terrorism. Lines of business such as regional multi-line and whole account may have characteristics of various other classes of business, and are allocated accordingly.

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

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

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

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

Table of Contents

Other

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

Geographic Breakdown

Our exposures are generally diversified across geographic zones, but are also a function of market conditions and opportunities. Our largest exposure has historically been to the U.S. and Caribbean market, which represented 49.7% of our gross premiums written for the year ended December 31, 2018. A significant amount of our U.S. and Caribbean premium provides coverage against windstorms (mainly U.S. Atlantic hurricanes), earthquakes and other natural and man-made catastrophes.

The following table sets forth the amounts and percentages of our gross premiums written allocated to the territory of coverage exposure:

	2018		2017		2016	
Year ended December 31,	Gross Premiums Written	Percentage of Gross Premiums Written	Gross Premiums Written	Percentage of Gross Premiums Written	Gross Premiums Written	Percentage of Gross Premiums Written
(in thousands, except percentages)						
Property Segment						
U.S. and Caribbean	$978,063	29.4 %	$954,269	34.1 %	$743,226	31.3 %
Worldwide	464,311	14.0 %	305,915	10.9 %	210,168	8.9 %
Japan	71,601	2.2 %	49,821	1.8 %	44,536	1.9 %
Europe	144,857	4.4 %	49,486	1.8 %	37,611	1.6 %
Worldwide (excluding U.S.) (1)	66,872	2.0 %	48,182	1.7 %	55,043	2.3 %
Australia and New Zealand	19,273	0.6 %	14,151	0.5 %	13,729	0.6 %
Other	15,949	0.5 %	18,613	0.7 %	6,950	0.3 %
Total Property Segment	1,760,926	53.1 %	1,440,437	51.5 %	1,111,263	46.9 %
Casualty and Specialty Segment						
Worldwide	776,976	23.4 %	686,253	24.5 %	581,972	24.5 %
U.S. and Caribbean	667,125	20.2 %	622,757	22.3 %	646,381	27.2 %
Europe	15,296	0.5 %	9,752	0.3 %	5,541	0.2 %
Worldwide (excluding U.S.) (1)	31,734	1.0 %	10,104	0.4 %	13,840	0.6 %
Australia and New Zealand	3,667	0.1 %	4,141	0.1 %	5,073	0.2 %
Other	54,703	1.7 %	24,103	0.9 %	10,506	0.4 %
Total Casualty and Specialty Segment	1,549,501	46.9 %	1,357,110	48.5 %	1,263,313	53.1 %
Other category	—	— %	(7)	— %	—	— %
Total gross premiums written	$3,310,427	100.0 %	$2,797,540	100.0 %	$2,374,576	100.0 %

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

9

Table of Contents

VENTURES

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

Managed Joint Ventures

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

DaVinci

DaVinci was established in 2001 and principally writes property catastrophe reinsurance and certain low frequency, high severity specialty reinsurance lines of business on a global basis. In general, we seek to construct for DaVinci a portfolio with risk characteristics similar to those of Renaissance Reinsurance’s property catastrophe reinsurance portfolio, and from time to time, certain lines of specialty reinsurance written by Renaissance Reinsurance such as terrorism and workers’ compensation. In accordance with DaVinci’s underwriting guidelines, it can only participate in business also underwritten by Renaissance Reinsurance. We maintain majority voting control of DaVinci’s holding company, DaVinciRe, and accordingly, consolidate the results of DaVinciRe into our consolidated results of operations and financial position. The underwriting results of DaVinciRe are principally included in our Property segment. We seek to manage DaVinci’s capital efficiently over time in light of the market opportunities and needs we perceive and believe we are able to serve. DaVinciRe is managed by RUM in return for a management fee and performance based incentive fee. Our noncontrolling economic ownership in DaVinciRe was 22.1% at December 31, 2018 (2017 - 22.1%).

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

Top Layer Re

Top Layer Re was established in 1999 and writes high excess non-U.S. property catastrophe reinsurance. Top Layer Re is owned 50% by State Farm and 50% by Renaissance Reinsurance. State Farm provides $3.9 billion of stop loss reinsurance coverage to Top Layer Re. Top Layer Re is managed by RUM in return for a management fee. We account for our equity ownership in Top Layer Re under the equity method of accounting and our proportionate share of its results is reflected in equity in earnings of other ventures in our consolidated statements of operations.

Medici

Medici is an exempted fund, incorporated under the laws of Bermuda. Medici’s objective is to invest substantially all of its assets in various insurance-based investment instruments that have returns primarily correlated to property catastrophe risk. Third-party investors subscribe for the majority of the participating, non-voting common shares of Medici. We maintain majority voting control of Medici’s parent, RenaissanceRe Fund Holdings Ltd. (“Fund Holdings”), therefore the results of Medici and Fund Holdings are consolidated in our financial statements. Medici is managed by RenaissanceRe Fund Management Ltd. in return for a management fee. Our economic ownership in Medici was 16.6% at December 31, 2018 (2017 - 26.8%).

Upsilon RFO

In 2013, we formed a managed joint venture, Upsilon RFO, a Bermuda domiciled special purpose insurer (“SPI”), to provide additional capacity to the worldwide aggregate and per-occurrence primary and

10

retrocessional property catastrophe excess of loss market. Upsilon RFO enhances our efforts to match desirable reinsurance risk with efficient capital through a strategic capital structure. Original business is written directly by Upsilon RFO under fully-collateralized reinsurance contracts capitalized through the sale of non-voting shares to us and Upsilon Fund. Upsilon RFO is considered a variable interest entity ("VIE") as it has insufficient equity capital to finance its activities without additional financial support and we are the primary beneficiary. As a result, we consolidate Upsilon RFO and all significant inter-company transactions have been eliminated. Other than our equity investment, we have not provided any financial or other support to Upsilon RFO that we were not contractually required to provide.

Upsilon Fund

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

Vermeer

Effective December 17, 2018, we formed Vermeer, an exempted Bermuda reinsurer, with PGGM, a Dutch pension fund manager. Vermeer provides capacity focused on risk remote layers in the U.S. property catastrophe market. Vermeer is managed by RUM in return for a management fee. We maintain majority voting control of Vermeer, while PGGM retains economic benefits. Vermeer is considered a VIE, as it has voting rights that are not proportional to its participating rights and we are the primary beneficiary. As a result, we consolidate Vermeer and all significant inter-company transactions have been eliminated. The portion of Vermeer's earnings owned by third parties is recorded in the consolidated statements of operations as net income attributable to redeemable noncontrolling interests. We have not provided any financial or other support to Vermeer that we were not contractually required to provide.

Fibonacci Re

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

Langhorne

Effective December 22, 2017, we closed an initiative with Reinsurance Group of America, Incorporated to source third party capital to support reinsurers targeting large in-force life and annuity blocks. Langhorne Holdings is a company that owns and manages certain reinsurance entities within Langhorne. Langhorne Partners is the general partner for Langhorne and the entity which manages the third-party investors investing into Langhorne Holdings in return for a management and performance based incentive fee. We concluded that Langhorne Holdings meets the definition of a VIE. We are not the primary beneficiary of Langhorne Holdings and as a result, we do not consolidate the financial position or results of operations of Langhorne Holdings. We concluded that Langhorne Partners was not a VIE. We account for our

Table of Contents

investments in Langhorne Holdings and Langhorne Partners under the equity method of accounting, one quarter in arrears. We anticipate that our investment in Langhorne will increase, perhaps materially, as in-force life and annuity blocks of businesses are written. Other than our current and committed future equity investment in Langhorne, we have not provided financial or other support to Langhorne that we were not contractually required to provide.

Strategic Investments

Ventures also pursues strategic investments where, rather than assuming exclusive management responsibilities ourselves, we partner with other market participants. These investments may be directed at classes of risk other than catastrophe reinsurance, and at times may also be directed at non-insurance risks, such as Insurtech opportunities. We find these investments attractive because of their expected returns, and because they provide us with diversification benefits and information and exposure to other aspects of the market. For example, in 2018 we acquired a minority shareholding in Catalina Holdings (Bermuda) Ltd, a long-term consolidator in the non-life insurance/reinsurance run-off sector, which is accounted for at fair value and is included in other investments. Other examples of strategic investments include our investments in Bluegrass Insurance Management, LLC, Tower Hill Claims Service, LLC, Tower Hill Holdings, Inc., Tower Hill Insurance Group, LLC, Tower Hill Insurance Managers, LLC, Tower Hill Re Holdings, Inc., Tower Hill Select Insurance Holdings, Inc., Tower Hill Signature Insurance Holdings, Inc. and Tomoka Re Holdings, Inc. (collectively, the “Tower Hill Companies”), which are accounted for under the equity method of accounting. We also have investments in Essent Group Ltd. and Trupanion Inc., which are accounted for at fair value and are included in other investments.

The carrying value of these investments on our consolidated balance sheet, individually or in the aggregate, may differ from the realized value we may ultimately attain, perhaps significantly so. For example, we believe that our investment in the Tower Hill Companies, which is recorded under the equity method of accounting in our consolidated financial statements in accordance with generally accepted accounting principles in the U.S. (“GAAP”), would attract a significantly higher valuation than what is currently recognized in our consolidated financial statements. However, under GAAP, we are prohibited from recording this investment at fair value. In addition, there is no liquid market for this investment.

Other Transactions

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

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

NEW BUSINESS

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

We regularly review potential strategic transactions that might improve our portfolio of business, enhance or focus our strategies, expand our distribution or capabilities, or provide other benefits. In evaluating potential new ventures or investments, we generally seek an attractive estimated return on equity, the ability to develop or capitalize on a competitive advantage, and opportunities which we believe will not detract from

our core operations. We believe that our ability to attract investment and operational opportunities is supported by our strong reputation and financial resources, and by the capabilities and track record of our ventures unit.

COMPETITION

The markets in which we operate are highly competitive, and we believe that competition is, in general, increasing and becoming more robust. Our competitors include independent reinsurance and insurance companies, subsidiaries and/or affiliates of globally recognized insurance companies, reinsurance divisions of certain insurance companies, domestic and international underwriting operations, and a range of entities offering forms of risk transfer protection on a collateralized or other non-traditional basis. As our business evolves and the (re)insurance industry continues to experience consolidation, we expect our competitors to change as well.

We believe that our principal competitors include other companies active in the Bermuda market, currently including Allied World Assurance Company, AG, Arch Capital Group Ltd., Aspen Insurance Holdings Limited, AXA XL, Axis Capital Holdings Limited, Chubb Limited, Everest Re Group, Ltd., Fidelis Insurance Holdings Limited (“Fidelis”), Hamilton Re Ltd. (“Hamilton Re”), PartnerRe Ltd., Sompo International (formerly known as Endurance Specialty Holdings Ltd.) and Third Point Reinsurance Ltd. (“Third Point”), as well as a growing number of private, unrated reinsurers offering predominately collateralized reinsurance. We also compete with certain Lloyd’s syndicates active in the London market, as well as with a number of other industry participants, such as American International Group, Inc., Berkshire Hathaway Inc., Hannover Rückversicherung AG (“Hannover Re”), Ironshore Inc., Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München (“Munich Re”) and Swiss Re Ltd.

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

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

UNDERWRITING AND ENTERPRISE RISK MANAGEMENT

Underwriting

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

We have developed a proprietary, computer-based pricing and exposure management system, REMS©, which has analytic and modeling capabilities that help us to assess the risk and return of each incremental (re)insurance contract in relation to our overall portfolio of (re)insurance contracts. We believe that REMS© is a robust underwriting and risk management system that has been successfully integrated into our business processes and culture. In conjunction with pricing models that we run outside of REMS©, the REMS© framework encompasses and facilitates risk capture, analysis, correlation, portfolio aggregation and capital allocation within a single system for all of our natural hazards and non-natural hazards (re)insurance contracts. We continue to invest in and improve REMS©, incorporating our underwriting and

13

modeling experience and adding proprietary software and a significant amount of new industry data. We continually strive to improve our analytical techniques for both natural hazard and non-natural hazard models in REMS© and while our experience is most developed for analyzing natural hazard catastrophe risks, we continue to invest in and evolve our capabilities for assessing non-natural hazard catastrophe risks. Over the last five years, we have continued to develop our casualty and specialty modeling tools and capabilities in line with our business needs. With the acquisition of Platinum Underwriters Holdings, Ltd. (“Platinum”) and the expertise added since then, we believe our tools are now state of the art and fully embedded in our underwriting processes.

We generally utilize a multiple model approach when evaluating a proposed transaction, combining both probabilistic and deterministic techniques. We combine the analyses generated by REMS© with other information and other model inputs available to us, including our own knowledge of the client submitting the proposed program, to assess the premium offered against the risk of loss and the cost of utilized capital which the program presents. The underlying risk models integrated into our underwriting and REMS© framework are a combination of internally constructed and commercially available models. We use commercially available natural hazard catastrophe models to assist with validating and stress testing our base model and REMS© results.

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

We periodically review the estimates and assumptions that are reflected in REMS© and our other tools, driven either by new hazard science and understanding or by experience of loss events. For example, the movement in cedant loss estimates seen across the market in the months following Hurricane Irma prompted us to perform, in conjunction with several partner companies, a detailed review of the nature of the claims made as a result of that event. In addition, we have reviewed the prevalence of “assignment of benefits”, or “AOB” activity in underlying claims as well as the impact of loss adjusting expenses and the costs associated with any litigation. This process is informing a change in our view of reinsurance risk in certain parts of the state of Florida based on the observed behavioral norms. More generally our team of scientists at Weather Predict Consulting Inc. (“Weather Predict”) have been tracking the impact of climate and expanding urban development in both tornado/hail and wildfire risk over the last several years. The recent history of California wildfire events, and particularly the extreme outbreaks during 2017 and 2018, are being used to validate, and where necessary inform, our representation of this risk.

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

- simulate a range of potential outcomes that adequately represents the risk to an individual contract;
- analyze the incremental impact of an individual reinsurance contract on our overall portfolio;
- better assess the underlying exposures associated with assumed retrocessional business;
- price contracts within a short time frame;
- capture various classes of risk, including catastrophe and other insurance risks;
-

assess risk across multiple entities (including our various joint ventures) and across different components of our capital structure; and

- provide consistent pricing information.

14

Table of Contents

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

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

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

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

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

Enterprise Risk Management ("ERM")

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

Our Board of Directors is responsible for overseeing enterprise-wide risk management and is actively involved in the monitoring of risks that could affect us. The members of the Board have regular, direct

access to the senior executives and other officers responsible for identifying and monitoring our risks and coordinating our ERM, including our Group Chief Risk Officer, Chief Financial Officer, and Group General Counsel and Chief Compliance Officer, each of whom reports directly to our Chief Executive Officer, as well as other senior personnel such as our Chief Accounting Officer, Global Corporate Controller and Head of Internal Audit. The Board also receives regular reports from the Controls and Compliance Committee described below.

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

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

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

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

- Business Environment Risk. We define business environment risk as the risk of changes in the business, political or regulatory environment that could negatively impact our short term or long-term financial results or the markets in which we operate. This risk area also typically includes emerging risks. These risks are predominately extrinsic to us and our ability to alter or eliminate

these risks is limited, so we focus our efforts on monitoring developments, assessing potential impacts of any changes, and investing in cost effective means to attempt to mitigate the consequences of and ensure compliance with any new requirements applicable to us.

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

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

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

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

RATINGS

Financial strength ratings are an important factor in evaluating and establishing the competitive position of reinsurance and insurance companies. We have received high claims-paying and financial strength ratings from A.M. Best Company, Inc. (“A.M. Best”), Standard and Poor’s Rating Services (“S&P”), Moody’s Investors Service (“Moody’s”) and Fitch Ratings Ltd. (“Fitch”). These ratings represent independent opinions of an insurer’s financial strength, operating performance and ability to meet policyholder obligations, and are not an evaluation directed toward the protection of investors or a recommendation to buy, sell or hold any of our securities. Rating organizations continually review the financial positions of our principal operating subsidiaries and joint ventures and ratings may be revised or revoked by the agencies which issue them.

In addition, S&P and A.M. Best assess companies’ ERM practices, which is an opinion on the many critical dimensions of risk that determine overall creditworthiness. RenaissanceRe has been assigned an ERM rating of “Very Strong” from each of these agencies, which is the highest ERM score assigned.

See “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Capital Resources, Ratings” for the ratings of our principal operating subsidiaries and joint ventures by segment, and details of recent ratings actions.

Table of Contents

RESERVES FOR CLAIMS AND CLAIM EXPENSES

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

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

INVESTMENTS

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

For additional information regarding our investment portfolio, refer to "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources, Investments" and "Note 4. Investments in our Notes to the Consolidated Financial Statements".

MARKETING

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

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

18

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

Our brokers assess client needs and also perform data collection, contract preparation and other administrative tasks, enabling us to market our products cost effectively by maintaining a smaller staff. In recent years, our distribution has become increasingly reliant on a small and relatively decreasing number of broker relationships reflecting consolidation in the broker sector. We expect this concentration to continue and perhaps increase. In 2018, three brokerage firms accounted for 75.2% of our gross premiums written.

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

Year ended December 31, 2018	Property	Casualty and Specialty	Total
AON	42.7 %	38.4 %	40.7 %
Marsh	29.1 %	19.5 %	24.6 %
Willis Towers Watson	7.2 %	12.9 %	9.9 %
Total of largest brokers	79.0 %	70.8 %	75.2 %
All others	21.0 %	29.2 %	24.8 %
Total	100.0 %	100.0 %	100.0 %

EMPLOYEES

At February 4, 2019, we employed 411 people worldwide (February 2, 2018 - 384, February 17, 2017 - 376). Our overall headcount is expected to increase as a result of the TMR Stock Purchase.

None of our employees are subject to collective bargaining agreements and we are not aware of any current efforts to implement such agreements at any of our subsidiaries.

INFORMATION TECHNOLOGY

Our business and support functions utilize information systems that provide critical services to both our employees and our customers. We have an integrated team of professionals who manage and support our communication platforms, transaction-management systems, and analytics and reporting capabilities, including the development of proprietary solutions like REMS©. We use off-site, secure data centers in North America and Europe for most of our core applications, but our use of cloud-based services is increasing as the security and reliability of these services improves.

Information security and privacy are important concerns, with an escalating cyber-threat environment and evolving regulatory requirements driving continued investment in this area. Our information security program is designed around the National Institute of Standards and Technology (“NIST”) cybersecurity framework, upon which many cybersecurity regulations are modeled. In 2017, the New York Department of Financial Services’ Cybersecurity Requirements for Financial Services Companies (the “NYDFS Cybersecurity Regulation”), which sets minimum cybersecurity standards for financial institutions, insurers and certain other companies supervised by the NYDFS and to which we are subject, became effective. In addition, the National Association of Insurance Commissioners’ (the “NAIC”) adopted the Insurance Data Security Model Law, which closely resembles the NYDFS Cybersecurity Regulation and will be considered by states for adoption. These and other cybersecurity regulations impose significant new regulatory requirements intended to protect the confidentiality, integrity and availability of information systems. Our program is designed to comply with all applicable cybersecurity regulatory requirements and we continue to evaluate and assess our compliance in the changing regulatory environment.

We protect our information systems with physical, electronic and software safeguards considered appropriate by our management. In addition, we perform regular security penetration test scenarios and provide regular security risk staff education awareness sessions in order to evaluate our preparedness and

to enhance both our system's and our users' ability to identify, protect from, detect, respond to and recover from such an incident. Despite these efforts, computer viruses, hackers, employee misuse or misconduct and other internal or external hazards could expose our data systems to security breaches, cyber-attacks or other disruptions.

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

REGULATION

The business of insurance and reinsurance is regulated in most countries and all states in the U.S., although the degree and type of regulation varies significantly from one jurisdiction to another. Currently, we operate primarily in Bermuda, the U.S. and the U.K. We also have operations in Singapore, Ireland and Switzerland. Although principally regulated by the regulatory authorities of their respective jurisdictions, our operating subsidiaries may also be subject to regulation in the jurisdictions of their ceding companies. In addition, expansion into additional insurance markets could expose us or our subsidiaries to increasing regulatory oversight. However, we intend to continue to conduct our operations so as to minimize the likelihood that Renaissance Reinsurance, DaVinci, Top Layer Re, RenaissanceRe Specialty U.S., Upsilon RFO, or any of our other Bermudian subsidiaries will become subject to direct U.S. regulation. Upon completion of the TMR Stock Purchase, we will become subject to increased regulation in various jurisdictions, including the U.K., Switzerland and the U.S., including the insurance holding company laws of New York, the domestic state of Tokio Millennium Re AG (US Branch), a United States branch of Tokio Millennium Re AG.

Bermuda Regulation

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

As a holding company, RenaissanceRe is not currently subject to the Insurance Act. However, the Insurance Act regulates the insurance and reinsurance business of our Bermuda-licensed operating insurance companies. RenaissanceRe's Bermuda-licensed operating insurance subsidiaries and joint ventures include Renaissance Reinsurance and DaVinci, which are registered as Class 4 general business insurers, RenaissanceRe Specialty U.S. and Vermeer, which are registered as Class 3B general business insurers, and Top Layer Re, which is registered as a Class 3A general business insurer under the Insurance Act. RenaissanceRe also has operating subsidiaries registered as SPIs under the Insurance Act, including Upsilon RFO. RUM and RenaissanceRe Underwriting Management Ltd. are each registered as insurance managers under the Insurance Act.

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

On March 24, 2016, the BMA was recognized by the European Parliament as fully equivalent under Solvency II for its commercial (re)insurers, retroactive to January 1, 2016. To achieve this status, the BMA made certain changes to the filing requirements and public disclosure requirements applicable to commercial (re)insurers and insurance groups, including amendments to the statutory financial reporting regime, aligning it with GAAP, International Financial Reporting Standards ("IFRS") or other acceptable accounting standards, and the introduction of an economic balance sheet ("EBS") framework. Amendments were made to the Insurance Act to meet these changing requirements.

20

General Purpose Financial Statements. All Class 3A, Class 3B and Class 4 insurers must prepare financial statements in respect of their insurance business in accordance with GAAP, IFRS or other acceptable accounting standards, which are published on the BMA website.

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

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

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

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

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

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

Eligible Capital. To enable the BMA to better assess the quality of an insurer's capital resources, Class 3A, Class 3B and Class 4 insurers must maintain available capital in accordance with a "three tiered capital system". All capital instruments are classified as either basic or ancillary capital, which in turn are classified into one of three tiers (Tier 1, Tier 2 and Tier 3) based on their "loss absorbency" characteristics (the "Tiered Capital Requirements"). Eligibility limits are then applied to each tier in determining the amounts eligible to cover regulatory capital requirement levels. The highest capital is classified as Tier 1 capital and lesser

quality capital is classified as either Tier 2 capital or Tier 3 capital. Under this regime, not more than certain specified percentages of Tier 1, Tier 2 and Tier 3 capital may be used to satisfy the Class 3A, 3B and 4 insurers' Minimum Solvency Margin and ECR requirements.

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

Fit and Proper Controllers. The BMA maintains supervision over the controllers (as defined herein) of all Bermuda registered insurers. For so long as shares of RenaissanceRe are listed on the NYSE or another recognized stock exchange, the Insurance Act requires that the BMA be notified in writing within 45 days of any person becoming, or ceasing to be, a controller. A controller includes the managing director or chief executive of the registered insurer or its parent company; a 10%, 20%, 33% or 50% shareholder controller; and any person in accordance with whose directions or instructions the directors of the registered insurer or of its parent company are accustomed to act. In addition, all Bermuda insurers are also required to give the BMA written notice of the fact that a person has become, or ceased to be, a controller or officer of the registered insurer within 45 days of becoming aware of such fact. An officer in relation to a registered insurer includes a director, secretary, chief executive or senior executive by whatever name called.

Material Change. All registered insurers are required to give the BMA 30 days’ notice of their intention to effect a material change within the meaning of the Insurance Act, and shall not take any steps to give effect to a material change unless, before the end of notice period unless they have been notified by the BMA in writing that it has no objection to such change or the period has lapsed without the BMA issuing a notice of objection.

certain matters that are likely to be of material significance to the BMA in carrying out its supervisory function under the Insurance Act. The Insurance Act prescribes which matters require advance notice.

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

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

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

Group Supervision. Pursuant to the Insurance Act, the BMA acts as the group supervisor of the RenaissanceRe group of companies (the “RenaissanceRe Group”) and it has designated Renaissance Reinsurance to be the “designated insurer” in respect of the RenaissanceRe Group. The designated insurer is required to ensure that the RenaissanceRe Group complies with the provisions of the Insurance Act pertaining to groups and all related group solvency and group supervision rules (together, the “Group Rules”). Under the Group Rules, the RenaissanceRe Group is required to annually prepare and submit to the BMA group GAAP financial statements, group statutory financial statements, a group capital and solvency return (including an EBS) and an FCR. An insurance group must ensure that the value of the insurance group's assets exceeds the amount of the insurance group's liabilities by the aggregate of: (i) the individual Minimum Solvency Margin of each qualifying member of the group controlled by the parent company; and (ii) the parent company’s percentage shareholding in the member multiplied by the member’s Minimum Solvency Margin, where the parent company exercises significant influence over a member of the group but does not control the member (the "Group Minimum Solvency Margin"). A member is a qualified member of the insurance group if it is subject to solvency requirements in the jurisdiction in which it is registered. Every insurance group is also required to submit an annual group actuarial opinion when filing its group capital and solvency return. The group is required to appoint an individual approved by the BMA to be the group actuary. The group actuary must provide an opinion on the RenaissanceRe Group’s technical provisions as recorded in the RenaissanceRe Group statutory EBS. Insurance groups are required to maintain available statutory economic capital and surplus to an amount that is equal to or exceeds the value of its group ECR, which is calculated at the end of its relevant year by reference to the BSCR model of the group (the “Group BSCR”) or an approved internal capital model provided that the group ECR shall at all times be an amount equal to or exceeding the Group Minimum Solvency Margin. The BMA expects insurance groups to operate at or above a group TCL, which exceeds the group ECR. The TCL for insurance groups is set at 120% of its group ECR. In addition, under the Tiered Capital Requirements described above, not more than certain specified percentages of Tier 1, Tier 2 and Tier 3 capital may be used by an insurance group to satisfy the Group's Minimum Solvency Margin and group ECR requirements. Further, our Board of Directors has established solvency self assessment procedures for the RenaissanceRe Group that factor in all foreseeable material risks; Renaissance Reinsurance must ensure that the RenaissanceRe Group’s assets exceed the amount of the RenaissanceRe Group’s liabilities by the aggregate minimum margin of solvency of each qualifying member; and our Board of Directors has established and implements corporate governance policies and procedures designed to ensure they support the overall organizational strategy of the RenaissanceRe Group. In addition, the RenaissanceRe Group is required to prepare and submit to the BMA a quarterly financial return comprising unaudited consolidated group financial statements, a schedule of intra-group transactions and a schedule of risk concentrations.

The BMA has certain powers of investigation and intervention relating to insurers and their holding companies, subsidiaries and other affiliates, which it may exercise in the interest of such insurer’s policyholders or if there is any risk of insolvency or of a breach of the Insurance Act or the insurer’s license conditions. The BMA may cancel an insurer’s registration on certain grounds specified in the Insurance Act.

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

Economic Substance Act. In December 2018, the Economic Substance Act 2018 (the “ESA”) came into effect in Bermuda. Under the provisions of the ESA, every Bermuda registered entity engaged in a “relevant activity” must satisfy economic substance requirements by maintaining a substantial economic presence in Bermuda. Under the ESA, insurance or holding entity activities (both as defined in the ESA and Economic Substance Regulations 2018) are relevant activities. To the extent that the ESA applies to any of our entities registered in Bermuda, we will be required to demonstrate compliance with economic substance requirements by filing an annual economic substance declaration with the Registrar of Companies in Bermuda.

Income Taxes. Currently, neither we nor our shareholders are required to pay Bermuda income or profits tax, withholding tax, capital gains tax, capital transfer tax, estate duty or inheritance tax in respect of our shares. We have obtained an assurance from the Minister of Finance of Bermuda under the Exempted Undertakings Tax Protection Act 1966 that, if Bermuda enacts legislation imposing any tax on profits, income, capital asset, gain or appreciation or any tax in the nature of estate duty or inheritance tax, such tax

23

shall not be applicable to us, our operations or our shares, debentures or other obligations until March 31, 2035, except insofar as such tax applies to persons ordinarily resident in Bermuda or is payable by us in respect of real property owned or leased by us in Bermuda.

U.S. Regulation

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

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

Maryland law also requires any person seeking to acquire control of a Maryland-domestic insurer or of an entity that directly or indirectly controls a Maryland-domestic insurer, including its holding company, to file a statement with the Maryland Insurance Administration at least 60 days before the proposed acquisition of control. The transaction seeking to acquire control cannot be made unless, within 60 days after the statement is filed with the Maryland Insurance Administration, or within any extension of that period, the Maryland Insurance Administration approves, or does not disapprove, the transaction. Any purchaser of 10% or more of the outstanding voting securities of an insurance company, its holding company or any other entity directly or indirectly controlling the insurance company is presumed to have acquired control, unless the presumption is rebutted. Therefore, any investor who intends to acquire 10% or more of RenaissanceRe's outstanding voting securities may need to comply with these laws and would be required to file statements and reports with the Maryland Insurance Administration before such acquisition.

Effective for 2014, Maryland adopted enterprise risk management and reporting obligations applicable to insurance holding company systems that are meant to protect the licensed companies from enterprise risk. These obligations include requiring an annual enterprise risk report by the ultimate controlling person identifying the material risks within the insurance holding company system that could pose enterprise risk to the U.S. licensed companies. We timely filed our enterprise risk reports with the Maryland Insurance Administration for 2017 and 2018.

Table of Contents

Effective for 2018, Maryland adopted the Risk Management and Own Risk Solvency Assessment Act (the “RMORSA Act”) based on the NAIC Own Risk Solvency Assessment Model Act. The RMORSA Act requires Renaissance Reinsurance U.S. to: (i) maintain a risk management framework for identifying, assessing, monitoring, managing, and reporting its material and relevant risks; (ii) complete an Own Risk Solvency Assessment (“ORSA”) at least once each year and at any time there is a significant change to the risk profile of Renaissance Reinsurance U.S. or its holding company system; and (iii) submit an ORSA summary report to the Maryland Insurance Administration at least once each year. The obligation to maintain a risk management framework may be satisfied if the RenaissanceRe group maintains a risk management framework that applies to the operations of Renaissance Reinsurance U.S. and the ORSA obligation may be satisfied if the RenaissanceRe group completes an ORSA in accordance with the requirements of the RMORSA Act.

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

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

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

States generally require non-admitted alien reinsurers to provide collateral equal to one hundred percent of their reinsurance obligations to U.S. ceding insurers in order for the U.S. ceding insurers to obtain full credit for reinsurance. However, most states have adopted credit for reinsurance laws and regulations based on NAIC model law and regulation amendments that permit U.S. ceding insurers to take full credit for reinsurance when a “certified” reinsurer posts reduced collateral amounts. U.S. states are required to adopt the NAIC model law and regulation amendments permitting reduced collateral for certified reinsurers as an NAIC accreditation requirement by January 1, 2019. Under these credit for reinsurance laws and regulations, qualifying alien reinsurers may reduce their collateral for future reinsurance agreements based on a secure rating assigned by the U.S. insurance regulator. The secure rating is assigned by the state upon an assessment of the reinsurer’s financial condition, financial strength ratings and other factors. In addition, the alien reinsurer must be domiciled in a jurisdiction that is “qualified” under state law. The NAIC granted conditional qualified jurisdiction status to Bermuda effective January 1, 2014. Effective January 1, 2015, the NAIC approved its initial list of qualified jurisdictions, including Bermuda, and states that have these credit for reinsurance laws and regulations may accept such qualification in assessing reinsurers for certification. Florida has approved Renaissance Reinsurance and DaVinci for collateral reduction. As noted below, EU-domiciled reinsurers will be subject to the provisions of the US-EU Covered Agreement (defined below) that require states to remove reinsurance collateral requirements for qualifying EU reinsurers as of the US-EU Covered Agreement's implementation date.

NAIC Ratios. The NAIC has established 13 financial ratios to assist state insurance departments in their oversight of the financial condition of licensed property and casualty insurance companies operating in their respective states. The NAIC's Insurance Regulatory Information System ("IRIS") calculates these ratios

25

based on information submitted by insurers on an annual basis and shares the information with the applicable state insurance departments. Each ratio has an established “usual range” of results and assists state insurance departments in executing their statutory mandate to oversee the financial condition of insurance companies. A ratio result falling outside the usual range of IRIS ratios is not considered a failing result; rather unusual values are viewed as part of the regulatory early monitoring system. Furthermore, in some years, it may not be unusual for financially sound companies to have several ratios with results outside the usual ranges. An insurance company may fall outside of the usual range for one or more ratios because of specific transactions that are themselves immaterial.

Federal Oversight and Other Government Intervention. Government intervention in the insurance and reinsurance markets in the U.S. continues to evolve. Although U.S. state regulation is currently the primary form of regulation of insurance and reinsurance, Congress has considered proposals in several areas that may impact the industry, including the creation of an optional federal charter and repeal of the insurance company antitrust exemption from the McCarran Ferguson Act. We are unable to predict what other proposals will be made or adopted or the effect, if any, that such proposals would have on our operations and financial condition.

The Dodd-Frank Act established federal measures that impact the U.S. insurance business and preempt certain state insurance laws. For example, the Dodd-Frank Act created the Financial Stability Oversight Council (the “FSOC”), which is authorized to designate a non-bank financial company as “systemically significant” if its material financial distress could threaten the financial stability of the U.S. As of December 31, 2018, there were no non-bank financial companies designated as systemically significant by the FSOC. The FSOC’s potential recommendation of measures to address systemic risk in the insurance industry could affect our insurance and reinsurance operations as could a determination that we or our counterparties are systemically significant. In November 2017, the U.S. Department of the Treasury (“Treasury”) issued a report recommending certain changes to the FSOC’s process for designating non-bank financial companies as systemically significant in order to make the designation process more rigorous, clear, and transparent. Any suggested changes ultimately adopted by the FSOC would be implemented by FSOC directly, rather than through legislation.

The Dodd-Frank Act also created the Federal Insurance Office (“FIO”). The FIO does not have general supervisory or regulatory authority over the business of insurance, but it has preemption authority over state insurance laws that conflict with certain international agreements. The FIO is also authorized to monitor the U.S. insurance industry and identify potential regulatory gaps that could contribute to systemic risk and may recommend to the FSOC the designation of systemically important insurers. In addition, the FIO represents the U.S. at the International Association of Insurance Supervisors.

The Dodd-Frank Act authorizes Treasury and the Office of the U.S. Trade Representative (“USTR”) to enter into international agreements of mutual recognition regarding the prudential regulation of insurance or reinsurance (“covered agreements”). In January 2017, Treasury and the USTR negotiated a covered agreement with the EU regarding the prudential regulation of insurance and reinsurance (the “US-EU Covered Agreement”), which was signed in September 2017. Each party has begun the process of completing its internal requirements and procedures (such as amending or promulgating appropriate statutes and regulations) in order for the US-EU Covered Agreement to enter into force. The NAIC is working on proposed amendments to the Amended Credit for Reinsurance Model Act and Model Regulation in order to satisfy the substantive and timing requirements of the US-EU Covered Agreement. In addition to removing the reinsurance collateral obligations for EU reinsurers as required by the US-EU Covered Agreement, the proposed NAIC amendments would also provide a means by which reinsurers domiciled in other qualifying non-U.S. jurisdictions as well as reinsurers domiciled in qualifying states can achieve equivalent reinsurance collateral status for reinsurance contracts with U.S. insurers.

The US-EU Covered Agreement addresses three areas of prudential insurance and reinsurance supervision: reinsurance, group supervision and the exchange of information between the U.S. and EU. Under the US-EU Covered Agreement, reinsurance collateral requirements will no longer apply to qualifying EU reinsurers that sell reinsurance to the U.S. market, and U.S. reinsurers operating in the EU market will no longer be subject to “local presence” requirements. The US-EU Covered Agreement also establishes group supervision practices that apply only to U.S. and EU insurance groups operating in both territories. For instance, the US-EU Covered Agreement provides that U.S. insurance groups with operations in the EU will be supervised at the worldwide level only by U.S. insurance regulators, and precludes EU insurance

Table of Contents

supervisors from exercising solvency and capital requirements over the worldwide operations of U.S. insurers.
Government intervention in the property insurance market, particularly with respect to natural catastrophe losses, one of our key markets, has occurred on the state and federal level over recent years. Most significantly, beginning in 2007, the state of Florida enhanced the authority of the Florida Hurricane Catastrophe Fund (the “FHCF”) to offer coverage at below-market rates and expanded the ability of the state-sponsored insurer, Citizens Property Insurance Corporation (“Citizens”), to compete with private insurance companies, and other companies that cede business to us. This legislation reduced the role of the private insurance and reinsurance markets in Florida, a key target market of ours. In succeeding years, Florida legislation allowed Citizens to increase rates and cut back support for the FHCF, which has supported, over this period, a relatively increased role for private insurers in Florida, a market in which we have established substantial market share. However, we cannot assure you that this increased role will continue or be maintained, or that adverse new legislation will not be passed.
See “Part I, Item 1A. Risk Factors” and “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Current Outlook, Legislative and Regulatory Update” for further information regarding recent legislative and regulatory proposals and the potential effects on our business and results of operations.
U.K. Regulation
Lloyd’s Regulation
General. The operations of RSML are subject to oversight by Lloyd’s, substantially effected through the Lloyd’s Franchise Board. RSML’s business plan for Syndicate 1458, including maximum underwriting capacity, requires annual approval by the Lloyd’s Franchise Board. The Lloyd’s Franchise Board may require changes to any business plan presented to it or additional capital to be provided to support the underwriting plan. Lloyd’s also imposes various charges and assessments on its members. If material changes in the business plan for Syndicate 1458 were required by the Lloyd’s Franchise Board, or if charges and assessments payable to Lloyd’s by RenaissanceRe CCL were to increase significantly, these events could have an adverse effect on the operations and financial results of RSML. We have deposited certain assets with Lloyd’s to support RenaissanceRe CCL’s underwriting business at Lloyd’s. Dividends from a Lloyd’s managing agent and a Lloyd’s corporate member can be declared and paid provided the relevant company has sufficient profits available for distribution.
By entering into a membership agreement with Lloyd’s, RenaissanceRe CCL has undertaken to comply with all Lloyd’s bye-laws and regulations as well as the provisions of the Lloyd’s Acts and the Financial Services and Markets Act 2000, as amended by the Financial Services Act 2012 (the “FSMA”).
Capital Requirements. The underwriting capacity of a member of Lloyd’s must be supported by providing a deposit (referred to as “Funds at Lloyd’s”) in the form of cash, securities or letters of credit in an amount determined under the capital adequacy regime of the U.K.’s Prudential Regulation Authority (the “PRA”). The amount of such deposit is calculated for each member through the completion of an annual capital adequacy exercise. Under these requirements, Lloyd’s must demonstrate that each member has sufficient assets to meet its underwriting liabilities plus a required solvency margin.
Restrictions. A Reinsurance to Close (“RITC”) generally is put in place after the third year of operations of a syndicate year of account. On successful conclusion of a RITC, any profit from the syndicate’s operations for that year of account can be remitted by the managing agent to the syndicate’s members. If the syndicate’s managing agency concludes that an appropriate RITC cannot be determined or negotiated on commercially acceptable terms in respect of a particular underwriting year, it must determine that the underwriting year remain open and be placed into run-off. During this period, there cannot be a release of the Funds at Lloyd’s of a member of that syndicate without the consent of Lloyd’s.
The financial security of the Lloyd’s market as a whole is regularly assessed by three independent rating agencies (A.M. Best, S&P and Fitch). Syndicates at Lloyd’s take their financial security rating from the rating of the Lloyd’s Market. A satisfactory credit rating issued by an accredited rating agency is necessary for Lloyd’s syndicates to be able

to trade in certain classes of business at current levels. RSML and RenaissanceRe CCL would be adversely affected if Lloyd’s current ratings were downgraded.

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

PRA and FCA Regulation

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

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

Change of Control. The PRA and the FCA currently regulate the acquisition of control of any Lloyd's managing agent which is authorized under the FSMA. Any company or individual that, together with its or his associates, directly or indirectly acquires 10% or more of the shares in a Lloyd's managing agent or its parent company, or is entitled to exercise or control the exercise of 10% or more of the voting power in such Lloyd's managing agent or its parent company, would be considered to have acquired control for the purposes of the relevant legislation, as would a person who had significant influence over the management of such Lloyd's managing agent or its parent company by virtue of their shareholding or voting power in either. A purchaser of 10% or more of RenaissanceRe's common shares or voting power would therefore be considered to have acquired control of RSML. Under the FSMA, any person or entity proposing to acquire control over a Lloyd's managing agent must give prior notification to the PRA and the FCA of their or the entity's intention to do so. The PRA and FCA would then have 60 working days to consider the application to acquire control. Failure to make the relevant prior application could result in action being taken against RSML by the PRA or the FCA or both of them. Lloyd's approval is also required before any person can acquire control (using the same definition as for the PRA and FCA) of a Lloyd's managing agent or Lloyd's corporate member.

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

Solvency II

Solvency II was adopted by the European Parliament in April of 2009 and came into effect on January 1, 2016. Solvency II represents a risk-based approach to insurance regulation and capital adequacy. Its principal goals are to improve the correlation between capital and risk, effect group supervision of insurance

and reinsurance affiliates, implement a uniform capital adequacy structure for (re)insurers across the EU Member States, establish consistent corporate governance standards for insurance and reinsurance companies, and establish transparency through standard reporting of insurance operations. Under Solvency II, an insurer's or reinsurer's capital adequacy in relation to various insurance and business risks may be measured with an internal model developed by the insurer or reinsurer and approved for use by the Member State's regulator or pursuant to a standard formula developed by the EC. The PRA granted approval to Lloyd's internal model application in December 2015.

Singapore Regulation

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

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

Ireland Regulation

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

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

Switzerland Regulation

We have established branches of Renaissance Reinsurance and DaVinci in Zurich, Switzerland (the "Swiss Branches"). The reinsurance operations of branch offices of foreign reinsurers are not regulated by The Swiss Financial Market Supervisory Authority. We do not currently consider the activities of the Swiss Branches to be material to us.

RenaissanceRe Services of Switzerland AG, our Zurich-based service company, was established as a stock corporation in Switzerland on June 15, 2017. It is registered with the Commercial Register of Zurich is subject to Chapter 26 of the Swiss Code of Obligations.

ENVIRONMENTAL AND CLIMATE CHANGE MATTERS

Our principal economic exposures arise from our coverages for natural disasters and catastrophes. We believe, and believe the consensus view of current scientific studies substantiates, that changes in climate conditions, primarily global temperatures and expected sea levels, are likely to increase the severity, and possibly the frequency, of weather related natural disasters and catastrophes relative to the historical experience over the past 100 years. We believe that this expected increase in severe weather, coupled with

currently projected demographic trends in catastrophe-exposed regions, contributes to factors that will increase the average economic value of expected losses, increase the number of people exposed per year to natural disasters and in general exacerbate disaster risk, including risks to infrastructure, global supply chains and agricultural production. Accordingly, we expect an increase in claims, especially from properties located in coastal areas. We have taken measures to mitigate losses related to climate change through our underwriting process and by continuously monitoring and adjusting our risk management models.

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

GLOSSARY OF SELECTED INSURANCE AND REINSURANCE TERMS

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

Table of Contents

Catastrophe	A severe loss, typically involving multiple claimants. Common perils include earthquakes, hurricanes, hailstorms, severe winter weather, floods, fires, tornadoes, explosions and other natural or man-made disasters. Catastrophe losses may also arise from acts of war, acts of terrorism and political instability.
Catastrophe excess of loss reinsurance	A form of excess of loss reinsurance that, subject to a specified limit, indemnifies the ceding company for the amount of loss in excess of a specified retention with respect to an accumulation of losses resulting from a “catastrophe.”
Catastrophe-linked securities; cat-linked securities	Cat-linked securities are generally privately placed fixed income securities where all or a portion of the repayment of the principal is linked to catastrophic events. This includes securities where the repayment is linked to the occurrence and/or size of, for example, one or more hurricanes or earthquakes, or insured industry losses associated with these catastrophic events.
Cede; cedant; ceding company	When a party reinsures its liability with another, it “cedes” business and is referred to as the “cedant” or “ceding company.”
Claim	Request by an insured or reinsured for indemnification by an insurance company or a reinsurance company for losses incurred from an insured peril or event.
Claims made contracts	Contracts that cover claims for losses occurring during a specified period that are reported during the term of the contract.
Claims and claim expense ratio, net	The ratio of net claims and claim expenses to net premiums earned determined in accordance with either statutory accounting principles or GAAP.
Claim reserves	Liabilities established by insurers and reinsurers to reflect the estimated costs of claim payments and the related expenses that the insurer or reinsurer will ultimately be required to pay in respect of insurance or reinsurance policies it has issued. Claims reserves consist of case reserves, established with respect to individual reported claims, additional case reserves and “IBNR” reserves. For reinsurers, loss expense reserves are generally not significant because substantially all of the loss expenses associated with particular claims are incurred by the primary insurer and reported to reinsurers as losses.
Combined ratio	The combined ratio is the sum of the net claims and claim expense ratio and the underwriting expense ratio. A combined ratio below 100% generally indicates profitable underwriting prior to the consideration of investment income. A combined ratio over 100% generally indicates unprofitable underwriting prior to the consideration of investment income.
Delegated authority	A contractual arrangement between an insurer or reinsurer and an agent whereby the agent is authorized to bind insurance or reinsurance on behalf of the insurer or reinsurer. The authority is normally limited to a particular class or classes of business and a particular territory. The exercise of the authority to bind insurance or reinsurance is normally subject to underwriting guidelines and other restrictions such as maximum premium income. Under the delegated authority, the agent is responsible for issuing policy documentation, the collection of premium and may also be responsible for the settlement of claims.

31

Table of Contents

Excess of loss reinsurance or insurance	Reinsurance or insurance that indemnifies the reinsured or insured against all or a specified portion of losses on underlying insurance policies in excess of a specified amount, which is called a "level" or "retention." Also known as non-proportional reinsurance. Excess of loss reinsurance is written in layers. A reinsurer or group of reinsurers accepts a layer of coverage up to a specified amount. The total coverage purchased by the cedant is referred to as a "program" and will typically be placed with predetermined reinsurers in pre-negotiated layers. Any liability exceeding the outer limit of the program reverts to the ceding company, which also bears the credit risk of a reinsurer's insolvency.
Exclusions	Those risks, perils, or classes of insurance with respect to which the reinsurer will not pay loss or provide reinsurance, notwithstanding the other terms and conditions of reinsurance.
Frequency	The number of claims occurring during a given coverage period.
Funds at Lloyd's	Funds of an approved form that are lodged and held in trust at Lloyd's as security for a member's underwriting activities. They comprise the members' deposit, personal reserve fund and special reserve fund and may be drawn down in the event that the member's syndicate level premium trust funds are insufficient to cover its liabilities. The amount of the deposit is related to the member's premium income limit and also the nature of the underwriting account.
Generally Accepted Accounting Principles in the United States ("GAAP")	Accounting principles as set forth in the statements of the Financial Accounting Standards Board ("FASB") and related guidance, which are applicable in the circumstances as of the date in question.
Gross premiums written	Total premiums for insurance written and assumed reinsurance during a given period.
Incurred but not reported ("IBNR")	Reserves for estimated losses that have been incurred by insureds and reinsureds but not yet reported to the insurer or reinsurer, including unknown future developments on losses that are known to the insurer or reinsurer.
Insurance-linked securities	Financial instruments whose values are driven by (re)insurance loss events. Our investments in insurance-linked securities are generally linked to property losses due to natural catastrophes.
International Financial Reporting Standards ("IFRS")	Accounting principles, standards and interpretations as set forth in opinions of the International Accounting Standards Board which are applicable in the circumstances as of the date in question.
Layer	The interval between the retention or attachment point and the maximum limit of indemnity for which a reinsurer is responsible.
Line	The amount of excess of loss reinsurance protection provided to an insurer or another reinsurer, often referred to as limit.
Line of business	The general classification of insurance written by insurers and reinsurers, e.g., fire, allied lines, homeowners and surety, among others.
Lloyd's	Depending on the context, this term may refer to (a) the society of individual and corporate underwriting members that insure and reinsure risks as members of one or more syndicates (i.e., Lloyd's is not an insurance company); (b) the underwriting room in the Lloyd's building in which managing agents underwrite insurance and reinsurance on behalf of their syndicate members (in this sense Lloyd's should be understood as a market place); or (c) the Corporation of Lloyd's which regulates and provides support services to the Lloyd's market.

32

Table of Contents

Loss; losses	An occurrence that is the basis for submission and/or payment of a claim. Whether losses are covered, limited or excluded from coverage is dependent on the terms of the policy.
Loss reserve	For an individual loss, an estimate of the amount the insurer expects to pay for the reported claim. For total losses, estimates of expected payments for reported and unreported claims. These may include amounts for claims expenses.
Managing agent	An underwriting agent which has permission from Lloyd’s to manage a syndicate and carry on underwriting and other functions for a member.
Net claims and claim expenses	The expenses of settling claims, net of recoveries, including legal and other fees and the portion of general expenses allocated to claim settlement costs (also known as claim adjustment expenses or loss adjustment expenses) plus losses incurred with respect to net claims.
Net claims and claim expense ratio	Net claims and claim expenses incurred expressed as a percentage of net earned premiums.
Net premiums earned	The portion of net premiums written during or prior to a given period that was actually recognized as income during such period.
Net premiums written	Gross premiums written for a given period less premiums ceded to reinsurers and retrocessionaires during such period.
Perils	This term refers to the causes of possible loss in the property field, such as fire, windstorm, collision, hail, etc. In the casualty field, the term “hazard” is more frequently used.
Profit commission	A provision found in some reinsurance agreements that provides for profit sharing. Parties agree to a formula for calculating profit, an allowance for the reinsurer’s expenses, and the cedant’s share of such profit after expenses.
Property insurance or reinsurance	Insurance or reinsurance that provides coverage to a person with an insurable interest in tangible property for that person’s property loss, damage or loss of use.
Property per risk	Reinsurance on a treaty basis of individual property risks insured by a ceding company.
Proportional reinsurance	A generic term describing all forms of reinsurance in which the reinsurer shares a proportional part of the original premiums and losses of the reinsured. (Also known as pro rata reinsurance, quota share reinsurance or participating reinsurance.) In proportional reinsurance, the reinsurer generally pays the ceding company a ceding commission. The ceding commission generally is based on the ceding company’s cost of acquiring the business being reinsured (including commissions, premium taxes, assessments and miscellaneous administrative expense) and also may include a profit factor. See also “Quota Share Reinsurance”.
Quota share reinsurance	A form of proportional reinsurance in which the reinsurer assumes an agreed percentage of each insurance policy being reinsured and shares all premiums and losses accordingly with the reinsured. See also “Proportional Reinsurance”.
Reinstatement premium	The premium charged for the restoration of the reinsurance limit of a catastrophe contract to its full amount after payment by the reinsurer of losses as a result of an occurrence.

Table of Contents

Reinsurance	An arrangement in which an insurance company, the reinsurer, agrees to indemnify another insurance or reinsurance company, the ceding company, against all or a portion of the insurance or reinsurance risks underwritten by the ceding company under one or more policies. Reinsurance can provide a ceding company with several benefits, including a reduction in net liability on insurances and catastrophe protection from large or multiple losses. Reinsurance also provides a ceding company with additional underwriting capacity by permitting it to accept larger risks and write more business than would be possible without an equivalent increase in capital and surplus, and facilitates the maintenance of acceptable financial ratios by the ceding company. Reinsurance does not legally discharge the primary insurer from its liability with respect to its obligations to the insured.
Reinsurance to Close	Also referred to as a RITC, it is a contract to transfer the responsibility for discharging all the liabilities that attach to one year of account of a syndicate into a later year of account of the same or different syndicate in return for a premium.
Retention	The amount or portion of risk that an insurer retains for its own account. Losses in excess of the retention level are paid by the reinsurer. In proportional treaties, the retention may be a percentage of the original policy's limit. In excess of loss business, the retention is a dollar amount of loss, a loss ratio or a percentage.
Retrocedant	A reinsurer who cedes all or a portion of its assumed insurance to another reinsurer.
Retrocessional reinsurance; Retrocessionaire	A transaction whereby a reinsurer cedes to another reinsurer, the retrocessionaire, all or part of the reinsurance that the first reinsurer has assumed. Retrocessional reinsurance does not legally discharge the ceding reinsurer from its liability with respect to its obligations to the reinsured. Reinsurance companies cede risks to retrocessionaires for reasons similar to those that cause primary insurers to purchase reinsurance: to reduce net liability on insurances, to protect against catastrophic losses, to stabilize financial ratios and to obtain additional underwriting capacity.
Risks	A term used to denote the physical units of property at risk or the object of insurance protection that are not perils or hazards. Also defined as chance of loss or uncertainty of loss.
Solvency II	A set of regulatory requirements that codify and harmonize the EU insurance and reinsurance regulation. Among other things, these requirements impact the amount of capital that EU insurance and reinsurance companies are required to hold. Solvency II came into effect on January 1, 2016.
Specialty lines	Lines of insurance and reinsurance that provide coverage for risks that are often unusual or difficult to place and do not fit the underwriting criteria of standard commercial products carriers.
Statutory accounting principles	Recording transactions and preparing financial statements in accordance with the rules and procedures prescribed or permitted by Bermuda, U.S. state insurance regulatory authorities including the NAIC and/or in accordance with Lloyd's specific principles, all of which generally reflect a liquidating, rather than going concern, concept of accounting.
Stop loss	A form of reinsurance under which the reinsurer pays some or all of a cedant's aggregate retained losses in excess of a predetermined dollar amount or in excess of a percentage of premium.

Table of Contents

Submission	An unprocessed application for (i) insurance coverage forwarded to a primary insurer by a prospective policyholder or by a broker on behalf of such prospective policyholder, (ii) reinsurance coverage forwarded to a reinsurer by a prospective ceding insurer or by a broker or intermediary on behalf of such prospective ceding insurer or (iii) retrocessional coverage forwarded to a retrocessionaire by a prospective ceding reinsurer or by a broker or intermediary on behalf of such prospective ceding reinsurer.
Surplus lines insurance	Any type of coverage that cannot be placed with an insurer admitted to do business in a certain jurisdiction. Risks placed in excess and surplus lines markets are often substandard in respect to adverse loss experience, unusual, or unable to be placed in conventional markets due to a shortage of capacity.
Syndicate	A member or group of members underwriting (re)insurance business at Lloyd’s through the agency of a managing agent or substitute agent to which a syndicate number is assigned.
Treaty	A reinsurance agreement covering a book or class of business that is automatically accepted on a bulk basis by a reinsurer. A treaty contains common contract terms along with a specific risk definition, data on limit and retention, and provisions for premium and duration.
Underwriting	The insurer’s or reinsurer’s process of reviewing applications submitted for insurance coverage, deciding whether to accept all or part of the coverage requested and determining the applicable premiums.
Underwriting capacity	The maximum amount that an insurance company can underwrite. The limit is generally determined by a company’s retained earnings and investment capital. Reinsurance serves to increase a company’s underwriting capacity by reducing its exposure from particular risks.
Underwriting expense ratio	The ratio of the sum of the acquisition expenses and operational expenses to net premiums earned.
Underwriting expenses	The aggregate of policy acquisition costs, including commissions, and the portion of administrative, general and other expenses attributable to underwriting operations.
Unearned premium	The portion of premiums written representing the unexpired portions of the policies or contracts that the insurer or reinsurer has on its books as of a certain date.

AVAILABLE INFORMATION

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

ITEM 1A. RISK FACTORS

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

Risks Related to Our Company

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

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

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

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

Risks of volatility in our financial results are also exacerbated by the fact that the premiums in both our Property and Casualty and Specialty segments are prone to significant volatility due to factors including the timing of contract inception and our differentiated strategy and capability, which position us to pursue bespoke or large solutions for clients, which may be non-recurring.

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

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

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

Due to the many assumptions and estimates involved in establishing reserves and the inherent uncertainty of modeling techniques, the reserving process is inherently uncertain. It is expected that some of our assumptions or estimates will prove to be inaccurate, and that our actual net claims and claim expenses paid and reported will differ, perhaps materially, from the reserve estimates reflected in our financial statements. For example, our significant gross and net reserves associated with the large catastrophe events in 2017 and 2018 remain subject to significant uncertainty. As these and other events mature, losses are paid and information emerges, we expect our reserves may change, perhaps materially.

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

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

Financial strength ratings are used by ceding companies and reinsurance intermediaries to assess the financial strength and quality of reinsurers and insurers. Rating agencies evaluate us periodically and may downgrade or withdraw their financial strength ratings in the future if we do not continue to meet the criteria

36

of the ratings previously assigned to us. In addition, rating agencies may make changes in their capital models and rating methodologies which could increase the amount of capital required to support the ratings.
A ratings downgrade or other negative ratings action could adversely affect our ability to compete with other reinsurers and insurers, as well as the marketability of our product offerings, our access to and cost of borrowing and our ability to write new business, which could materially adversely affect our results of operations. For example, following a ratings downgrade we might lose customers to more highly rated competitors or retain a lower share of the business of our customers or we could incur higher borrowing costs on our credit facilities.
In addition, many reinsurance contracts contain provisions permitting cedants to, among other things, cancel coverage pro rata or require the reinsurer to post collateral for all or a portion of its obligations if the reinsurer is downgraded below a certain rating level. It is increasingly common for our reinsurance agreements to contain such terms. Whether a cedant would exercise any of these rights could depend on various factors, such as the reason for and extent of such downgrade, the prevailing market conditions and the pricing and availability of replacement reinsurance coverage. We cannot predict to what extent these contractual rights would be exercised, if at all, or what effect this would have on our financial condition or future operations, but the effect could be material.
For the current ratings of certain of our subsidiaries and joint ventures and additional ratings information, refer to "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources, Ratings".
The trend towards increasingly frequent and severe climate events could result in underestimated exposures that have the potential to adversely impact our financial results.
Our most severe estimated economic exposures arise from our coverages for natural disasters and catastrophes. The trend towards increased severity and frequency of weather related natural disasters and catastrophes which we believe arises in part from changes in climate conditions, coupled with currently projected demographic trends in catastrophe-exposed regions, contributes to factors which we believe increase the average economic value of expected losses, increase the number of people exposed per year to natural disasters and in general exacerbate disaster risk, including risks to infrastructure, global supply chains and agricultural production. Accordingly, we expect an increase in claims, especially from properties located in these catastrophe-exposed regions.
A substantial portion of our coverages may be adversely impacted by climate change, and we cannot assure you that our risk assessments accurately reflect environmental and climate related risks. We cannot predict with certainty the frequency or severity of tropical cyclones, wildfires or other catastrophes. Unanticipated environmental incidents could lead to additional insured losses that exceed our current estimates, resulting in disruptions to or adverse impacts on our business, the market, or our clients. Further, certain investments, such as catastrophe-linked securities and property catastrophe managed joint ventures, or other assets in our investment portfolio, could also be adversely impacted by climate change.
Retrocessional reinsurance may become unavailable on acceptable terms, or may not provide the coverage we intended to obtain, or we may not be able to collect on claimed retrocessional coverage.
As part of our risk management, we buy reinsurance for our own account, which is known as "retrocessional reinsurance." The reinsurance we purchase is generally subject to annual renewal. From time to time, market conditions have limited or prevented insurers and reinsurers from obtaining retrocessional reinsurance. Accordingly, we may not be able to renew our current retrocessional reinsurance arrangements or obtain desired amounts of new or replacement coverage. In addition, even if we are able to obtain such retrocessional reinsurance, we may not be able to negotiate terms that we consider appropriate or acceptable from entities with satisfactory creditworthiness or collect on claimed retrocessional coverage. This could limit the amount of business we are willing to write, or decrease the protection available to us as a result of large loss events.
When we purchase reinsurance or retrocessional reinsurance for our own account, the insolvency of any of our reinsurers, or inability or reluctance of any of our reinsurers to make timely payments to us under the terms of our

reinsurance agreements could have a material adverse effect on us. We have significant

37

reinsurance recoverables associated with the large catastrophe events of 2017 and 2018 and, generally, we believe that the “willingness to pay” of some reinsurers and retrocessionaires is declining. Therefore, this risk may be more significant to us at present than at many times in the past. Complex coverage issues or coverage disputes may impede our ability to collect amounts we believe we are owed.

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

Recently enacted U.S. tax reform legislation, as well as possible future tax reform legislation and regulations, could reduce our access to capital, decrease demand for our products and services, impact our shareholders or investors in our joint ventures or other entities we manage or otherwise adversely affect us.

U.S. tax reform legislation, commonly referred to as the Tax Cuts and Jobs Act (the “Tax Bill”), was signed into law on December 22, 2017. The Tax Bill amends a range of U.S. federal tax rules applicable to individuals, businesses and international taxation, including, among other things, by altering the current taxation of insurance premiums ceded from a United States domestic corporation to any non-U.S. affiliate. For example, the Tax Bill includes a new base erosion anti-avoidance tax (the “BEAT”) that would have substantially altered the taxation of affiliate reinsurance between our operating affiliates which are subject to U.S. taxation and our non-U.S. affiliates which are not. We believe those transactions would have become economically unfeasible under the BEAT and terminated them as of the 2017 year end. While these transactions were not significant for us, on an industry-wide basis for specific market participants the impacts could be more material, and it is possible that over time the BEAT may result in increased prices for certain reinsurance or insurance products, which could cause a decrease in demand for these products and services due to limitations on the available resources of our clients or their underlying insureds.

The Tax Bill increased the likelihood that we or our non-U.S. subsidiaries or joint ventures managed by us will be deemed a “controlled foreign corporation” (“CFC”) within the meaning of the Internal Revenue Code for U.S. federal tax purposes. Specifically, the Tax Bill expands the definition of “U.S. shareholder” for CFC purposes to include U.S. persons who own 10% or more of the value of a foreign corporation’s shares, rather than only looking to voting power held. As a result, the “voting cut-back” provisions included in our Amended and Restated Bye-laws that limit the voting power of any shareholder to 9.9% of the total voting power of our capital stock will be ineffective in avoiding “U.S. shareholder” status for U.S. persons who own 10% or more of the value of our shares. The Tax Bill also expands certain attribution rules for stock ownership in a way that would cause foreign subsidiaries in a foreign parented group that includes at least one U.S. subsidiary to be treated as CFCs. In the event a corporation is characterized as a CFC, any “U.S. shareholder” of the CFC is required to include its pro rata share of certain insurance and related investment income in income for a taxable year, even if such income is not distributed. In addition, U.S. tax exempt entities subject to the unrelated business taxable income (“UBTI”) rules that own 10% or more of the value of our non-U.S. subsidiaries or joint ventures managed by us that are characterized as CFCs may recognize UBTI with respect to such investment.

In addition to changes in the CFC rules, the Tax Bill contains modifications to certain provisions relating to passive foreign investment company (“PFIC”) status that could, for example, discourage U.S. persons from investing in our joint ventures or other entities we manage. The Tax Bill makes it more difficult for a non-U.S. insurance company to avoid PFIC status under an exception for certain non-U.S. insurance companies engaged in the active conduct of an insurance business. The Tax Bill limits this exception to a non-U.S. insurance company that would be taxable as an insurance company if it were a U.S. corporation and that maintains insurance liabilities of more than 25% of such company’s assets for a taxable year (or maintains reserves that at least equal 10% of its assets and it satisfies a facts and circumstances test that requires a showing that the failure to exceed the 25% threshold is due to run-off or rating agency circumstances). While we believe that our non-U.S. insurance subsidiaries should satisfy this reserve test and we do not expect to be a PFIC for the foreseeable future, we cannot assure you that this will continue to be the case in future years, and there is a significant risk that joint venture entities managed by us may not satisfy the reserve test.

The IRS has been considering other changes to the PFIC rules for several years. In 2015, the IRS issued proposed regulations intended to clarify the application of this insurance company exception to the classification of a non-U.S. insurer as a PFIC. These proposed regulations provide that a non-U.S. insurer

will qualify for the insurance company exception only if, among other things, the non-U.S. insurer's officers and employees perform its substantial managerial and operational activities. This proposed regulation will not be effective until adopted in final form.

We are unable to predict all of the ultimate impacts of the Tax Bill and other proposed tax reform regulations and legislation on our business and results of operations. It is possible the IRS will construe the intent of the Tax Bill as having been to reduce or eliminate certain perceived tax advantages of companies (including insurance companies) that have legal domiciles outside the U.S., and its interpretation, enforcement actions or regulatory changes could increase the impact of the Tax Bill beyond prevailing current assessments or our own estimates. Further, it is possible that other legislation could be introduced and enacted in the future that would have an adverse impact on us. These events and trends towards more punitive taxation of cross border transactions could in the future materially adversely impact the insurance and reinsurance industry and our own results of operations by increasing taxation of certain activities and structures in our industry. Accordingly, we cannot reliably estimate what the potential impact of any such changes could be to us or our non-U.S. subsidiaries or joint ventures managed by us and our and their respective sources of capital, investors or the market generally, however, it is possible these changes could materially adversely impact our results of operations.

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

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

In addition, we believe our property results have been adversely impacted over recent periods by increasing primary claims level fraud and abuses, as well as other forms of social inflation, and that these trends may continue, particularly in certain U.S. jurisdictions in which we focus, including Florida and Texas. For example, in Florida, homeowners are increasingly assigning the benefit of their insurance recovery to third parties, typically related to a water loss claim but also with respect to other claims. This practice is referred to as an "assignment of benefits", and is characterized by an inflated size and number of claims, increased incidence of litigation, interference in the adjustment of claims, and the assertion of bad faith actions and a one-way right to claim attorney fees. Assignments of benefits and related insurance fraud may directly affect us, potentially materially, through any policy we write in Florida, as well as by inflating the size of occurrences we cover under our reinsurance treaties and reducing the value of certain investments we have in Florida, including both debt and equity investments in domestic reinsurers. Additionally, significant uncertainty may arise from the attribution of potentially insured losses proximately or indirectly related to the 2017 and 2018 California wildfires.

With respect to our casualty and specialty reinsurance operations, these legal and social changes and their impact may not become apparent until some time after their occurrence. For example, we could be deemed liable for losses arising out of a matter, such as the potential for industry losses arising out of a pandemic illness, that we had not anticipated or had attempted to contractually exclude. Moreover, irrespective of the clarity and inclusiveness of policy language, we cannot assure you that a court or arbitration panel will enforce policy language or not issue a ruling adverse to us. Our exposure to these uncertainties could be exacerbated by the increased willingness of some market participants to dispute insurance and reinsurance contract and policy wording. Alternatively, potential efforts by us to exclude such exposures could, if successful, reduce the market's acceptance of our related products. The full effects of these and other unforeseen emerging claim and coverage issues are extremely hard to predict. As a result, the full extent of our liability under our coverages may not be known for many years after a contract is issued. Furthermore, we expect that our exposure to this uncertainty may grow as our "long-tail" casualty businesses grow, because in these lines claims can typically be made for many years, making them more susceptible to these trends than our traditional catastrophe business, which is typically more "short-tail." While we continually seek to improve the effectiveness of our contracts and claims capabilities, we may fail to mitigate our exposure to these growing uncertainties.

Table of Contents

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

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

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

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

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

We believe our exposure to counterparty credit risk has increased in recent years. In accordance with industry practice, we pay virtually all amounts owed on claims under our policies to reinsurance brokers, and these brokers, in turn, pay these amounts over to the insurers that have reinsured a portion of their liabilities with us (we refer to these insurers as ceding insurers). Likewise, premiums due to us by ceding insurers are virtually all paid to brokers, who then pass such amounts on to us. In many jurisdictions, we have contractually agreed that if a broker were to fail to make a payment to a ceding insurer, we would remain liable to the ceding insurer for the deficiency. Conversely, in many jurisdictions, when the ceding insurer pays premiums for these policies to reinsurance brokers for payment over to us, these premiums are considered to have been paid by the cedants and the ceding insurer is no longer liable to us for those amounts, whether or not we have actually received the premiums. Consequently, in connection with the settlement of reinsurance balances, we assume a substantial degree of credit risk associated with brokers around the world.

We are also exposed to the credit risk of our customers, who, pursuant to their contracts with us, frequently pay us over time. We cannot assure you that our premiums receivable or reinsurance recoverables, which may not be collateralized, will be collected or that we will not be required to write down additional amounts in future periods. To the extent our customers or retrocedants become unable to pay future premiums, we would be required to recognize a downward adjustment to our premiums receivable or reinsurance recoverables, as applicable, in our financial statements. As of December 31, 2018, we had reinsurance recoverables of $2.4 billion, and our failure to collect even a small portion of these recoverables, or a meaningful delay in the collection of recoverables as to which our own underlying obligations are due, could negatively affect our results of operations and financial condition, perhaps materially.

During periods of economic uncertainty, our consolidated credit risk, reflecting our counterparty dealings with agents, brokers, customers, retrocessionaires, capital providers, parties associated with our investment portfolio, and others may increase, perhaps materially so.

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

Challenging economic conditions throughout the world could adversely affect our business and financial results. If economic conditions should weaken, the business environment in our principal markets would be adversely affected, which could adversely affect demand for the products sold by us or our customers. In

Table of Contents

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

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

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

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

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

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

Future acquisitions could likewise involve numerous additional risks such as potential losses from unanticipated litigation or levels of claims and inability to generate sufficient revenue to offset acquisition costs. As we pursue or consummate a strategic transaction or investment, we may value the acquired or funded company or operations incorrectly, fail to integrate the acquired operations appropriately into our own operations, fail to successfully manage our operations as our product and geographical diversity increases, expend unforeseen costs during the acquisition or integration process, or encounter other unanticipated risks or challenges. If we succeed in consummating a strategic investment, we may fail to value it accurately or divest it or otherwise realize the value which we originally invested or have subsequently reflected in our consolidated financial statements. Any failure by us to effectively limit such risks or implement our acquisitions or strategic investment strategies could have a material adverse effect on our business, financial condition or results of operations. As provided in more detail below under “Risks Related to the TMR Stock Purchase,” we face significant challenges in combining our operations with the operations of the TMR Group, and we may not be able to accomplish this integration process smoothly or successfully, which would reduce the anticipated benefits of the TMR Stock Purchase.

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

Our success depends in substantial part upon our ability to attract and retain our senior officers. The loss of services of members of our senior management team and the uncertain transition of new members of our senior management team may strain our ability to execute our strategic initiatives. The loss of one or more of our senior officers could adversely impact our business, by, for example, making it more difficult to retain customers, attract or maintain our capital support, or meet other needs of our business, which depend in part on the service of the departing officer. We may also encounter unforeseen difficulties associated with

the transition of members of our senior management team to new or expanded roles necessary to execute our strategic and tactical plans from time to time.

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

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

We have historically derived a meaningful portion of our income from our invested assets, which are comprised of, among other things, fixed maturity securities, such as bonds, asset-backed securities, mortgage-backed securities, equity securities, and other investments, including but not limited to private equity investments, bank loan funds and hedge funds. Accordingly, our financial results are subject to a variety of investment risks, including risks relating to general economic conditions, inflation, market volatility, interest rate fluctuations, foreign currency risk, liquidity risk and credit and default risk. Additionally, with respect to certain of our investments, we are subject to pre-payment or reinvestment risk. Our investment portfolio also includes securities with a longer duration, which may be more susceptible to certain of these risks.

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

A portion of our investment portfolio is allocated to other classes of investments including equity securities and interests in alternative investment vehicles such as catastrophe bonds, private equity investments, senior secured bank loan funds and hedge funds. These other classes of investments are recorded on our consolidated balance sheet at fair value, which is generally established on the basis of the valuation criteria set forth in the governing documents of such investment vehicles. Such valuations may differ significantly from the values that would have been used had ready markets existed for the shares, partnership interests, notes or other securities representing interests in the relevant investment vehicles. We cannot assure you that, if we were forced to sell these assets, we would be able to sell them for the prices at which we have recorded them, and we might be forced to sell them at significantly lower prices. Furthermore, our interests in many of the investment classes described above are subject to restrictions on redemptions and sales which limit our ability to liquidate these investments in the short term. These classes of investments expose us to market risks including interest rate risk, foreign currency risk, equity price risk and credit risk. The performance of these classes of investments is also dependent on the individual investment managers and the investment strategies. It is possible that the investment managers will leave and/or the investment strategies will become ineffective or that such managers will fail to follow our investment guidelines. Any of the foregoing could result in a material adverse change to our investment performance, and accordingly, adversely affect our financial

results.
In addition to the foregoing, we may from time to time re-evaluate our investment approach and guidelines and explore investment opportunities in respect of other asset classes not previously discussed above, including, without limitation, by expanding our relatively small portfolio of direct investments in the equity markets. Any such investments could expose us to systemic and price volatility risk, interest rate risk and other market risks. Any investment in equity securities carries with it inherent volatility. We cannot assure

you that such an investment will prove profitable and we could lose the value of our investment. Accordingly, any such investment could impact our financial results, perhaps materially, over both the short and the long term.
As a result of concerns about the accuracy of the calculation of LIBOR, a number of British Bankers' Association ("BBA") member banks entered into settlements with certain regulators and law enforcement agencies with respect to the alleged manipulation of LIBOR. Actions by the BBA, regulators or law enforcement agencies as a result of these or future events, may result in changes to the manner in which LIBOR is determined. Potential changes, or uncertainty related to such potential changes may adversely affect the market for LIBOR-based securities. In addition, changes or reforms to the determination or supervision of LIBOR may result in a sudden or prolonged increase or decrease in reported LIBOR, which could have an adverse impact on the market for LIBOR-based securities.
In July 2017, the head of the United Kingdom Financial Conduct Authority announced the desire to phase out the use of LIBOR by the end of 2021, which may affect us adversely. If LIBOR ceases to exist, we may need to renegotiate the terms of certain of our capital securities and credit instruments, which utilize LIBOR as a factor in determining the interest rate, to replace LIBOR with the new standard that is established. There is currently no definitive information regarding the future utilization of LIBOR or of any particular replacement rate. As such, the potential effect of any such event on our cost of capital and net investment income cannot yet be determined.
We could face losses from terrorism, political unrest and war.
We have exposure to losses resulting from acts of terrorism, political unrest and acts of war. The frequency of these events has increased in recent years and it is difficult to predict the occurrence of these events or to estimate the amount of loss an occurrence will generate. Accordingly, it is possible that actual losses from such acts will exceed our probable maximum loss estimate and that these acts will have a material adverse effect on us.
We closely monitor the amount and types of coverage we provide for terrorism risk under reinsurance and insurance treaties. If we think we can reasonably evaluate the risk of loss and charge an appropriate premium for such risk we will write some terrorism exposure on a stand-alone basis. We generally seek to exclude terrorism from non-terrorism treaties. If we cannot exclude terrorism, we evaluate the risk of loss and attempt to charge an appropriate premium for such risk. Even in cases where we have deliberately sought to exclude coverage, we may not be able to completely eliminate our exposure to terrorist acts.
The Terrorism Risk Insurance Program Reauthorization Act of 2007 ("TRIPRA"), which provides a federal backstop to all U.S. based property and casualty insurers for insurance related losses resulting from any act of terrorism on U.S. soil or against certain U.S. air carriers, vessels or foreign missions, expires on December 31, 2020. We benefit from TRIPRA as this protection generally inures to our benefit under our reinsurance treaties where terrorism is not excluded.
We are subject to cybersecurity risks and may incur increasing costs in an effort to minimize those risks.
Publicly reported instances of cyber security threats and incidents have increased over recent periods, and we may be subject to heightened cyber-related risks. Our business depends on the proper functioning and availability of our information technology platform, including communications and data processing systems and our proprietary pricing and exposure management system. We are also required to effect electronic transmissions with third parties including brokers, clients, vendors and others with whom we do business, and with our Board of Directors. We believe we have implemented appropriate security measures, controls and procedures to safeguard our information technology systems and to prevent unauthorized access to such systems and any data processed or stored in such systems, and we periodically evaluate and test the adequacy of such systems, measures, controls and procedures and perform third-party risk assessments; however, there can be no guarantee that such systems, measures, controls and procedures will be effective, that we will be able to establish secure capabilities with all of third parties, or that third parties will have appropriate controls in place to protect the confidentiality of our information. Security breaches could expose us to a risk of loss or misuse of our information, litigation and potential liability.

In addition, cyber incidents that impact the availability, reliability, speed, accuracy or other proper functioning of our systems could have a significant impact on our operations, and potentially on our results.

Table of Contents

We protect our information systems with physical and electronic safeguards as well as backup systems considered appropriate by management. However, it is not possible to protect against every potential power loss, telecommunications failure, cybersecurity attack or similar event that may arise. Moreover, the safeguards we use are subject to human implementation and maintenance and to other uncertainties. Although we attempt to keep personal, confidential, and proprietary information confidential, we may be impacted by third parties who may not have or use appropriate controls to protect such information.

We may not have the resources or technical sophistication to anticipate or prevent rapidly evolving types of cyberattacks. A significant cyber incident, including system failure, security breach, disruption by malware or other damage could interrupt or delay our operations, result in a violation of applicable privacy and other laws, damage our reputation, cause a loss of customers or give rise to monetary fines and other penalties, which could be significant. While management is not aware of a cybersecurity incident that has had a material effect on our operations, there can be no assurances that a cyber incident that could have a material impact on us will not occur in the future.

Our disaster recovery and business continuity plans involve arrangements with our off-site, secure data centers. We cannot assure you that we will be able to access our systems from these facilities in the event that our primary systems are unavailable due to various scenarios, such as natural disasters or that we have prepared for every disaster or every scenario which might arise in respect of a disaster for which we have prepared, and cannot assure you our efforts in respect of disaster recovery will succeed, or will be sufficiently rapid to avoid harm to our business.

The cybersecurity regulatory environment is evolving, and it is possible that the costs to us of and the resources required for complying with new or developing regulatory requirements will increase. For example, the NYDFS Cybersecurity Regulation imposes pre-breach cybersecurity obligations with which certain of our subsidiaries are required to comply. We may be required to comply with other cybersecurity requirements upon completion of the TMR Stock Purchase. It is also possible that similar laws and regulations may be enacted in the future in other jurisdictions. We also operate in a number of jurisdictions with strict data privacy and other related laws, which could be violated in the event of a significant cybersecurity incident, or by our personnel. Failure to comply with these obligations can give rise to monetary fines and other penalties, which could be significant.

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

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

We regularly evaluate our business plans and strategies, which often results in changes to our business plans and initiatives. Given the increasing importance of strategic execution in our industry, we are subject to increasing risks related to our ability to successfully implement our evolving plans and strategies, particularly as the pace of change in our industry continues to increase. Changing plans and strategies requires significant management time and effort, and may divert management’s attention from our core and historically successful operations and competencies. We routinely evaluate potential investments and strategic transactions, but there can be no assurance we will successfully consummate any such transaction, or that a consummated transaction will succeed financially or strategically. Moreover, modifications we undertake to our operations may not be immediately reflected in our financial statements. Therefore, risks associated with implementing or changing our business strategies and initiatives, including risks related to developing or enhancing our operations, controls and other infrastructure, may not have an impact on our publicly reported results until many years after implementation. Our failure to carry out our business plans may have an adverse effect on our long-term results of operations and financial condition.

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

Table of Contents

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

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

We may be adversely impacted by inflation.

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

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

Like other reinsurers, we do not separately evaluate each primary risk assumed under our reinsurance contracts or pursuant to our delegated authority business. Accordingly, we are heavily dependent on the original underwriting decisions made by our ceding companies and delegated authority counterparties and are therefore subject to the risk that our customers may not have adequately evaluated the risks to be reinsured, or that the premiums ceded to us will not adequately compensate us for the risks we assume, perhaps materially so. In addition, it is possible that delegated authority counterparties or other counterparties authorized to bind policies on our behalf will fail to fully comply with regulatory requirements, such as those relating to sanctions, or the standards we impose in light of our own underwriting and reputational risk tolerance. To the extent we continue to increase the relative amount of proportional coverages we offer, we will increase our aggregate exposure to risks of this nature.

Our business is subject to operational risks, including systems or human failures.

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

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

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

In addition, in furtherance of our goal of matching well-structured risk with capital whose owners would find the risk-return trade-off attractive, we may invest capital in new and complex ventures with which we do not have a significant amount of experience, which may increase our exposure to legal, regulatory and reputational risks.
In addition, our third party capital providers may, in general, redeem their interests in our joint ventures at certain points in time, which could materially impact the financial condition of such joint ventures, and could in turn materially impact our financial condition and results of operations.
Certain of our joint venture capital providers provide significant capital investment and other forms of capital support in respect of our joint ventures. The loss, or alteration in a negative manner, of any of this capital support could be detrimental to our financial condition and results of operations. Moreover, we can provide no assurance that we will be able to attract and raise additional third party capital for our existing joint ventures or for potential new joint ventures and therefore we may forego existing and/or potentially attractive fee income and other income generating opportunities.
We may be adversely affected by foreign currency fluctuations.
We routinely transact business in currencies other than the U.S. dollar, our financial reporting currency. Moreover, we maintain a portion of our cash and investments in currencies other than the U.S. dollar. Although we generally seek to hedge significant non-U.S. dollar positions, we may, from time to time, experience losses resulting from fluctuations in the values of these foreign currencies, which could cause our consolidated earnings to decrease. In addition, failure to manage our foreign currency exposures could cause our results of operations to be more volatile. Adverse, unforeseen or rapidly shifting currency valuations in our key markets may magnify these risks over time. Our pending acquisition of the TMR Group Entities and significant third party capital management operations my further complicate our foreign currency operational needs and risk.
We may require additional capital in the future, which may not be available or may only be available on unfavorable terms.
To the extent that our existing capital is insufficient to support our future operating requirements, we may need to raise additional funds through financings or limit our growth. Our operations are subject to significant volatility in capital due to our exposure to potentially significant catastrophic events. Any further equity or debt financings, or capacity needed for letters of credit, if available at all, may be on terms that are unfavorable to us. Our ability to raise such capital successfully would depend upon the facts and circumstances at the time, including our financial position and operating results, market conditions, and applicable legal issues. We are also exposed to the risk that the contingent capital facilities we have in place may not be available as expected. If we are unable to obtain adequate capital when needed, our business, results of operations and financial condition would be adversely affected.
In addition, we are exposed to the risk that we may be unable to raise new capital for our managed joint ventures and other private alternative investment vehicles, which would reduce our future fee income and market capacity and thus negatively affect our results of operations and financial condition.
The covenants in our debt agreements limit our financial and operational flexibility, which could have an adverse effect on our financial condition.
We have incurred indebtedness, and may incur additional indebtedness in the future. Our indebtedness primarily consists of publicly traded notes, letters of credit and a revolving credit facility. For more details on our indebtedness, see “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Capital Resources.”
The agreements governing our indebtedness contain covenants that limit our ability and the ability of certain of our subsidiaries to borrow money, make particular types of investments or other restricted payments, sell or place a lien on our or their respective assets, merge or consolidate. Certain of these agreements also require us or our subsidiaries to maintain specific financial ratios. If we or our subsidiaries fail to comply with these covenants or meet these financial ratios, the noteholders or the lenders could declare a default and demand immediate repayment of all

amounts owed to them or, where applicable, cancel their commitments to lend or issue letters of credit or, where the reimbursement obligations are secured, require us to pledge additional or a different type of collateral.

The regulatory systems under which we operate and potential changes thereto could restrict our ability to operate, increase our costs, or otherwise adversely impact us.
Certain of our operating subsidiaries are not licensed or admitted in any jurisdiction except Bermuda, conduct business only from their principal offices in Bermuda and do not maintain offices in the U.S. The insurance and reinsurance regulatory framework continues to be subject to increased scrutiny in many jurisdictions, including the U.S. and Europe. If our Bermuda insurance or reinsurance operations become subject to the insurance laws of any state in the U.S., jurisdictions in the EU, or elsewhere, we could face challenges to the future operations of these companies.
Moreover, we could be put at a competitive disadvantage in the future with respect to competitors that are licensed and admitted in U.S. jurisdictions. Among other things, jurisdictions in the U.S. do not permit insurance companies to take credit for reinsurance obtained from unlicensed or non-admitted insurers on their statutory financial statements unless security is posted. Our contracts generally require us to post a letter of credit or provide other security (e.g., through a multi-beneficiary reinsurance trust). In order to post these letters of credit, issuing banks generally require collateral. It is possible that the EU or other countries might adopt a similar regime in the future, or that U.S. or EU regulations could be altered in a way that treats Bermuda-based companies disparately. It is possible that individual jurisdiction or cross border regulatory developments could adversely differentiate Bermuda, the jurisdiction in which we are subject to group supervision, or could exclude Bermuda-based companies from benefits such as market access, mutual recognition or reciprocal rights made available to other jurisdictions, which could adversely impact us, perhaps significantly. Any such development, or our inability to post security in the form of letters of credit or trust funds when required, could significantly and negatively affect our operations.
We could be required to allocate considerable time and resources to comply with any new or additional regulatory requirements in any of the jurisdictions in which we operate, including Bermuda, Maryland and the U.K., and any such requirements could impact the operations of our insurance and/or non-insurance subsidiaries, result in increased costs for us and impact our financial condition. In addition, we could be adversely affected if a regulatory authority believed we had failed to comply with applicable law or regulations.
Our current or future business strategy could cause one or more of our currently unregulated subsidiaries to become subject to some form of regulation. Any failure to comply with applicable laws could result in the imposition of significant restrictions on our ability to do business, and could also result in fines and other sanctions, any or all of which could adversely affect our financial results and operations.
We face risks related to changes in Bermuda law and regulations, and the political environment in Bermuda.
We are incorporated in Bermuda and many of our operating companies are domiciled in Bermuda. Therefore, our exposure to potential changes in Bermuda law and regulation that may have an adverse impact on our operations, such as the imposition of tax liability, increased regulatory supervision or changes in regulation is heightened. The Bermuda insurance and reinsurance regulatory framework recently has become subject to increased scrutiny in many jurisdictions, including in the U.S. and in various states within the U.S. We are unable to predict the future impact on our operations of changes in Bermuda laws and regulations to which we are or may become subject.
In addition, we are subject to changes in the political environment in Bermuda, which could make it difficult to operate in, or attract talent to, Bermuda. For example, Bermuda is a small jurisdiction and may be disadvantaged in participating in global or cross border regulatory matters as compared with larger jurisdictions such as the U.S. or the leading EU and Asian countries. In addition, Bermuda, which is currently an overseas territory of the U.K., may consider changes to its relationship with the U.K. in the future. These changes could adversely affect Bermuda or the international reinsurance market focused there, either of which could adversely impact us commercially.
Because we are a holding company, we are dependent on dividends and payments from our subsidiaries.
As a holding company with no direct operations, we rely on our investment income, cash dividends and other permitted payments from our subsidiaries to make principal and interest payments on our debt and to pay dividends to

our shareholders. From time to time, we may not have sufficient liquid assets to meet

these obligations. Regulatory restrictions on the payment of dividends under Bermuda law and various U.S. laws regulate the ability of our subsidiaries to pay dividends. If our subsidiaries are restricted from paying dividends to us, we may be unable to pay dividends to our shareholders or to repay our indebtedness.

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

Some provisions of our Amended and Restated Bye-Laws may discourage third parties from making unsolicited takeover bids or prevent the removal of our current board of directors and management. In particular, our Bye-Laws prohibit transfers of our capital shares if the transfer would result in a person owning or controlling shares that constitute 9.9% or more of any class or series of our shares. In addition, our Bye-Laws reduce the total voting power of any shareholder owning, directly or indirectly, beneficially or otherwise, more than 9.9% of our common shares to not more than 9.9% of the total voting power of our capital stock unless otherwise waived at the discretion of the Board. These provisions may have the effect of deterring purchases of large blocks of our common shares or proposals to acquire us, even if our shareholders might deem these purchases or acquisition proposals to be in their best interests.

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

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

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

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

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

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

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

Risks Related to Our Industry

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

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

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

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

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

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

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

From time to time, the state of Florida has enacted legislation altering the size and the terms and operations of the FHCF and Citizens. For example, in 2007 legislation expanded the FHCF’s provision of below-market rate reinsurance to up to $28.0 billion per season and expanded the ability of Citizens to compete with private insurance companies and other companies that cede business to us, which reduced the role of the private insurance and reinsurance markets in Florida. Much of the impact of the 2007 legislation was repealed over time. In January of 2019, a bill was filed for introduction in the Florida House of Representatives, titled House Bill 561, which would, among other things, lower the FHCF’s aggregate retention by about $2.1 billion; reduce the first limit provided by the FHCF from $17 billion to

$7 billion; implement a second event or season limit of a $7 billion; implement additional coverage options for Florida domestic insurers to consider when choosing their specific FHCF limit; eliminate the FHCF cash build up factor at times when the FHCF's cash balance exceeds $7 billion; and permit appropriation of all of the FHCF's investment income for mitigation. At this time, we can not assess the likelihood of this proposed legislation or other related legislation passing, or the precise impacts to us, our clients or the market should

any such legislation be adopted. Because we are one of the largest providers of catastrophe-exposed coverage globally and in Florida, adverse legislation such as the 2007 bill, or the weakened financial position of Florida insurers which resulted in 2007 and could result from future legislation or other occurrences, may have a greater adverse impact on us than it would on other reinsurance market participants. In addition, other states, particularly those with Atlantic or Gulf Coast exposures or seismic exposures (such as California), may enact new or expanded legislation based on the prior Florida legislation, the current proposal or otherwise, that would diminish aggregate private market demand for our products.

See “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Current Outlook, Legislative and Regulatory Update” for further information.

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

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

We operate in a highly competitive environment.

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

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

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

The insurance and reinsurance regulatory framework is subject to heavy scrutiny by the U.S. and individual state governments, as well as an increasing number of international authorities, and we believe it is likely there will be increased regulatory intervention in our industry in the future. For example, the U.S. federal government has increased its scrutiny of the insurance regulatory framework in recent years (including as specifically addressed in the Dodd-Frank Act), and some states, including Maryland , have enacted laws that increase state regulation of insurance and reinsurance companies and holding companies. Moreover,

the NAIC, which is an association of the insurance commissioners of all 50 states and the District of Columbia, and state insurance regulators regularly reexamine existing laws and regulations. We could also be adversely affected by proposals or enacted legislation to expand the scope of coverage under existing policies for perils such as hurricanes or earthquakes or for a pandemic disease outbreak, mandate the terms of insurance and reinsurance policies, expand the scope of the FIO or establish a new federal insurance regulator, revise laws, regulations, or contracts under which we operate, disproportionately benefit the companies of one country over those of another or repeal or diminish the insurance company antitrust exemption from the McCarran Ferguson Act.

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

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

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

We must comply with all applicable economic sanctions and anti-bribery laws and regulations of the U.S. and other jurisdictions. U.S. laws and regulations that may be applicable to us in certain circumstances include the economic trade sanctions laws and regulations administered by the U.S. Treasury Department’s Office of Foreign Assets Control as well as certain laws administered by the U.S. Department of State. The sanctions laws and regulations of non-U.S. jurisdictions in which we operate may differ to some degree from those of the U.S. and these differences may additionally expose us to sanctions violations. In addition, we are subject to the Foreign Corrupt Practices Act and other anti-bribery laws that generally prohibit corrupt payments or improper gifts to non-U.S. governments or officials. Although we have policies and controls in place that are designed to ensure compliance with these laws and regulations, it is possible that an employee or intermediary could fail to comply with applicable laws and regulations. In such event, we could be exposed to civil penalties, criminal penalties and other sanctions, including fines 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 adversely affect our financial condition and results of operations.

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

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

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

Internationally, many countries with fast growing economies, such as China and India, continue to impose significant restrictions on the writing of reinsurance by foreign companies. In addition, in the wake of recent large natural catastrophes, a number of proposals have been introduced to alter the financing of natural catastrophes in several of the markets in which we operate. For example, the Thailand government has announced it is studying proposals for a natural catastrophe fund, under which the government would provide coverage for natural disasters in excess of an industry retention and below a certain limit, after which private reinsurers would continue to participate. The government of the Philippines has announced that it is considering similar proposals. Indonesia’s financial services authority has announced a proposal to increase the amount of insurance business placed with domestic reinsurers. A range of proposals from varying stakeholders have been reported to have been made to alter the current regimes for insuring flood risk in the U.K., flood risk in Australia and earthquake risk in New Zealand. If these proposals are enacted and reduce market opportunities for our clients or for the reinsurance industry, we could be adversely

impacted. See “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Current Outlook, Legislative and Regulatory Update” for further information.

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

The OECD has published reports and launched a global dialog among member and non-member countries on measures to limit harmful tax competition. These measures are largely directed at counteracting the effects of jurisdictions perceived by the OECD to be tax havens or offering preferential tax regimes. The OECD has not listed Bermuda as an uncooperative tax haven jurisdiction because Bermuda has committed to eliminating harmful tax practices and to embracing international tax standards for transparency, exchange of information and the elimination of any aspects of the regimes for financial and other services that attract business with no substantial domestic activity. We are not able to predict what changes will arise from the commitment to the OECD or whether such changes will subject us to additional taxes. The EU has initiated its own measures along similar lines. In December 2017, the EU identified certain jurisdictions (including Bermuda) which it considered had a tax system that facilitated offshore structuring by attracting profits without commensurate economic activity. In order to avoid EU “blacklisting”, Bermuda introduced new economic substance legislation in December 2018, which came into force on January 1, 2019. Based on the EU guidelines, the legislation requires Bermuda companies to be locally managed and directed, to carry on their core income generating activities in Bermuda and to have an adequate level of local full time qualified employees, local accommodation and local expenditure. There is no experience yet as to how the Bermuda authorities will interpret and enforce these new rules and, accordingly, we are not able to predict their impact on our operations and net income.

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

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

As a result of Brexit, negotiations 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, including Syndicate 1458, to transact business in EU countries, particularly in respect of primary or direct insurance business as to which we currently rely on the licensure afforded to syndicates at Lloyd’s for access to EU markets. To mitigate against the risks of Brexit we will utilize the Lloyd’s Brussels Subsidiary through RSML. The Lloyd's Brussels Subsidiary is authorized and regulated by the National Bank of Belgium and regulated by the Financial Services and Markets Authority. The Lloyd’s Brussels Subsidiary will write all non-life risks from EEA countries from January 1, 2019.

In addition, uncertainties related 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.

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

Accounting standards and regulatory changes may require modifications to our accounting principles, both prospectively and for prior periods, and such changes could have an adverse impact on our financial results. Required modification of our existing principles, and new disclosure requirements, could have an impact on our results of operations and increase our expenses in order to implement and comply with any new requirements.

The preparation of our consolidated financial statements requires us to make many estimates and judgments.

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

Risks Related to the TMR Stock Purchase

Failure to complete the TMR Stock Purchase could negatively impact our future business and financial results, and could adversely impact our ability to execute our strategy.

The TMR Stock Purchase Agreement contains a number of conditions precedent that must be satisfied or waived prior to the completion of the TMR Stock Purchase, including the receipt of regulatory approvals in multiple jurisdictions. There are no assurances that all of the conditions to the TMR Stock Purchase will be so satisfied or waived. If the conditions to the TMR Stock Purchase are not satisfied or waived, then we may be unable to complete the TMR Stock Purchase.

Additionally, in approving the TMR Stock Purchase Agreement and the transactions contemplated thereby, our board of directors considered a number of factors and potential benefits, including its belief that the TMR Stock Purchase will further our strategy to produce superior returns for our shareholders over the long-term by pursuing market leadership in segments where leadership is derived from superior underwriting. If the TMR Stock Purchase is not completed, neither we nor our shareholders will realize these and other anticipated benefits of the TMR Stock Purchase. Moreover, we would have nevertheless incurred substantial fees and costs, such as legal, accounting and financial advisor fees, and the loss of management time and resources.

The TMR Group Entities will be exposed to underwriting and other business risks during the period that the TMR Group Entities’ business continues to be operated independently from us.

Until completion of the TMR Stock Purchase, we and the TMR Group Entities will operate independently from one another in accordance with each of our distinct underwriting guidelines, investment policies, referral processes, authority levels and risk management policies and practices. As a result, during this period, the TMR Group Entities may assume risks that we would not have assumed for ourselves, accept premiums that, in our judgment, do not adequately compensate it for the risks assumed, make investment decisions that would not adhere to our investment policies or otherwise make business decisions or take on exposure that, while consistent with the TMR Group Entities’ general business approach and practices, are

53

not the same as ours. While the TMR Stock Purchase Agreement contains informational obligations and various negative and affirmative covenants on management’s behavior and ability to bind the TMR Group Entities, we cannot assure you such mechanisms will suffice to prohibit actions which could diminish the value of the TMR Group Entities. Significant delays in completing the TMR Stock Purchase will materially increase the risk that the TMR Group Entities will operate their business in a manner that differs from how the business would have been conducted by us.

Risks Related to RenaissanceRe Following the TMR Stock Purchase

The integration of RenaissanceRe and the TMR Group Entities following the TMR Stock Purchase may present significant challenges and costs.

We may face significant challenges, including technical, accounting and other challenges, in combining our operations and that of the TMR Group Entities’. We entered into the TMR Stock Purchase Agreement because we believe that the TMR Stock Purchase will be beneficial to us and our shareholders and accelerate our existing strategy. Achieving the anticipated benefits of the TMR Stock Purchase will depend in part upon whether we will be successful in integrating the TMR Group Entities’ businesses in a timely and efficient manner. We may not be able to accomplish this integration process smoothly or successfully, and we may incur unanticipated costs in connection with obtaining regulatory consents and approvals required to complete the TMR Stock Purchase, which could also adversely affect our ability to integrate the operations of the TMR Group Entities’ into RenaissanceRe or could reduce the anticipated benefits of the TMR Stock Purchase.

Any of the following items could adversely affect the combined company’s ability to maintain relationships with customers, brokers, employees and other constituencies or our ability to achieve the anticipated benefits of the TMR Stock Purchase or could otherwise adversely affect our business and financial results after the TMR Stock Purchase:

- delays in the integration of management teams, strategies, operations, products and services;
- diversion of the attention of management as a result of the TMR Stock Purchase;
- differences in business backgrounds, corporate cultures and management philosophies that may delay successful integration;
- the inability to retain key employees;
- the inability to establish and maintain integrated risk management systems, underwriting methodologies and controls, which could give rise to excess accumulation or aggregation of risks, underreporting or underrepresentation of exposures or other adverse consequences;
- the inability to create and enforce uniform financial, compliance and operating controls, procedures, policies and information systems;
- complexities associated with managing the TMR Group Entities’ operating units as a component of RenaissanceRe, including the challenge of integrating complex systems, technology, networks and other assets of the TMR Group Entities into those of RenaissanceRe in a seamless manner that minimizes any adverse impact on customers, brokers, employees and other constituencies;
- potential unknown liabilities and unforeseen increased expenses or delays associated with the TMR Stock Purchase, including one-time cash costs to integrate the TMR Group Entities beyond current estimates; and
- the disruption of, or the loss of momentum in, the combined company’s ongoing businesses or inconsistencies in standards, controls, procedures and policies.

In addition, we will incur integration and restructuring costs following the completion of the TMR Stock Purchase as we integrate the businesses of the TMR Group Entities. Although we expect that the realization of efficiencies related to the integration of the businesses will offset incremental transaction, integration and restructuring costs over time, we cannot give any assurance that this net benefit will be achieved at any time in the future, if at all.

Our future results will suffer if we do not effectively manage our expanded operations following the TMR Stock Purchase.

Following completion of the TMR Stock Purchase, we may continue to expand our operations, and our future success depends, in part, upon our ability to manage our expansion opportunities, which pose numerous risks and uncertainties, including the need to integrate the operations and business of the TMR Group Entities into our existing business in an efficient and timely manner, to combine systems and management controls and to integrate relationships with customers, vendors and business partners.

The market price of our common shares may decline in the future as a result of the sale of shares issued to Tokio Marine & Nichido Fire Insurance Co., Ltd. ("TMNF") and State Farm in connection with the TMR Stock Purchase and the State Farm Stock Purchase or due to other factors.

We have issued $250.0 million of our common shares to State Farm in connection with the State Farm Stock Purchase, and anticipate issuing approximately $250.0 million of our common shares to TMNF in connection with the TMR Stock Purchase. Following a 12-month "lock-up" period, each of TMNF and State Farm may seek to sell our common shares held by them. Our current shareholders may also seek to sell our common shares held by them following, or in anticipation of, consummation of the TMR Stock Purchase and the State Farm Stock Purchase, or in reaction to these announcements or the consummation of these transactions. These sales (or the perception that these sales may occur), coupled with the increase in the outstanding number of our common shares, may affect the market for, and the market price of, our common shares in an adverse manner.

The market price of our common shares may also decline in the future as a result of the TMR Stock Purchase for a number of other reasons, including:

- the unsuccessful integration of the TMR Group Entities into RenaissanceRe;
- our failure to achieve the anticipated benefits of the TMR Stock Purchase, including financial results, as rapidly as or to the extent anticipated;
- decreases in our financial results before or after the closing of the TMR Stock Purchase;
- as described below, any failure to maintain our financial strength, claims-paying and enterprise-wide risk management ratings as a result of the TMR Stock Purchase; or
- general market or economic conditions unrelated to our performance.

These factors are, to some extent, beyond our control.

The completion of the TMR Stock Purchase and the post-acquisition integration process may subject us to liabilities that currently cannot be estimated.

We have incurred significant transaction and integration costs in connection with our planned acquisition of the TMR Group Entities, and, if we succeed in consummating the TMR Stock Purchase, we will incur additional costs and expenses. These costs relate to matters including investment banking fees; legal, actuarial and other professional fees; employee severance and sign-on costs, regulatory filing fees; and a range of other matters. Moreover, the TMR Stock Purchase and post-merger integration process may give rise to unexpected liabilities and costs, including financing costs and costs associated with the defense and resolution of possible litigation or other claims. Unexpected delays in completing the TMR Stock Purchase or in connection with the post-acquisition integration process may significantly increase our aggregate related costs and expenses.

Following the TMR Stock Purchase, we will become subject to certain laws and regulations applicable to the TMR Group Entities' business to which we would not otherwise have been subject.

The TMR Group Entities are subject to the requirements of certain regulatory agencies and bodies, to which our operations are not currently subject. Following the TMR Stock Purchase, the operations of the TMR Group Entities will continue as part of the surviving company and, accordingly, we will become subject to the laws and regulations applicable to such operations. It is difficult to predict or quantify the additional costs to us that may result from complying with the additive regulatory requirements imposed by the regulatory agencies with oversight authority over the operations to be acquired in the TMR Stock Purchase.

Table of Contents

The TMR Group Entities' counterparties to contracts and arrangements may acquire certain rights upon the TMR Stock Purchase, which could negatively affect us following the TMR Stock Purchase.

In analyzing the value of the TMR Group Entities, we ascribed value to the revenue streams and renewal prospects of certain of the TMR Group Entities' in-force portfolio of business. The TMR Group Entities and its operating subsidiaries are parties to numerous contracts, agreements, licenses, permits, authorizations and other arrangements that contain provisions giving counterparties certain rights (including, in some cases, termination rights) upon a "change in control" of the TMR Group Entities or their subsidiaries. The definition of "change in control" varies from contract to contract, ranging from a narrow to a broad definition, and in some cases, the "change in control" provisions may be implicated by the TMR Stock Purchase. If such "change in control" provisions are triggered as a result of the TMR Stock Purchase, a wide range of consequences may result, including the possibility that cedants will have the right to cancel and commute a contract, or the requirement that the TMR Group Entities return unearned premiums, net of commissions, or post certain collateral requirements.

Whether a counterparty would have any of these or other rights in connection with the TMR Stock Purchase depends upon the language of its agreement with the TMR Group Entities or its applicable subsidiaries. Whether a counterparty exercises any cancellation rights it has would depend on, among other factors, such counterparty's views with respect to our business reputation and financial strength following the TMR Stock Purchase, the extent to which such counterparty currently has reinsurance coverage with our affiliates, prevailing market conditions, the pricing and availability of replacement reinsurance coverage and our ratings following the TMR Stock Purchase. We cannot currently predict the extent to which such cancellation rights would be triggered or exercised, if at all.

In addition to the risk outlined above, many of these reinsurance contracts, as well as most of our reinsurance and insurance contracts, renew annually, and so whether or not they may be terminated following the TMR Stock Purchase, reinsurance cedants or policyholders may choose not to renew these contracts with us following the TMR Stock Purchase.

Termination of in-force contracts or failure to renew reinsurance or insurance agreements and policies by contractual counterparties could adversely affect the benefits to be received by us from the TMR Group Entities' contractual arrangements. If the benefits from these arrangements are less than expected, including as a result of these arrangements being terminated, determined to be unenforceable, in whole or in part, or the counterparties to such arrangements failing to satisfy their obligations thereunder, the benefits of the TMR Stock Purchase to us may be significantly less than anticipated.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

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

ITEM 3. LEGAL PROCEEDINGS

We and our subsidiaries are subject to lawsuits and regulatory actions in the normal course of business that do not arise from or directly relate to claims on reinsurance treaties or contracts or direct surplus lines insurance policies. In our industry, business litigation may involve allegations of underwriting or claims-handling errors or misconduct, disputes relating to the scope of, or compliance with, the terms of delegated underwriting agreements, employment claims, regulatory actions or disputes arising from our business ventures. Our operating subsidiaries are subject to claims litigation involving, among other things, disputed interpretations of policy coverages. Generally, our direct surplus lines insurance operations are subject to

Table of Contents

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

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

Table of Contents

PART II

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

MARKET INFORMATION AND NUMBER OF HOLDERS

Our common shares are listed on the NYSE under the symbol "RNR." On February 4, 2019, there were 114 holders of record of our common shares.

PERFORMANCE GRAPH

The following graph compares the cumulative return on our common shares, including reinvestment of our dividends on our common shares, to such return for the S&P 500 Composite Stock Price Index ("S&P 500") and S&P's Property-Casualty Industry Group Stock Price Index ("S&P P&C"), for the five-year period commencing December 31, 2013 and ending December 31, 2018, assuming $100 was invested on December 31, 2013. Each measurement point on the graph below represents the cumulative shareholder return as measured by the last sale price at the end of each calendar year during the period from January 1, 2014 through December 31, 2018. As depicted in the graph below, during this period, the cumulative return was (1) 44.8% on our common shares; (2) 50.3% for the S&P 500; and (3) 71.1% for the S&P P&C.

COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN

Table of Contents

ISSUER REPURCHASES OF EQUITY SECURITIES

Our share repurchase program may be effected from time to time, depending on market conditions and other factors, through open market purchases and privately negotiated transactions. On November 10, 2017, our Board of Directors approved a renewal of our authorized share repurchase program to an aggregate amount of up to $500.0 million. Unless terminated earlier by our Board of Directors, the program will expire when we have repurchased the full value of the shares authorized. The table below details the repurchases that were made under the program during the three months ended December 31, 2018, and also includes other shares purchased, which represents common shares surrendered by employees in respect of withholding tax obligations on the vesting of restricted stock or in lieu of cash payments for the exercise price of employee stock options.

	Total shares purchased		Other shares purchased		Shares purchased under repurchase program		Dollar amount still available under repurchase program (in millions)
	Shares purchased	Average price per share	Shares purchased	Average price per share	Shares purchased	Average price per share	
Beginning dollar amount available to be repurchased							$ 500.0
October 1 - 31, 2018	—	$—	—	$—	—	$ —	—
November 1 - 30, 2018	1,360	$124.85	1,360	$124.85	—	$ —	—
December 1 - 31, 2018	4,508	$133.58	4,508	$133.58	—	$ —	—
Total	5,868	$131.56	5,868	$131.56	—	$ —	$ 500.0

During 2018, we did not repurchase any of our common shares. In the future, we may authorize additional purchase activities under the currently authorized share repurchase program, increase the amount authorized under the share repurchase program, or adopt additional trading plans.

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following tables set forth our selected consolidated financial data and other financial information at the end of and for each of the years in the five-year period ended December 31, 2018. The results of Platinum are included in our consolidated financial data from March 2, 2015. The selected consolidated financial data should be read in conjunction with our consolidated financial statements and related notes thereto and “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” of this Form 10-K.

Year ended December 31,	2018	2017	2016	2015	2014
(in thousands, except share and per share data and percentages)					
Statements of Operations Data:					
Gross premiums written	$3,310,427	$2,797,540	$2,374,576	$2,011,310	$1,550,572
Net premiums written	2,131,902	1,871,325	1,535,312	1,416,183	1,068,236
Net premiums earned	1,976,129	1,717,575	1,403,430	1,400,551	1,062,416
Net investment income	261,866	222,209	181,726	152,567	124,316
Net realized and unrealized (losses) gains on investments	(175,069)	135,822	141,328	(68,918)	41,433
Net claims and claim expenses incurred	1,120,018	1,861,428	530,831	448,238	197,947
Acquisition expenses	432,989	346,892	289,323	238,592	144,476
Operational expenses	178,267	160,778	197,749	219,112	190,639
Underwriting income (loss)	244,855	(651,523)	385,527	494,609	529,354
Net income (loss)	268,917	(354,671)	630,048	542,242	686,256
Net income (loss) available (attributable) to RenaissanceRe common shareholders	197,276	(244,770)	480,581	408,811	510,337
Net income (loss) available (attributable) to RenaissanceRe common shareholders per common share – diluted	4.91	(6.15)	11.43	9.28	12.60
Dividends per common share	1.32	1.28	1.24	1.20	1.16
Weighted average common shares outstanding – diluted	39,755	39,854	41,559	43,526	39,968
Return on average common equity	4.7%	(5.7)%	11.0%	9.8%	14.9%
Combined ratio	87.6%	137.9%	72.5%	64.7%	50.2%

At December 31,	2018	2017	2016	2015	2014
Balance Sheet Data:					
Total investments	$11,885,747	$9,503,439	$9,316,968	$8,999,068	$6,743,750
Total assets	18,676,196	15,226,131	12,352,082	11,555,287	8,202,307
Reserve for claims and claim expenses	6,076,271	5,080,408	2,848,294	2,767,045	1,412,510
Unearned premiums	1,716,021	1,477,609	1,231,573	889,102	512,386
Debt	991,127	989,623	948,663	960,495	248,279
Capital leases	25,853	26,387	26,073	26,463	26,817
Preference shares	650,000	400,000	400,000	400,000	400,000
Total shareholders’ equity attributable to RenaissanceRe	5,045,080	4,391,375	4,866,577	4,732,184	3,865,715

Common shares outstanding	42,207	40,024	41,187	43,701	38,442
Book value per common share	$104.13	$99.72	$108.45	$99.13	$90.15
Accumulated dividends	19.32	18.00	16.72	15.48	14.28
Book value per common share plus accumulated dividends	$123.45	$117.72	$125.17	$114.61	$104.43
Change in book value per common share plus change in accumulated dividends	5.7 %	(6.9)%	10.7 %	11.3 %	13.7 %

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following is a discussion and analysis of our results of operations for 2018 compared to 2017 and 2017 compared to 2016, respectively. The following also includes a discussion of our liquidity and capital resources at December 31, 2018. This discussion and analysis should be read in conjunction with the audited consolidated financial statements and notes thereto included in this filing. This filing contains forward-looking statements that involve risks and uncertainties. Actual results may differ materially from the results described or implied by these forward-looking statements. See "Note on Forward-Looking Statements."

OVERVIEW

RenaissanceRe is a global provider of reinsurance and insurance. We provide property, casualty and specialty reinsurance and certain insurance solutions to customers, principally through intermediaries. Established in 1993, we have offices in Bermuda, Ireland, Singapore, Switzerland, the U.K., and the U.S. Our operating subsidiaries include Renaissance Reinsurance, RenaissanceRe Specialty U.S., Renaissance Reinsurance U.S., Renaissance Reinsurance of Europe and Syndicate 1458. We also underwrite reinsurance on behalf of joint ventures, including Top Layer Re, Upsilon RFO, DaVinci, Vermeer and Fibonacci Re. In addition, through Medici, we invest in various insurance based investment instruments that have returns primarily tied to property catastrophe risk.

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

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

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

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

We continually explore appropriate and efficient ways to address the risk needs of our clients and the impact of various regulatory and legislative changes on our operations. We have created and managed, and continue to manage, multiple capital vehicles across a number of jurisdictions and may create additional risk bearing vehicles or enter into additional jurisdictions in the future. In addition, our differentiated strategy and capability position us to pursue bespoke or large solutions for clients, which may be non-recurring. This, and other factors including the timing of contract inception, could result in significant volatility of premiums in both our Property and Casualty and Specialty segments. As our product and geographical diversity increases, we may be exposed to new risks, uncertainties and sources of volatility.

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

Our expenses primarily consist of: (1) net claims and claim expenses incurred on the policies of reinsurance and insurance we sell; (2) acquisition costs which typically represent a percentage of the premiums we write; (3) operating expenses which primarily consist of personnel expenses, rent and other operating expenses; (4) corporate expenses which include certain executive, legal and consulting expenses, costs for research and development, transaction and integration-related expenses, and other miscellaneous costs, including those associated with operating as a publicly traded company; (5) redeemable noncontrolling interests, which represent the interests of third parties with respect to the net income of DaVinciRe, Vermeer and Medici; and (6) interest and dividend costs related to our debt and preference shares. We are also subject to taxes in certain jurisdictions in which we operate. Since the majority of our income is currently earned in Bermuda, which does not have a corporate income tax, the tax impact to our operations has historically been minimal, notwithstanding the impact of the write-down of a portion of our deferred tax asset in the fourth quarter of 2017 associated with the adoption of the Tax Bill. In the future, our net tax exposure may increase as our operations expand geographically, or as a result of adverse tax developments.

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

62

Table of Contents

SUMMARY OF CRITICAL ACCOUNTING ESTIMATES

Claims and Claim Expense Reserves

General Description

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

We will account for the acquisition of the TMR Group Entities, which is expected to close in the first half of 2019, under the acquisition method of accounting in accordance with FASB ASC Topic Business Combinations, under which the total consideration paid will be allocated among acquired assets and assumed liabilities based on the fair values of the assets acquired and liabilities assumed. Upon acquisition, the TMR Group Entities' assets and liabilities, including the TMR Group Entities' claim and claim expense reserves, will be consolidated by RenaissanceRe.

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

At December 31, 2018	Case Reserves	Additional Case Reserves	IBNR	Total
(in thousands)				
Property	$690,718	$ 1,308,307	$1,087,229	$3,086,254
Casualty and Specialty	771,537	116,877	2,096,979	2,985,393
Other	1,458	—	3,166	4,624
Total	$1,463,713	$ 1,425,184	$3,187,374	$6,076,271
At December 31, 2017				
(in thousands)				
Property	$696,285	$ 896,522	$893,583	$2,486,390
Casualty and Specialty	689,962	124,923	1,760,607	2,575,492
Other	6,605	—	11,921	18,526
Total	$1,392,852	$ 1,021,445	$2,666,111	$5,080,408

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

Year ended December 31,	2018	2017	2016
(in thousands)			
Net reserves as of January 1	$3,493,778	$2,568,730	$2,632,519
Net incurred related to:			
Current year	1,390,767	1,902,424	694,957
Prior years	(270,749)	(40,996)	(164,126)
Total net incurred	1,120,018	1,861,428	530,831
Net paid related to:			
Current year	391,061	450,527	83,015
Prior years	503,708	524,298	506,279
Total net paid	894,769	974,825	589,294
Foreign exchange	(14,977)	38,445	(5,326)
Net reserves as of December 31	3,704,050	3,493,778	2,568,730
Reinsurance recoverable as of December 31	2,372,221	1,586,630	279,564
Gross reserves as of December 31	$6,076,271	$5,080,408	$2,848,294

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

Year ended December 31,	2018	2017	2016
(in thousands)	(Favorable) adverse development	(Favorable) adverse development	(Favorable) adverse development
Property	$ (221,290)	$ (45,596)	$ (104,876)
Casualty and Specialty	(49,262)	6,183	(58,140)
Other	(197)	(1,583)	(1,110)
Total favorable development of prior accident years net claims and claim expenses	$ (270,749)	$ (40,996)	$ (164,126)

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

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

Our estimates of losses from large events are based on factors including currently available information derived from claims information from certain customers and brokers, industry assessments of losses from the events, proprietary models, and the terms and conditions of our contracts. The uncertainty of our estimates for large events is also impacted by the preliminary nature of the information available, the magnitude and relative infrequency of the events, the expected duration of the respective claims

Table of Contents

development period, inadequacies in the data provided to the relevant date by industry participants, the potential for further reporting lags or insufficiencies and, in certain cases, the form of the claims and legal issues under the relevant terms of insurance and reinsurance contracts. In addition, a significant portion of the net claims and claim expenses associated with certain large events can be concentrated with a few large clients and therefore the loss estimates for these events may vary significantly based on the claims experience of those clients. The contingent nature of business interruption and other exposures will also impact losses in a meaningful way, which we believe may give rise to significant complexity in respect of claims handling, claims adjustment and other coverage issues, over time. Given the magnitude of certain events, there can be meaningful uncertainty regarding total covered losses for the insurance industry and, accordingly, several of the key assumptions underlying our loss estimates. Loss reserve estimation in respect of our retrocessional contracts poses further challenges compared to directly assumed reinsurance. In addition, our actual net losses from these events may increase if our reinsurers or other obligors fail to meet their obligations. Because of the inherent uncertainties discussed above, we have developed a reserving philosophy which attempts to incorporate prudent assumptions and estimates, and we have generally experienced favorable net development on prior accident years net claims and claim expenses in the last several years. However, there is no assurance that this favorable development on prior accident years net claims and claim expenses will occur in future periods.

Our reserving techniques, assumptions and processes differ among our Property and Casualty and Specialty segments. Refer to “Note 7. Reserve for Claims and Claim Expenses in our Notes to the Consolidated Financial Statements” for more information on the risks we insure and reinsure, the reserving techniques, assumptions and processes we follow to estimate our claims and claim expense reserves, prior year development of the reserve for claims and claim expenses, analysis of our incurred and paid claims development and claims duration information for each of our Property and Casualty and Specialty segments.

Property Segment

Actual Results vs. Initial Estimates

As discussed above, the key assumption in estimating reserves for our Property segment is our estimate of incurred claims and claim expenses. The table below shows our initial estimates of incurred claims and claim expenses for each accident year and how these initial estimates have developed over time. The initial estimate of accident year incurred claims and claim expenses represents our estimate of the ultimate settlement and administration costs for claims incurred in our Property segment occurring during a particular accident year, and as reported as of December 31 of that year. The re-estimated incurred claims and claim expenses as of December 31 of subsequent years, represent our revised estimates as reported as of those dates. Our most recent estimates as reported at December 31, 2018 differ from our initial accident year estimates and demonstrate that our initial estimate of incurred claims and claim expenses are reasonably likely to vary from our most recent estimate, perhaps significantly. Changes in this estimate will be recorded in the period in which they occur. In accident years where our current estimates are lower than our initial estimates, we have experienced favorable development while accident years where our current estimates are higher than our original estimates indicates adverse development. The table is presented on a net basis and, therefore, includes the benefit of reinsurance recoverable. In addition, we have included historical incurred claims and claim expenses development information related to Platinum in the table below. For incurred accident year claims denominated in foreign currency, we have used the current year-end balance sheet foreign exchange rate for all periods provided, thereby eliminating the effects of changes in foreign currency translation rates from the incurred accident year claims development information included in the table below.

The following table details our Property segment incurred claims and claim expenses, net of reinsurance, as of December 31, 2018.

	Incurred claims and claim expenses, net of reinsurance									
(in thousands)	For the year ended December 31,									
Accident Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
2009	$219,979	$164,369	$145,207	$138,747	$134,490	$135,245	$134,539	$134,811	$134,355	$134,876
2010	—	609,380	561,524	526,928	531,199	550,980	554,733	564,345	566,475	555,642
2011	—	—	1,264,374	1,192,868	1,141,403	1,091,415	1,070,957	1,040,721	1,036,663	1,033,601
2012	—	—	—	437,940	344,487	311,648	293,873	275,910	264,532	257,246
2013	—	—	—	—	227,268	196,729	174,335	152,715	141,197	137,660
2014	—	—	—	—	—	183,249	154,469	147,138	142,864	142,457
2015	—	—	—	—	—	—	226,039	195,164	176,159	167,916
2016	—	—	—	—	—	—	—	252,556	254,151	241,296
2017	—	—	—	—	—	—	—	—	1,342,161	1,167,013
2018	—	—	—	—	—	—	—	—	—	718,266
Total										$4,555,973

Our initial and subsequent estimates of incurred claims and claim expenses are impacted by available information derived from claims information from certain customers and brokers, industry assessments of losses from the events, proprietary models, and the terms and conditions of our contracts. As described above, given the complexity in reserving for claims and claims expenses associated with property losses, and catastrophe excess of loss reinsurance contracts in particular, which make up a significant proportion of our Property segment, we have experienced development, both favorable and unfavorable, in any given accident year. For example, incurred claims and claim expenses associated with our 2011 accident year have developed favorably by $230.8 million, which is 18.3% better than our initial estimates of incurred claims and claim expenses for the 2011 accident year estimated as of December 31, 2011. This was largely driven by reductions in estimated ultimate claims and claim expenses associated with a number of large catastrophe events that occurred in 2011, including the Tohoku Earthquake, a number of large tornadoes in the U.S., the Australian Floods, Hurricane Irene and the Thailand Floods. In comparison, while net claims and claim expenses associated with the 2010 accident year initially developed favorably, it has experienced adverse development in the outer years. The adverse development in the outer years was driven by a deterioration in expected net claims and claim expenses associated with the 2010 New Zealand Earthquake as new and additional claims information was received. The 2010 New Zealand Earthquake has complex issues associated with establishing estimates of incurred claims and claim expenses, including the magnitude and relative infrequency of the event, the expected duration of the respective claims development period and inadequacies in the data provided by industry participants on the relevant date.

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

and the speed at which we settle claims can vary dramatically based on the type of event.
Sensitivity Analysis
The table below shows the impact on our gross reserve for claims and claim expenses, net income and shareholders' equity as of and for the year ended December 31, 2018 of a reasonable range of possible outcomes associated with our estimates of gross ultimate losses for claims and claim expenses incurred within our Property segment. The reasonable range of possible outcomes is based on a distribution of outcomes of our ultimate incurred claims and claim expenses from catastrophic events. In addition, we flex the loss ratios and development curves in our other property lines of business in a similar fashion to the

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

Property Claims and Claim Expense Reserve Sensitivity Analysis

(in thousands, except percentages)	Reserve for Claims and Claim Expenses at December 31, 2018	$ Impact of Change Reserve for Claims and Claim Expenses at December 31, 2018	% Impact of Change on Reserve for Claims and Claim Expenses at December 31, 2018	% Impact of Change on Net Income for the Year Ended December 31, 2018	% Impact of Change on Shareholders' Equity at December 31, 2018
Higher	$ 3,401,044	$ 314,790	5.2 %	(117.1)%	(6.2)%
Recorded	3,086,254	—	— %	— %	— %
Lower	2,911,835	(174,419)	(2.9)%	64.9 %	3.5 %

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

Casualty and Specialty Segment

Actual Results vs. Initial Estimates

As discussed above, the key assumption in estimating reserves for our Casualty and Specialty segment is our estimate of incurred claims and claim expenses. Standard actuarial techniques are used to calculate the ultimate claims and claim expenses and two key assumptions include the estimated incurred claims and claim expenses ratio and the estimated loss reporting patterns. The table below shows our initial estimates of incurred claims and claim expenses for each accident year and how these initial estimates have developed over time. The initial estimate of accident year incurred claims and claim expenses represents our estimate of the ultimate settlement and administration costs for claims incurred in our Casualty and Specialty segment occurring during a particular accident year, and as reported as of December 31 of that year. The re-estimated incurred claims and claim expenses as of December 31 of subsequent years, represent our revised estimates as reported as of those dates. Our most recent estimates as reported at December 31, 2018 differ from our initial accident year estimates and demonstrate that our initial estimate of incurred claims and claim expenses are reasonably likely to vary from our most recent estimate, perhaps significantly. Changes in this estimate will be recorded in the period in which they occur. In accident years where our current estimates are lower than our initial estimates, we have experienced favorable

Table of Contents

development while accident years where our current estimates are higher than our original estimates indicates adverse development. The table is presented on a net basis and, therefore, includes the benefit of reinsurance recoverable. In addition, we have included historical incurred claims and claim expenses development information related to Platinum in the table below. For incurred accident year claims denominated in foreign currency, we have used the current year-end balance sheet foreign exchange rate for all periods provided, thereby eliminating the effects of changes in foreign currency translation rates from the incurred accident year claims development information included in the table below.

The following table details our Casualty and Specialty segment incurred claims and claim expenses, net of reinsurance, as of December 31, 2018.

	Incurred claims and claim expenses, net of reinsurance									
(in thousands)	For the year ended December 31,									
Accident Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
2009	$479,421	$470,031	$471,808	$438,538	$417,569	$395,631	$387,184	$382,077	$385,230	$386,863
2010	—	382,996	389,460	375,980	340,465	318,979	305,784	304,096	300,054	299,490
2011	—	—	382,194	381,062	351,692	321,471	313,955	307,899	297,405	303,844
2012	—	—	—	427,341	425,617	395,823	387,532	377,527	391,350	409,458
2013	—	—	—	—	392,146	362,017	338,054	319,555	305,114	295,703
2014	—	—	—	—	—	477,587	459,317	454,589	439,609	416,162
2015	—	—	—	—	—	—	413,112	432,538	453,052	422,675
2016	—	—	—	—	—	—	—	427,483	430,606	425,157
2017	—	—	—	—	—	—	—	—	553,215	564,282
2018	—	—	—	—	—	—	—	—	—	649,147
Total										$4,172,781

As each underwriting year has developed, our estimated expected incurred claims and claim expenses have changed. As an example, our re-estimated incurred claims and claim expenses decreased for the 2013 accident year from the initial estimates. This decrease was principally driven by actual reported and paid net claims and claim expenses associated with the 2013 accident year coming in less than expected, which has resulted in a reduction in our expected ultimate claims and claim expense ratio for this accident year. In comparison, the 2015 accident year has developed adversely compared to our initial estimates of incurred claims and claim expenses and our current estimates are higher than our initial estimates. The increase in incurred claims and claim expenses for the 2015 accident year is due to the deterioration of a number of large losses in our general liability line of business.

The reserving methodology for our Casualty and Specialty segment is weighted more heavily to our initial estimate in the early periods immediately following the contracts' inception through the use of the expected loss ratio method. The expected loss ratio method estimates the incurred losses by multiplying the initial expected loss ratio by the earned premium. Under the expected loss ratio method, no reliance is placed on the development of claims and claim expenses. The determination of when reported losses are sufficient and credible to warrant selection of an ultimate loss ratio different from the initial expected loss ratio also requires judgment. We generally make adjustments for reported loss experience indicating unfavorable variances from the initial expected loss ratio sooner than reported loss experience indicating favorable variances as reporting of losses in excess of expectations tends to have greater credibility than an absence of or lower than expected level of reported losses. Over time, as a greater number of claims are reported and the credibility of reported losses improves, actuarial estimates of IBNR are typically based on the

Bornhuetter-Ferguson actuarial method. The Bornhuetter-Ferguson method places weight on claims and claim expenses development experience. If there is adverse development of prior accident years claims and claim expenses, we generally select the Bornheutter-Ferguson method to ensure the claim experience is considered in the determination of our estimated claims and claim expenses with the associated business. If we believe we lack the claims experience in the early stages of development of a line of business, we may not select the Bornheutter-Ferguson method until such time as we believe there is greater credibility in the level of reported losses. As prior accident years claims and claim expenses development experience becomes credible, the Bornhuetter-Ferguson method is generally selected which places greater weight on this experience as it develops. The Bornhuetter-Ferguson method estimates our

expected ultimate claims and claim expenses by applying our initial estimated loss ratio to our undeveloped premium, and adding the reported losses to the estimate. The impact of these methodologies can be observed in the table above. For example, the 2011 accident year has experienced favorable development on prior accident years net claims and claim expenses for each subsequent calendar year-end. However, the favorable development experienced in the first few years was lower than the favorable development experienced in subsequent calendar years where the reserving methodology used changed to the Bornhuetter-Ferguson method as the experience became more credible.

Sensitivity Analysis

The table below quantifies the impact on our gross reserves for claims and claim expenses, net income and shareholders' equity as of and for the year ended December 31, 2018 of a reasonable range of possible outcomes in the actuarial assumptions used to estimate our December 31, 2018 claims and claim expense reserves within our Casualty and Specialty segment. The table quantifies a reasonable range of possible outcomes in our initial estimated gross ultimate claims and claim expense ratios and estimated loss reporting patterns. The impact on net income and shareholders' equity assumes no increase or decrease in reinsurance recoveries, loss related premium or redeemable noncontrolling interest – DaVinciRe.

Casualty and Specialty Claims and Claim Expense Reserve Sensitivity Analysis

(in thousands, except percentages)	Estimated Loss Reporting Pattern	$ Impact of Change on Reserves for Claims and Claim Expenses at December 31, 2018	% Impact of Change on Reserve for Claims and Claim Expenses at December 31, 2018	% Impact of Change on Net Income for the Year Ended December 31, 2018	% Impact of Change on Shareholders' Equity at December 31, 2018
Increase expected claims and claim expense ratio by 10%	Slower reporting	$ 364,293	6.0 %	(135.5)%	(7.2)%
Increase expected claims and claim expense ratio by 10%	Expected reporting	209,698	3.5 %	(78.0)%	(4.2)%
Increase expected claims and claim expense ratio by 10%	Faster reporting	76,341	1.3 %	(28.4)%	(1.5)%
Expected claims and claim expense ratio	Slower reporting	140,541	2.3 %	(52.3)%	(2.8)%
Expected claims and claim expense ratio	Expected reporting	—	— %	— %	— %
Expected claims and claim expense ratio	Faster reporting	(121,234)	(2.0)%	45.1 %	2.4 %
Decrease expected claims and claim expense ratio by 10%	Slower reporting	(83,211)	(1.4)%	30.9 %	1.6 %
Decrease expected claims and claim expense ratio by 10%	Expected reporting	(209,698)	(3.5)%	78.0 %	4.2 %
Decrease expected claims and claim expense ratio by 10%	Faster reporting	(318,808)	(5.2)%	118.6 %	6.3 %

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

and shareholders’ equity than those noted above, and could be recorded across multiple periods. We also caution that the above sensitivity analysis is not used by management in developing our reserve estimates and is also not used by management in managing the business.

Other

Included in the Other category are the remnants of our former Bermuda-based insurance operations. These operations are in run-off and no new business is being underwritten. Our outstanding claims and claim expense reserves for these operations include insurance policies and proportional reinsurance with respect to risks including: (1) commercial property, which principally included catastrophe-exposed commercial property products; (2) commercial multi-line, which included commercial property and liability coverage, such as general liability, automobile liability and physical damage, building and contents, professional liability and various specialty products; and (3) personal lines property, which principally included homeowners personal lines property coverage and catastrophe exposed personal lines property coverage and totaled $4.6 million at December 31, 2018 (2017 - $18.5 million).

Our reserving techniques and processes for our Casualty and Specialty segment also apply to our Other category. In addition, certain of our coverages may be impacted by natural and man-made catastrophes. We estimate claim reserves for these losses after the event giving rise to these losses occurs, following a process that is similar to that used in our Property segment.

Premiums and Related Expenses

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

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

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

Reinsurance Recoverables

We enter into retrocessional reinsurance agreements in order to help reduce our exposure to large losses and to help manage our risk portfolio. Amounts recoverable from reinsurers are estimated in a manner consistent with the claims and claim expense reserves associated with the related assumed reinsurance. For multi-year retrospectively rated contracts, we accrue amounts (either assets or liabilities) that are due to

or from our retrocessionaires based on estimated contract experience. If we determine that adjustments to earlier estimates are appropriate, such adjustments are recorded in the period in which they are determined.

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

The majority of the balance we have accrued as recoverable will not be due for collection until some point in the future. The amounts recoverable ultimately collected are open to uncertainty due to the ultimate ability and willingness of reinsurers to pay our claims, for reasons including insolvency and elective run-off, contractual dispute and various other reasons. In addition, because the majority of the balances recoverable will not be collected for some time, economic conditions as well as the financial and operational performance of a particular reinsurer may change, and these changes may affect the reinsurer's willingness and ability to meet their contractual obligations to us. To reflect these uncertainties, we estimate and record a valuation allowance for potential uncollectible reinsurance recoverables which reduces reinsurance recoverables and net income.

We estimate our valuation allowance by applying specific percentages against each reinsurance recoverable based on our counterparty's credit rating. The percentages applied are based on historical industry default statistics developed by major rating agencies and are then adjusted by us based on industry knowledge and our judgment and estimates. We also apply case-specific valuation allowances against certain recoveries we deem unlikely to be collected in full. We then evaluate the overall adequacy of the valuation allowance based on other qualitative and judgmental factors. At December 31, 2018, our reinsurance recoverable balance was $2.4 billion (2017 - $1.6 billion). Of this amount, 60.8% is fully collateralized by our reinsurers, 38.0% is recoverable from reinsurers rated A- or higher by major rating agencies and 1.2% is recoverable from reinsurers rated lower than A- by major rating agencies (2017 - 54.5%, 44.5% and 1.0%, respectively). The increase in our reinsurance recoverable balance during 2018 was principally related to the 2018 Large Loss Events (as defined herein). Similarly, the increase during 2017 was primarily the result of reinsurance recoverables related to Hurricanes Harvey, Irma and Maria and the Mexico City Earthquake (the "Q3 2017 Catastrophe Events"), the wildfires in California during the fourth quarter of 2017 (the "Q4 2017 California Wildfires") and losses associated with aggregate loss contracts (the "2017 Aggregate Losses" and collectively with the Q3 2017 Catastrophe Events and the Q4 2017 California Wildfires, the "2017 Large Loss Events"). The reinsurers with the three largest balances accounted for 15.5%, 6.7% and 6.5%, respectively, of our reinsurance recoverable balance at December 31, 2018 (2017 - 10.4%, 7.5% and 7.3%, respectively). The valuation allowance recorded against reinsurance recoverable was $9.0 million at December 31, 2018 (2017 - $7.0 million). The three largest company-specific components of the valuation allowance represented 16.2%, 14.8% and 12.3%, respectively, of our total valuation allowance at December 31, 2018 (2017 - 11.1%, 9.2% and 8.4%, respectively).

Fair Value Measurements and Impairments

Fair Value

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

71

Table of Contents

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

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the level in the fair value hierarchy within which the fair value measurement in its entirety falls has been determined based on the lowest level input that is significant to the fair value measurement of the asset or liability. Our assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and we consider factors specific to the asset or liability.

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

At December 31, 2018, we classified $59.5 million and $13.3 million of our assets and liabilities, respectively, at fair value on a recurring basis using Level 3 inputs. This represented 0.3% and 0.1% of our total assets and liabilities, respectively. Level 3 fair value measurements are based on valuation techniques that use at least one significant input that is unobservable. These measurements are made under circumstances in which there is little, if any, market activity for the asset or liability. We use valuation models or other pricing techniques that require a variety of inputs including contractual terms, market prices and rates, yield curves, credit curves, measures of volatility, prepayment rates and correlations of such inputs, some of which may be unobservable, to value these Level 3 assets and liabilities. Our assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment. In making the assessment, we considered factors specific to the asset or liability. In certain cases, the inputs used to measure fair value of an asset or a liability may fall into different levels of the fair value hierarchy. In such cases, the level in the fair value hierarchy within which the fair value measurement in its entirety is classified is determined based on the lowest level input that is significant to the fair value measurement of the asset or liability.

Refer to “Note 5. Fair Value Measurements in our Notes to the Consolidated Financial Statements” for additional information about fair value measurements.

Impairments

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

Goodwill and Other Intangible Assets

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

On March 2, 2015 we acquired Platinum and the transaction was accounted under the acquisition method of accounting in accordance with FASB ASC Topic Business Combinations. Total consideration paid was allocated among acquired assets and assumed liabilities based on their fair values. In connection with the acquisition of Platinum, we recognized identifiable finite lived intangible assets of $75.2 million, which are being amortized over their estimated useful lives from the date of acquisition, identifiable indefinite lived intangible assets of $8.4 million, and certain other adjustments to the fair values of the assets acquired, liabilities assumed and shareholders’ equity of Platinum at March 2, 2015.

In addition, we recognized goodwill of $191.7 million primarily attributable to Platinum’s workforce and synergies expected to result upon the integration of Platinum into our operations. Goodwill resulting from

the acquisition of Platinum will not be amortized but instead will be tested for impairment at least annually, as outlined below (more frequently if certain indicators are present). Goodwill is assigned to the applicable reporting unit of the acquired entities giving rise to the goodwill and other intangible assets.

We anticipate we will account for the acquisition of the TMR Group Entities under the acquisition method of accounting in accordance with ASC Topic Business Combinations, under which the total consideration paid will be allocated among acquired assets and assumed liabilities based on the fair values of the assets acquired and liabilities assumed. We anticipate that the purchase price paid will exceed the fair values of the net assets acquired, perhaps significantly so, and the excess will be accounted for as goodwill. Intangible assets with definite lives will be amortized over their estimated useful lives. Goodwill resulting from the acquisition of the TMR Group Entities will not be amortized but instead will be tested for impairment at least annually, as outlined below (more frequently, if certain indicators are present). In the event that we determine that the value of goodwill has become impaired, an accounting charge will be taken in the fiscal quarter in which such determination is made.

We assess goodwill and other intangible assets for impairment in the fourth quarter of each year, or more frequently if events or changes in circumstances indicate that the carrying amount may not be recoverable. For purposes of the annual impairment evaluation, we assess qualitative factors to determine if events or circumstances exist that would lead us to conclude that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If we determine that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then we do not perform a quantitative evaluation. Should we determine that a quantitative analysis is required, we will first determine the fair value of the reporting unit and compare that with the carrying value, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, then goodwill is not considered impaired and no further analysis is required. If the carrying amount of a reporting unit exceeds its fair value, we then proceed to determine the amount of the impairment charge, if any. There are many assumptions and estimates underlying the fair value calculation. Principally, we identify the reporting unit or business entity that the goodwill or other intangible asset is attributed to, and review historical and forecasted operating and financial performance and other underlying factors affecting such analysis, including market conditions. Other assumptions used could produce significantly different results which may result in a change in the value of goodwill or our other intangible assets and a related charge in our consolidated statements of operations. An impairment charge could be recognized in the event of a significant decline in the implied fair value of those operations where the goodwill or other intangible assets are applicable. In the event we determine that the value of goodwill has become impaired, an accounting charge will be taken in the fiscal quarter in which such determination is made, which could have a material adverse effect on our results of operations in the period in which the impairment charge is recorded. As at December 31, 2018, excluding the amounts recorded in investments in other ventures, under the equity method, as noted below, our consolidated balance sheets include $197.6 million of goodwill (2017 - $197.6 million) and $39.8 million of other intangible assets (2017 - $45.6 million). Impairment charges related to these balances were $Nil during the year ended December 31, 2018 (2017 - $Nil, 2016 - $Nil). In the future, it is possible we will hold more goodwill, which would increase the degree of judgment and uncertainty embedded in our financial statements, and potentially increase the volatility of our reported results.

Investments in Other Ventures, Under Equity Method

Investments in which we have significant influence over the operating and financial policies of the investee are classified as investments in other ventures, under equity method, and are accounted for under the equity method of accounting. Under this method, we record our proportionate share of income or loss from such investments in our results for the period. Any decline in the value of investments in other ventures, under equity method, including goodwill and other intangible assets arising upon acquisition of the investee, considered by management to be other-than-temporary, is reflected in our consolidated statements of operations in the period in which it is determined. As of December 31, 2018, we had $115.2 million (2017 - $102.0 million) in investments in other ventures, under equity method on our consolidated balance sheets, including $10.6 million of goodwill and $17.1 million of other intangible assets (2017 – $7.8 million and $8.9 million). The carrying value of our investments in other ventures, under equity method, individually or in the aggregate, may, and likely will, differ from the realized value we may ultimately attain, perhaps significantly so.

In determining whether an equity method investment is impaired, we take into consideration a variety of factors including the operating and financial performance of the investee, the investee's future business plans and projections, recent transactions and market valuations of publicly traded companies where available, discussions with the investee's management, and our intent and ability to hold the investment until it recovers in value. Accordingly, we make assumptions and estimates in assessing whether an impairment has occurred and if, in the future, our assumptions and estimates made in assessing the fair value of these investments change, this could result in a material decrease in the carrying value of these investments. This would cause us to write-down the carrying value of these investments and could have a material adverse effect on our results of operations in the period the impairment charge is taken. We do not have any current plans to dispose of these investments, and cannot assure you we will consummate future transactions in which we realize the value at which these holdings are reflected in our financial statements. During the year ended December 31, 2018, we recorded $Nil (2017 - $Nil, 2016 - $Nil) of other-than-temporary impairment charges related to goodwill and other intangible assets associated with our investments in other ventures, under the equity method. Refer to "Note 3. Goodwill and Other Intangible Assets in our Notes to the Consolidated Financial Statements" for additional information.

Income Taxes

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

As a result of the reduction in the U.S. corporate tax rate from 35% to 21% effective January 1, 2018 pursuant to the Tax Bill, which was enacted on December 22, 2017, the Company recorded a $36.7 million write-down of its deferred tax asset during the fourth quarter of 2017.

At December 31, 2018, our net deferred tax asset (prior to our valuation allowance) and valuation allowance were $99.9 million (2017 - $86.7 million) and $35.3 million (2017 - $30.0 million), respectively (see "Note 14. Taxation in our Notes to the Consolidated Financial Statements" for additional information). At each balance sheet date, we assess the need to establish a valuation allowance that reduces the net deferred tax asset when it is more likely than not that all, or some portion, of the deferred tax assets will not be realized. The valuation allowance assessment is performed separately in each taxable jurisdiction based on all available information including projections of future GAAP taxable income from each tax-paying component in each tax jurisdiction. The majority of the valuation allowance relates to a substantial portion of our deferred tax assets in our Ireland, U.K., and Singapore operations as these operations have produced historical GAAP taxable losses, among other facts. A small valuation allowance also continues to be recorded against finite lived tax carryforwards in our U.S. operations.

We have unrecognized tax benefits of $Nil as of December 31, 2018 (2017 - $Nil). Interest and penalties related to unrecognized tax benefits, would be recognized in income tax expense. At December 31, 2018, interest and penalties accrued on unrecognized tax benefits were $Nil (2017 - $Nil). Income tax returns filed for tax years 2015 through 2017, 2014 through 2017, 2017, 2014 through 2017, and 2017, are open for examination by the IRS, Irish tax authorities, U.K. tax authorities, Singapore and Switzerland tax authorities, respectively. We do not expect the resolution of these open years to have a significant impact on our consolidated statements of operations and financial condition.

Table of Contents

SUMMARY OF RESULTS OF OPERATIONS

Year ended December 31,	2018	2017	2016
(in thousands, except per share amounts and percentages)			
Statements of operations highlights			
Gross premiums written	$3,310,427	$2,797,540	$2,374,576
Net premiums written	$2,131,902	$1,871,325	$1,535,312
Net premiums earned	$1,976,129	$1,717,575	$1,403,430
Net claims and claim expenses incurred	1,120,018	1,861,428	530,831
Acquisition expenses	432,989	346,892	289,323
Operational expenses	178,267	160,778	197,749
Underwriting income (loss)	$244,855	$(651,523)	$385,527
Net investment income	$261,866	$222,209	$181,726
Net realized and unrealized (losses) gains on investments	(175,069)	135,822	141,328
Change in net unrealized gains on fixed maturity investments available for sale	—	—	(1,870)
Total investment result	$86,797	$358,031	$321,184
Net income (loss)	$268,917	$(354,671)	$630,048
Net income (loss) available (attributable) to RenaissanceRe common shareholders	$197,276	$(244,770)	$480,581
Net income (loss) available (attributable) to RenaissanceRe common shareholders per common share – diluted	$4.91	$(6.15)	$11.43
Dividends per common share	$1.32	$1.28	$1.24
Key ratios			
Net claims and claim expense ratio – current accident year	70.4%	110.8%	49.5%
Net claims and claim expense ratio – prior accident years	(13.7)%	(2.4)%	(11.7)%
Net claims and claim expense ratio – calendar year	56.7%	108.4%	37.8%
Underwriting expense ratio	30.9%	29.5%	34.7%
Combined ratio	87.6%	137.9%	72.5%
Return on average common equity	4.7%	(5.7)%	11.0%

Book value	December 31, 2018	December 31, 2017	December 31, 2016
Book value per common share	$104.13	$99.72	$108.45
Accumulated dividends per common share	19.32	18.00	16.72
Book value per common share plus accumulated dividends	$123.45	$117.72	$125.17
Change in book value per common share plus change in accumulated dividends	5.7%	(6.9)%	10.7%

Balance sheet highlights	December 31, 2018	December 31, 2017	December 31, 2016
Total assets	$18,676,196	$15,226,131	$12,352,082

Total shareholders’ equity attributable to RenaissanceRe	$5,045,080	$4,391,375	$4,866,577

Results of operations for 2018 compared to 2017.

Net income available to RenaissanceRe common shareholders was $197.3 million in 2018, compared to a net loss attributable to RenaissanceRe common shareholders of $244.8 million in 2017, an increase of $442.0 million. As a result of our net income available to RenaissanceRe common shareholders in 2018, we generated an annualized return on average common equity of 4.7% and our book value per common share increased from $99.72 at December 31, 2017 to $104.13 at December 31, 2018, a 5.7% increase, after considering the change in accumulated dividends paid to our common shareholders.

The most significant events affecting our financial performance during 2018, on a comparative basis to 2017, include:

- Impact of Catastrophe Events - we had a net negative impact on our net income available to RenaissanceRe common shareholders of $216.1 million from the Q3 2018 Catastrophe Events, the Q4 2018 Catastrophe Events, and the 2018 Aggregate Losses (each as defined herein and collectively, the “2018 Large Loss Events”), partially offset by a net positive impact of $129.8 million resulting from decreases in the estimates of the net negative impact of the 2017 Large Loss Events , compared to a net negative impact of $720.2 million associated with the 2017 Large Loss Events recorded in 2017;
- Underwriting Results - we generated underwriting income of $244.9 million and had a combined ratio of 87.6% in 2018, compared to an underwriting loss of $651.5 million and a combined ratio of 137.9%, in 2017. Our underwriting income in 2018 was comprised of $262.1 million of underwriting income in our Property segment, partially offset by a $17.0 million underwriting loss in our Casualty and Specialty segment.

Included in our underwriting results for 2018 were the 2018 Large Loss Events, which had a net negative impact on our underwriting result of $340.2 million and added 18.6 percentage points to the combined ratio, partially offset by changes in the estimates of the 2017 Large Loss Events, which had a positive impact on the underwriting result of $157.8 million and reduced the combined ratio by 8.0 percentage points. In addition, as a result of the Q4 2018 California Wildfires, the Company’s underwriting result was negatively impacted by certain casualty liability exposures within the Casualty and Specialty segment. In comparison, in 2017 the underwriting result experienced a net negative impact of $989.2 million, or an increase in the combined ratio of 59.4 percentage points, associated with the 2017 Large Loss Events;

- Non-recurring Reinsurance Transactions - our results for 2018 include certain large, non-recurring reinsurance transactions, which are reflected in our Property segment and increased net premiums earned by $72.3 million and contributed $56.2 million to our net income available to RenaissanceRe common shareholders. While we expect these transactions to be non-recurring, we believe they reflect our differentiated strategy, our capability to provide bespoke or large solutions for our clients and our continued focus on serving our clients with unique coverages;
- Gross Premiums Written - our gross premiums written increased by $512.9 million, or 18.3%, to $3.3 billion in 2018, compared to 2017, driven primarily by increases of $320.5 million in the Property segment and $192.4 million in the Casualty and Specialty segment. Included in gross premiums written in 2018 were $94.5 million of reinstatement premiums written associated with the 2018 Large Loss Events and changes in the estimates of the 2017 Large Loss Events, and $102.3 million of gross premiums written associated with a large, non-recurring reinsurance transaction, each principally within the Property segment. Included in the gross premiums written in 2017 were $180.2 million of reinstatement premiums written associated with the 2017 Large Loss Events;
- Investment Results - our total investment result, which includes the sum of net investment income and net realized and unrealized gains and losses on investments, was $86.8 million in 2018, compared to $358.0 million in 2017, a decrease of $271.2 million. The decrease was primarily driven by net realized and unrealized losses on investments of $175.1 million in 2018, compared to net realized and unrealized gains on investments of $135.8 million in 2017. The net realized and unrealized losses on investments in 2018 were driven by net realized and unrealized losses on the fixed maturity investments portfolio, and net realized and unrealized losses on the equity investments trading portfolio. Partially offsetting these items was higher net investment income from our portfolios of fixed maturity

investments trading and short term investments, primarily driven by higher average invested assets and the impact of interest rate increases during recent periods; and

76

- Net Income Attributable to Redeemable Noncontrolling Interests - our net income attributable to redeemable noncontrolling interests was $41.6 million in 2018, compared to a net loss attributable to redeemable noncontrolling interests of $132.3 million in 2017. The increase was principally due to DaVinciRe generating underwriting income in 2018 compared to significant underwriting losses in 2017. Our ownership in DaVinciRe was 22.1% at both December 31, 2018 and December 31, 2017.

Results of operations for 2017 compared to 2016.

Net loss attributable to RenaissanceRe common shareholders was $244.8 million in 2017, compared to net income available to RenaissanceRe common shareholders of $480.6 million in 2016, a decrease of $725.4 million. As a result of our net loss attributable to RenaissanceRe common shareholders in 2017, our annualized return on average common equity was negative 5.7% and our book value per common share decreased from $108.45 at December 31, 2016 to $99.72 at December 31, 2017, a 6.9% decrease, after considering the change in accumulated dividends paid to our common shareholders, and the impact of repurchasing an aggregate of 1.3 million common shares in open market transactions.

The most significant events affecting our financial performance during 2017, on a comparative basis to 2016, include:

- Underwriting Loss - Primarily as a result of 2017 Large Loss Events, we incurred an underwriting loss of $651.5 million and a combined ratio of 137.9% in 2017, compared to generating underwriting income of $385.5 million and a combined ratio of 72.5%, respectively, in 2016. Our underwriting loss in 2017 was comprised of an underwriting loss of $574.9 million in our Property segment, and an underwriting loss of $78.2 million in our Casualty and Specialty segment.

The 2017 Large Loss Events resulted in $959.8 million of underwriting losses in our Property segment, or 110.5 percentage points on its combined ratio in 2017, and $29.4 million of underwriting losses in our Casualty and Specialty segment, or 3.7 percentage points on its combined ratio in 2017. See below for additional information regarding the net negative impact of the 2017 Large Loss Events. Our underwriting results are discussed in additional detail below in “Underwriting Results by Segment”;

- Income Tax Expense - we recognized $26.5 million of income tax expense in 2017, compared to $0.3 million in 2016, representing a $26.1 million increase in income tax expense. The increase in income tax expense was principally driven by a write-down of a portion of our deferred tax asset during the fourth quarter of 2017 of $36.7 million as a result of the reduction in the U.S. corporate tax rate from 35% to 21% effective January 1, 2018 pursuant to the Tax Bill, which was enacted on December 22, 2017. Partially offsetting this income tax expense was an income tax benefit associated with pre-tax GAAP losses in our U.S.-based operations primarily due to underwriting losses associated with 2017 Large Loss Events, compared to pre-tax GAAP income in our U.S.-based operations in 2016; partially offset by
- Net Loss Attributable to Redeemable Noncontrolling Interests - our net loss attributable to redeemable noncontrolling interests was $132.3 million in 2017, compared to net income attributable to redeemable noncontrolling interests of $127.1 million in 2016. The decrease was principally due to significant underwriting losses associated with the 2017 Large Loss Events incurred by DaVinciRe, and a decrease in our ownership in DaVinciRe to 22.1% at December 31, 2017, compared to 24.0% at December 31, 2016; and
- Investment Results - our total investment result, which includes the sum of net investment income, net realized and unrealized gains on investments, and the change in net unrealized gains on fixed maturity investments available for sale, was $358.0 million in 2017, compared to $321.2 million in 2016, an increase of $36.8 million. Our fixed maturity investment portfolio generated higher net investment income during 2017, compared to 2016, principally driven by higher average invested assets and the impact of interest rate increases during the current year. In addition, our portfolio of other investments experienced higher returns during 2017, compared to 2016, principally driven by our private equity investments. We also experienced a $24.2 million increase in net realized and unrealized gains on equity investments trading driven by positive returns in the global equity markets, combined with the strong

performance of a number of our equity positions.

Table of Contents

Net Negative Impact

Net negative impact includes the sum of estimates of net claims and claim expenses incurred, earned reinstatement premiums assumed and ceded, lost profit commissions and redeemable noncontrolling interest. Our estimates of net negative impact are based on a review of our potential exposures, preliminary discussions with certain counterparties and catastrophe modeling techniques. Our actual net negative impact, both individually and in the aggregate, will vary from these estimates, perhaps materially. Changes in these estimates will be recorded in the period in which they occur.

Meaningful uncertainty remains regarding the estimates, and the nature and extent of the losses, associated with Typhoons Jebi, Mangkhut and Trami, Hurricane Florence and the wildfires in California during the third quarter of 2018 (collectively, the Q3 2018 Catastrophe Events”), Hurricane Michael and the wildfires in California during the fourth quarter of 2018 (the “Q4 2018 California Wildfires” and, together with Hurricane Michael, the “Q4 2018 Catastrophe Events”) driven by the magnitude and recent occurrence of each event, relatively limited claims data received to date, the contingent nature of business interruption and other exposures, potential uncertainties relating to reinsurance recoveries and other factors inherent in loss estimation, among other things.

The financial data below provides additional information detailing the net negative impact of the Q3 2018 Catastrophe Events, the Q4 2018 Catastrophe Events and certain losses associated with aggregate loss contracts (the “2018 Aggregate Losses”) and the net positive impact of changes in estimates of the net negative impact of the 2017 Large Loss Events on our consolidated financial statements in 2018.

Year ended December 31, 2018	Q3 2018 Catastrophe Events (1)	Q4 2018 Catastrophe Events (2)	2018 Aggregate Losses	Total 2018 Large Loss Events	Changes in Estimates of the 2017 Large Loss Events (3)	Total
(in thousands, except percentages)						
(Increase) decrease in net claims and claims expenses incurred	$(152,672)	$(232,702)	$(54,818)	$(440,192)	$187,484	$(252,708)
Net reinstatement premiums earned	26,956	59,660	2	86,618	(18,376)	68,242
Lost (earned) profit commissions	2,279	11,971	(900)	13,350	(11,355)	1,995
Net (negative) positive impact on underwriting result	(123,437)	(161,071)	(55,716)	(340,224)	157,753	(182,471)
Redeemable noncontrolling interest - DaVinciRe	20,815	87,245	16,035	124,095	(27,983)	96,112
Net (negative) positive impact on net income available to RenaissanceRe common shareholders	$(102,622)	$(73,826)	$(39,681)	$(216,129)	$129,770	$(86,359)
Percentage point impact on consolidated combined ratio	6.5	8.8	2.8	18.6	(8.0)	10.0
Net (negative) positive impact on Property segment underwriting result	$(121,875)	$(161,071)	$(55,716)	$(338,662)	$145,724	$(192,938)
	(1,562)	—	—	(1,562)	12,029	10,467

Net (negative) positive impact on Casualty and Specialty segment underwriting result (4)						
Net (negative) positive impact on underwriting result	$(123,437)	$(161,071)	$(55,716)	$(340,224)	$157,753	$(182,471)

(1) Q3 2018 Catastrophe Events includes Typhoons Jebi, Mangkhut and Trami, Hurricane Florence and the wildfires in California during the third quarter of 2018.

(2) Q4 2018 Catastrophe Events includes Hurricane Michael and the wildfires in California during the fourth quarter of 2018.

(3) An initial estimate of the net negative impact of the 2017 Large Loss Events was recorded in our consolidated financial statements during 2017. The amounts noted in the table above reflect changes in the estimates of the net negative impact of the 2017 Large Loss Events recorded in 2018.

(4) Impact on Casualty and Specialty segment result includes loss estimates from catastrophe exposed contracts within certain specialty lines of business (i.e., energy, marine, and regional multi-line business). Amounts shown for the Q4 2018 Catastrophe Events, which includes the Q4 2018 California Wildfires, do not reflect impacts from certain casualty liability exposures within the Casualty and Specialty segment associated with the Q4 2018 California Wildfires, as different actuarial techniques are used to estimate losses related to such exposures.

Table of Contents

The financial data below provides additional details regarding the net negative impact of the 2017 Large Loss Events on our consolidated financial statements in 2017.

Year ended December 31, 2017	2017 Large Loss Events (1)
(in thousands, except percentages)	
Net claims and claim expenses incurred	$(1,166,295)
Net reinstatement premiums earned	145,154
Earned profit commissions	31,944
Net negative impact on underwriting result	(989,197)
Redeemable noncontrolling interest - DaVinciRe	268,952
Net negative impact	$(720,245)
Percentage point impact on consolidated combined ratio	59.4
Net negative impact on Property segment underwriting result	$(959,762)
Net negative impact on Casualty and Specialty segment underwriting result	(29,435)
Net negative impact on underwriting result	$(989,197)

(1) 2017 Large Loss Events includes Hurricanes Harvey, Irma and Maria and the Mexico City Earthquake, the wildfires in California during the fourth quarter of 2017 and losses associated with aggregate loss contracts.

Underwriting Results by Segment

Property Segment

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

Year ended December 31,	2018	2017	2016
(in thousands, except percentages)			
Gross premiums written	$1,760,926	$1,440,437	$1,111,263
Net premiums written	$1,055,188	$978,014	$725,321
Net premiums earned	$1,050,831	$931,070	$720,951
Net claims and claim expenses incurred	497,895	1,297,985	151,545
Acquisition expenses	177,912	113,816	97,594
Operational expenses	112,954	94,194	108,642
Underwriting income (loss)	$262,070	$(574,925)	$363,170
Net claims and claim expenses incurred – current accident year	$719,185	$1,343,581	$256,421
Net claims and claim expenses incurred – prior accident years	(221,290)	(45,596)	(104,876)
Net claims and claim expenses incurred – total	$497,895	$1,297,985	$151,545
Net claims and claim expense ratio – current accident year	68.4%	144.3%	35.6%
Net claims and claim expense ratio – prior accident years	(21.0)%	(4.9)%	(14.6)%
Net claims and claim expense ratio – calendar year	47.4%	139.4%	21.0%
Underwriting expense ratio	27.7%	22.3%	28.6%

Combined ratio	75.1 %	161.7 %	49.6 %

Table of Contents

Property Gross Premiums Written

In 2018, our Property segment gross premiums written increased by $320.5 million, or 22.2%, to $1.8 billion, compared to $1.4 billion in 2017.

Gross premiums written in the catastrophe class of business were $1.3 billion in 2018, an increase of $244.9 million, or 22.2%, compared to 2017. Included in the catastrophe class of business in 2018 were $102.3 million of gross premiums written associated with large, non-recurring reinsurance transactions and $95.5 million of reinstatement premiums written primarily associated with the 2018 Large Loss Events and changes in the estimates of the net negative impact of the 2017 Large Loss Events. In comparison, 2017 included $172.4 million of reinstatement premiums written associated with the 2017 Large Loss Events. Excluding the reinstatement premiums written in each period associated with the respective catastrophe events, gross premiums written in the catastrophe class of business would have increased $321.8 million, or 34.5%, which was primarily a result of expanded participation on existing transactions and certain new transactions we believe have comparably attractive risk-return attributes, including the large, non-recurring reinsurance transactions noted above.

Gross premiums written in the other property class of business were $411.6 million in 2018, an increase of $75.6 million, or 22.5%, compared to 2017. The increase in gross premiums written in the other property class of business was primarily driven by growth across our underwriting platforms, both from existing relationships and through new opportunities we believe have comparably attractive risk-return attributes.

In 2017, our Property segment gross premiums written increased by $329.2 million, or 29.6%, to $1.4 billion, compared to $1.1 billion in 2016. Included in gross premiums written in the Property segment in 2017 were $175.1 million of reinstatement premiums written primarily associated with the 2017 Large Loss Events, compared to 2016 which included $21.4 million of reinstatement premiums written associated with a wildfire originating near Fort McMurray, Alberta (the “Fort McMurray Wildfire”), a number of weather-related events in Texas (the “2016 Texas Events”) and Hurricane Matthew.

Gross premiums written in the catastrophe class of business were $1.1 billion in 2017, an increase of $220.1 million, or 24.9%, compared to 2016. Included in gross premiums written in the catastrophe class of business in 2017 were $172.4 million of reinstatement premiums written primarily associated with the 2017 Large Loss Events, compared to 2016 which included $21.4 million of reinstatement premiums written associated with the Fort McMurray Wildfire, 2016 Texas Events and Hurricane Matthew. Overall, market conditions remained challenging during 2017 in the catastrophe class of business. However, we were able to increase our participation on a select number of transactions we believe have comparably attractive risk-return attributes and enter into certain new contracts following the occurrence of certain large events in the third quarter of 2017, while continuing to exercise underwriting discipline given prevailing market terms and conditions. Certain of these contracts were for partial periods of an original exposure period.

Gross premiums written in the other property class of business were $336.0 million in 2017, an increase of $109.1 million, or 48.1%, compared to 2016. The increase in gross premiums written in the other property class of business were driven in large part by proportional and delegated authority business where we were able to increase our participation on a select number of transactions and enter into certain new transactions we believe have comparably attractive risk-return attributes.

Our Property segment gross premiums written continue to be characterized by a large percentage of U.S. and Caribbean premium, as we have found business derived from exposures in Europe, Asia and the rest of the world to be, in general, less attractive on a risk-adjusted basis during recent periods. A significant amount of our U.S. and Caribbean premium provides coverage against windstorms, notably U.S. Atlantic windstorms, as well as earthquakes and other natural and man-made catastrophes.

Property Ceded Premiums Written

Year ended December 31,	2018	2017	2016
(in thousands)			
Ceded premiums written - Property	$705,738	$462,423	$385,942

Ceded premiums written in our Property segment increased by $243.3 million, to $705.7 million, in 2018, compared to $462.4 million in 2017. The increase in ceded premiums written was principally due to a

80

significant portion of the increase in gross premiums written in the catastrophe class of business noted above being ceded through our managed joint venture, Upsilon RFO, combined with increased purchases of retrocessional reinsurance as part of the management of our risk portfolio.

Ceded premiums written in our Property segment increased $76.5 million to $462.4 million in 2017, compared to $385.9 million in 2016, primarily reflecting increased purchases of retrocessional reinsurance as part of the management of our risk portfolio and $32.8 million of ceded reinstatement premiums written associated with the 2017 Large Loss Events.

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

Property Underwriting Results

Our Property segment generated underwriting income of $262.1 million in 2018, compared to an underwriting loss of $574.9 million in 2017, an improvement of $837.0 million. In 2018, our Property segment generated a net claims and claim expense ratio of 47.4%, an underwriting expense ratio of 27.7% and a combined ratio of 75.1%, compared to 139.4%, 22.3% and 161.7%, respectively, in 2017.

Principally impacting the Property segment underwriting result and combined ratio in 2018 were the 2018 Large Loss Events, which resulted in a net negative impact on the underwriting result of $338.7 million, and a corresponding increase in the combined ratio of 37.4 percentage points. This was partially offset by a net positive impact on the underwriting result associated with changes in the estimates of the net negative impact on the underwriting result of the 2017 Large Loss Events of $145.7 million, and a corresponding decrease in the combined ratio of 14.0 percentage points. In comparison, 2017 was impacted by the 2017 Large Loss Events which resulted in a net negative impact on the underwriting result of $959.8 million and added 110.5 percentage points to the Property segment combined ratio.

Primarily as a result of changes in the estimates of the net negative impact of the 2017 Large Loss Events noted above, the Property segment experienced net favorable development on prior accident years net claims and claim expenses of $221.3 million, or 21.0 percentage points, during 2018, compared to $45.6 million, or 4.9 percentage points, in 2017. See “Part II, Item 7. Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves” and “Note 7. Reserve for Claims and Claim Expenses in our Notes to the Consolidated Financial Statements” for additional discussion of our reserving techniques and prior year development of net claims and claim expenses.

Our Property segment incurred an underwriting loss of $574.9 million in 2017, compared to generating underwriting income of $363.2 million in 2016, a decrease of $938.1 million. In 2017, our Property segment generated a net claims and claim expense ratio of 139.4%, an underwriting expense ratio of 22.3% and a combined ratio of 161.7%, compared to 21.0%, 28.6% and 49.6%, respectively, in 2016.

Principally impacting our Property segment underwriting result and combined ratio in 2017 were the 2017 Large Loss Events, which resulted in an underwriting loss of $959.8 million and added 110.5 percentage points to the combined ratio. The underwriting result and combined ratio in 2016 were impacted by the 2016 Texas Events, the Fort McMurray Wildfire and Hurricane Matthew, which resulted in $101.0 million of underwriting losses and added 17.9 percentage points to our Property segment combined ratio. Partially offsetting the impact of the 2017 Large Loss Events was a 6.3 percentage point decrease in the underwriting expense ratio, from 28.6% in 2016 to 22.3% in 2017, driven in part by a decrease in operating expenses reflecting lower compensation expenses, combined with an increase in net premiums earned driven in large part by the reinstatement premiums written noted above.

Our Property segment experienced favorable development on prior accident years net claims and claim expenses of $45.6 million, or 4.9 percentage points, in 2017, compared to $104.9 million, or 14.6 percentage points, in 2016. See "Part II, Item 7. Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves" and "Note 7. Reserve for Claims and Claim Expenses in our Notes to the

Consolidated Financial Statements” for additional discussion of our reserving techniques and prior year development of net claims and claim expenses.

Casualty and Specialty Segment

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

Year ended December 31,	2018	2017	2016
(in thousands, except percentages)			
Gross premiums written	$1,549,501	$1,357,110	$1,263,313
Net premiums written	$1,076,714	$893,307	$809,848
Net premiums earned	$925,298	$786,501	$682,337
Net claims and claim expenses incurred	622,320	565,026	380,396
Acquisition expenses	255,079	233,077	191,729
Operational expenses	64,883	66,548	88,984
Underwriting (loss) income	$(16,984)	$(78,150)	$21,228
Net claims and claim expenses incurred – current accident year	$671,582	$558,843	$438,536
Net claims and claim expenses incurred – prior accident years	(49,262)	6,183	(58,140)
Net claims and claim expenses incurred – total	$622,320	$565,026	$380,396
Net claims and claim expense ratio – current accident year	72.6%	71.1%	64.3%
Net claims and claim expense ratio – prior accident years	(5.3)%	0.7%	(8.6)%
Net claims and claim expense ratio – calendar year	67.3%	71.8%	55.7%
Underwriting expense ratio	34.5%	38.1%	41.2%
Combined ratio	101.8%	109.9%	96.9%

Casualty and Specialty Gross Premiums Written – In 2018, our Casualty and Specialty segment gross premiums written increased by $192.4 million, or 14.2%, to $1.5 billion, compared to $1.4 billion in 2017. The increase was principally due to selective growth from new business opportunities across various classes of business in our Casualty and Specialty segment. Much of this growth is a result of our differentiated strategy to provide bespoke customer solutions, which may be non-recurring.

In 2017, our Casualty and Specialty segment gross premiums written increased $93.8 million, or 7.4%, to $1.4 billion, compared to $1.3 billion in 2016. The $93.8 million increase was principally due to selective growth from existing business and private placements within certain of our casualty lines of business, partially offset by a decrease in financial lines of business primarily as a result of a large, in-force multi-year mortgage reinsurance contract written in 2016, that did not reoccur in 2017. Financial lines of business, and more specifically, mortgage reinsurance, are prone to significant gross premiums written volatility and can be influenced by a small number of relatively large transactions.

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

Table of Contents

Casualty and Specialty Ceded Premiums Written

Year ended December 31,	2018	2017	2016
(in thousands)			
Ceded premiums written - Casualty and Specialty	$472,787	$463,803	$453,465

Ceded premiums written in our Casualty and Specialty segment increased by $9.0 million, to $472.8 million, in 2018, compared to $463.8 million in 2017, primarily resulting from increases in gross premiums written subject to our retrocessional quota share reinsurance programs utilized as part of the management of our risk portfolio.

Ceded premiums written in our Casualty and Specialty segment increased $10.3 million, to $463.8 million, in 2017, compared to $453.5 million in 2016, primarily as a result of increased gross premiums written subject to our retrocessional quota share reinsurance programs utilized as part of the management of our risk portfolio.

As in our Property segment, the buying of ceded reinsurance in our Casualty and Specialty segment is based on market opportunities and is not based on placing a specific reinsurance program each year.

Casualty and Specialty Underwriting Results

Our Casualty and Specialty segment incurred an underwriting loss of $17.0 million in 2018, compared to an underwriting loss of $78.2 million in 2017. In 2018, our Casualty and Specialty segment generated a net claims and claim expense ratio of 67.3%, an underwriting expense ratio of 34.5% and a combined ratio of 101.8%, compared to 71.8%, 38.1% and 109.9%, respectively, in 2017.

The decrease in our Casualty and Specialty segment's combined ratio was driven by decreases of 4.5 percentage points in the net claims and claim expense ratio and and 3.6 percentage points in the underwriting expense ratio in 2018, compared to 2017.

The decrease in our Casualty and Specialty segment net claims and claim expense ratio was principally due to favorable development of prior accident year losses of $49.3 million, or 5.3 percentage points during 2018, as compared to net adverse development of $6.2 million, or 0.7 percentage points, in 2017. The net favorable development during 2018 was principally driven by reported losses coming in lower than expected compared to 2017, which experienced adverse development associated with the decrease in the Ogden Rate during the period. See "Part II, Item 7. Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves" and "Note 7. Reserve for Claims and Claim Expenses in our Notes to the Consolidated Financial Statements" for additional discussion of our reserving techniques and prior year development of net claims and claim expenses.

The underwriting expense ratio in our Casualty and Specialty segment decreased 3.6 percentage points to 34.5% in 2018, compared to 38.1% in 2017, due to decreases in both the net acquisition ratio and the operating expense ratio, with the latter being due to improved operating leverage .

Our Casualty and Specialty segment incurred an underwriting loss of $78.2 million in 2017, compared to underwriting income of $21.2 million in 2016. In 2017, our Casualty and Specialty segment generated a combined ratio of 109.9%, compared to 96.9% in 2016. The increase in the Casualty and Specialty segment's combined ratio was driven by a 16.1 percentage point increase in the net claims and claim expense ratio, from 55.7% in 2016 to 71.8% in 2017. Offsetting the increase in the net claims and claim expenses ratio was a 3.1 percentage point decrease in the underwriting expense ratio, from 41.2% in 2016 to 38.1% in 2017, driven in part by a decrease in operating expenses reflecting lower compensation expenses, combined with an increase in net premiums earned as we selectively grew the business.

Current accident year net claims and claim expenses in the Casualty and Specialty segment were primarily impacted by net claims and claim expenses from the 2017 Large Loss Events, combined with higher attritional net claims and claim expenses.

Our Casualty and Specialty segment experienced adverse development on prior accident years net claims and claim expenses of $6.2 million, or 0.7 percentage points, during 2017, compared to favorable development of $58.1 million, or 8.6 percentage points, in 2016. See “Part II, Item 7. Summary of Critical Accounting Estimates, Claims and Claim Expense Reserves” and “Note 7. Reserve for Claims and Claim

Expenses in our Notes to the Consolidated Financial Statements" for additional discussion of our reserving techniques and prior year development of net claims and claim expenses.

Fee Income

Year ended December 31,	2018	2017	2016
(in thousands)			
Management fee income			
Joint ventures	$26,387	$15,358	$19,919
Managed funds	11,462	3,659	2,381
Structured reinsurance products	33,312	31,177	28,643
Total management fee income	71,161	50,194	50,943
Performance fee income			
Joint ventures	$15,093	$9,429	$19,429
Managed funds	62	197	1,758
Structured reinsurance products	3,580	4,719	30,231
Total performance fee income (1)	18,735	14,345	51,418
Total fee income	$89,896	$64,539	$102,361

(1) Performance fees are based on the performance of the individual vehicles and/or product, and could be negative in any given quarter when large losses occur, which can result in the reversal of previously accrued performance fees.

Total fee income is earned through third-party capital management as well as various joint ventures and certain structured retrocession agreements to which we are a party. Joint ventures include DaVinciRe, Top Layer Re, Vermeer and certain entities investing in Langhorne. Managed funds include Upsilon Fund and Medici. Structured reinsurance products include Fibonacci Re, as well as certain other reinsurance contracts which transfer risk to capital.

In 2018, total fee income increased $25.4 million, to $89.9 million, compared to $64.5 million in 2017, primarily driven by an increase in the dollar value of capital being managed. In addition, certain of our joint ventures, namely DaVinciRe, were significantly more profitable in 2018 compared to 2017.

In 2017, total fee income decreased $37.8 million, to $64.5 million, compared to $102.4 million in 2016, primarily the result of higher net claims and claims expenses experienced by our joint venture related vehicles during 2017, compared to 2016, which reduced our performance fee income.

Table of Contents

Net Investment Income

Year ended December 31,	2018	2017	2016
(in thousands)			
Fixed maturity investments	$211,973	$179,624	$160,661
Short term investments	33,571	11,082	5,127
Equity investments trading	4,474	3,628	4,235
Other investments			
Private equity investments	477	33,999	6,155
Other	22,475	8,067	20,181
Cash and cash equivalents	3,810	1,196	788
	276,780	237,596	197,147
Investment expenses	(14,914)	(15,387)	(15,421)
Net investment income	$261,866	$222,209	$181,726

Net investment income was $261.9 million in 2018, compared to $222.2 million in 2017, an increase of $39.7 million. Impacting our net investment income for 2018 were higher average invested assets in our fixed maturity and short term investment portfolios, combined with the impact of interest rate increases during recent periods. In addition, our catastrophe bonds, which are included in other investments, experienced an increase in net investment income as these investments benefited from higher interest rates and higher invested assets, and were less impacted by the catastrophe events in 2018, compared to 2017. Partially offsetting these items were lower returns in our portfolio of private equity investments in 2018 compared to 2017.

Net investment income was $222.2 million in 2017, compared to $181.7 million in 2016, an increase of $40.5 million. Impacting our net investment income for 2017 were improved returns in our portfolio of private equity investments and higher net investment income in our portfolio of fixed maturity investments primarily driven by higher average invested assets, partially offset by lower unrealized gains in our other investment portfolio, specifically our catastrophe bond portfolio, which was impacted by a number of large catastrophe events occurring in 2017.

Low interest rates in preceding periods lowered the yields at which assets were invested relative to historical levels. In more recent periods, increases in interest rates should have a positive impact on future investment income.

Our private equity and other investment portfolios are accounted for at fair value with the change in fair value recorded in net investment income, which included net unrealized losses of $8.3 million in 2018, and net unrealized gains of $24.7 million and $11.5 million in 2017 and 2016, respectively.

Table of Contents

Net Realized and Unrealized (Losses) Gains on Investments

Year ended December 31,	2018	2017	2016
(in thousands)			
Gross realized gains	$21,284	$49,121	$72,739
Gross realized losses	(91,098)	(38,832)	(38,315)
Net realized (losses) gains on fixed maturity investments	(69,814)	10,289	34,424
Net unrealized (losses) gains on fixed maturity investments trading	(57,310)	8,479	26,954
Net realized and unrealized (losses) gains on investments-related derivatives	(8,784)	(2,490)	(15,414)
Net realized gains on equity investments trading	27,739	80,027	14,190
Net unrealized (losses) gains on equity investments trading	(66,900)	39,517	81,174
Net realized and unrealized (losses) gains on investments	$(175,069)	$135,822	$141,328

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

Net realized and unrealized losses on investments were $175.1 million in 2018, compared to net realized and unrealized gains of $135.8 million in 2017, a decrease of $310.9 million. Principally impacting our net realized and unrealized losses on investments in 2018 were:

- net realized and unrealized losses on our fixed maturity investments trading of $127.1 million in 2018, compared to net realized and unrealized gains of $18.8 million in 2017, a decrease of $145.9 million, principally driven by an upward shift in the interest rate yield curve and a widening of credit spreads during 2018, compared to a tightening of credit spreads and a decrease in interest rates at the longer end of the yield curve in 2017; and
- net realized and unrealized losses on equity investments trading of $39.2 million in 2018, compared to net realized and unrealized gains of $119.5 million in 2017, a decrease of $158.7 million, principally driven by lower returns on certain of our larger equity positions during 2018.

Net realized and unrealized gains on investments were $135.8 million in 2017, compared to $141.3 million in 2016, a decrease of $5.5 million. Included in our net realized and unrealized gains on investments were:

- net realized and unrealized gains on equity investments trading of $119.5 million in 2017, compared to $95.4 million in 2016, an improvement of $24.2 million, principally driven by positive returns in the global equity markets, combined with the strong performance of a number of our equity positions in 2017;
- net realized and unrealized gains on our fixed maturity investments trading of $18.8 million in 2017, compared to $61.4 million in 2016. The $42.6 million decrease was principally the result of lower unrealized gains driven by an upward shift of the front end of the yield curve in 2017, compared to 2016 which experienced a more modest upward shift in the yield curve; and
- net realized and unrealized losses on certain investments-related derivatives of $2.5 million in 2017, compared to losses of $15.4 million in 2016, an improvement of $12.9 million, primarily due to the yield curve movements noted above.

Net Foreign Exchange (Losses) Gains

Year ended December 31,	2018	2017	2016
(in thousands)			
Total foreign exchange (losses) gains	$(12,428)	$10,628	$(13,788)

Our functional currency is the U.S. dollar. We routinely write a portion of our business in currencies other than U.S. dollars and invest a portion of our cash and investment portfolio in those currencies. As a result, we may experience foreign exchange gains and losses in our consolidated financial statements. All changes in exchange rates are recognized in our consolidated statements of operations. We are primarily impacted by the foreign currency risk exposures associated with our underwriting operations and investment portfolio, and may, from time to time, enter into foreign currency forward and option contracts to minimize the effect of fluctuating foreign currencies on the value of non-U.S. dollar denominated assets and liabilities.
Refer to “Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk” for additional information related to our exposure to foreign currency risk and “Note 18. Derivative Instruments in our Notes to the Consolidated Financial Statements” for additional information related to foreign currency forward and option contracts we have entered into.
Equity in Earnings of Other Ventures

Year ended December 31,	2018	2017	2016
(in thousands)			
Tower Hill Companies	$9,605	$(1,647)	$10,379
Top Layer Re	8,852	9,851	(8,576)
Other	17	(174)	(840)
Total equity in earnings of other ventures	$18,474	$8,030	$963

Equity in earnings of other ventures primarily represents our pro-rata share of the net income from our investments in Top Layer Re and the Tower Hill Companies, and, except for Top Layer Re, is recorded one quarter in arrears. The carrying value of these investments on our consolidated balance sheets, individually or in the aggregate, may differ from the realized value we may ultimately attain, perhaps significantly so.
Equity in earnings of other ventures was $18.5 million in 2018, compared to $8.0 million in 2017, an increase of $10.4 million, principally driven by improved profitability of the Tower Hill Companies.
Equity in earnings of other ventures was $8.0 million in 2017, compared to $1.0 million in 2016, an increase of $7.1 million. The increase in equity in earnings of other ventures was driven in part by Top Layer Re, which returned to profitability in 2017 following the activity of 2016 as described below. Partially offsetting the equity in earnings from Top Layer Re was equity in losses of the Tower Hill Companies of $1.6 million in 2017, compared to earnings of $10.4 million in 2016, a decrease of $12.0 million, principally due to losses associated with certain catastrophe events occurring in 2017 impacting the profitability of the Tower Hill Companies.
Other Income

Year ended December 31,	2018	2017	2016
(in thousands)			
Assumed and ceded reinsurance contracts accounted for as derivatives and deposits	$4,807	$8,655	$14,246
Other	1,162	760	(68)
Total other income	$5,969	$9,415	$14,178

In 2018, we generated other income of $6.0 million, compared to $9.4 million in 2017, a decrease of $3.4 million, driven by a reduction in our assumed and ceded reinsurance contracts accounted for as derivatives and deposits.

Table of Contents

In 2017, we generated other income of $9.4 million, compared to $14.2 million in 2016, a decrease of $4.8 million, driven by a reduction in assumed and ceded reinsurance contracts accounted for as derivatives and deposits.

Corporate Expenses

Year ended December 31,	2018	2017	2016
(in thousands)			
Total corporate expenses	$33,983	$18,572	$37,402

Corporate expenses include certain executive, director, legal and consulting expenses, costs for research and development, impairment charges related to goodwill and other intangible assets, and other miscellaneous costs, including those associated with operating as a publicly traded company, as well as costs incurred in connection with the TMR Stock Purchase. From time to time, we may revise the allocation of certain expenses between corporate and operating expenses to better reflect the characteristic of the underlying expense.

Corporate expenses increased $15.4 million, to $34.0 million, in 2018, compared to $18.6 million in 2017, principally as a result of changes in the allocation of operating and corporate expenses to better reflect the nature of those expenses. In addition, during 2018, we incurred $3.4 million of costs in connection with the TMR Stock Purchase, which we expect to close in the first half of 2019.

Corporate expenses decreased $18.8 million, to $18.6 million, in 2017, compared to $37.4 million in 2016, primarily reflecting $15.4 million of expenses related to executive departures recorded in 2016 that did not reoccur in 2017.

Interest Expense and Preferred Share Dividends

Year ended December 31,	2018	2017	2016
(in thousands)			
Interest expense			
$250.0 million Series B 7.50% Senior Notes due 2017	$—	$7,813	$18,750
$250.0 million 5.75% Senior Notes due 2020	14,375	14,375	14,375
$300.0 million 3.700% Senior Notes due 2025	11,100	11,100	11,100
$300.0 million 3.450% Senior Notes due 2027	10,350	5,482	—
$150.0 million 4.750% Senior Notes due 2025 (DaVinciRe)	7,125	7,125	7,125
Other	4,119	(1,702)	(9,206)
Total interest expense	47,069	44,193	42,144
Preferred share dividends			
$125.0 million 6.08% Series C Preference Shares	7,600	7,600	7,600
$275.0 million 5.375% Series E Preference Shares	14,781	14,781	14,781
$250.0 million 5.575% Series F Preference Shares	7,707	—	—
Total preferred share dividends	30,088	22,381	22,381
Total interest expense and preferred share dividends	$77,157	$66,574	$64,525

Interest expense increased $2.9 million to $47.1 million in 2018, compared to $44.2 million in 2017, primarily driven by:

- additional interest expense due to twelve months of interest expense in 2018 on the $300.0 million of 3.450% Senior Notes due 2027 issued in June 2017, compared to seven months of interest expense on these notes in 2017.

Table of Contents

Interest expense increased $2.0 million to $44.2 million in 2017, compared to $42.1 million in 2016, primarily driven by:

- additional interest expense due to the June 2017 issuance of $300.0 million of 3.450% Senior Notes due 2027, resulting in seven months of interest expense in 2017, compared to none in 2016; partially offset by
- lower interest expense due to the June 1, 2017 repayment in full at maturity of $250.0 million of Series B 7.50% Senior Notes due 2017 assumed in connection with the acquisition of Platinum, resulting in five months of interest expense incurred during 2017, compared to a full year of interest expense incurred on these notes in 2016; and
- lower amortization of net fair value adjustments of $5.4 million, included in the other category in the table above, which reduced our interest expense and were recognized in connection with the acquisition of Platinum and its $250.0 million Series B 7.50% Notes due June 1, 2017.

Preferred share dividends increased by $7.7 million to $30.1 million in 2018, compared to $22.4 million in 2017, primarily driven by dividends on the $250.0 million of 5.750% Series F Preference Shares issued in June 2018. Preferred share dividends were flat at $22.4 million in each of 2017 and 2016.

Income Tax Benefit (Expense)

Year ended December 31,	2018	2017	2016
(in thousands)			
Income tax benefit (expense)	$6,302	$(26,487)	$(340)

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

In 2018, we recognized an income tax benefit of $6.3 million, compared to an income tax expense of $26.5 million in 2017. The income tax benefit in 2018 was principally driven by pre-tax GAAP losses in our U.S.-based operations associated with the 2018 Large Loss Events and unrealized losses on our investment portfolio, compared to pre-tax GAAP losses in our U.S.-based operations, offset by the impact of a $36.7 million increase in income tax expense due to the write-down of a portion of our deferred tax asset during 2017, as a result of the reduction in the U.S. corporate tax rate pursuant to the Tax Bill, which was enacted on December 22, 2017.

In 2017, we recognized an income tax expense of $26.5 million, compared to $0.3 million in 2016, principally driven by the write-down of a portion of our deferred tax asset as a result of the reduction in the U.S. corporate tax rate pursuant to the Tax Bill described above. Partially offsetting this income tax expense was an income tax benefit associated with pre-tax GAAP losses in our U.S.-based operations primarily due to underwriting losses associated with the 2017 Large Loss Events, compared to pre-tax GAAP income in our U.S.-based operations in 2016.

At December 31, 2018, our U.S. tax-paying subsidiaries had a net deferred tax asset (after valuation allowance) of $64.7 million. Our Ireland, U.K. and Singapore operations have historically produced GAAP taxable losses and we currently do not believe it is more likely than not that we will be able to recover the predominant amount of our net deferred tax assets in these jurisdictions. Our valuation allowance totaled $35.3 million and $30.0 million at December 31, 2018 and 2017, respectively.

Our effective income tax rate, which we calculate as income tax benefit (expense) divided by income or loss before taxes, may fluctuate significantly from period to period depending on the geographic distribution of pre-tax income or loss in any given period between different jurisdictions with comparatively higher tax rates and those with comparatively lower tax rates. The geographic distribution of pre-tax income or loss can vary significantly between periods due to, but not limited to, the following factors: the business mix of net premiums written and earned; the size and nature of net claims and claim expenses incurred; the amount and geographic location of operating expenses, net investment income, net realized and unrealized gains (losses) on investments; outstanding debt and related interest expense; and the amount of specific

89

adjustments to determine the income tax basis in each of our operating jurisdictions. In addition, a significant portion of our gross and net premiums are currently written and earned in Bermuda, which does not have a corporate income tax, including the majority of our catastrophe business, which can result in significant volatility to our pre-tax income or loss in any given period. We expect our consolidated effective tax rate to increase in the future, as our global operations outside of Bermuda expand, including in connection with the TMR Stock Purchase. In addition, it is possible we could be adversely affected by changes in tax laws, regulation, or enforcement, any of which could increase our effective tax rate more rapidly or steeply than we currently anticipate.

Generally, the preponderance of our revenue and pre-tax income or loss is generated by our domestic (i.e., Bermuda) operations, in the form of underwriting income or loss and net investment income or loss, rather than our foreign operations. However, the geographic distribution of pre-tax income or loss can vary significantly between periods for a variety of reasons, including the business mix of net premiums written and earned, the size and nature of net claims and claim expenses incurred, the amount and geographic location of operating expenses, net investment income and net realized and unrealized gains (losses) on investments and the amount of specific adjustments to determine the income tax basis in each of our operating jurisdictions. Pre-tax income for our domestic operations was higher compared to our foreign operations for the years ended December 31, 2018 and 2016 primarily as a result of the more volatile catastrophe business underwritten in our Bermuda operations during these periods being relatively free of catastrophe losses and thus generating higher levels of net underwriting income than our foreign operations, which underwrite primarily less volatile business with higher attritional net claims and claim expenses and as a result produce lower levels of net underwriting income in benign loss years. For 2017, our domestic operations generated an underwriting loss due to the significant catastrophe loss activity during the year and the underwriting loss in our domestic operations was significantly greater than the underwriting loss that was generated by our foreign operations.

Net (Income) Loss Attributable to Redeemable Noncontrolling Interests

Year ended December 31,	2018	2017	2016
(in thousands)			
Net (income) loss attributable to redeemable noncontrolling interests	$(41,553)	$132,282	$(127,086)

Our net income attributable to redeemable noncontrolling interests was $41.6 million in 2018, compared to a net loss attributable to redeemable noncontrolling interests of $132.3 million in 2017, a change of $173.8 million, principally due to DaVinciRe generating underwriting income in 2018, compared to significant underwriting losses in 2017 driven by the 2017 Large Loss Events. Our ownership of DaVinciRe was 22.1% at both December 31, 2018 and December 31, 2017.

Our net loss attributable to redeemable noncontrolling interests was $132.3 million in 2017, compared to net income attributable to redeemable noncontrolling interests of $127.1 million in 2016. The $259.4 million change was principally due to underwriting losses associated with the 2017 Large Loss Events incurred by DaVinciRe and a decrease in our ownership of DaVinciRe to 22.1% at December 31, 2017, compared to 24.0% at December 31, 2016. We expect our noncontrolling economic ownership in DaVinciRe to fluctuate over time. See “Note 9. Noncontrolling Interests” in our “Notes to Consolidated Financial Statements” for additional information regarding DaVinciRe.

LIQUIDITY AND CAPITAL RESOURCES

Financial Condition

RenaissanceRe is a holding company, and we therefore rely on dividends from our subsidiaries and investment income to make principal and interest payments on our debt and to make dividend payments to our preference and common shareholders. The payment of dividends by our subsidiaries is, under certain circumstances, limited by the applicable laws and regulations in the various jurisdictions in which our subsidiaries operate, including Bermuda, the U.S., the U.K. and Ireland. For example, insurance laws require our insurance subsidiaries to maintain certain measures of solvency and liquidity. The regulations

governing our and our principal operating subsidiaries' ability to pay dividends are discussed in detail in "Part I, Item 1. Regulation" and "Note 17. Statutory Requirements in our Notes to the Consolidated Financial Statements".

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

During 2018 and 2017 we experienced significant losses from the 2018 Large Loss Events and 2017 Large Loss Events, respectively, and as we would expect following events of this magnitude, it was necessary for RenaissanceRe to contribute capital to certain of its principal operating subsidiaries to ensure they were able to maintain levels of capital adequacy and liquidity in compliance with various laws and regulations, support rating agency capital requirements, pay valid claims quickly and be adequately capitalized to pursue business opportunities as they arise. As a result, during 2018 net capital contributions by RenaissanceRe to our principal operating subsidiaries, net of dividends and return of capital received by RenaissanceRe from our principal operating subsidiaries, were $69.0 million (2017 - $242.3 million). We believe RenaissanceRe and our principal operating subsidiaries continue to be adequately capitalized following these events.

Group Supervision

The BMA is our group supervisor. Under the Insurance Act, we are required to maintain capital at a level equal to our ECR, which is established by reference to the BSCR model. The BSCR is a mathematical model designed to give the BMA robust methods for determining an insurer's capital adequacy. Underlying the BSCR is the belief that all insurers should operate on an ongoing basis with a view to maintaining their capital at a prudent level in excess of the minimum solvency margin otherwise prescribed under the Insurance Act. We are currently completing our 2018 group BSCR, which must be filed with the BMA on or before May 31, 2019, and at this time, we believe we will exceed the target level of required economic statutory capital. Our 2017 group BSCR exceeded the target level of required statutory capital.

Class 3A, 3B and 4 insurers and insurance groups are also required to prepare and publish an FCR, which was introduced to the regulatory regime in 2016 as part of the measures undertaken to achieve Solvency II equivalence. The FCR provides, among other things, details of measures governing the business operations, corporate governance framework and solvency and financial performance of the insurer or insurance group. We received approval from the BMA to file a consolidated group FCR, inclusive of our Bermuda-domiciled insurance subsidiaries and Top Layer Re. Our most recent FCR was filed with the BMA in advance of the June 30, 2018 deadline, and is available on our website.

Bermuda Subsidiaries

Bermuda regulations require BMA approval for any reduction of capital in excess of 15% of statutory capital, as defined in the Insurance Act. The Insurance Act also requires the Bermuda insurance subsidiaries of RenaissanceRe to maintain certain measures of solvency and liquidity. At December 31, 2018, we believe the statutory capital and surplus of our Bermuda insurance subsidiaries exceeded the minimum amount required to be maintained under Bermuda law.

Under the Insurance Act, RenaissanceRe Specialty U.S. and Vermeer are defined as Class 3B insurers, and Renaissance Reinsurance and DaVinci are classified as Class 4 insurers, and must each maintain capital at a level equal to an ECR which is established by reference to the BSCR model. The 2018 BSCR for Renaissance Reinsurance, RenaissanceRe Specialty U.S. and DaVinci must be filed with the BMA before April 30, 2019; at this time, we believe each company will exceed the minimum amount required to be maintained under Bermuda law. In addition, audited annual financial statements prepared in accordance with GAAP for each of Renaissance Reinsurance, RenaissanceRe Specialty U.S., DaVinci and Vermeer must be filed prior to April 30 of each year with the BMA, if applicable, and are available free of charge on the BMA's website.

Table of Contents

U.K. Subsidiaries

Underwriting capacity, or stamp capacity, of a member of Lloyd’s must be supported by providing a deposit in the form of cash, securities or letters of credit, which are referred to as Funds at Lloyd’s (“FAL”). The amount of FAL is determined by Lloyd’s and is based on Syndicate 1458’s solvency and capital requirement as calculated through its internal model. In addition, if the FAL are not sufficient to cover all losses, the Lloyd’s Central Fund provides an additional level of security for policyholders.

At December 31, 2018, the FAL required to support the underwriting activities at Lloyd’s through Syndicate 1458 was £427.5 million (December 31, 2017 - £405.8 million). Actual FAL posted for Syndicate 1458 at December 31, 2018 by RenaissanceRe CCL was £481.0 million, supported by a $180.0 million letter of credit and a $339.7 million deposit of cash and fixed maturity securities. See “Note 8. Debt and Credit Facilities” in our “Notes to the Consolidated Financial Statements” for additional information related to this letter of credit facility.

U.S. Subsidiaries

Renaissance Reinsurance U.S. is domiciled in Maryland, which has adopted the NAIC's model law that uses a risk-based capital ("RBC") model to monitor and regulate the solvency of licensed life, health, and property and casualty insurance and reinsurance companies. The RBC calculation is used to measure an insurer's capital adequacy with respect to the risk characteristics of the insurer's premiums written and net claims and claim expenses, rate of growth and quality of assets, among other measures. At December 31, 2018, we believe the statutory capital and surplus of Renaissance Reinsurance U.S. exceeded the minimum capital adequacy level required to be maintained under U.S. law.

Renaissance Reinsurance U.S. is subject to certain restrictions on its ability to pay dividends pursuant to Maryland law, including making appropriate filings with and obtaining certain approvals from its regulator. During 2019, Renaissance Reinsurance U.S. has an ordinary dividend capacity of $31.2 million (2018 - $24.1 million).

Top Layer Re

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

Liquidity and Cash Flows

Holding Company Liquidity

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

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

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

Table of Contents

Sources of Liquidity

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

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

Our “shelf” registration statement on Form S-3 under the Securities Act allows for the public offering of various types of securities, including common shares, preference shares and debt securities, and thus provides a source of liquidity. Because we are a “well-known seasoned issuer” as defined by the rules promulgated under the Securities Act, we are also eligible to file additional automatically effective registration statements on Form S-3 in the future for the potential offering and sale of an unlimited amount of debt and equity securities.

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

Cash Flows

Year ended December 31,	2018	2017	2016
(in thousands)			
Net cash provided by operating activities	$1,221,701	$1,025,787	$484,772
Net cash used in investing activities	(2,536,613)	(122,434)	(164,532)
Net cash provided by (used in) financing activities	1,066,340	28,860	(401,331)
Effect of exchange rate changes on foreign currency cash	(5,098)	8,222	(4,637)
Net (decrease) increase in cash and cash equivalents	(253,670)	940,435	(85,728)
Cash and cash equivalents, beginning of period	1,361,592	421,157	506,885
Cash and cash equivalents, end of period	$1,107,922	$1,361,592	$421,157

2018

During 2018, our cash and cash equivalents decreased by $253.7 million, to $1.1 billion at December 31, 2018, compared to $1.4 billion at December 31, 2017.

Cash flows provided by operating activities. Cash flows provided by operating activities during 2018 were $1.2 billion, compared to $1.0 billion during 2017. Cash flows provided by operating activities during 2018 were primarily the result of certain adjustments to reconcile our net income of $268.9 million to net cash provided by operating activities, including:

- an increase in reserve for claims and claim expenses of $995.9 million as a result of claims and claims expenses incurred of $2.6 billion during 2018 principally driven by the 2018 Large Loss Events, partially offset by claims payments of $1.6 billion primarily associated with the 2017 Large Loss Events;

- an increase in reinsurance balances payable of $913.0 million principally driven by the issuance of non-voting preference shares to investors in Upsilon RFO, following capital being deployed in the vehicle, which are accounted for as prospective reinsurance and included in reinsurance balances payable on our consolidated balance sheet. See “Note 10. Variable Interest Entities” for additional information related to Upsilon RFO’s non-voting preference shares;
- an increase in unearned premiums of $238.4 million due to the timing of renewals and the increase in gross premiums written in 2018, compared to 2017; partially offset by
- an increase in reinsurance recoverable of $785.6 million primarily resulting from the increase in net claims and claim expenses principally driven by the 2018 Large Loss Events, noted above, as we continue to execute our gross-to-net strategy;
- a decrease in other operating cash flows of $223.3 million primarily associated with movements in subscriptions received in advance associated with the issuance of Upsilon RFO’s non-voting preference shares effective January 1, 2019 and 2018. See “Note 10. Variable Interest Entities” and “Note. 23 Subsequent Events” in our Notes to the Consolidated Financial Statements for additional information related to Upsilon RFO’s non-voting preference shares;
- increases in premiums receivable and deferred acquisition costs of $232.6 million and $50.1 million, respectively, due to the timing of payments of our gross premiums written and amortization of deferred acquisition costs, respectively;
- net realized and unrealized losses on investments of $175.1 million principally related to our fixed maturity investments portfolio which experienced an upward shift in the interest rate yield curve and a widening of credit spreads during 2018, and our equity investments trading portfolio which was impacted by lower returns on certain of our larger equity positions during 2018; and
- an increase of $82.6 million in our prepaid reinsurance premiums due to ceded premiums written associated renewals in 2018.

Cash flows used in investing activities. During 2018, our cash flows used in investing activities were $2.5 billion, principally reflecting net purchases of short term, fixed maturity and other investments of $1.4 billion, $904.4 million and $199.5 million, respectively. The net purchase of short term and fixed maturity investments was funded in part by the capital received from investors in Upsilon RFO and Vermeer, and the proceeds from the issuance of our 5.750% Series F Preference Shares and the issuance of $250.0 million of our common shares to State Farm, each as discussed below. In addition, we increased our allocation to other investments during 2018.

Cash flows provided by financing activities. Our cash flows provided by financing activities in 2018 were $1.1 billion, and were principally the result of:

- net inflows of $665.7 million related to a net contribution of capital from third-party shareholders, primarily related to the creation of Vermeer, which was initially capitalized with $600.0 million of participating, non-voting common shares;
- net inflows of $241.4 million associated with the issuance of $250.0 million of Depositary Shares (each representing a 1/1000th interest in a share of our 5.750% Series F Preference Shares), net of expenses;
- net inflows of $250.0 million associated with the issuance of 1,947,496 of our common shares to State Farm; partially offset by
- dividends paid on our common and preference shares of $52.8 million and $30.1 million, respectively.

2017

During 2017, our cash and cash equivalents increased $940.4 million, to $1.4 billion at December 31, 2017, compared to $421.2 million at December 31, 2016.

Cash flows provided by operating activities. Cash flows provided by operating activities during 2017 were $1.0 billion, compared to cash flows provided by operating activities of $484.8 million during 2016. Cash

flows provided by operating activities during 2017 were primarily the result of certain adjustments to reconcile our net loss of $354.7 million to net cash provided by operating activities, including:

- an increase in our reserve for claims and claim expenses of $2.2 billion as a result of claims and claims expenses incurred of $3.4 billion, partially offset by claims payments of $1.2 billion, each largely driven by the 2017 Large Loss Events;
- a corresponding increase of $1.3 billion in our reinsurance recoverable given the increase in net claims and claim expenses noted above and recoverables associated with the 2017 Large Loss Events;
- an increase in other operating cash flows of $518.1 million primarily reflecting $602.4 million of subscriptions received in advance of the issuance of Upsilon RFO’s non-voting preference shares effective January 1, 2018, which were recorded in other liabilities at December 31, 2017. See “Note 10. Variable Interest Entities” for additional information related to Upsilon RFO;
- an increase in unearned premiums of $246.0 million due to the timing of renewals and a $315.1 million increase in reinsurance balances payable due to the timing of payments of our premiums ceded;
- decreases in premiums receivable and deferred acquisition costs of $317.3 million and $91.2 million, respectively, due to the timing of payments of our gross premiums written and amortization of deferred acquisition costs, respectively; and
- an decrease of $92.3 million in our prepaid reinsurance premiums due to ceded premiums written associated renewals in 2017.

Cash flows used in investing activities. During 2017, our cash flows used in investing activities were $122.4 million, principally reflecting net purchases of fixed maturity investments of $602.9 million, partially offset by net sales of short term investments and equity investments trading of $364.0 million and $115.8 million, respectively.

Cash flows provided by financing activities. Our cash flows provided by financing activities in 2017 were $28.9 million, and were principally the result of:

- net inflows of $295.9 million associated with the issuance of $300.0 million of our 3.450% Senior Notes due July 1, 2027, net of underwriting discount;
- net inflows of $260.5 million related to net capital contributions from third-party shareholders, principally in DaVinciRe and Medici; partially offset by
- the repayment in full at maturity of the aggregate principal amount of $250.0 million of our Series B 7.50% Senior Notes due 2017 assumed in connection with the acquisition of Platinum and originally issued by Platinum Underwriters Finance, Inc.;
- the settlement of $188.6 million of common share repurchases; and
- dividends paid on our common and preferred shares of $51.4 million and $22.4 million, respectively.

Capital Resources

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

Table of Contents

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

(in thousands)	At December 31, 2018	At December 31, 2017	Change
Common shareholders' equity	$4,395,080	$3,991,375	$403,705
Preference shares	650,000	400,000	250,000
Total shareholders' equity attributable to RenaissanceRe	5,045,080	4,391,375	653,705
3.450% Senior Notes due 2027	295,797	295,303	494
3.700% Senior Notes due 2025	297,688	297,318	370
5.750% Senior Notes due 2020	249,602	249,272	330
4.750% Senior Notes due 2025 (DaVinciRe) (1)	148,040	147,730	310
RenaissanceRe revolving credit facility – unborrowed	500,000	250,000	250,000
Total debt	1,491,127	1,239,623	251,504
Total shareholders' equity attributable to RenaissanceRe and debt	$6,536,207	$5,630,998	$905,209

(1) RenaissanceRe owns a noncontrolling economic interest in its joint venture DaVinciRe. Because RenaissanceRe controls a majority of DaVinciRe's outstanding voting rights, the consolidated financial statements of DaVinciRe are included in the consolidated financial statements of RenaissanceRe. However, RenaissanceRe does not guarantee or provide credit support for DaVinciRe and RenaissanceRe's financial exposure to DaVinciRe is limited to its investment in DaVinciRe's shares and counterparty credit risk arising from reinsurance transactions.

During 2018, our total shareholders' equity attributable to RenaissanceRe and debt increased by $905.2 million, to $6.5 billion.

Our shareholders' equity attributable to RenaissanceRe increased $653.7 million during 2018 principally as a result of:

- our comprehensive income attributable to RenaissanceRe of $225.7 million;
- raising $250.0 million from the issuance of 10,000,000 Depositary Shares (each representing a 1/1,000th interest in a share of our 5.750% Series F Preference Shares);
- raising $250.0 million from the issuance of 1,947,496 of our common shares in connection with the State Farm Stock Purchase; and partially offset by
- $52.8 million and $30.1 million of dividends on our common and preference shares, respectively.

Credit Facilities

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

At December 31, 2018	Issued or Drawn
(in thousands)	
RenaissanceRe Revolving Credit Facility (1)	$—
Uncommitted Standby Letter of Credit Facility with Wells Fargo	86,861
Bilateral Letter of Credit Facility with Citibank Europe	243,696
Renaissance Reinsurance FAL Facility	180,000
Total credit facilities in U.S. dollars	$510,557
Specialty Risks FAL Facility (1)	—
Total credit facilities in pound sterling	£—

(1) At December 31, 2018, no amounts were issued or drawn under these facilities.

Refer to “Note 8. Debt and Credit Facilities in our Notes to the Consolidated Financial Statements” for additional information related to our debt and credit facilities and “Note 11. Shareholders’ Equity in our

Table of Contents

Notes to the Consolidated Financial Statements" for additional information related to our common and preference shares.

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

Refer to "Note 17. Statutory Requirements in our Notes to the Consolidated Financial Statements" for additional information related to our multi-beneficiary reinsurance trusts and multi-beneficiary reduced collateral reinsurance trust.

Redeemable Noncontrolling Interest – DaVinciRe

Refer to "Note 9. Noncontrolling Interests in our Notes to the Consolidated Financial Statements" for additional information related to redeemable noncontrolling interest - DaVinciRe.

Impact of TMR Stock Purchase on Liquidity and Capital Resources

The TMR Stock Purchase is expected to close in the first half of 2019, subject to the closing conditions set forth in the TMR Stock Purchase Agreement, including receipt of required regulatory approvals. There can be no assurance that the TMR Stock Purchase will occur.

The aggregate consideration for the transaction is expected to be approximately $1.4 billion, comprised of cash consideration, a pre-closing dividend and the issuance of common shares, each in an amount to be determined as set forth in the TMR Stock Purchase Agreement. We anticipate funding the cash consideration to be paid by RenaissanceRe from available cash resources and the liquidation of certain of our fixed maturity investments trading.

We incurred $3.4 million of corporate expenses associated with the TMR Stock Purchase in 2018 and expect to incur additional costs and expenses associated with the TMR Stock Purchase in 2019. These additional one-time costs may be significant, and it is possible that our ultimate costs will exceed our current estimates.

Following the close of the transaction, we anticipate that our operating subsidiaries will have adequate capital resources and sufficient cash flows to meet their expected claims payments and operational expenses and to provide dividend payments to RenaissanceRe and that we will have adequate capital resources, or access to capital resources, to meet our obligations, including dividend payments to our common and preferred shareholders, interest payments on our senior notes and other liabilities, as they come due.

See "Note 20. Acquisition of Tokio Millennium Re" for additional information regarding the TMR Stock Purchase.

Ratings

Financial strength ratings are an important factor in evaluating and establishing the competitive position of reinsurance and insurance companies. We have received high claims-paying and financial strength ratings from A.M. Best, S&P, Moody's and Fitch. These ratings represent independent opinions of an insurer's financial strength, operating performance and ability to meet policyholder obligations, and are not an evaluation directed toward the protection of investors or a recommendation to buy, sell or hold any of our securities. Rating organizations continually review the financial positions of our principal operating subsidiaries and joint ventures and ratings may be revised or revoked by the agencies which issue them.

The financial strength ratings of our principal operating subsidiaries and joint ventures and the ERM ratings of RenaissanceRe as of February 4, 2019 are presented below.

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

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

(2) The A.M. Best, S&P and Fitch ratings for the Lloyd's Overall Market Rating represent Syndicate 1458's financial strength rating.

(3) The A.M. Best rating for RenaissanceRe refers to the ERM A.M. Best score within A.M. Best's credit ratings methodology. The S&P rating for RenaissanceRe represents the rating on its ERM practices.

A.M. Best. On March 1, 2018, A.M. Best upgraded the financial strength ratings of Renaissance Reinsurance U.S. and RenaissanceRe Specialty U.S. to “A+” from “A”. The outlook for these ratings is stable. A.M. Best also affirmed the financial strength ratings of Renaissance Reinsurance and Renaissance Reinsurance of Europe and revised the outlooks for these ratings to stable from negative and affirmed the financial strength rating of DaVinci with a stable outlook. On November 2, 2018, subsequent to the announcement of the TMR Stock Purchase, A.M. Best placed the financial strength ratings of Renaissance Reinsurance, DaVinci, Renaissance Reinsurance U.S., RenaissanceRe Specialty U.S. and Renaissance Reinsurance of Europe under review with developing implications pending completion of the TMR Stock Purchase. In addition, on December 18, 2018, A.M. Best assigned a financial strength rating of A to Vermeer. “A+” is the second highest designation of A.M. Best's rating levels. “A+” rated insurance companies are defined as “Superior” companies and are considered by A.M. Best to have a very strong ability to meet their obligations to policyholders. “A” is the third highest designation assigned by A.M. Best, representing A.M. Best's opinion that the insurer has an “Excellent” ability to meet its ongoing obligations to policyholders.

S&P. On February 28, 2018, S&P lowered the financial strength ratings of Renaissance Reinsurance, DaVinci, Renaissance Reinsurance of Europe, Renaissance Reinsurance U.S. and RenaissanceRe Specialty U.S to “A+” with a stable outlook from “AA-“ with a negative outlook. S&P attributed the downgrade to negative market pressures despite the Company's strong market position. On October 31, 2018, following the announcement of the TMR Stock Purchase, S&P affirmed these financial strength ratings, but put the ratings on negative outlook reflecting risks associated with the transaction. The “A” range (“A+”,”A”, “A-“), which is the third highest rating assigned by S&P, indicates that S&P believes the insurers have strong capacity to meet their respective financial commitments but they are somewhat more susceptible to adverse effects or changes in circumstances and economic conditions than insurers rated higher.

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

Table of Contents

Moody's. Moody's Insurance Financial Strength Ratings represent its opinions of the ability of insurance companies to pay punctually policyholder claims and obligations and senior unsecured debt instruments. On July 25, 2018, Moody's affirmed its insurance financial strength rating of "A1" for RenaissanceRe and on August 7, 2018, Moody's affirmed its insurance financial strength rating of "A3" for DaVinci, each with a stable outlook. Moody's believes that insurance companies rated "A1" and "A3" offer good financial security.

Fitch. Fitch's issuer financial strength ratings provide an assessment of the financial strength of an insurance organization. On November 1, 2018, Fitch affirmed its insurer financial strength rating of Renaissance Reinsurance at "A+", with a stable outlook. Fitch believes that insurance companies rated "A+" have "Strong" capacity to meet policyholders and contract obligations on a timely basis with a low expectation of ceased or interrupted payments. Insurers rated "AA-" by Fitch are believed to have a very low expectation of ceased or interrupted payments and very strong capital to meet policyholder obligations.

Lloyd's Overall Market Rating

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

Reserve for Claims and Claim Expenses

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

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

Table of Contents

Investments

The table below shows our invested assets:

At December 31,	2018		2017		Change
(in thousands, except percentages)					
U.S. treasuries	$3,331,411	28.0 %	$3,168,763	33.3 %	$162,648
Agencies	174,883	1.5 %	47,646	0.5 %	127,237
Municipal	6,854	0.1 %	509,802	5.4 %	(502,948)
Non-U.S. government	279,818	2.4 %	287,660	3.0 %	(7,842)
Non-U.S. government-backed corporate	160,063	1.3 %	163,651	1.7 %	(3,588)
Corporate	2,450,244	20.6 %	2,063,459	21.7 %	386,785
Agency mortgage-backed	817,880	6.8 %	500,456	5.3 %	317,424
Non-agency mortgage-backed	278,680	2.4 %	300,331	3.1 %	(21,651)
Commercial mortgage-backed	282,294	2.4 %	202,062	2.1 %	80,232
Asset-backed	306,743	2.6 %	182,725	2.0 %	124,018
Total fixed maturity investments, at fair value	8,088,870	68.1 %	7,426,555	78.1 %	662,315
Short term investments, at fair value	2,586,520	21.8 %	991,863	10.4 %	1,594,657
Equity investments trading, at fair value	310,252	2.6 %	388,254	4.1 %	(78,002)
Other investments, at fair value	784,933	6.5 %	594,793	6.3 %	190,140
Total managed investment portfolio	11,770,575	99.0 %	9,401,465	98.9 %	2,369,110
Investments in other ventures, under equity method	115,172	1.0 %	101,974	1.1 %	13,198
Total investments	$11,885,747	100.0%	$9,503,439	100.0%	$2,382,308

At December 31, 2018, we held investments totaling $11.9 billion, compared to $9.5 billion at December 31, 2017. Our investment guidelines stress preservation of capital, market liquidity, and diversification of risk. Notwithstanding the foregoing, our investments are subject to market-wide risks and fluctuations, as well as to risks inherent in particular securities. In addition to the information presented above and below, refer to “Note 4. Investments and Note 5. Fair Value Measurements in our Notes to the Consolidated Financial Statements” for additional information regarding our investments and the fair value measurement of our investments, respectively.

As the reinsurance coverages we sell include substantial protection for damages resulting from natural and man-made catastrophes, as well as for potentially large casualty and specialty exposures, we expect from time to time to become liable for substantial claim payments on short notice. Accordingly, our investment portfolio as a whole is structured to seek to preserve capital and provide a high level of liquidity, which means that the large majority of our investment portfolio consists of highly rated fixed income securities, including U.S. treasuries, agencies, municipals, highly rated sovereign and supranational securities, high-grade corporate securities and mortgage-backed and asset-backed securities. During the second quarter of 2018, we reduced our allocation to municipal fixed maturity investments and invested the proceeds in certain other sectors of fixed maturity and short term investments that we believe will provide a higher net after-tax yield to maturity, however, we cannot assure you of this. We also have an allocation to publicly traded equities reflected on our consolidated balance sheet as equity investments trading and an allocation to other investments (including catastrophe bonds, private equity investments, senior secured bank loan funds and hedge funds). At December 31, 2018, our portfolio of equity investments trading totaled $310.3 million, or 2.6%, of our total investments (2017 - $388.3 million or 4.1%). Our portfolio of other investments totaled $784.9 million, or 6.5%, of our total investments (2017 - $594.8 million or 6.3%).

Table of Contents

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

					Credit Rating (1)				
December 31, 2018	Amortized Cost	Fair Value	% of Total Investment Portfolio	Weighted Average Yield to Maturity	AAA	AA	A	BBB	Non- Inves Grade
(in thousands, except percentages)									
Short term investments	$2,586,520	$2,586,520	21.8 %	2.1%	$2,579,900	$2,541	$553	$1,511	$751
		100.0 %			99.8 %	0.1 %	— %	0.1 %	—
Fixed maturity investments									
U.S. treasuries	3,336,969	3,331,411	28.0 %	2.5%	—	3,331,411	—	—	—
Agencies	175,185	174,883	1.5 %	3.0%	—	174,883	—	—	—
Municipal	6,070	6,854	0.1 %	4.8%	—	1,044	4,546	504	—
Non-U.S. government	284,965	279,818	2.4 %	2.7%	207,103	61,233	8,216	—	3,266
Non-U.S. government-backed corporate	160,286	160,063	1.3 %	2.8%	55,843	49,635	54,188	397	—
Corporate	2,513,434	2,450,244	20.6 %	4.9%	41,668	197,653	854,801	607,745	719,4
Agency mortgage-backed	825,365	817,880	6.8 %	3.5%	262	817,618	—	—	—
Non-agency mortgage-backed	266,705	278,680	2.4 %	4.7%	18,521	12,485	3,890	11,216	177,9
Commercial mortgage-backed	284,495	282,294	2.4 %	3.6%	214,161	57,704	895	9,534	—
Asset-backed	310,488	306,743	2.6 %	4.3%	232,199	41,641	1,669	29,429	—
Total fixed maturity investments	8,163,962	8,088,870	68.1 %	3.5%	769,757	4,745,307	928,205	658,825	900,6
		100.0 %			9.5 %	58.7 %	11.5 %	8.1 %	11.1
Equity investments trading		310,252	2.6 %		—	—	—	—	—
		100.0 %			— %	— %	— %	— %	—
Other investments									
Catastrophe bonds		516,571	4.3 %		—	—	—	—	516,5
Private equity investments		242,647	2.0 %		—	—	—	—	—
Senior secured bank loan funds		14,482	0.1 %		—	—	—	—	—

Hedge funds	11,233	0.1 %	—	—	—	—	—
Total other investments	784,933	6.5 %	—	—	—	—	516,5
	100.0 %		— %	— %	— %	— %	65.8
Investments in other ventures	115,172	1.0 %	—	—	—	—	—
	100.0 %		— %	— %	— %	— %	—
Total investment portfolio	$11,885,747	100.0%	$3,349,657	$4,747,848	$928,758	$660,336	$1,41
	100.0 %		28.2 %	39.9 %	7.8 %	5.6 %	11.9

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

Fixed Maturity Investments and Short Term Investments

At December 31, 2018, our fixed maturity investments and short term investment portfolio had a dollar-weighted average credit quality rating of AA (2017 – AA-) and a weighted average effective yield of 3.2% (2017 – 2.5%). At December 31, 2018, our non-investment grade and not rated fixed maturity investments totaled $1.0 billion or 12.2% of our fixed maturity investments (2017 - $1.0 billion or 13.5%, respectively). In addition, within our other investments category we have funds that invest in non-investment grade and not

101

rated fixed income securities and non-investment grade cat-linked securities. At December 31, 2018, the funds that invest in non-investment grade and not rated fixed income securities and non-investment grade cat-linked securities totaled $531.1 million (2017 – $398.0 million).

At December 31, 2018, we had $2.6 billion of short term investments (2017 – $1.0 billion). Short term investments are managed as part of our investment portfolio and have a maturity of one year or less when purchased. Short term investments are carried at fair value. The increase in our allocation to short term investments at December 31, 2018, compared to December 31, 2017, is principally driven by the additional invested assets in certain of our third-party vehicles that limits investment allocation to shorter term securities.

The duration of our fixed maturity investments and short term investments at December 31, 2018 was 2.1 years (2017 - 2.5 years). From time to time, we may reevaluate the duration of our portfolio in light of the duration of our liabilities and market conditions. The shorter duration of our fixed maturity investments and short term investments at December 31, 2018, compared to December 31, 2017, is principally the result of the increase in the allocation to short term investments noted above.

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

- Changes in the overall interest rate environment can expose us to “prepayment risk” on our mortgage-backed investments. When interest rates decline, consumers will generally make prepayments on their mortgages and, as a result, our investments in mortgage-backed securities will be repaid to us more quickly than we might have originally anticipated. When we receive these prepayments, our opportunities to reinvest these proceeds back into the investment markets will likely be at reduced interest rates. Conversely, when interest rates increase, consumers will generally make fewer prepayments on their mortgages and, as a result, our investments in mortgage-backed securities will be repaid to us less quickly than we might have originally anticipated. This will increase the duration of our portfolio, which is disadvantageous to us in a rising interest rate environment.
- Our investments in certain tax-exempt municipal fixed income securities are subject to the risk that the U.S. Government could limit or materially alter the current tax exemption on these securities and future new issuances. While the potential reduction or loss of such tax exemption would likely lead to increased yields on newly issued municipal fixed income securities in the long term, we would also expect to see a decrease in the fair value of our municipal fixed income securities portfolio in the short term.
- Our investments in mortgage-backed securities are also subject to default risk. This risk is due in part to defaults on the underlying securitized mortgages, which would decrease the fair value of the investment and be disadvantageous to us. Similar risks apply to other asset-backed securities in which we may invest from time to time.
- Our investments in debt securities of other corporations are exposed to losses from insolvencies of these corporations, and our investment portfolio can also deteriorate based on reduced credit quality of these corporations. We are also exposed to the impact of widening credit spreads even if specific securities are not downgraded.
- Our investments in asset-backed securities are subject to prepayment risks, as noted above, and to the structural risks of these securities. The structural risks primarily emanate from the priority of each security in the issuer’s overall capital structure. We are also exposed to the impact of widening credit spreads.
- Within our other investments category, we have funds that invest in non-investment grade fixed income securities as well as securities denominated in foreign currencies. These investments expose us to losses from insolvencies and other credit-related issues and also to widening of credit spreads. We are also exposed to fluctuations in foreign exchange rates that may result in realized losses to us if our exposures are not hedged or if our hedging strategies are not effective.

Table of Contents

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

At December 31, 2018 (in thousands)			
Issuer	Total	Short term investments	Fixed maturity investments
JP Morgan Chase & Co.	$61,983	$ —	$ 61,983
Goldman Sachs Group Inc.	53,330	—	53,330
Bank of America Corp.	51,889	—	51,889
Morgan Stanley	48,966	—	48,966
Wells Fargo & Co.	36,443	—	36,443
HSBC Holdings PLC	32,551	—	32,551
Banco Santander, S.A.	27,701	—	27,701
Citigroup Inc.	27,190	—	27,190
UBS Group AG	26,177	—	26,177
Barclays P.L.C	24,694	—	24,694
Total (1)	$390,924	$ —	$ 390,924

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

Equity Investments Trading

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

At December 31,	2018	2017	Change
(in thousands)			
Financials	$200,357	$253,543	$(53,186)
Communications and technology	42,333	49,526	(7,193)
Industrial, utilities and energy	24,520	34,325	(9,805)
Consumer	20,639	24,779	(4,140)
Healthcare	18,925	21,364	(2,439)
Basic materials	3,478	4,717	(1,239)
Total	$310,252	$388,254	$(78,002)

We have a diversified public equity securities mandate with a third party investment manager which currently comprises a portion of our investments included in equity investments trading. In addition, we can also strategically invest in certain more concentrated public equity positions internally, primarily through our ventures business unit. It is possible our equity allocation will increase in the future, and it could, from time to time, have a material effect on our financial results for the reasonably foreseeable future.

Table of Contents

Other Investments

The table below shows our portfolio of other investments:

At December 31,	2018	2017	Change
(in thousands)			
Catastrophe bonds	$516,571	$380,475	$136,096
Private equity investments	242,647	196,220	46,427
Senior secured bank loan funds	14,482	17,574	(3,092)
Hedge funds	11,233	524	10,709
Total other investments	$784,933	$594,793	$190,140

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

Some of our fund managers and fund administrators are unable to provide final fund valuations as of our current reporting date. We typically experience a reporting lag to receive a final net asset value report of one month for our hedge funds and senior secured bank loan funds and three months for private equity investments, although we have occasionally experienced delays of up to six months at year end, as the private equity investments typically complete their year-end audits before releasing their final net asset value statements.

In circumstances where there is a reporting lag between the current period end reporting date and the reporting date of the latest fund valuation, we estimate the fair value of these funds by starting with the prior month or quarter-end fund valuations, adjusting these valuations for actual capital calls, redemptions or distributions, and the impact of changes in foreign currency exchange rates, and then estimating the return for the current period. In circumstances in which we estimate the return for the current period, all information available to us is utilized. This principally includes using preliminary estimates reported to us by our fund managers, obtaining the valuation of underlying portfolio investments where such underlying investments are publicly traded and therefore have a readily observable price, using information that is available to us with respect to the underlying investments, reviewing various indices for similar investments or asset classes, and estimating returns based on the results of similar types of investments for which we have obtained reported results, or other valuation methods, where possible. Actual final fund valuations may differ, perhaps materially so, from our estimates and these differences are recorded in our consolidated statement of operations in the period in which they are reported to us, as a change in estimate. Included in net investment income for 2018 is income of $0.3 million (2017 - income of $1.9 million) representing the change in estimate during the period related to the difference between our estimated net investment income due to the lag in reporting discussed above and the actual amount as reported in the final net asset values provided by our fund managers.

Our estimate of the fair value of catastrophe bonds is based on quoted market prices, or when such prices are not available, by reference to broker or underwriter bid indications. Refer to “Note 5. Fair Value Measurements” in our “Notes to the Consolidated Financial Statements” for additional information regarding the fair value of measurement of our investments.

We have committed capital to private equity investments, other investments and investments in other ventures of $1.2 billion, of which $686.4 million has been contributed at December 31, 2018. Our remaining commitments to these investments at December 31, 2018 totaled $470.8 million. In the future, we may enter into additional commitments in respect of private equity investments or individual portfolio company investment opportunities.

Table of Contents

Investments in Other Ventures, under Equity Method

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

At December 31,	2018				2017			
(in thousands, except percentages)	Investment	Ownership %		Carrying Value	Investment	Ownership %		Carrying Value
Total Tower Hill Companies	64,750	24.9	%	38,241	64,750	26.3	%	42,167
Top Layer Re	65,375	50.0	%	46,562	65,375	50.0	%	50,211
Other	35,862	30.6	%	30,369	13,650	40.4	%	9,596
Total investments in other ventures, under equity method	$165,987			$115,172	$143,775			$101,974

Except for Top Layer Re, the equity in earnings of the Tower Hill Companies and our other category of investments in other ventures are reported one quarter in arrears. The carrying value of our investments in other ventures, under equity method, individually or in the aggregate may, and likely will, differ from the realized value we may ultimately attain, perhaps significantly so.

Effects of Inflation

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

Off-Balance Sheet and Special Purpose Entity Arrangements

At December 31, 2018, we had not entered into any off-balance sheet arrangements, as defined in Item 303(a)(4) of Regulation S-K.

Table of Contents

Contractual Obligations

In the normal course of our business, we are a party to a variety of contractual obligations and these are considered by us when assessing our liquidity requirements. In certain circumstances, our contractual obligations may be accelerated due to defaults under the agreements governing those obligations (including pursuant to cross-default provisions in such agreements) or in connection with certain changes in control of the Company, for example. In addition, in certain circumstances, in the event of a default these obligations may bear an increased interest rate or be subject to penalties. The table below shows our contractual obligations:

At December 31, 2018	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
(in thousands)					
Long term debt obligations (1)					
3.450% Senior Notes due 2027	$387,965	$10,350	$20,700	$20,700	$336,215
3.700% Senior Notes due 2025	369,364	11,100	22,200	22,200	313,864
5.750% Senior Notes due 2020	267,293	14,375	252,918	—	—
4.750% Senior Notes due 2025 (DaVinciRe) (1)	195,714	7,125	14,250	14,250	160,089
Total long term debt obligations	1,220,336	42,950	310,068	57,150	810,168
Private equity and investment commitments (2)	470,754	470,754	—	—	—
Operating lease obligations	23,418	7,137	10,228	5,755	298
Capital lease obligations	28,959	3,331	6,672	6,166	12,790
Payable for investments purchased	380,332	380,332	—	—	—
Reserve for claims and claim expenses (3)	6,076,271	1,762,119	1,883,644	1,032,966	1,397,542
Total contractual obligations (4)	$8,200,070	$2,666,623	$2,210,612	$1,102,037	$2,220,798

(1) Includes contractual interest payments.

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

(3) Because of the nature of the coverages we provide, the amount and timing of the cash flows associated with our policy liabilities will fluctuate, perhaps significantly, and therefore are highly uncertain. We have based our estimates of future claim payments on available relevant sources of loss and allocated loss adjustment expense development data and benchmark industry payment patterns. These benchmarks are revised periodically as new trends emerge. We believe that it is likely that this benchmark data will not be predictive of our future claim payments and that material fluctuations can occur due to the nature of the losses which we insure and the coverages which we provide.

(4) In connection with the TMR Stock Purchase, we expect certain of the obligations to increase as we will consolidate the TMR Group Entities' assets and liabilities, including the TMR Group Entities' claim and claim expense reserves.

CURRENT OUTLOOK

Property Exposed Market Developments

In 2018, the insurance and reinsurance markets were impacted by large loss events including Typhoons Jebi, Mangkut and Trami, Hurricanes Florence and Michael in the U.S., wildfires in the state of California, and numerous other events around the world. We currently estimate that these events gave rise to more than $80 billion of industry-wide insured losses. These significant 2018 events follow a number of significant natural disasters in 2017, including Hurricanes Harvey, Irma and Maria, the Mexico City Earthquake in the third quarter of 2017, and the wildfires in many areas of California. Given the nature and breadth of these events, the associated losses have affected an unusually large number of regions, and, accordingly, insureds, reinsurance lines and reinsurers. In addition, the ultimate scale of the losses, loss estimation, length of payout periods, social inflation risk and other factors continue to be uncertain for these loss events, both for the individual events and in the aggregate. In addition, in 2018 the insurance industry experienced significant ongoing adverse development on the 2017 Large Loss Events, most notably

Hurricane Irma. We estimate that, by itself, the industry's 2018 adverse development on Hurricane Irma would have been one of the largest events of 2018 on an insured loss basis.

Partly as a result of the 2017 Large Loss Events and the subsequent overall adverse development from them, industry conditions improved broadly in the 2018 renewal season, albeit at the lower end of our expectations, facilitating growth in existing operations and presenting opportunities to deploy additional third party capital. Broadly, the January 2019 renewal season was generally stable, at the lower end of reported market expectations in light of the significant loss activity. Generally, loss affected programs and lines have seen the most improvement in terms and conditions, but other property-exposed coverages have also exhibited beneficial changes, particularly retrocessional coverages. We believe it is possible that the 2018 Large Loss Events may contribute to overall market dynamics that could continue to sustain the modestly positive rate impacts that were seen following the 2017 Large Loss Events, or could forestall negative trends. Moreover, both the large loss events and other market dynamics helped drive demand for complex, holistic product coverages, for which we believe we have competitive advantages. However, at this time we cannot know with certainty whether any such positive developments will transpire or be sustained, or the degree to which we will continue to benefit from them.

We expect that over time reinsurance demand for many coverages and solutions will continue to lag the pace of growth in available capital and we believe we are well positioned to benefit from these developments as shown, for example, in our efforts to optimize our gross-to-net portfolio. However, we believe it is possible that in 2019 capital supply from alternative capital providers may not, for the first time in some time, continue to grow. In any case, over the medium and longer term, we anticipate the market will be characterized by an ample supply of capital, including third party capital, notwithstanding the significant impacts of the 2017 Large Loss Events and 2018 Large Loss Events.

Furthermore, cedants in many of the key markets we serve are large and increasingly sophisticated. They may be able to manage large and growing retentions, access risk transfer capital in expanding forms, and may seek to focus their reinsurance relationships on a core group of well-capitalized, highly-rated reinsurers who can provide a complete product suite as well as value-added service. While we believe we are well positioned to compete for business we find attractive, these dynamics may limit the degree to which the market sustains favorable improvements in the near-term or continue to introduce or exacerbate long-term challenges in our markets.

Casualty and Specialty Exposed Market Developments

The markets in which our Casualty and Specialty segment operate generally experienced favorable rate trends and stable terms and conditions in 2018. While we have mostly observed favorable conditions for accounts that exhibited elevated loss emergence or underlying rate deterioration, we estimate that the favorable market trends have extended more broadly. We continue to expect casualty insurance and reinsurance capacity to remain generally abundant during 2019, and estimate that, overall, the casualty and specialty market was relatively stable at the January 2019 renewal. In the near term, we believe that current pricing trends exhibited during the year are likely to continue, with terms and conditions for loss-affected lines of business, such as the liability exposures impacted by the California wildfires, continuing to show moderate improvement and certain other areas of the casualty and specialty market potentially maintaining less pronounced but positive adjustments. Moreover, we believe that pockets of casualty and specialty lines may provide attractive opportunities for stronger or well-positioned reinsurers and that, given our strong ratings, expanded product offerings, and increased U.S. market presence, we are well positioned to compete for business that we find attractive, such as the large, bespoke coverages we have structured and provided for the California wildfire liability market. We plan to continue to seek unique or differentiated opportunities to provide coverage on large programs open only to us or select markets. However, these opportunities arise sporadically, and we cannot assure that we will retain these programs or obtain new programs of this nature in the future.

Relatedly, specific renewal terms vary widely by insured account and our ability to shape our portfolio to improve its estimated risk and return characteristics is subject to a range of competitive and commercial factors. We cannot assure you that these positive dynamics will be sustained, or that we will participate fully in improving terms. We intend to seek to maintain strong underwriting discipline and, in light of prevailing market conditions, cannot provide assurance that we will succeed in growing or maintaining our current combined in-force book of business.

Table of Contents

General Economic Conditions

Underlying economic conditions in several of the key markets we serve remained generally stable or improved in 2018, with our core markets, including the U.S., experiencing economic growth amidst moderate increases in prevailing interest rates. This economic growth contributes positively to demand for our coverages and services, particularly in jurisdictions with high insurance penetration and the potential for risk concentration.

We continue to believe that meaningful risk remains for political and economic uncertainty, economic weakness or adverse disruptions in general economic and financial market conditions. Moreover, any future economic growth may be at a comparatively suppressed rate for a relatively extended period of time. Declining or weak economic conditions could reduce demand for the products sold by us or our customers, impact the risk-adjusted attractiveness and absolute returns and yields of our investment portfolio, or weaken our overall ability to write business at risk-adequate rates. Persistent low levels of economic activity could also adversely impact other areas of our financial performance, by contributing to unforeseen premium adjustments, mid-term policy cancellations or commutations or asset devaluation, among other things. In addition, it is possible that increasing uncertainties related to cross-border trade will diminish economic growth for specific sectors which drive the insurance market disproportionately. Our specialty and casualty reinsurance and Lloyd’s portfolios in particular could be exposed to risks arising from economic weakness or dislocations, including with respect to a potential increase of claims in directors and officers, errors and omissions, surety, casualty clash and other lines of business. In addition, we believe our consolidated credit risk, reflecting our counterparty dealings with customers, agents, brokers, retrocessionaires, capital providers and parties associated with our investment portfolio, among others, is likely to be higher during a period of economic weakness. Any of the foregoing or other outcomes of a period of economic weakness could adversely impact our financial position or results of operations.

The sustained environment of low interest rates in recent years lowered the yields at which we invest our assets relative to longer-term historical levels. More recently, we have seen increases in interest rates, and as we invest cash from new premiums written or reinvest the proceeds of invested assets that mature or that we choose to sell, the yield on our portfolio may be favorably impacted by the increasing interest rate environment. However, such an increase in prevailing interest rates could contribute to higher realized and unrealized losses associated with our currently invested assets in the near term. While it is possible yields will improve in future periods, we are unable to predict with certainty when conditions will substantially improve, or the pace of any such improvement.

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

Legislative and Regulatory Update

The Tax Bill was signed into law on December 22, 2017. The Tax Bill amends a range of U.S. federal tax rules applicable to individuals, businesses and international taxation, including, among other things, altering the current taxation of insurance premiums ceded from a United States domestic corporation to any non-U.S. affiliate. The Tax Bill and future regulatory actions pertaining to it could adversely impact the insurance and reinsurance industry and our own results of operations by increasing taxation of certain activities and structures in our industry. We are unable to predict all of the ultimate impacts of the Tax Bill and other proposed tax reform regulations and legislation on our business and results of operations. While we continue to estimate that the near term economic impact of the Tax Bill to us will be minimal, uncertainty regarding the impact of the Tax Bill remains, as a result of factors including future regulatory and rulemaking processes, the prospects of additional corrective or supplemental legislation, potential trade or other litigation and other factors. Further, it is possible that other legislation could be introduced and enacted in the future that would have an adverse impact on us.

In prior Congressional sessions, Congress has considered a range of potential legislation which would, if enacted, provide for matters such as the creation of (i) a federal reinsurance catastrophe fund; (ii) a federal consortium to facilitate qualifying state residual markets and catastrophe funds in securing reinsurance; and (iii) a federal bond guarantee program for state catastrophe funds in qualifying state residual markets. In April 2016, H.R.4947, the Natural Disaster Reinsurance Act of 2016, which would create a federal

reinsurance program to cover any losses insured or reinsured by eligible state programs arising from natural catastrophes, including losses from floods, earthquakes, tropical storms, tornadoes, volcanic eruption and winter storms, was introduced. If enacted, this bill, or legislation similar to any of these proposals, would, we believe, likely contribute to the growth of state entities offering below-market priced insurance and reinsurance in a manner adverse to us and market participants more generally. Such legislation could also encourage cessation, or even reversal, of reforms and stabilization initiatives that have been enacted in the state of Florida and other catastrophe-exposed states in recent years. While we believe such legislation will continue to be vigorously opposed, if adopted these bills would likely diminish the role of private market catastrophe reinsurers and could adversely impact our financial results, perhaps materially.

In June 2012, Congress passed the Biggert-Waters Bill, which provided for a five-year renewal of the National Flood Insurance Program (the "NFIP") and, among other things, authorized the Federal Emergency Management Agency ("FEMA") to carry out initiatives to determine the capacity of private insurers, reinsurers, and financial markets to assume a greater portion of the flood risk exposure in the U.S., and to assess the capacity of the private reinsurance market to assume some of the program's risk. Commencing in January 2017, FEMA has, acting under authority contemplated by the Biggert-Waters Bill, secured annual reinsurance protection for the NFIP. Most recently, in January 2018, FEMA announced that it had renewed its reinsurance program to provide for $1.32 billion of protection in respect of 2019, covering 14% of NFIP's losses between $4 billion and $6 billion, 25.6% of its losses between $6 billion and $8 billion, and 26.6% of its losses between $8 billion and $10 billion. In addition, NFIP has procured an additional $500 million of private market protection via the FloodSmart Re $500 million Series 2018-1 Notes. It is possible this program will continue and potentially expand in future periods and may encourage other U.S. federal programs to explore private market risk transfer initiatives; however, we cannot assure you that any such developments will in fact occur, or that if they do transpire we will succeed in participating.

The statutory authorization for the operation and continuation of the NFIP has expired and received a series of short term extensions. Most recently, in December 2018, NFIP's authorization was extended to May 31, 2019. Legislative language under consideration in the House of Representatives would clarify that flood insurance provided by private firms satisfies the requirement that homeowners maintain flood coverage on mortgaged properties that are backed by a federal guarantee and located in a flood zone. In January 2019, the Federal Deposit Insurance Corp. and Office of the Comptroller of the Currency issued rules requiring lenders to accept private flood insurance policies that have coverage at least as comprehensive as that offered by NFIP, and providing a framework to evaluate alternative flood coverage. Congress is also considering legislative language that would direct FEMA to consider policy holders who discontinue an NFIP policy and then later return to the NFIP as having continuous coverage if they can demonstrate that a flood insurance policy from a private firm was maintained throughout the interim period. To the extent these laws, rules and regulations are adopted and enforced, they could incrementally contribute to the growth of private residential flood opportunities and the financial stabilization of the NFIP. However, reauthorization of the NFIP remains subject to meaningful uncertainty; and whether a successful reauthorization would continue market-enhancing reforms is significantly uncertain. Accordingly, we cannot assure you that legislation to reform the NFIP will indeed be enacted or that the private market for residential flood protection will be enhanced if it is.

In recent years, market conditions for insurance in the state of Florida have been significantly impacted by the increasingly prevalent utilization of a practice referred to as "assignment of benefits," or "AOB". We currently estimate that the impacts of AOB will contribute adversely to the ultimate economic losses borne by the insurance market in light of recent large Florida loss events, including Hurricane Michael, perhaps significantly. An AOB is an instrument executed by a primary policyholder that is deemed to permit certain third parties, such as water extraction companies, roofers, or plumbers, to "stand in the shoes" of the insured and seek direct payments from the policyholder's insurance company. According to the Florida Office of Insurance Regulation (the "OIR"), while there were 405 AOB lawsuits relating to water and glass matters across Florida in 2006, that number rose to 36,601 in 2017 and 34,289 in 2018.

Moreover, according to the OIR, claims with an AOB have a much higher degree of severity than claims without one. For example, in 2018 the OIR estimated that between 2015 and 2017, the frequency of water claims rose by 44% and the severity of water claims rose by 18%. Similarly, litigation data submitted to the Florida Department of Financial Services show that the number of AOB lawsuits filed against all Florida property insurers rose from 4,613 in 2013 to 17,421 in 2018, a 270% increase.

Table of Contents

While we cannot precisely estimate the adverse impact AOB practices will have in respect of the large losses in 2017 and 2018, we do believe that usage of AOBs contributes significantly to loss trends in Florida. Accordingly, these ongoing challenges relating to abuse of AOB has impacted our own risk selection criteria with respect to Florida exposures, reducing the number of programs we believe are submitted at attractive risk-adjusted terms. We actively review our underwriting criteria, and expect that, in the absence of reform, these trends may further affect our decisions in respect of allocating capital to Florida. While both private companies and the OIR are exploring non-statutory means to mitigate these issues, legislative reforms proposed over the last several years have not been enacted. We believe that a continuation of these trends will likely weaken or potentially impair primary insurance companies, reduce both demand for and availability of reinsurance and discourage the strengthening of the private insurance market that we believe had otherwise been evident in Florida. Such trends would adversely impact the Florida market and many of the companies we seek to serve.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

We are principally exposed to four types of market risk: interest rate risk; foreign currency risk; credit risk; and equity price risk. Our policies to address these risks in 2018 were not materially different than those used in 2017.

Upon consummation of the TMR Stock Purchase, the TMR Group Entities’ assets and liabilities will be consolidated with RenaissanceRe and subject to our existing policies for addressing the markets risks noted herein. As a result of the potential acquisition of the TMR Group Entities, we anticipate increased exposure to each of these market risks, resulting from an increase in the geographic scope of our operations and in the size of our investment portfolio. We do not currently anticipate significant changes in how those exposures are managed in future reporting periods based upon what is known or expected to be in effect in future reporting periods, including the potential acquisition of the TMR Group Entities.

Our guidelines permit investments in derivative instruments such as futures, forward contracts, options, swap agreements and other derivative contracts which may be used to assume risk or for hedging purposes. Refer to “Note 18. Derivative Instruments in our Notes to the Consolidated Financial Statements” for additional information related to derivatives we have entered into.

Interest Rate Risk

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

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

Table of Contents

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

	Interest Rate Shift in Basis Points				
At December 31, 2018	-100	-50	Base	50	100
(in thousands, except percentages)					
Fair value of fixed maturity and short term investments	$10,877,855	$10,777,893	$10,675,390	$10,571,175	$10,466,211
Net increase (decrease) in fair value	$202,465	$102,503	$—	$(104,215)	$(209,179)
Percentage change in fair value	1.9%	1.0%	—%	(1.0)%	(2.0)%

	Interest Rate Shift in Basis Points				
At December 31, 2017	-100	-50	Base	50	100
(in thousands, except percentages)					
Fair value of fixed maturity and short term investments	$8,630,509	$8,524,138	$8,418,418	$8,313,350	$8,208,934
Net increase (decrease) in fair value	$212,091	$105,720	$—	$(105,068)	$(209,484)
Percentage change in fair value	2.5%	1.3%	—%	(1.2)%	(2.5)%

As noted above, we use derivative instruments, namely interest rate futures and swaps within our portfolio of fixed maturity investments to manage our exposure to interest rate risk, which can include increasing or decreasing our exposure to this risk. At December 31, 2018, we had $1.9 billion of notional long positions and $545.8 million of notional short positions of primarily Eurodollar, U.S. Treasury and non-U.S. dollar futures contracts (2017 - $1.5 billion and $801.1 million, respectively). At December 31, 2018, we had $78.4 million of notional positions paying a fixed rate and $32.1 million receiving a fixed rate denominated in U.S. dollar swap contracts (2017 - $40.3 million and $Nil, respectively). Refer to "Note 18. Derivative Instruments in our Notes to the Consolidated Financial Statements" for additional information related to interest rate futures and swaps entered into by us.

At December 31, 2018, the aggregate hypothetical impact of an immediate upward parallel shift in the treasury yield curve of 100 basis points would be a decrease in the market value of our net position in interest rate futures of approximately $11.3 million and an increase in the market value of our net position in interest rate swaps of approximately $0.1 million. Conversely, at December 31, 2018, the aggregate hypothetical impact of an immediate downward parallel shift in the treasury yield curve of 100 basis points would be an increase in the market value of our net position in interest rate futures of approximately $10.3 million and a decrease in the market value of our net position in interest rate swaps of approximately $0.1 million. The foregoing reflects the use of an immediate time horizon, since this presents the worst-case scenario. Credit spreads are assumed to remain constant in these hypothetical examples.

Foreign Currency Risk

Our functional currency is the U.S. dollar. We routinely write a portion of our business in currencies other than U.S. dollars and may, from time to time, experience foreign exchange gains and losses in our consolidated financial statements. All changes in exchange rates, with the exception of non-monetary assets and liabilities, are recognized in our consolidated statements of operations. We are primarily

111

Table of Contents

impacted by the foreign currency risk exposures noted below, and may, from time to time, enter into foreign currency forward and option contracts to minimize the effect of fluctuating foreign currencies on the value of non-U.S. dollar denominated assets and liabilities. Refer to "Note 18. Derivative Instruments in our Notes to the Consolidated Financial Statements" for additional information related to foreign currency forward and option contracts we have entered into. We may determine to not match a portion of our projected liabilities in foreign currencies with investments in the same currencies, which would increase our exposure to foreign currency fluctuations and increase the volatility of our results of operations.

Underwriting Operations

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

Investment Portfolio

Our investment operations are exposed to currency fluctuations through our investments in non-U.S. dollar fixed maturity investments, short term investments and other investments. To economically hedge our exposure to currency fluctuations from these investments, we have entered into foreign currency forward contracts. In certain instances, we may assume foreign exchange risk as part of our investment strategy. Unrealized foreign exchange gains or losses arising from non-U.S. dollar investments classified as available for sale are recorded in accumulated other comprehensive income. Realized and unrealized foreign exchange gains or losses from the sale of our non-U.S. dollar fixed maturity investments trading and other investments, and foreign exchange gains or losses associated with our hedging of these non-U.S. dollar investments are recorded in net foreign exchange (losses) gains in our consolidated statements of operations. In the future, we may choose to increase our exposure to non-U.S. dollar investments.

The following tables summarize the principal currencies creating foreign exchange risk for us and our net foreign currency exposures and the impact of a hypothetical 10% change in our net foreign currency exposure, keeping all other variables constant, as of the dates indicated:

At December 31, 2018	AUD	CAD	EUR	GBP	JPY	NZD	Other	Total
(in thousands, except for percentages)								
Net assets denominated in foreign currencies	$(7,428)	$57,425	$190,573	$(94,769)	$(233,041)	$(15,495)	$(36,968)	$(139,703)
Net foreign currency derivatives notional amounts	(2,360)	(54,656)	(136,404)	98,195	163,909	16,413	10,030	95,127
Total net foreign currency exposure	$(9,788)	$2,769	$54,169	$3,426	$(69,132)	$918	$(26,938)	$(44,576)

Net foreign currency exposure as a percentage of total shareholders' equity attributable to RenaissanceRe	(0.2)%	0.1 %	1.1 %	0.1 %	(1.4)%	— %	(0.5)%	(0.9)%
Impact of a hypothetical 10% change in total net foreign currency exposure	$979	$(277)	$(5,417)	$(343)	$6,913	$(92)	$2,694	$4,458

112

At December 31, 2017 (in thousands, except for percentages)	AUD	CAD	EUR	GBP	JPY	NZD	Other	Total
Net assets denominated in foreign currencies	$(5,519)	$50,546	$(62,778)	$(61,928)	$(16,762)	$(24,114)	$(8,266)	$(128,821)
Net foreign currency derivatives notional amounts	(1,577)	(32,792)	94,981	75,226	24,468	22,749	(382)	182,673
Total net foreign currency exposure	$(7,096)	$17,754	$32,203	$13,298	$7,706	$(1,365)	$(8,648)	$53,852
Net foreign currency exposure as a percentage of total shareholders' equity attributable to RenaissanceRe	(0.2)%	0.4 %	0.7 %	0.3 %	0.2 %	— %	(0.2)%	1.2 %
Impact of a hypothetical 10% change in total net foreign currency exposure	$710	$(1,775)	$(3,220)	$(1,330)	$(771)	$137	$865	$(5,385)

Credit Risk

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

Fixed Maturity Investments and Short Term Investments

Credit risk related to our fixed maturity investments and short term investments is the exposure to adverse changes in the creditworthiness of individual investment holdings, issuers, groups of issuers, industries and countries. We manage credit risk in our fixed maturity investments and short term investments through the credit research performed primarily by the investment management service providers and our evaluation of these investment managers adherence to investment mandates provided to them. The management of credit risk in the investment portfolio is integrated in our credit risk management governance framework and the management of credit exposures and concentrations within the investment portfolio are carried out in accordance with our risk policies, limits and risk concentrations as overseen by the Investment and Risk Management Committee of our Board of Directors. In the investment portfolio, we review on a regular basis our asset concentration, credit quality and adherence to credit limit guidelines. At December 31, 2018, our fixed maturity investments and short term investment portfolio had a dollar-weighted average credit quality rating of AA (2017 - AA-). In addition, we limit the amount of credit exposure to any one financial institution and, except for U.S. Government securities and money market securities, none of our investments exceeded 10% of shareholders’ equity at December 31, 2018.

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

At December 31,	2018	2017
AAA	31.4 %	20.2 %
AA	44.5 %	51.9 %
A	8.7 %	9.7 %
BBB	6.2 %	6.2 %
Non-investment grade	8.4 %	11.4 %
Not rated	0.8 %	0.6 %
Total	100.0 %	100.0 %

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

	Credit Spread Shift in Basis Points				
At December 31, 2018	-100	-50	Base	50	100
(in thousands, except percentages)					
Fair value of fixed income and short term investments	$10,804,654	$10,750,213	$10,675,390	$10,589,321	$10,503,252
Net increase (decrease) in fair value	$129,264	$74,823	$—	$(86,069)	$(172,138)
Percentage change in fair value	1.2 %	0.7 %	— %	(0.8)%	(1.6)%

	Credit Spread Shift in Basis Points				
At December 31, 2017	-100	-50	Base	50	100
(in thousands, except percentages)					
Fair value of fixed income and short term investments	$8,511,410	$8,476,539	$8,418,418	$8,344,261	$8,270,104
Net increase (decrease) in fair value	$92,992	$58,121	$—	$(74,157)	$(148,314)
Percentage change in fair value	1.1 %	0.7 %	— %	(0.9)%	(1.8)%

We also employ credit derivatives in our investment portfolio to either assume credit risk or hedge our credit exposure. At December 31, 2018, we had outstanding credit derivatives of $1.0 million in notional long positions (short credit) and $126.2 million in notional short positions (long credit), denominated in U.S. dollars (2017 - $1.0 million and $18.8 million, respectively). Refer to "Note 18. Derivative Instruments in our Notes to the Consolidated Financial Statements" for additional information related to credit derivatives

entered into by us. The aggregate hypothetical market value impact from an immediate upward shift in credit spreads of 100 basis points would cause a decrease in the market value of our net position in these derivatives of approximately $5.5 million at December 31, 2018. Conversely, the aggregate hypothetical market value impact from an immediate downward shift in credit spreads of 100 basis points would cause an increase in the market value of our net position in these derivatives of approximately $5.0 million at December 31, 2018. For an immediate downward shift in credit spreads, we do not allow credit spreads to go negative in calculating the impact. The foregoing reflects the use of an immediate time horizon, since this presents the worst-case scenario.

Premiums Receivable and Reinsurance Recoverable

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

Equity Price Risk

Equity price risk is the potential loss arising from changes in the market value of equities. As detailed in the table below, we are directly exposed to this risk through our investment in equity investments trading which are traded on nationally recognized stock exchanges; and indirectly exposed to this risk through our investments in: (1) private equity investments whose exit strategies often depend on the equity markets; (2) certain hedge funds that have net long equity positions; and (3) other ventures, under equity method. We may use equity derivatives in our investment portfolio to either assume equity risk or hedge our equity exposure. The following table summarizes a hypothetical 10% increase and decline in the carrying value of our equity investments trading, private equity investments, hedge funds and investments in other ventures, under equity method, holding all other factors constant, at the dates indicated:

At December 31,	2018	2017
(in thousands, except for percentages)		
Equity investments trading, at fair value	$310,252	$388,254
Private equity investments, at fair value	242,647	196,220
Investments in other ventures, under equity method	115,172	101,974
Hedge funds, at fair value	11,233	524
Total carrying value of investments exposed to equity price risk	$679,304	$686,972
Impact of a hypothetical 10% increase in the carrying value of investments exposed to equity price risk	$67,930	$68,697
Impact of a hypothetical 10% decrease in the carrying value of investments exposed to equity price risk	$(67,930)	$(68,697)

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(b) and 15d-15(b) of the Exchange Act, as of the end of the period covered by this report. Based upon that evaluation, our management, including our Chief Executive Officer and Chief Financial Officer, concluded that, at December 31, 2018, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in Company reports filed or submitted under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control Over Financial Reporting

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

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

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

Management, with the participation of the Chief Executive Officer and Chief Financial Officer, assessed our internal control over financial reporting as of December 31, 2018 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013). Based on this assessment, management concluded that RenaissanceRe's internal control over financial reporting was effective as of December 31, 2018.

Ernst & Young Ltd., the independent registered public accountants who audited our consolidated financial statements included in this Form 10-K, audited our internal control over financial reporting as of December 31, 2018 and their attestation report on our internal control over financial reporting appears below.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2018, which were identified in connection with our evaluation required pursuant to Rules 13a-15 or 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Table of Contents

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
To the Shareholders and the Board of Directors of RenaissanceRe Holdings Ltd.
Opinion on Internal Control over Financial Reporting
We have audited RenaissanceRe Holdings Ltd. and Subsidiaries' internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, RenaissanceRe Holdings Ltd. and Subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of RenaissanceRe Holdings Ltd. and Subsidiaries as of December 31, 2018 and 2017, and the related consolidated statements of operations, comprehensive (loss) income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018 and the related notes of the Company and our report dated February 7, 2019 expressed an unqualified opinion thereon.
Basis for Opinion
The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.
We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.
Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.
Definition and Limitations of Internal Control Over Financial Reporting
A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young Ltd.
Hamilton, Bermuda

February 7, 2019

117

Table of Contents

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item relating to our directors, executive officers and corporate governance is incorporated herein by reference to information found in our Proxy Statement for the Annual General Meeting of Shareholders to be held on May 14, 2019 (our “Proxy Statement”). We intend to file our Proxy Statement no later than 120 days after the close of the fiscal year.

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

ITEM 11. EXECUTIVE COMPENSATION

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

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

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

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

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

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

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

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Financial Statements

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

Financial Statement Schedules

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

Table of Contents

Exhibit Index

Exhibit Number	Description
2.1	Stock Purchase Agreement, dated as of October 30, 2018, by and among Tokio Marine & Nichido Fire Insurance Co., Ltd., Tokio Marine Holdings, Inc., and RenaissanceRe Holdings Ltd., including the exhibits thereto. (42)
3.1	Memorandum of Association. (P) (1)
3.2	Amended and Restated Bye-Laws. (2)
3.3	Memorandum of Increase in Share Capital of RenaissanceRe Holdings Ltd. (3)
3.4	Specimen Common Share certificate. (P) (1)
4.1	Certificate of Designation, Preferences and Rights of 6.08% Series C Preference Shares. (4)
4.2	Certificate of Designation, Preferences and Rights of 5.375% Series E Preference Shares. (5)
4.2(a)	Form of Stock Certificate Evidencing the 5.375% Series E Preference Shares. (5)
4.3	Certificate of Designation, Preferences and Rights of 5.750% Series F Preference Shares. (41)
4.3(a)	Form of Stock Certificate Evidencing the 5.750% Series F Preference Shares. (41)
4.3(b)	Deposit Agreement, dated June 18, 2018, among RenaissanceRe Holdings Ltd., Computershare, Inc. and Computershare Trust Company, N.A. (41)
4.3(c)	Form of Depositary Receipt. (41)
4.4	Senior Indenture, dated as of March 17, 2010, among RenRe North America Holdings Inc., as issuer, RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Companies America, as trustee. (6)
4.4(a)	First Supplemental Indenture, dated as of March 17, 2010, among RenRe North America Holdings Inc., as issuer, RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Companies America, as trustee. (6)
4.4(b)	Senior Debt Securities Guarantee Agreement, dated as of March 17, 2010, between RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Companies America, as guarantee trustee. (6)
4.4(c)	Waiver Agreement, dated as of January 21, 2011, by and among RenRe North America Holdings Inc., RenaissanceRe Holdings Ltd. and Deutsche Bank Trust Company Americas, as trustee. (7)
4.4(d)	Second Supplemental Indenture, dated as of July 3, 2015, among RenRe North America Holdings, Inc., as issuer, RenaissanceRe Holdings Ltd., as guarantor, RenaissanceRe Finance Inc., as co-obligor, and Deutsche Bank Trust Companies America, as trustee. (25)
4.5	Senior Indenture, dated as of March 24, 2015, among RenaissanceRe Finance Inc., as issuer, RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Company Americas, as trustee. (23)
4.5(a)	First Supplemental Indenture, dated as of March 24, 2015, among RenaissanceRe Finance Inc., as issuer, RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Company Americas, as trustee. (23)
4.5(b)	Senior Debt Securities Guarantee Agreement, dated as of March 24, 2015, between RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Company Americas, as guarantee trustee. (23)
4.6	Senior Indenture, dated as of June 29, 2017, among RenaissanceRe Finance Inc., as issuer, RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Company Americas, as trustee. (36)
4.6(a)	First Supplemental Indenture, dated as of June 29, 2017, among RenaissanceRe Finance Inc., as issuer, RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Company Americas, as trustee. (36)

4.6(b)	Senior Debt Securities Guarantee Agreement, dated as of June 29, 2017, between RenaissanceRe Holdings Ltd., as guarantor, and Deutsche Bank Trust Company Americas, as guarantee trustee. (36)
10.1*	Further Amended and Restated Employment Agreement, dated as of July 22, 2016, by and between RenaissanceRe Holdings Ltd. and Kevin J. O'Donnell. (29)
10.2*	Legacy Form of Further Amended and Restated Employment Agreement for Named Executive Officers (other than our Chief Executive Officer). (29)**
10.3*	Form of Employment Agreement for Named Executive Officers (other than our Chief Executive Officer). (29)***
10.4*	Letter agreement, dated July 6, 2016, between Ian Branagan and RenaissanceRe Holdings Ltd. regarding secondment to the U.K. (29)
10.5*	Letter agreement, dated April 11, 2013, between Ian Branagan and RenaissanceRe Holdings Ltd. regarding secondment to the U.K. (29)
10.6*	RenaissanceRe Holdings Ltd. 2016 Long-Term Incentive Plan. (39)
10.6(a)*	Form of Director Restricted Stock Agreement under the RenaissanceRe Holdings Ltd. 2016 Long-Term Incentive Plan. (29)
10.6(b)*	Form of Restricted Stock Agreement under the RenaissanceRe Holdings Ltd. 2016 Long-Term Incentive Plan. (29)
10.6(c)*	Form of Performance Share Agreement under the RenaissanceRe Holdings Ltd. 2016 Long-Term Incentive Plan (for awards made in 2016). (38)
10.6(d)*	Form of Performance Share Agreement under the RenaissanceRe Holdings Ltd. 2016 Long-Term Incentive Plan (for awards made in 2017 and March 2018). (34)
10.6(e)*	Form of Performance Share Agreement under the RenaissanceRe Holdings Ltd. 2016 Long-Term Incentive Plan (for awards made in May 2018 and later). (40)
10.7	RenaissanceRe Holdings Ltd. Deferred Cash Award Plan. (37)
10.7(a)	Form of Deferred Cash Award Agreement pursuant to which Deferred Cash Awards are granted under the RenaissanceRe Holdings Ltd. Deferred Cash Award Plan. (37)
10.8*	RenaissanceRe Holdings Ltd. 2016 Restricted Stock Unit Plan. (40)
10.8(a)*	Form of Restricted Stock Unit Agreement pursuant to which restricted stock unit grants are made under the RenaissanceRe Holdings Ltd. 2016 Restricted Stock Unit Plan. (31)
10.9*	RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (15)
10.9(a)*	Amendment No. 1 to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (16)
10.9(b)*	Amendment No. 2 to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (16)
10.9(c)*	Amendment No. 3 to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (8)
10.9(d)*	Amendment No. 4 to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (13)
10.9(e)*	Amendment No. 5 to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (17)
10.9(f)*	Amendment No. 6 to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (11)
10.9(g)*	UK Schedule to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (8)
10.9(h)*	UK Sub-Plan to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (8)
10.9(i)*	Form of Option Grant Notice and Agreement pursuant to which option grants were made under the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (18)
10.9(j)*	Form of Restricted Stock Grant Notice and Agreement pursuant to which restricted stock grants were made under the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (18)
10.9(k)*	Form of Performance-Based Restricted Stock Grant Notice and Agreement pursuant to which performance-based restricted stock grants were made under the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan. (28)

10.10*	RenaissanceRe Holdings Ltd. 2010 Restricted Stock Unit Plan. (14)
10.10(a)*	Form of Restricted Stock Unit Agreement, pursuant to which restricted stock unit grants were made under the RenaissanceRe Holdings Ltd. 2010 Restricted Stock Unit Plan. (14)

120

Table of Contents

10.11*	RenaissanceRe Holdings Ltd. 2010 Performance-Based Equity Incentive Plan. (13)
10.11(a)*	Amendment No. 1 to the RenaissanceRe Holdings Ltd. 2010 Performance-Based Equity Incentive Plan. (22)
10.11(d)*	Form of Performance-Based Restricted Stock Grant Notice and Agreement pursuant to which performance-based restricted stock awards were made under the RenaissanceRe Holdings Ltd. 2010 Performance-Based Equity Incentive Plan. (22)
10.12*	Form of Tax Reimbursement Waiver Letter with the Named Executive Officers. (19)
10.13*	Form of Agreement Regarding Use of Aircraft Interest by and between RenaissanceRe Holdings Ltd. and Certain Executive Officers of RenaissanceRe Holdings Ltd. (12)
10.14*	Form of Director Retention Agreement, dated as of November 8, 2002, entered into by each of the non-employee directors of RenaissanceRe Holdings Ltd. (20)
10.15*	Form of Director Shares Grant Notice and Agreement pursuant to which restricted stock grants were made to non-employee directors on March 1, 2016. (29)
10.16	Standby Letter of Credit Agreement, dated as of December 23, 2014, by and among Renaissance Reinsurance Ltd., RenaissanceRe Specialty Risks Ltd., DaVinci Reinsurance Ltd., RenaissanceRe Holdings Ltd., as Guarantor, and Wells Fargo Bank, National Association. (21)
10.16(a)	First Amendment to Standby Letter of Credit Agreement, dated as of May 15, 2015, by and among Platinum Underwriters Bermuda, Ltd., Renaissance Reinsurance U.S. Inc., Renaissance Reinsurance Ltd., RenaissanceRe Specialty Risks Ltd., DaVinci Reinsurance Ltd., RenaissanceRe Holdings Ltd., as Guarantor, and Wells Fargo Bank, National Association. (24)
10.17	Facility Letter, dated September 17, 2010, from Citibank Europe PLC to Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd. and Glencoe Insurance Ltd. (9)
10.17(a)	Insurance Letters of Credit - Master Agreement, dated September 17, 2010, between Renaissance Reinsurance Ltd. and Citibank Europe PLC. DaVinci Reinsurance Ltd., Glencoe Insurance Ltd., Renaissance Reinsurance of Europe, Renaissance Specialty U.S. Ltd., Platinum Underwriters Bermuda, Ltd. and Renaissance Reinsurance U.S. Inc. each entered into an agreement with Citibank Europe PLC that is identical to the foregoing agreement, except with respect to party names and dates. (9)
10.17(b)	Amendment to Facility Letter, dated July 14, 2011, by and among Citibank Europe plc, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd and Glencoe Insurance Ltd.
10.17(c)	Amendment to Facility Letter, dated October 1, 2013, by and among Citibank Europe PLC, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd., RenaissanceRe Specialty Risks Ltd., Renaissance Reinsurance of Europe and RenaissanceRe Specialty U.S. Ltd. (10)
10.17(d)	Amendment to Facility Letter, dated December 23, 2014, by and among Citibank Europe PLC, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd., RenaissanceRe Specialty Risks Ltd., Renaissance Reinsurance of Europe and RenaissanceRe Specialty U.S. Ltd. (28)
10.17(e)	Amendment to Facility Letter, dated March 31, 2015, by and among Citibank Europe PLC, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd., RenaissanceRe Specialty Risks Ltd., Renaissance Reinsurance of Europe, RenaissanceRe Specialty U.S. Ltd., Platinum Underwriters Bermuda, Ltd. and Platinum Underwriters Reinsurance, Inc. (28)
10.17(f)	Amendment to Facility Letter, dated December 30, 2015, by and among Citibank Europe PLC, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd., RenaissanceRe Specialty Risks Ltd., Renaissance Reinsurance of Europe, RenaissanceRe Specialty U.S. Ltd., Platinum Underwriters Bermuda, Ltd. and Renaissance Reinsurance U.S. Inc. (27)
10.17(g)	Amendment to Facility Letter, dated January 14, 2016, by and among Citibank Europe PLC, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd., RenaissanceRe Specialty Risks Ltd., Renaissance Reinsurance of Europe, RenaissanceRe Specialty U.S. Ltd., Platinum Underwriters

	Bermuda, Ltd. and Renaissance Reinsurance U.S. Inc. (28)
10.17(h)	Termination of Master Agreements, Control Agreements and Pledge Agreements, dated October 1, 2016, between Renaissance Reinsurance Ltd. and Citibank Europe PLC. (30)

121

10.17(i)	Amendment to Facility Letter, dated December 31, 2016, by and among Citibank Europe plc, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd., Renaissance Reinsurance of Europe, RenaissanceRe Specialty U.S. Ltd. and Renaissance Reinsurance U.S. Inc. (33)
10.17(j)	Amendment to Facility Letter, dated December 29, 2017, by and among Citibank Europe plc, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd., Renaissance Reinsurance of Europe Unlimited Company, RenaissanceRe Specialty U.S. Ltd. and Renaissance Reinsurance U.S. Inc. (38)
10.17(k)	Amendment to Facility Letter, dated December 29, 2017, by and among Citibank Europe plc, Renaissance Reinsurance Ltd., DaVinci Reinsurance Ltd., Renaissance Reinsurance of Europe Unlimited Company, RenaissanceRe Specialty U.S. Ltd. and Renaissance Reinsurance U.S. Inc. (45)
10.18	Master Reimbursement Agreement, dated as of November 24, 2014, by and between RenaissanceRe Specialty Risks Ltd. and Citibank Europe PLC. (22)
10.18(a)	Pledge Agreement, dated as of November 24, 2014 by and among RenaissanceRe Specialty Risks Ltd. and Citibank Europe PLC. (22)
10.18(b)	Omnibus Amendment Agreement, dated October 1, 2016, between Renaissance Reinsurance Ltd., Citibank Europe PLC and Bank of New York Mellon. (30)
10.18(c)	First Amendment to Pledge Agreement, dated as of November 22, 2016, between Citibank Europe plc and Renaissance Reinsurance Ltd.
10.19	Letter of Credit Reimbursement Agreement, dated as of November 23, 2015, by and among Renaissance Reinsurance Ltd., as Borrower, various lenders, Bank of Montreal, as Documentation Agent, Citibank Europe plc, as Collateral Agent, and ING Bank N.V., London Branch, as Letter of Credit Agent. (26)
10.19(a)	First Amendment to Letter of Credit Reimbursement Agreement, dated as of December 10, 2015, among Renaissance Reinsurance Ltd., as Borrower, various lenders party to the Letter of Credit Reimbursement Agreement dated as of November 23, 2015, Bank of Montreal, as Documentation Agent, Citibank Europe PLC, as Collateral Agent, and ING Bank N.V., London Branch, as Letter of Credit Agent. (14)
10.19(b)	Second Amendment to Letter of Credit Reimbursement Agreement, dated as of May 20, 2016, among Renaissance Reinsurance Ltd., as Borrower, various lenders party to the Letter of Credit Reimbursement Agreement, dated as of November 23, 2015, Bank of Montreal, as Documentation Agent, Citibank Europe plc, as Collateral Agent, and ING Bank N.V., London Branch, as Letter of Credit Agent. (29)
10.19(c)	Third Amendment to Letter of Credit Reimbursement Agreement, dated as of November 8, 2016, by and among Renaissance Reinsurance Ltd., various lenders party to the Letter of Credit Reimbursement Agreement, dated as of November 23, 2015, Bank of Montreal, as Documentation Agent, Citibank Europe plc, as Collateral Agent, and ING Bank N.V., London Branch, as Letter of Credit Agent. (31)
10.19(d)	Fourth Amendment to Letter of Credit Reimbursement Agreement, dated as of May 25, 2017, by and among Renaissance Reinsurance Ltd., various lenders party to the Letter of Credit Reimbursement Agreement, dated as of November 23, 2015, Bank of Montreal, as Documentation Agent, Citibank Europe plc, as Collateral Agent, and ING Bank N.V., London Branch, as Letter of Credit Agent. (35)
10.19(e)	Fifth Amendment to Letter of Credit Reimbursement Agreement dated as of November 8, 2017 by and among Renaissance Reinsurance Ltd. , various lenders party to the Letter of Credit Reimbursement Agreement, dated as of November 23, 2015, Bank of Montreal, as Documentation Agent, Citibank Europe plc, as Collateral Agent, and ING Bank N.V., London Branch, as Letter of Credit Agent. (37)
10.19(f)	Sixth Amendment to Letter of Credit Reimbursement Agreement, dated as of November 5, 2018, by and among Renaissance Reinsurance Ltd. and each of Bank of Montreal, as documentation agent, Bank of Montreal, London Branch, as a lender, Citibank Europe plc, as a lender and as collateral agent, and ING Bank N.V., London Branch, as a lender and as letter of credit agent. (43)

Table of Contents

10.20	Second Amended and Restated Credit Agreement, dated as of November 9, 2018, by and among RenaissanceRe Holdings Ltd., Renaissance Reinsurance Ltd., RenaissanceRe Specialty U.S. Ltd., Renaissance Reinsurance U.S. Inc., various banks and financial institutions parties thereto, and Wells Fargo Bank, National Association, as Fronting Bank, LC Administrator and Administrative Agent for the Lenders. (44)
10.20(a)	Guaranty Agreement, dated as of November 9, 2018, by and among RenRe North America Holdings Inc., RenaissanceRe Finance Inc. and Wells Fargo Bank, National Association, as Administrative Agent. (44)
10.21	Waiver, dated as of November 15, 2016, by and between RenaissanceRe Holdings Ltd. and BlackRock, Inc. (32)
10.22	Waiver, dated as of May 11, 2018, by and between RenaissanceRe Holdings Ltd. and The Vanguard Group, Inc. (40)
10.23	Investment Agreement, dated as of October 30, 2018, by and between RenaissanceRe Holdings Ltd. And State Farm Mutual Automobile Insurance Company, including the exhibits thereto. (42)
10.24	Registration Rights Agreement, dated October 30, 2018, by and between RenaissanceRe Holdings Ltd. and Tokio Marine & Nichido Fire Insurance Co. Ltd. (42)
10.25	Registration Rights Agreement, dated October 30, 2018, by and between RenaissanceRe Holdings Ltd. and State Farm Mutual Automobile Insurance Co. Ltd. (42)
21.1	List of Subsidiaries of the Registrant.
23.1	Consent of Ernst & Young Ltd.
31.1	Certification of Kevin J. O'Donnell, Chief Executive Officer of RenaissanceRe Holdings Ltd., pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended.
31.2	Certification of Robert Qutub, Chief Financial Officer of RenaissanceRe Holdings Ltd., pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended.
32.1	Certification of Kevin J. O'Donnell, Chief Executive Officer of RenaissanceRe Holdings Ltd., pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Robert Qutub, Chief Financial Officer of RenaissanceRe Holdings Ltd., pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

* Represents management contract or compensatory plan or arrangement.

** Applicable to Stephen H. Weinstein and Ian D. Branagan.

*** Applicable to Ross A. Curtis and Robert Qutub.

(1) Incorporated by reference to the Registration Statement on Form S-1 of RenaissanceRe Holdings Ltd. (Registration No. 33-70008) which was declared effective by the SEC on July 26, 1995.

(2) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Quarterly Report on Form 10-Q for the period ended June 30, 2002, filed with the SEC on August 14, 2002.

(3) Incorporated by reference to Exhibit 3.1 to RenaissanceRe Holdings Ltd.'s Quarterly Report on Form 10-Q for the period ended March 31, 1998, filed with the SEC on May 14, 1998.

(4) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on March 18, 2004.

(5)

Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on May 28, 2013.

Table of Contents

(6) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on March 18, 2010.

(7) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on January 24, 2011.

(8) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Quarterly Report on Form 10-Q for the period ended March 31, 2009, filed with the SEC on May 1, 2009.

(9) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on September 23, 2010.

(10) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on October 4, 2013.

(11) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Quarterly Report on Form 10-Q for the period ended September 30, 2013, filed with the SEC on November 6, 2013.

(12) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2012, filed with the SEC on February 22, 2013.

(13) Amendment No. 4 to the RenaissanceRe Holdings Ltd. 2001 Stock Incentive Plan is incorporated by reference to Appendix B to RenaissanceRe Holdings Ltd.'s Definitive Proxy Statement filed with the SEC on April 8, 2010. The RenaissanceRe Holdings Ltd. 2010 Performance-Based Equity Incentive Plan is incorporated by reference to Appendix A to RenaissanceRe Holdings Ltd.'s Definitive Proxy Statement filed with the SEC on April 8, 2010.

(14) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2009, filed with the SEC on February 19, 2010.

(15) Incorporated by reference to Exhibit 99.2 to the Registration Statement on Form S-8 (Registration No. 333-90758) dated June 19, 2002.

(16) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Quarterly Report on Form 10-Q for the period ended March 31, 2007, filed with the SEC on May 2, 2007.

(17) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on August 13, 2010.

(18) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Quarterly Report on Form 10-Q, for the period ended September 30, 2004, filed with the SEC on November 9, 2004.

(19) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2011, filed with the SEC on February 23, 2012.

(20) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2002, filed with the SEC on March 31, 2003 (SEC File Number 001-14428).

(21) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on December 30, 2014.

(22) Incorporated by reference to RenaissanceRe Holding Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on February 20, 2015.

(23) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on March 25, 2015.

(24) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on May 21, 2015.

(25) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on July 8, 2015.

(26) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on November 25, 2015.

(27)

Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K, filed with the SEC on December 31, 2015.

(28) Incorporated by reference to RenaissanceRe Holding Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2015, filed with the SEC on February 19, 2016.

124

Table of Contents

(29) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Quarterly Report on Form 10-Q for the period ended June 30, 2016, filed with the SEC on July 27, 2016.
(30) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Quarterly Report on Form 10-Q for the period ended September 30, 2016, filed with the SEC on November 2, 2016.
(31) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K filed with the SEC on November 10, 2016.
(32) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K filed with the SEC on November 18, 2016.
(33) Incorporated by reference to RenaissanceRe Holdings Ltd.'s Current Report on Form 8-K filed with the SEC on January 5, 2017.
(34) Incorporated by reference to RenaissanceRe Holding Ltd's Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on February 23, 2017.
(35) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on May 26, 2017.
(36) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on June 29, 2017.
(37) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on November 13, 2017.
(38) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on January 3, 2018.
(39) Incorporated by reference to RenaissanceRe Holding Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on February 9, 2018.
(40) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on May 16, 2018.
(41) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on June 19, 2018.
(42) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on November 5, 2018.
(43) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on November 9, 2018.
(44) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on November 14, 2018.
(45) Incorporated by reference to RenaissanceRe Holding Ltd.'s Current Report on Form 8-K filed with the SEC on January 3, 2019.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

Table of Contents

SIGNATURES

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

Date:	February 7, 2019	RENAISSANCERE HOLDINGS LTD.
		/s/ Kevin J. O'Donnell
		Kevin J. O'Donnell
		Chief Executive Officer and President

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

Signature	Title	Date
/s/ Kevin J. O'Donnell Kevin J. O'Donnell	Chief Executive Officer, President and Director (Principal Executive Officer)	February 7, 2019
/s/ Robert Qutub Robert Qutub	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 7, 2019
/s/ James C. Fraser James C. Fraser	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 7, 2019
/s/ James L. Gibbons James L. Gibbons	Non-Executive Chair of the Board of Directors	February 7, 2019
/s/ David C. Bushnell David C. Bushnell	Director	February 7, 2019
/s/ Brian G. J. Gray Brian G. J. Gray	Director	February 7, 2019
/s/ Jean D. Hamilton Jean D. Hamilton	Director	February 7, 2019
/s/ Duncan P. Hennes Duncan P. Hennes	Director	February 7, 2019
/s/ Henry Klehm, III	Director	February 7, 2019

Henry Klehm, III		
/s/ Valerie Rahmani Valerie Rahmani	Director	February 7, 2019
/s/ Carol P. Sanders Carol P. Sanders	Director	February 7, 2019
/s/ Anthony M. Santomero Anthony M. Santomero	Director	February 7, 2019
/s/ Edward J. Zore Edward J. Zore	Director	February 7, 2019

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of RenaissanceRe Holdings Ltd. and Subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of operations, comprehensive (loss) income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2018 and 2017, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 7, 2019, expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young Ltd.

We have served as the Company's auditor since 1993.

Hamilton, Bermuda

February 7, 2019

Table of Contents

RenaissanceRe Holdings Ltd. and Subsidiaries
Consolidated Balance Sheets
At December 31, 2018 and 2017
(in thousands of United States Dollars, except share and per share amounts)

	December 31, 2018	December 31, 2017
Assets		
Fixed maturity investments trading, at fair value - amortized cost $8,163,962 at December 31, 2018 (2017 - $7,434,870) (Notes 4 and 5)	$ 8,088,870	$ 7,426,555
Short term investments, at fair value (Notes 4 and 5)	2,586,520	991,863
Equity investments trading, at fair value (Notes 4 and 5)	310,252	388,254
Other investments, at fair value (Notes 4 and 5)	784,933	594,793
Investments in other ventures, under equity method (Note 4)	115,172	101,974
Total investments	11,885,747	9,503,439
Cash and cash equivalents	1,107,922	1,361,592
Premiums receivable	1,537,188	1,304,622
Prepaid reinsurance premiums (Note 6)	616,185	533,546
Reinsurance recoverable (Notes 6 and 7)	2,372,221	1,586,630
Accrued investment income	51,311	42,235
Deferred acquisition costs	476,661	426,551
Receivable for investments sold	256,416	103,145
Other assets	135,127	121,226
Goodwill and other intangible assets (Note 3)	237,418	243,145
Total assets	$ 18,676,196	$ 15,226,131
Liabilities, Noncontrolling Interests and Shareholders' Equity		
Liabilities		
Reserve for claims and claim expenses (Note 7)	$ 6,076,271	$ 5,080,408
Unearned premiums	1,716,021	1,477,609
Debt (Note 8)	991,127	989,623
Reinsurance balances payable	1,902,056	989,090
Payable for investments purchased	380,332	208,749
Other liabilities	513,609	792,771
Total liabilities	11,579,416	9,538,250
Commitments and Contingencies (Note 19)		
Redeemable noncontrolling interests (Note 9)	2,051,700	1,296,506
Shareholders' Equity (Note 11)		
Preference shares: $1.00 par value – 16,010,000 shares issued and outstanding at December 31, 2018 (2017 – 16,000,000)	650,000	400,000
Common shares: $1.00 par value – 42,207,390 shares issued and outstanding at December 31, 2018 (2017 – 40,023,789)	42,207	40,024
Additional paid-in capital	296,099	37,355
Accumulated other comprehensive (loss) income	(1,433)	224
Retained earnings	4,058,207	3,913,772
Total shareholders' equity attributable to RenaissanceRe	5,045,080	4,391,375
Total liabilities, noncontrolling interests and shareholders' equity	$ 18,676,196	$ 15,226,131

See accompanying notes to the consolidated financial statements

Table of Contents

RenaissanceRe Holdings Ltd. and Subsidiaries
Consolidated Statements of Operations
For the years ended December 31, 2018, 2017, and 2016
(in thousands of United States Dollars, except per share amounts)

	2018	2017	2016
Revenues			
Gross premiums written	$3,310,427	$2,797,540	$2,374,576
Net premiums written (Note 6)	$2,131,902	$1,871,325	$1,535,312
Increase in unearned premiums	(155,773)	(153,750)	(131,882)
Net premiums earned (Note 6)	1,976,129	1,717,575	1,403,430
Net investment income (Note 4)	261,866	222,209	181,726
Net foreign exchange (losses) gains	(12,428)	10,628	(13,788)
Equity in earnings of other ventures (Note 4)	18,474	8,030	963
Other income	5,969	9,415	14,178
Net realized and unrealized (losses) gains on investments (Note 4)	(175,069)	135,822	141,328
Total revenues	2,074,941	2,103,679	1,727,837
Expenses			
Net claims and claim expenses incurred (Notes 6 and 7)	1,120,018	1,861,428	530,831
Acquisition expenses	432,989	346,892	289,323
Operational expenses	178,267	160,778	197,749
Corporate expenses	33,983	18,572	37,402
Interest expense (Note 8)	47,069	44,193	42,144
Total expenses	1,812,326	2,431,863	1,097,449
Income (loss) before taxes	262,615	(328,184)	630,388
Income tax benefit (expense) (Note 14)	6,302	(26,487)	(340)
Net income (loss)	268,917	(354,671)	630,048
Net (income) loss attributable to redeemable noncontrolling interests (Note 9)	(41,553)	132,282	(127,086)
Net income (loss) attributable to RenaissanceRe	227,364	(222,389)	502,962
Dividends on preference shares (Note 11)	(30,088)	(22,381)	(22,381)
Net income (loss) available (attributable) to RenaissanceRe common shareholders	$197,276	$(244,770)	$480,581
Net income (loss) available (attributable) to RenaissanceRe common shareholders per common share – basic (Note 12)	$4.91	$(6.15)	$11.50
Net income (loss) available (attributable) to RenaissanceRe common shareholders per common share – diluted (Note 12)	$4.91	$(6.15)	$11.43

See accompanying notes to the consolidated financial statements

RenaissanceRe Holdings Ltd. and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss)
For the years ended December 31, 2018, 2017 and 2016
(in thousands of United States Dollars)

	2018	2017	2016
Comprehensive income (loss)			
Net income (loss)	$268,917	$(354,671)	$630,048
Change in net unrealized (losses) gains on investments	(1,657)	(909)	(975)
Comprehensive income (loss)	267,260	(355,580)	629,073
Net (income) loss attributable to redeemable noncontrolling interests	(41,553)	132,282	(127,086)
Comprehensive (income) loss attributable to redeemable noncontrolling interests	(41,553)	132,282	(127,086)
Comprehensive income (loss) attributable to RenaissanceRe	$225,707	$(223,298)	$501,987
Disclosure regarding net unrealized (losses) gains			
Total net realized and unrealized holding (losses) gains on investments	$(1,657)	$(909)	$403
Net realized losses on fixed maturity investments available for sale	—	—	(1,378)
Change in net unrealized (losses) gains on investments	$(1,657)	$(909)	$(975)

See accompanying notes to the consolidated financial statements

Table of Contents

RenaissanceRe Holdings Ltd. and Subsidiaries
Consolidated Statements of Changes in Shareholders' Equity
For the years ended December 31, 2018, 2017 and 2016
(in thousands of United States Dollars)

	2018	2017	2016
Preference shares			
Balance – January 1	$400,000	$400,000	$400,000
Issuance of shares (Note 11)	250,000	—	—
Balance – December 31	650,000	400,000	400,000
Common shares			
Balance – January 1	40,024	41,187	43,701
Issuance of shares (Note 11)	1,947	—	—
Repurchase of shares	—	(1,322)	(2,741)
Exercise of options and issuance of restricted stock awards (Notes 12 and 16)	236	159	227
Balance – December 31	42,207	40,024	41,187
Additional paid-in capital			
Balance – January 1	37,355	216,558	507,674
Issuance of shares (Note 11)	248,053	—	—
Repurchase of shares	—	(187,269)	(306,693)
Offering expenses	(8,552)	—	—
Change in redeemable noncontrolling interest	837	119	(1,655)
Exercise of options and issuance of restricted stock awards (Notes 12 and 16)	18,406	7,947	17,232
Balance – December 31	296,099	37,355	216,558
Accumulated other comprehensive (loss) income			
Balance – January 1	224	1,133	2,108
Change in net unrealized (losses) gains on investments	(1,657)	(909)	(975)
Balance – December 31	(1,433)	224	1,133
Retained earnings			
Balance – January 1	3,913,772	4,207,699	3,778,701
Cumulative effect of adoption of ASU 2016-09 (Note 2)	—	2,213	—
Net income (loss)	268,917	(354,671)	