Section 1: 10-K (10-K)

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

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
OR
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission file number 001-31721

AXIS CAPITAL HOLDINGS LIMITED
(Exact name of registrant as specified in its charter)

BERMUDA
(State or other jurisdiction of incorporation or organization)
98-0395986
(I.R.S. Employer Identification No.)
92 Pitts Bay Road, Pembroke, Bermuda HM 08
(Address of principal executive offices and zip code)
(441) 496-2600
(Registrant's telephone number, including area code)

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 $0.0125 per share	New York Stock Exchange
5.50% Series D preferred shares	New York Stock Exchange
5.50% Series E preferred shares	New York Stock Exchange

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 Securities Act. Yes ☒ No ☐
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐
Non-accelerated filer ☐ Smaller reporting company ☐
Emerging growth company ☐

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. ☐
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒
The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, computed by reference to the closing price as of the last business day of the registrant's most recently completed second fiscal quarter, June 30, 2018, was approximately $4.6 billion.
As of February 20, 2019, there were outstanding 83,628,651 common shares, $0.0125 par value per share, of the registrant.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A relating to the annual meeting of shareholders to be held on May 2, 2019 are incorporated by reference in response to items 10, 11, 12, 13 and 14 in Part III of this Form 10-K. The definitive proxy statement will be filed with the Securities and Exchange Commission not later than 120 days after the registrant's fiscal year ended December 31, 2018.

AXIS CAPITAL HOLDINGS LIMITED

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Cautionary Statement Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements within the meaning of section 27A of the Securities Act of 1933 and section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical facts included in this report, including statements regarding our estimates, beliefs, expectations, intentions, strategies or projections are "forward-looking statements". We intend these forward-looking statements to be covered by the safe harbor provisions for forward-looking statements in the United States federal securities laws. In some cases, these statements can be identified by the use of forward-looking words such as "may", "should", "could", "anticipate", "estimate", "expect", "plan", "believe", "predict", "potential" and "intend" or similar expressions. These forward-looking statements are not historical facts, and are based on upon current expectations, estimates and projections, and various assumptions, many of which, by their nature, are inherently uncertain and beyond management's control.

Forward-looking statements contained in this report may include, but are not limited to, information regarding our estimates of losses related to catastrophes and other large losses, measurements of potential losses in the fair market value of our investment portfolio and derivative contracts, our expectations regarding the performance of our business, our financial results, our liquidity and capital resources, the outcome of our strategic initiatives, our expectations regarding estimated synergies and the success of the integration of acquired entities, our expectations regarding the estimated benefits and synergies related to the Company's transformation program, our expectations regarding pricing and other market conditions, our growth prospects, and valuations of the potential impact of movements in interest rates, equity securities prices, credit spreads and foreign currency rates.

Forward-looking statements only reflect our expectations and are not guarantees of performance.

These statements involve risks, uncertainties and assumptions. Accordingly, there are or will be important factors that could cause actual results to differ materially from those indicated in such statements. We believe that these factors include, but are not limited to, those described under Item 1A, *'Risk Factors'* in this report, as those factors may be updated from time to time in our periodic filings with the Securities and Exchange Commission (the "SEC"), which are accessible on the SEC's website at *http://www.sec.gov.*

We undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

Website and Social Media Disclosure

We use our website (www.axiscapital.com) and our corporate Twitter (@AXIS_Capital) and LinkedIn (AXIS Capital) accounts as channels of distribution of Company information. The information we post through these channels may be deemed material. Accordingly, investors should monitor these channels, in addition to following our press releases, SEC filings and public conference calls and webcasts. In addition, e-mail alerts and other information about AXIS Capital may be received when enrolled in our "E-mail Alerts" program, which can be found in the Investor Information section of our website (www.axiscapital.com). The contents of our website and social media channels are not, however, a part of this Annual Report on Form 10-K.

PART I

ITEM 1. BUSINESS

In this Form 10-K, references to "AXIS Capital" refer to AXIS Capital Holdings Limited and reference to "we", "us", "our", the "Group" or the "Company" refer to AXIS Capital Holdings Limited and its direct and indirect subsidiaries and branches, including AXIS Specialty Limited ("AXIS Specialty Bermuda"), AXIS Specialty Limited (Singapore Branch), AXIS Specialty Markets Limited, AXIS Managing Agency Ltd., AXIS Corporate Capital U.K. Limited (sole corporate member of AXIS Syndicate 1686 ("Syndicate 1686")), AXIS Ventures Limited ("AXIS Ventures"), AXIS Ventures Reinsurance Limited ("Ventures Re"), AXIS Reinsurance Managers Limited ("AXIS Reinsurance Managers"), AXIS Specialty Europe SE ("AXIS Specialty Europe"), AXIS Specialty Europe SE ("U.K. Branch"), AXIS Re SE (AXIS Re), AXIS Re SE, Dublin (Zurich Branch) ("AXIS Re Europe"), Compagnie Belge d'Assurances Aviation NV/SA ("Aviabel"), AXIS Reinsurance Company ("AXIS Re U.S."), AXIS Reinsurance Company (Canadian Branch), AXIS Insurance Company ("AXIS Insurance Co."), AXIS Surplus Insurance Company ("AXIS Surplus"), AXIS Specialty Insurance Company ("AXIS Specialty U.S."), AXIS Specialty Finance LLC, AXIS Specialty Finance PLC, Novae Corporate Underwriting Limited (sole corporate member of Novae Syndicate 2007 ("Syndicate 2007")), unless the context suggests otherwise.

Tabular dollars are in thousands. Amounts in tables may not reconcile due to rounding differences.

General

AXIS Capital, the Bermuda-based holding company for the AXIS group of companies was incorporated on December 9, 2002. AXIS Specialty Bermuda commenced operations on November 20, 2001. AXIS Specialty Bermuda and its subsidiaries became wholly owned subsidiaries of AXIS Capital pursuant to an exchange offer consummated on December 31, 2002.

We provide a broad range of specialty insurance and reinsurance solutions to our clients on a worldwide basis, through operating subsidiaries and branch networks based in Bermuda, the United States ("U.S."), Europe, Singapore, Canada, Latin America and the Middle East. We also maintain marketing offices in Brazil, France and Spain. Our business consists of two distinct global underwriting platforms, AXIS Insurance and AXIS Re.

The markets in which we operate have historically been cyclical. During periods of excess underwriting capacity, as defined by availability of capital, competition can result in lower pricing and less favorable policy terms and conditions for (re)insurers. During periods of reduced underwriting capacity, pricing and policy terms and conditions are generally more favorable for (re)insurers. Historically, underwriting capacity has been impacted by several factors, including industry losses, catastrophes, changes in legal and regulatory guidelines, investment results and the ratings and financial strength of competitors.

At December 31, 2018, we had common shareholders’ equity of $4.3 billion, total capital of $6.4 billion and total assets of $24.1 billion.

Our Business Strategy

We are a hybrid specialty insurance and global reinsurance company that is a leader in many of the markets where we choose to compete. We provide our clients and distribution partners with a broad range of risk transfer products and services, and meaningful capacity, backed by excellent financial strength. We manage our portfolio holistically, aiming to construct the optimum portfolio of risks, consistent with our risk appetite and the development of our franchise. We nurture an ethical, entrepreneurial and disciplined culture that promotes outstanding client service, intelligent risk taking and the achievement of superior risk-adjusted returns for our shareholders. We believe that the achievement of our objectives will position us as a global leader in specialty risks.

We aim to execute on our business strategy through the following multi-pronged approach:

We offer a diversified range of products and services across market segments and geographies: Our position as a well-balanced hybrid specialty insurance and global reinsurance company gives us insight into the opportunities and challenges in a variety of markets. Established in Bermuda in 2001, today we have locations across the U.S., Canada and in Europe where

we have offices in Dublin, London, Zurich, Brussels, Barcelona, Madrid and Paris. We are actively pursuing opportunities throughout Latin America, mainly through our Miami office, which enables us to deliver a full range of facultative and treaty reinsurance solutions in Latin America. Our Singapore office serves as our regional hub in Asia and provides both specialty insurance and reinsurance solutions in the Asia Pacific region. Our Dubai office provides accident and health specialty reinsurance solutions to our clients in the Middle East and Africa. We have expanded our presence in the London market and at Lloyd's of London ("Lloyd's") through our acquisition of Novae Group plc ("Novae"), and our acquisition of specialty aviation insurer and reinsurer, Aviabel, has given us a strong foothold in continental Europe.

We underwrite a balanced portfolio of risks, including complex and volatile lines, moderating overall volatility with risk limits, diversification and risk management: Risk management is a strategic priority embedded in our organizational structure and we are continuously monitoring, reviewing and refining our enterprise risk management practices. We combine judgment and experience with data-driven analysis, enhancing our overall risk selection process.

We modulate our risk appetite and deployment of capital across the underwriting cycle, commensurate with available market opportunities and *returns:* In response to market dynamics, we recognize opportunities as they develop and react quickly as new trends emerge. Our risk analytics provide important and continuous feedback, further assisting with the ongoing assessment of our risk appetite and strategic capital deployment. We have been successful in extending our product lines, finding new distribution channels and entering new geographies. When we do not find sufficiently attractive uses for our capital, we return excess capital to our shareholders through share repurchases or dividends.

We develop and maintain deep, trustful and mutually beneficial relationships with clients and distribution partners, offering high-levels of service and effective solutions for risk management needs: Our management team has extensive industry experience, deep product knowledge and long-standing market relationships. We primarily transact in specialty markets, where risks are complex. Our intellectual capital and proven client-service capability attract clients and distribution partners looking for solutions.

We maintain excellent financial strength, characterized by financial discipline and transparency: Our total capital of $6.4 billion at December 31, 2018, as well as our high-quality and liquid investment portfolio and our operating subsidiary ratings of "A+" ("Strong") by Standard & Poor's and "A+" ("Superior") by the A.M. Best Company, Inc. ("A.M. Best") are key indicators of our financial strength.

We attract, develop, retain and motivate teams of experts: We aim to attract and retain the top talent in the industry and to motivate our employees to make decisions that are in the best interest of both our clients and shareholders. We nurture an ethical, risk-aware, achievement-oriented culture that promotes professionalism, responsibility, integrity, discipline and entrepreneurship. As a result, we believe that our staff is well-positioned to make the best underwriting and strategic decisions for the Company.

In 2018, our key metrics for performance measurement included operating return on average common equity ("operating ROACE") which is reconciled to the most comparable GAAP financial measure, return on average common equity ("ROACE"), in Item 7 *'Management's Discussion and Analysis of Financial Condition and Results of Operations* ("MD&A") – *Executive Summary – Results of Operations'* on an annual basis and book value per diluted common share adjusted for dividends over the long-term. Our goal is to achieve top-quintile industry operating ROACE and growth in book value per diluted common share adjusted for dividends, with volatility consistent with the industry average across underwriting cycles.

Segment Information

Our underwriting operations are organized around our global underwriting platforms, AXIS Insurance and AXIS Re. We have determined that we have two reportable segments, insurance and reinsurance. We do not allocate our assets by segment, with the exception of goodwill and intangible assets, as we evaluate the underwriting results of each segment separately from the results of our investment portfolio.

Refer to Item 7 *'Management's Discussion and Analysis of Financial Condition and Results of Operations'* for additional information relating to our reportable segments and Item 8, Note 4 to the Consolidated Financial Statements '*Segment Information*' for additional information relating to our reportable segments and a description of the geographic distribution of gross premiums written based on the location of our subsidiaries.

The table below presents gross premiums written in each of our reportable segments for each of the most recent three years.

Year ended December 31,	2018	2017	2016
Insurance	**$ 3,797,592**	$ 2,814,918	$ 2,432,475
Reinsurance	**3,112,473**	2,741,355	2,537,733
Total	**$ 6,910,065**	$ 5,556,273	$ 4,970,208

<u>*Insurance Segment*</u>

Lines of Business and Distribution

Our insurance segment offers specialty insurance products to a variety of niche markets on a worldwide basis. The following are the lines of business in our insurance segment:

- *Property*: provides physical loss or damage, business interruption and machinery breakdown cover for virtually all types of property, including commercial buildings, residential premises, construction projects and onshore energy installations. This line of business includes primary and excess risks, some of which are catastrophe-exposed.
- *Marine*: provides cover for traditional marine classes, including offshore energy, cargo, liability, recreational marine, fine art, specie, and hull and war. Offshore energy coverage includes physical damage, business interruption, operators extra expense and liability coverage for all aspects of offshore upstream energy, from exploration and construction through the operation and distribution phases.
- *Terrorism*: provides cover for physical damage and business interruption of an insured following an act of terrorism and includes kidnap and ransom, and crisis management insurance.
- *Aviation*: provides hull and liability, and specific war cover primarily for passenger airlines but also for cargo operations, general aviation operations, airports, aviation authorities, security firms and product manufacturers.
- *Credit and Political Risk:* provides credit and political risk insurance products for banks, commodity traders, corporations and multilateral and export credit agencies. Cover is provided for a range of risks including sovereign default, credit default, political violence, currency inconvertibility and non-transfer, expropriation, aircraft non-repossession and contract frustration due to political events.
- *Professional Lines:* provides directors' and officers' liability, errors and omissions liability, employment practices liability, fiduciary liability, crime, professional indemnity, cyber and privacy insurance, medical malpractice and other financial insurance related covers for commercial enterprises, financial institutions, not-for-profit organizations and other professional service providers. This business is predominantly written on a claims-made basis.
- *Liability:* primarily targets primary and low/mid-level excess and umbrella commercial liability risks in the U.S. wholesale markets in addition to primary and excess of loss employers, public, and products liability predominately in the U.K. Target industry sectors include construction, manufacturing, transportation and trucking and other services.
- *Accident and Health:* includes accidental death, travel insurance and specialty health products for employer and affinity groups.
- *Discontinued Lines - Novae:* includes those lines of business that Novae exited or placed into run-off in the fourth quarter of 2016 and in the first quarter of 2017. These discontinued insurance lines include financial institutions, professional indemnity, international liability, and international direct property.

We produce business primarily through wholesale and retail brokers worldwide. Some of our insurance products are also distributed through managing general agents ("MGAs") and managing general underwriters ("MGUs"). In the U.S., we have the ability to write business on an admitted basis using forms and rates filed with state insurance regulators and on a non-admitted or surplus lines basis which provides flexibility in forms and rates, as these are not filed with state regulators. Our ability to write business on a non-admitted basis in the U.S. provides us with the pricing flexibility needed to write non-standard coverages. Substantially all of our insurance business is subject to aggregate limits, in addition to event limits.

Gross premiums written by broker, shown individually where premiums were 10% or more of the total in any of the last three years, were as follows:

Year ended December 31,		2018			2017			2016	
Marsh & McLennan Companies Inc.	**$**	**380,238**	**10%**	$	330,057	12%	$	362,151	15%
Aon plc		**405,281**	**11%**		374,940	13%		368,876	15%
Willis Tower Watson PLC		**228,643**	**6%**		246,081	9%		235,834	10%
Other brokers [a]		**1,838,804**	**48%**		1,387,363	49%		1,147,895	47%
Managing general agencies and underwriters [a]		**944,626**	**25%**		476,477	17%		317,719	13%
Total	**$**	**3,797,592**	**100%**	$	2,814,918	100%	$	2,432,475	100%

[a] Reclassified $71,090 of gross premiums written in 2016 from Other brokers to MGAs and MGUs.

No insured accounted for more than 10% of the gross premiums written in the insurance segment.

Competitive Environment

In our insurance segment, where competition is focused on price as well as availability, service and other considerations, we compete with global carriers and U.S. companies in regional and local markets. We believe we can achieve positive differentiation through underwriting expertise in our chosen lines of business and market segments, providing customized solutions for our strategic partners and industry leading claim service levels to our clients and distributors. In addition, our investment in building an agile business model is expected to further position us to capitalize on opportunities and more quickly bring innovative products and services to market; advancing our efforts to strengthen our portfolio and drive profitable growth.

Reinsurance Segment

Lines of Business and Distribution

Our reinsurance segment writes business on a proportional basis, receiving an agreed percentage of the underlying premium and accepting liability for the same percentage of incurred losses. We also write business on an excess of loss basis, whereby we typically provide an indemnification to the reinsured entity for a portion of losses, both individually and in the aggregate, in excess of a specified individual or aggregate loss deductible. Our business is primarily produced through reinsurance brokers worldwide.

Our reinsurance segment provides treaty reinsurance to insurance companies on a worldwide basis. The following are the lines of business in our reinsurance segment:

- *Catastrophe:* provides protection for most catastrophic losses that are covered in the underlying insurance policies written by our cedants. The underlying policies principally cover property-related exposures but other exposures including workers compensation and personal accident are also covered. The principal perils covered by policies in this portfolio include hurricane and windstorm, earthquake, flood, tornado, hail and fire. In some instances, terrorism may be a covered peril or the only peril. This business is written on a proportional and excess of loss basis.
- *Property:* provides protection for property damage and related losses resulting from natural and man-made perils that are covered in the underlying personal and commercial lines insurance policies written by our cedants. The predominant exposure is property damage but other risks, including business interruption and other non-property losses, may also be covered when arising from a covered peril. The most significant perils covered by policies in this portfolio include windstorm, tornado and earthquake, but other perils such as freeze, riots, flood, industrial explosions, fire, hail and a number of other loss events are also included. This business is written on a proportional and excess of loss basis.
- *Professional Lines:* provides cover for directors' and officers' liability, employment practices liability, medical malpractice, professional indemnity, environmental liability and miscellaneous errors and omissions insurance risks. The underlying business is predominantly written on a claims-made basis. This business is written on a proportional and excess of loss basis.

- *Credit and Surety:* provides reinsurance of trade credit insurance products and includes proportional and excess of loss structures. The underlying insurance indemnifies sellers of goods and services in the event of a payment default by the buyer of those goods and services. Credit insurance cover is provided to mortgage guaranty insurers and government sponsored entities. Cover for losses arising from a broad array of surety bonds issued by insurers to satisfy regulatory demands or contract obligations in a variety of jurisdictions around the world is also offered.
- *Motor:* provides cover to insurers for motor liability and property damage losses arising out of any one occurrence. A loss occurrence can involve one or many claimants where the ceding insurer aggregates the claims from the occurrence. Traditional proportional and non-proportional reinsurance as well as structured solutions are offered.
- *Liability:* provides cover to insurers of standard casualty business, excess and surplus casualty business and specialty casualty programs. The primary focus of the underlying business is general liability, although workers' compensation and auto liability covers are also written.
- *Agriculture:* provides protection for risks associated with the production of food and fiber on a global basis for primary insurance companies writing multi-peril crop insurance, crop hail, and named peril covers, as well as custom risk transfer mechanisms for agricultural dependent industries with exposures to crop yield and/or price deviations. This business is written on a proportional and aggregate stop loss reinsurance basis.
- *Engineering:* provides protection for all types of construction risks and risks associated with erection, testing and commissioning of machinery and plants during the construction stage. This line of business also includes cover for losses arising from operational failures of machinery, plant and equipment, and electronic equipment as well as business interruption.
- *Marine and Other:* includes marine, aviation and personal accident reinsurance.
- *Accident and Health:* includes specialty health, accidental death, travel, life and disability reinsurance products which are offered on a proportional and catastrophic or per life excess of events loss basis.
- *Discontinued Lines - Novae*: includes those lines of business that Novae exited or placed into run-off in the fourth quarter of 2016 and in the first quarter of 2017. These discontinued reinsurance lines include motor reinsurance, general liability reinsurance, international facultative property.

Gross premiums written by broker, shown individually where premiums were 10% or more of the total in any of the last three years, were as follows:

Year ended December 31,		**2018**			**2017**			**2016**	
Marsh & McLennan Companies Inc.	$	779,375	**25%**	$	783,286	29%	$	704,319	28%
Aon plc		765,779	**25%**		583,199	21%		590,480	23%
Willis Tower Watson PLC		361,983	**12%**		408,188	15%		356,241	14%
Other brokers		864,601	**28%**		690,337	25%		679,116	27%
Direct		178,568	**6%**		176,600	6%		135,604	5%
Managing general agencies and underwriters		162,167	**5%**		99,744	4%		71,973	3%
Total	**$**	**3,112,473**	**100%**	$	2,741,355	100%	$	2,537,733	100%

No cedant accounted for more than 10% of the gross premiums written in the reinsurance segment.

Competitive Environment

In our reinsurance segment, competition tends to be focused on availability, service, financial strength and, increasingly, price. We compete with major U.S. and non-U.S. reinsurers and reinsurance departments of numerous multi-line insurance organizations. In addition to traditional market participants, we also compete with new market entrants supported by alternative capital sources offering risk transfer on a collateralized or other non-traditional basis. Our clients may also acquire reinsurance protection through capital market products such as catastrophe bonds and insurance loss warranties. We believe that we achieve a competitive advantage through our diversified global product offering, responsiveness to customer needs and ability to provide sophisticated and innovative products. We offer excellent claims management, strong financial strength ratings and an ability to leverage our balance sheet and relationships with strategic capital partners to provide meaningful capacity.

Cash and Investments

We seek to balance the investment portfolios’ objectives of (1) increasing book value with (2) the generation of relatively stable investment income, while providing sufficient liquidity to meet our claims and other obligations. Liquidity needs arising from potential claims are of primary importance and are considered in asset class participation and the asset allocation process. Intermediate maturity investment-grade fixed maturities have duration characteristics similar to our expected claim payouts and are, therefore, central to our investment portfolio’s asset allocation. At December 31, 2018, the duration of our fixed maturities portfolio was approximately three years, which was lower than the estimated duration of our net insurance liabilities.

To diversify risk and optimize the growth in our book value, we may invest in other asset classes such as equity securities, high yield securities and alternative investments (e.g. hedge funds) which provide higher potential total rates of return. These individual investment classes involve varying degrees of risk, including the potential for more volatile returns and reduced liquidity. However, as part of a balanced portfolio, they also provide diversification from interest rate and credit risk.

With regard to our investment portfolio, we utilize third party investment managers for security selection and trade execution functions, subject to our guidelines and objectives for each asset class. This enables us to actively manage our investment portfolio with access to top performers specializing in various products and markets. We select the managers based on various criteria including investment style, performance history and corporate governance. In addition, we monitor approved investment asset classes for each subsidiary through analysis of our operating environment, including expected volatility of cash flows, overall capital position, regulatory and rating agency considerations. The Finance Committee of our Board of Directors approves our overall group asset allocation targets and investment policy to ensure that they are consistent with our overall goals, strategies and objectives. We also have an Investment and Finance Committee, comprising senior management, which oversees the implementation of our investment strategy.

Refer to Item 7 '*Management’s Discussion and Analysis of Financial Condition and Results of Operations – Cash and Investments'* and Item 8, Note 6 to the Consolidated Financial Statements '*Investments'* for additional information regarding our investment portfolio.

Refer to '*Risk and Capital Management'* for additional information regarding the management of investment risk.

Risk Management Framework – Overview

Mission and Objectives

The mission of Enterprise Risk Management ("ERM") at the Company is to promptly identify, measure, report and monitor risks that affect the achievement of our strategic, operational and financial objectives. The key objectives of our risk management framework are to:

- Protect our capital base and earnings by monitoring our risks against our stated risk appetite and limits;
- Promote a sound risk management culture through disciplined and informed risk taking;
- Enhance value creation and contribute to an optimal risk-return profile by providing the basis for efficient capital deployment;
- Support our group-wide decision making process by providing reliable and timely risk information; and
- Safeguard our reputation.

Risk Governance

At the heart of our risk management framework is a governance process with responsibilities for taking, managing, monitoring and reporting risks. We articulate the roles and responsibilities for risk management throughout the organization, from the Board of Directors and the Chief Executive Officer to our business and functional areas, thus embedding risk management throughout the business (refer to '*Risk Governance and Risk Management Organization*' below).

To support our governance process, we rely on our documented policies and guidelines. Our Risk Policies are a formal set of documents we use to specify our approach and risk mitigation/control philosophy for managing individual and aggregate risks. We also have procedures to approve exceptions and procedures for referring risk issues to senior management and the Board of Directors. Our qualitative and quantitative risk reporting framework provides transparency and early warning indicators to senior management with regard to our overall risk profile, adherence to risk appetite and associated limits, and improvement actions both at an operating entity and Group level.

Various governance and control bodies coordinate to help ensure that objectives are being achieved, risks are identified and appropriately managed and internal controls are in place and operating effectively.

Internal Capital Model

An important aspect of our risk management framework is our internal capital model. Utilizing this modeling framework provides us with a holistic view of the capital we put at risk in any year by allowing us to understand the relative interaction among the known risks impacting us. This integrated approach recognizes that a single risk factor can affect different sub-portfolios and that different risk factors can have different mutual dependencies. We continuously review and update our model and its parameters as our risk landscape and external environment continue to evolve.

As well as being used to measure internal risk capital (refer to '*Capital Management'* below), our internal capital model is used as a tool in managing our business, planning capital allocations, portfolio monitoring, reinsurance and retrocession (collectively referred to as "reinsurance") purchasing, and investment asset allocations.

Risk Diversification

As a global (re)insurer with a wide product offering across different businesses, diversification is a key component of our business model and risk framework. Diversification enhances our ability to manage our risks by limiting the impact of a single event and contributing to relatively stable long-term results and our general risk profile. The degree to which the diversification effect can be realized depends not only on the correlation between risks but also the level of relative concentration of those risks. Therefore, our aim is to maintain a balanced risk profile without any disproportionately large risks. Our internal capital model considers the level of correlation and diversification between individual risks and we measure concentration risk consistently across our business units in terms of pre and post diversified internal risk capital requirements.

Risk Appetite and Limit Framework

Our integrated risk management framework considers material risks that arise from operating our business. Large risks that might accumulate and have the potential to produce substantial losses are subject to our group-wide risk appetite and limit framework. Our risk appetite, as authorized by our Board of Directors, represents the amount of risk that we are willing to accept within the constraints imposed by our capital resources as well as the expectations of our stakeholders as to the type of risk we hold within our business. At an annual aggregated level, we also monitor and manage the potential financial loss from the accumulation of risk exposure in any one year.

Specific risk limits are defined and translated into a consistent framework across our identified risk categories and across our operating entities, and are intended to limit the impact of individual risk types or accumulations of risk. Individual limits are established through an iterative process to ensure that the overall framework complies with our group-wide requirements on capital adequacy and risk accumulation.

We monitor risk through, for example, risk dashboards and limit consumption reports. These are intended to allow us to detect potential deviations from our internal risk limits at an early stage.

External Perspectives

Various external stakeholders, among them regulators, rating agencies, investors and accounting bodies, place emphasis on the importance of sound risk management in the insurance industry. We monitor developments in the external environment and evolve our risk management practices accordingly.

Risk Governance and Risk Management Organization

The key elements of our governance framework, as it relates specifically to risk management, are described below.

Board of Directors' Level

The Risk Committee of the Board ("Risk Committee") assists the Board of Directors in overseeing the integrity and effectiveness of our ERM framework, and ensuring that our risk assumption and risk mitigation activities are consistent with that framework. The Risk Committee reviews, approves and monitors our overall risk strategy, risk appetite and key risk limits and receives regular reports from the Group Risk Management function ("Group Risk") to ensure any significant risk issues are being addressed by management. The Risk Committee further reviews, with management and Internal Audit, the Group's general policies and procedures and satisfies itself that effective systems of risk management and controls are established and maintained. Among its other responsibilities, the Risk Committee also reviews and approves our annual Own Risk and Solvency Assessment ("ORSA") report. The Risk Committee assesses the independence and objectivity of our Group Risk function, approves its terms of reference and reviews its ongoing activities.

Following a recommendation by the Chief Executive Officer, the Risk Committee also conducts a review and provides a recommendation to the Board of Directors regarding the appointment and/or removal of the Chief Risk Officer. The Risk Committee meets with the Chief Risk Officer in separate executive sessions on a regular basis.

The Finance Committee of our Board oversees the Group's investment of funds and adequacy of financing facilities. This includes approval of the Group's strategic asset allocation plan. The Audit Committee of our Board, which is supported by our internal audit function, is responsible for overseeing internal controls and compliance procedures and also reviews with management and the Chairman of the Risk Committee the Group's guidelines and policies regarding risk assessment and risk management.

Group Executive Level

Our management Executive Committee formulates our business objectives and risk strategy within the overall risk appetite set by our Board. It allocates capital resources and sets limits across the Group, with the objective of balancing return and risk. While the management Executive Committee is responsible overall for risk management, it has delegated some authority to the executive level Risk Management Committee ("RMC"):

The RMC is responsible for overseeing the integrity and effectiveness of the Group's ERM framework, and ensuring that the Group's risk assumption and risk mitigation activities are consistent with that framework, including a review of the annual business plan relative to our risk limits. In addition to the RMC there is an established framework of separate yet complementary management committees and subcommittees, focusing on particular aspects of ERM including the following:

- The Investment & Finance Committee oversees the Group’s investment activities by, among other things, monitoring market risks, the performance of our investment managers and the Group’s asset-liability management, liquidity positions and investment policies and guidelines. The Investment & Finance Committee also prepares the Group’s strategic asset allocation and presents it to the Finance Committee of the Board for approval.

- The Reinsurance Security Committee ("RSC") sets out the financial security requirements of our reinsurance counterparties and approves our counterparties, as needed.

- The Cyber, Property, and Credit Product Boards, which oversee the exposure management frameworks and views of risk for our cyber, property, and credit underwriting risks. Each Product Board contributes to portfolio management, setting underwriting guidelines and risk appetite, as well as encouraging general knowledge sharing.

- The Internal Model Committee oversees the Group's Internal Model framework, including the key model assumptions, methodology and validation framework.

- The Operational Risk Committee oversees the Group's Operational Risk framework for the identification, management, mitigation and measurement of operational risk and facilitates the embedding of effective operational risk management practices throughout the Group.

- The Emerging Risks Committee oversees the processes for identifying, assessing and monitoring current and potential emerging risks.

- The Capital Management Committee oversees the integrity and effectiveness of the Company’s Capital Management Policy, including the capital management policies of the Company’s legal entities and branches, ensuring the Company’s effective implementation of the annual Capital Management Plan, which is approved by the Finance Committee of the Board, and overseeing the availability of capital within the Group.

Group Risk Management Organization

As a general principle, management in each of our business units is responsible in the first instance for both the risks and returns of its decisions. Management is the 'owner' of risk management processes and is responsible for managing our business within defined risk limits.

Our Chief Risk Officer reports to the Chief Financial Officer and the Chairman of the Board Risk Committee, leads our independent Group Risk function, and is responsible for oversight and implementation of the Group's ERM framework as well as providing guidance and support for risk management practices. Group Risk is responsible for developing methods and processes for identifying, measuring, managing and reporting risk. This forms the basis for informing the Risk Committee and RMC of the Group’s risk profile. Group Risk develops our risk management framework and oversees the adherence to this framework at the Group and operating entity level. Our Chief Risk Officer regularly reports risk matters to the Chief Financial Officer, management Executive Committee, RMC and the Risk Committee.

Internal Audit, an independent, objective function, reports to the Audit Committee of the Board on the effectiveness of our risk management framework. This includes assurance that key business risks have been adequately identified and managed appropriately and that our system of internal control is operating effectively. Internal Audit also provides independent assurance around the validation of our internal capital model and coordinates risk-based audits, compliance reviews, and other specific initiatives to evaluate and address risk within targeted areas of our business.

Our risk governance structure is further complemented by our Legal Department which seeks to mitigate legal and regulatory compliance risks with support from other departments. This includes ensuring that significant developments in law and regulation are observed and that we react appropriately to impending legislative and regulatory changes and applicable court rulings.

Risk Landscape

Our risk landscape comprises strategic, insurance, credit, market, operational, liquidity and other risks that arise as a result of doing business. We provide definitions of these risk categories in the following sections as well as our related risk management. Across these risk categories, we identify and evaluate emerging threats and opportunities through a framework that includes the assessment of potential surprise factors that could affect known loss potentials.

Our risk landscape is reviewed on a regular basis to ensure that it remains up-to date based on the evolving risk profile of the Company. In addition we undertake ongoing risk assessments across all enterprise risks, the output of which is captured in our risk register which is reviewed and reported through our governance structure.

Strategic Risk

Strategic risk is the risk of loss arising from the adverse effect of management decisions on both business strategies and their implementation. This includes the failure to devise or adapt a business strategy in light of changes in our internal and external environment. We assess any strategic action in the context of our risk framework by reviewing the impact of the strategy, including any incremental risk, prior to the action taking place. In addition, what we learn about risk through our monitoring, reporting and control processes provides important feedback in terms of reevaluating our risks and, therefore, reevaluating our business strategy.

We undertake a strategic business planning process on an annual basis which is overseen by our management Executive Committee, the Business Council, business unit leadership and our Board of Directors. Our internal capital model provides an input into this process by providing an assessment as to whether our prospective business and investment strategies are in line with our defined risk appetite and objectives, at both the group and operating entity level. The model also provides a basis for optimizing our risk-return profile by providing consistent risk measurement across the Group. The model outputs are reviewed and supplemented with management’s judgment and business experience and expertise.

We specifically evaluate the risks of potential merger and acquisition transactions both from a quantitative and qualitative perspective. We conduct risk assessments of merger and acquisition transactions to evaluate risks specifically related to the integration of acquiring a business. In addition, we have governance procedures in place to review and approve strategic investments and potential new initiatives within our existing businesses in order to evaluate whether the risks are well understood and justified by the potential rewards.

Insurance Risk

Insurance risk is the inherent uncertainty as to the occurrence, amount and timing of insurance liabilities transferred to us through the underwriting process.

Since our inception in 2001, we have expanded our international presence, with underwriting offices in Bermuda, the U.S., Europe, Singapore and Canada. Our disciplined underwriting approach coupled with a group-wide peer review process has enabled us to manage this growth in a controlled and consistent manner.

A key component of the Group's underwriting risk governance is our peer review processes which allow for a collaborative review of risk and pricing and ensures that underwriting is within established protocols and guidelines. Underwriting guidelines are in place to provide a framework for consistent pricing and risk analysis and ensuring alignment to the Group's risk appetite. Limits are set on underwriting capacity, and cascade authority to individuals based on their specific roles and expertise.

We also have significant audit coverage across our business units, including Management Initiated Audits ("MIAs"). MIAs are audits of underwriting and claims files performed by teams independent of those who originated the transactions, the purpose of which is to test the robustness of our underwriting, claims and operating processes and to recognize any early indicators of future trends in our operational risk environment.

Reinsurance Purchasing

Another key component of our mitigation of insurance risk is the purchase of reinsurance on both a treaty (covering a portfolio of risks) and facultative (single risk) basis, on both our short and long tail lines of business.

For treaty reinsurance, we purchase both proportional and non-proportional cover. Under proportional reinsurance, we cede an agreed proportion of the premiums and the losses and loss adjustment expenses on the policies we underwrite. We primarily use proportional reinsurance on our liability, professional lines, and cyber portfolios, as well as on select property portfolios, whereby we protect against higher loss frequency rather than specific events. We also purchase proportional reinsurance on our assumed property catastrophe reinsurance portfolio, casualty, and credit and bond portfolios, which includes our cessions to Strategic Capital Partners. We also use non-proportional reinsurance, whereby losses up to a certain amount (i.e. our retention) are borne by us. By using non-proportional reinsurance, we can limit our liability with a retention, which reflects our willingness and ability to bear risk, and therefore in line with our risk appetite. We primarily purchase the following forms of non-proportional reinsurance:

- Excess of loss per risk – the reinsurer indemnifies us for loss amounts of all individual policies effected, defined in the treaty terms and conditions. Per risk treaties are an effective means of risk mitigation against large single losses (e.g. a large fire claim). This includes our Northshore Re catastrophe bond program, which provides a combined $550 million of limit across the Group. Refer to Item 7 *'Management's Discussion and Analysis of Financial Condition and Results of Operations' – Underwriting Results – Consolidated – Underwriting Expenses'* for additional information on our Northshore Re catastrophe bond program.

- Catastrophe excess of loss – provides aggregate loss cover for our insurance portfolio against the accumulation of losses incurred from a single event (e.g. windstorm).

We have a centralized Risk Funding department, which coordinates external treaty reinsurance purchasing across the Group and is overseen by our Reinsurance Purchasing Group ("RPG"). The RPG, which includes among others, our Chief Executive Officer, Chief Financial Officer, Chief Risk Officer and business unit leadership, approves each treaty placement, and aims to ensure that appropriate diversification exists within our RSC approved counterparty panels.

Facultative reinsurance is case by case risk transfer, which we may also use to complement treaty reinsurance by covering additional risks above and beyond what is already covered in treaties. Facultative reinsurance is monitored by the Risk Funding department.

Natural Peril Catastrophe Risk

Natural catastrophes such as earthquakes, storms, tsunamis and floods represent a challenge for risk management due to their accumulation potential and occurrence volatility. In managing natural catastrophe risk, our internal risk limit framework aims to limit both the loss of capital due to a single event and the loss of capital that would occur from multiple (but perhaps smaller events) in any year. Within this framework, we have an established risk limit for single event, single zone probable maximum loss ("PML") within defined zones and at various return periods. For example, at the 1-in-250 year return period, we are not willing to expose more than 20% of our prior quarter-end common-equity from a single event within a single zone.

The table below shows our mean PML estimates for certain defined single zones which correspond to peak industry catastrophe exposures at January 1, 2019 and 2018:

At January 1, (in millions of U.S. dollars)		2019			2018		
Single zone/single event	**Perils**	**50 Year Return Period**	**100 Year Return Period**	**250 Year Return Period**	**50 Year Return Period**	**100 Year Return Period**	**250 Year Return Period**
Southeast	U.S. Hurricane	**$ 383**	**$ 441**	**$ 620**	$ 350	$ 430	$ 848
Northeast	U.S. Hurricane	**52**	**156**	**290**	58	164	297
Mid-Atlantic	U.S. Hurricane	**133**	**315**	**449**	121	273	401
Gulf of Mexico	U.S. Hurricane	**258**	**316**	**394**	237	302	400
California	Earthquake	**253**	**369**	**468**	241	328	527
Europe	Windstorm	**231**	**301**	**376**	232	327	467
Japan	Earthquake	**147**	**227**	**359**	168	232	336
Japan	Windstorm	**60**	**109**	**158**	60	99	140

The return period refers to the frequency with which losses of a given amount or greater are expected to occur. A zone is a geographic area in which the insurance risks are considered to be correlated to a single catastrophic event. Estimated losses from a modeled event are grouped into a single zone, as shown above, based on where the majority of the total estimated industry loss is expected to occur. In managing zonal concentrations, we aim to ensure that the geography of single events is suitably captured, but distinct enough that they track specific types of events. For example, our definition of Southeast wind encompasses five states, including Florida, while our definition of Gulf Wind encompasses four states, including Texas.

Our PMLs take into account the fact that an event may trigger claims in a number of lines of business. For instance, our U.S. hurricane modeling includes the estimated pre-tax impact to our financial results arising from our catastrophe, property, engineering, energy, marine and aviation lines of business. Our PMLs include assumptions regarding the location, size and magnitude of an event, the frequency of events, the construction type and a property's susceptibility to damage, and the cost of rebuilding the property. Loss estimates for non-U.S. zones will be subject to foreign exchange rates, although we may mitigate this currency variability from a book value perspective.

As indicated in the table above, our modeled single occurrence 1-in-100 year return period PML for a Southeast U.S. hurricane, net of reinsurance, is approximately $0.4 billion. According to our modeling, there is a one percent chance that on an annual basis, our losses incurred from a Southeast hurricane event could be in excess of $0.4 billion. Conversely, there is a 99% chance that on an annual basis, the loss from a Southeast hurricane will fall below $0.4 billion.

We have developed our PML estimates using multiple commercially available vendor models, including AIR Worldwide ("AIR") and Risk Management Solutions ("RMS") (which we also use for pricing catastrophe risk). These models cover the major peril regions where we face potential exposure. We combine the outputs of catastrophe models with our estimate of non-modeled perils and other factors which we believe, from our experience, provides us with a more complete view of natural peril catastrophe risk.

Our PML estimates are based on assumptions that are inherently subject to significant uncertainties and contingencies. These uncertainties and contingencies can affect actual losses and could cause actual losses to differ materially from those expressed above. We aim to reduce the potential for model error in a number of ways, the most important of which is by ensuring that management's judgment supplements the model outputs. We also perform ongoing model validation both within our business units and at a group level including through our catastrophe model validation unit. These validation procedures include sensitivity testing of models to understand their key variables and, where possible, back testing the model outputs to actual results.

Our estimated net losses from peak zone catastrophes may change from period to period as a result of several factors, which include but are not limited to, updates to vendor catastrophe models, changes in our own modeling, changes in our underwriting portfolios, changes to our reinsurance purchasing strategy and changes in foreign exchange rates. Several of the aforementioned factors, including the acquisition of Novae and opportunistic purchase of more reinsurance protection, drove the changes to our natural catastrophe PMLs during 2018.

Man-made Catastrophe Risk

Similar to our management of natural peril catastrophe exposures, we also take a similar focused and analytical approach to our management of man-made catastrophes. Man-made catastrophes, which include such risks as train collisions, airplane crashes or terrorism, are harder to model in terms of assumptions regarding intensity and frequency. For these risks we couple the vendor models (where available) with our bespoke modeling and underwriting judgment and expertise. This allows us to take advantage of business opportunities relating to man-made catastrophe exposures particularly where we can measure and limit the risk sufficiently as well as obtain risk-adequate pricing.

As an example of our approach, our assessment of terrorism risk is based on a mixture of qualitative and quantitative data (e.g. for estimating property damage, business interruption, mortality and morbidity subsequent to an attack of a predefined magnitude), which we use to control, limit and manage our aggregate terrorism exposure. We use commercially available vendor modeling and bespoke modeling tools to measure accumulations around potential terrorism accumulation zones on a deterministic and probabilistic basis. We supplement the results of our modeling with underwriting judgment.

Reserving Risk

The estimation of reserves is subject to uncertainty due to the fact that the settlement of claims that have arisen before the balance sheet date is dependent on future events and developments. Unforeseen loss trends resulting from court rulings, changes in the law, medical and long-term care costs, and economic factors such as inflation can have an impact on the ultimate cost to settle our claim liabilities.

We calculate the reserves for losses and claims settlement costs in accordance with actuarial practice based on substantiated assumptions, methods and assessments. The assumptions are regularly reviewed and updated, and the application of our Group reserving policy and standards of practice ensures a reliable and consistent procedure. Our loss reserving process demands data quality and reliability and requires a quantitative and qualitative review of both our overall reserves and individual large claims. Within a structured control framework, claims information is communicated on a regular basis throughout our organization, including to senior management, to provide an increased awareness regarding the losses that have taken place throughout the insurance markets. The detailed and analytical reserving approach that follows is designed to absorb and understand the latest information on our reported and unreported claims, to recognize the resultant exposure as quickly as possible, and to make appropriate and realistic provisions in our financial statements. We have well established processes for determining carried reserves, which we ensure are applied consistently over time.

Reserving for long-tail lines of business represents a significant component of reserving risk. When loss trends prove to be higher than those underlying our reserving assumptions, the risk is greater because of a stacking-up effect: we carry reserves to cover claims arising from several years of underwriting activity and these reserves are likely to be adversely affected by unfavorable loss trends. We manage and mitigate reserving risk on long-tail business in a variety of ways. First, the long-tail business we write is part of a well-balanced and diversified global portfolio of business. In 2018, our long-tail net premiums written (namely liability and motor business) represented 22% of our total premiums written and 33% of total net reserves. We also purchase reinsurance on liability business to reduce our net positions. Secondly, we follow a disciplined underwriting process that utilizes available information, including industry trends.

Another significant component of reserving risk relates to the estimation of losses in the aftermath of a major catastrophe event. Refer to Item 7 *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Estimates – Reserves for Losses and Loss Expenses'* for further details including a description of our reserving process.

Claims Handling Risk

In accepting risk, we are committing to the payment of claims and therefore these risks must be understood and controlled. We have claims teams located throughout our main business units. Our claim teams include a diverse group of experienced professionals, including claims adjusters and attorneys. We also use approved external service providers, such as independent adjusters and appraisers, surveyors, accountants, investigators and specialist attorneys, as appropriate.

We maintain claims handling guidelines and claims reporting control and escalation procedures in all our claims units. Large claims matters are reviewed during weekly claims meetings. The minutes from each meeting are circulated to our underwriters, senior management and others involved in the reserving process. To maintain communication between underwriting and claims teams, claims personnel regularly report at underwriting meetings and frequently attend client meetings.

We foster a strong culture of review among our claims teams. This includes MIAs, whereby senior claims handlers audit a sample of claim files. The process is designed to ensure consistency between the claims units and to develop Group-wide best practices.

When we receive notice of a claim, regardless of size, it is recorded within our underwriting and claims systems. To assist with the reporting of significant claims, we have also developed a standard format and procedure to produce "flash reports" for significant events and potential losses, regardless of whether we have exposure. Our process for flash reporting allows a direct notification to be communicated to underwriters and senior management worldwide. Similarly, for natural peril catastrophes, we have developed a catastrophe database, along with catastrophe coding in certain systems, that allows for the gathering, blending and reporting of loss information as it develops from early modeled results to fully adjusted and paid losses.

Credit Risk

Credit risk represents the risk of incurring financial loss due to the diminished creditworthiness (eroding credit rating and, ultimately, default) of our third party counterparties. We distinguish between various forms of credit exposure; the risk of issuer default from instruments in which we invest or trade, such as corporate bonds; counterparty exposure in a direct contractual relationship, such as reinsurance; the credit risk related to our receivables, including those from brokers and other intermediaries; and the risk we assume through our insurance contracts, such as our credit and political risk and trade credit and bond lines of business.

Credit Risk Aggregation

We monitor and manage the aggregation of credit risk on a Group-wide basis allowing us to consider exposure management strategies for individual companies, countries, regions, sectors and any other relevant inter-dependencies. Our credit exposures are aggregated based on the origin of risk. Credit risk aggregation is managed through minimizing overlaps in underwriting, financing and investing activities. As part of our credit aggregation framework, we assign aggregate credit limits by country and for any individual counterparty. These limits are based and adjusted on a variety of factors including the prevailing economic environment and the nature of the underlying credit exposures.

Our credit aggregation measurement and reporting process is facilitated by our credit risk exposure database, which contains relevant information on counterparty details and credit risk exposures. The database is accessible by management throughout the Group, thus providing transparency to allow for the implementation of active exposure management strategies. We also license third party tools to provide credit risk assessments. We monitor all our credit aggregations and, where appropriate, adjust our internal risk limits and/or have taken specific actions to reduce our risk exposures.

Credit Risk Relating to Investing Activities

Within our fixed maturity investment portfolio, which represents approximately $11 billion or 47% of our total assets, we are exposed to potential losses arising from the diminished creditworthiness of issuers of bonds as well as third party counterparties such as custodians. We limit such credit risk through diversification, issuer exposure limits graded by ratings and, with respect to custodians, through contractual and other legal remedies. Excluding U.S. Treasury and Agency securities, we limit our concentration of credit risk to any single corporate issuer to 2% or less of our investment grade fixed maturities portfolio for securities rated A- or above and 1% or less of our investment grade fixed maturities portfolio for securities rated below A-.

We also have credit risk relating to our cash and cash equivalents. In order to mitigate concentration and operational risks related to cash and cash equivalents, we limit the maximum amount of cash that can be deposited with a single counterparty and additionally limit acceptable counterparties based on current rating, outlook and other relevant factors.

Credit Risk Relating to Reinsurance Recoverable Assets

Within our reinsurance purchasing activities, we are exposed to the credit risk of a reinsurer failing to meet its obligations under our reinsurance contracts. To help mitigate this, all of our reinsurance purchasing is subject to financial security requirements specified by our RSC. The RSC maintains a list of approved reinsurers, reviews credit risk assessments for potential new reinsurers, regularly monitors approved reinsurers with consideration for events which may have a material impact on their creditworthiness, recommends counterparty limits for different types of ceded business and monitors concentrations of credit risk. This assessment considers a wide range of individual attributes, including a review of the counterparty's financial strength, industry position and other qualitative factors.

We monitor counterparty credit quality and exposures, with special monitoring of those cases that merit close attention.

Credit Risk Relating to Receivables

Our largest credit risk exposure to receivables is from brokers and other intermediaries; the risk arises where they collect premiums from customers to be paid to us or we pay claims to them for onward settlement to customers on our behalf. We have policies and standards in place to manage and monitor credit risk from intermediaries with a focus on day-to-day monitoring of the largest positions.

Credit Risk Relating to our Underwriting Portfolio

In our insurance segment, we provide credit insurance primarily for lenders (financial institutions) seeking to mitigate the risk of non-payment from their borrowers. This product has complemented our more traditional political risk insurance business. For the credit insurance contracts, it is necessary for the buyer of the insurance, most often a bank, to hold an insured asset, most often an underlying loan, in order to claim compensation under the insurance contract. The vast majority of the credit insurance provided is for single-name illiquid risks, primarily in the form of senior secured bank loans that can be individually analyzed and underwritten. As part of this underwriting process, an evaluation of credit-worthiness and reputation of the obligor is critical and forms the cornerstone of the underwriting process. We generally require that our clients retain a share of each transaction that we insure. A key element to our underwriting analysis is the assessment of recovery in the event of default and, accordingly, the strength of the collateral and the enforceability of rights to the collateral are paramount. We avoid insurance for structured finance products defined by pools of risks and insurance for synthetic products that would expose us to mark-to-market losses. We also seek to avoid terms in our credit insurance contracts which introduce liquidity risk, most notably, in the form of a collateralization requirement upon a ratings downgrade. We also provide protection against sovereign default or sovereign actions that result in impairment of cross-border investments for banks and corporations. Our contracts generally include conditions precedent to our liability relating to the enforceability of the insured transaction and restricting amendments to the transaction documentation, obligations on the insured to prevent and minimize losses, subrogation rights (including rights to have the insured asset transferred to us) and waiting periods. Under most of our policies, a loss payment is made in the event the debtor failed to pay our client when payment is due subject to a waiting period of up to 180 days.

In our reinsurance segment, we provide reinsurance of credit and bond insurers exposed to the risks of financial loss arising from non-payment of trade receivables covered by a policy (credit insurance) or non-performance (bonding). Our credit insurance exposures are concentrated primarily within developed economies, while our surety bond exposures are concentrated primarily within Latin American and developed economies. We also provide coverage to the mortgage industry through insurance and reinsurance of mortgage insurance companies and U.S. Government Sponsored Entity credit risk sharing transactions. We focus on credit risk transfer from Freddie Mac and Fannie Mae, in the single-family, fixed rate, conforming mortgage space. We provide this cover on a proportional and non-proportional basis globally through AXIS Reinsurance Company, AXIS Specialty Bermuda and AXIS Managing Agency. Our exposure to mortgage risk is monitored and managed through robust underwriting within defined parameters for mortgage credit quality and concentration, continuous monitoring of the housing market, as well as limits on our PML resulting from a severe economic downturn in the housing market.

Market Risk

Market risk is the risk that our financial instruments may be negatively impacted by movements in financial market prices or rates such as equity prices, interest rates, credit spreads and foreign exchange rates. Fluctuations in market rates primarily affect our investment portfolio.

Through asset and liability management, we aim to ensure that market risks influence the economic value of our investments and that of our loss reserves and other liabilities in the same way, thus mitigating the effect of market fluctuations. For example, we reflect important features of our liabilities, such as maturity patterns and currency structures, on the assets side of the balance sheet by acquiring investments with similar characteristics.

We supplement our asset-liability management with various internal policies and limits. As part of our strategic asset allocation process, different asset strategies are simulated and stressed in order to evaluate the ‘optimal’ portfolio (given return objectives and risk constraints). In our investment department, we centralize the management of asset classes to control aggregation of risk, and provide a consistent approach to constructing portfolios as well as the selection process of external asset managers. We have limits on the concentration of investments by single issuers and certain asset classes, and we limit the level of illiquid investments (refer to '*Liquidity Risk*' below). Further, our investment guidelines do not permit the use of leverage in any of our fixed maturity portfolios.

We stress test our investment portfolios using historical and hypothetical scenarios to analyze the impact of unusual market conditions and to ensure potential investment losses remain within our risk appetite. At an annual aggregated level, we manage the total risk exposure to our investment portfolio so that the ‘total return’ investment loss in any one year is unlikely to exceed a defined percentage of our common equity at a defined return period.

We mitigate foreign currency risk by seeking to match our estimated (re)insurance liabilities payable in foreign currencies with assets, including cash and investments that are also denominated in such currencies. Where necessary, we use derivative financial instruments for economic hedging purposes. For example, in certain circumstances, we use forward contracts and currency options, to economically hedge portions of our un-matched foreign currency exposures.

Operational Risk

Operational risk represents the risk of financial loss as a result of inadequate processes, system failures, human error or external events.

Group Risk is responsible for coordinating and overseeing a Group-wide framework for operational risk management. As part of this, we maintain an operational loss-event database which helps us better monitor and analyze potential operational risk, identify any trends, and, where necessary, put in place improvement actions to avoid occurrence or recurrence of operational loss events.

We manage transaction type operational risks through the application of process controls throughout our business. In testing these controls, we supplement the work of our internal audit team, with regular underwriting and claim MIAs (as discussed above).

We have specific processes and systems in place to focus on high priority operational matters such as information security, managing business continuity, and third party vendor risk:

- Major failures and disasters which could cause a severe disruption to working environments, facilities and personnel, represent a significant operational risk to us. Our Business Continuity Management framework strives to protect critical business functions from these effects to enable us to carry out our core tasks in time and at the quality required. During 2018, we continued to review our Business Continuity Planning procedures through cyclical planned tests.

- We have developed a number of Information Technology ("IT") platforms, applications and security controls to support our business activities worldwide. Dedicated security standards are in place for our IT systems to ensure the proper use, availability and protection of our information assets.

- Our use of third party vendors exposes us to a number of increased operational risks, including the risk of security breaches, fraud, non-compliance with laws and regulations or internal guidelines and inadequate service. We manage material third party vendor risk, by, among other things, performing a thorough risk assessment on potential large vendors, reviewing a vendor’s financial stability, ability to provide ongoing service and business continuity planning.

Liquidity Risk

Liquidity risk is the risk that we may not have sufficient financial resources to meet our obligations when they fall due, or would have to incur excessive costs to do so. As a (re)insurer, our core business generates liquidity primarily through premium, investment income and the maturity/sale of investments. Our exposure to liquidity risk stems mainly from the need to cover potential extreme loss events and regulatory constraints that limit the flow of funds within the Group. To manage these risks, we have a range of liquidity policies and measures in place:

- We maintain cash and cash equivalents and high quality, liquid investment portfolios to meet expected outflows, as well as those that could result from a range of potential stress events. We place internal limits on the maximum percentage of cash and investments which may be in an illiquid form as well as a minimum percentage of our investment portfolio to mature within a defined timeframe.

- We maintain committed borrowing facilities, as well as access to diverse funding sources to cover contingencies. Funding sources include asset sales, external debt issuances and lines of credit.

Capital Management

Our capital management strategy is to maximize long-term shareholder value by, among other things, optimizing capital allocation and minimizing our cost of capital. We manage our capital in accordance with our Target Capital Range ("TCR") concept. The TCR defines the preferred level of capital needed to absorb shock losses and still satisfy our minimum solvency targets in relation to key capital benchmarks including our "own view" of risk from our internal capital model and regulatory and rating agency capital requirements:

- Internal risk capital - We use our internal capital model to assess the capital consumption of our business, measuring and monitoring the potential aggregation of risk at extreme return periods.

- Regulatory capital requirements - In each country in which we operate, the local regulator specifies the minimum amount and type of capital that each of the regulated entities must hold in support of their liabilities and business plans. We target to hold, in addition to the minimum capital required to comply with the solvency requirements, an adequate buffer to ensure that each of our operating entities meets its local capital requirements. Refer to Item 8, Note 20 to the Consolidated Financial Statements, *'Statutory Financial Information'* for further details.

- Rating agency capital requirements - Rating agencies apply their own models to evaluate the relationship between the required risk capital of a company and its available capital resources. The assessment of capital adequacy is usually an integral part of the rating agency process. Meeting rating agency capital requirements and maintaining strong credit ratings are strategic business objectives of the Company. Refer to Item 7 *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources*' for further information on our financial strength.

The TCR identifies the point at which management needs to consider raising capital, amending our business plan or executing capital management activities well before capital approaches the minimum requirements ("early warning indicator"). This allows us to take appropriate measures to ensure the continued strength and appropriateness of our capital and solvency positions, and also enables us to take advantage of opportunities as they arise. Such measures are performed as and when required and include traditional capital management tools (e.g. dividends, share buy-backs, issuance of shares or debt) or through changes to our risk exposure (e.g. recalibration of our investment portfolio or changes to our reinsurance purchasing strategy).

The TCR also considers an amount of capital beyond which capital could be considered "excess". Where we do not find sufficiently attractive opportunities and returns for our excess capital, we may return capital back to our shareholders through repurchases and dividends. In doing so, we seek to maintain an appropriate balance between higher returns for our shareholders and the security provided by a sound capital position.

REGULATION

General

The business of (re)insurance is regulated in most countries, although the degree and type of regulation varies significantly from one jurisdiction to another. In addition, some jurisdictions are currently evaluating changes to their regulation and we are monitoring these potential developments. To the extent we are aware of impending changes in regulation, designated project teams prepare us to comply on a timely basis with such anticipated changes. The following describes the current material regulations under which the Company operates.

Bermuda

Our Bermuda insurance operating subsidiary, AXIS Specialty Bermuda, is a Class 4 general business insurer subject to the Insurance Act 1978 of Bermuda and related regulations, as amended (the "Insurance Act"). The Insurance Act provides that no person may carry on any insurance or reinsurance business in or from within Bermuda unless registered as an insurer by the Bermuda Monetary Authority (the "BMA") under the Insurance Act. The Insurance Act imposes upon Bermuda insurance companies solvency and liquidity standards and auditing and reporting requirements, and grants the BMA powers to supervise, investigate, require information and demand the production of documents and intervene in the affairs of insurance companies. Significant requirements pertaining to Class 4 insurers include the appointment of an independent auditor, the appointment of a loss reserve specialist, the appointment of a principal representative in Bermuda, the filing of annual Statutory Financial Returns, the filing of annual GAAP financial statements, the filing of an annual capital and solvency return, compliance with minimum and enhanced capital requirements, compliance with certain restrictions on reductions of capital and the payment of dividends and distributions, compliance with group solvency and supervision rules, if applicable, and compliance with the Insurance Code of Conduct. On July 30, 2018, the Insurance Amendment (No. 2) Act 2018 amended the Insurance Act to provide for the prior payment of policyholders' liabilities ahead of general unsecured creditors in the event of the liquidation or winding up of an insurer. Effective January 1, 2019, this amendment applies to general business insurers and provides among other things that, subject to certain statutorily preferred debts, the insurance debts of an insurer must be paid in priority to all other unsecured debts of the insurer. Insurance debt is defined as a debt to which an insurer is or may become liable pursuant to an insurance contract excluding debts owed to an insurer under an insurance contract where the insurer is the person insured.

Effective January 1, 2016, the BMA was granted full "equivalence" under Solvency II (as more fully described below under *"Ireland"*) for Bermuda’s commercial insurance sector, including Class 4 insurers.

The BMA acts as group supervisor of AXIS Capital and has designated AXIS Specialty Bermuda as the ‘designated insurer’ of the AXIS Capital insurance companies. In accordance with the group supervision and insurance group solvency rules, AXIS Capital is required to prepare and submit annual audited group GAAP financial statements, an annual group Statutory Financial Return, an annual group Capital and Solvency Return and quarterly group unaudited GAAP financial statements, and to appoint both a group actuary and a group auditor. Enhanced group capital requirements ("ECR") have been phased in since the financial year ending December 31, 2013, when the applicable ECR was 50% of the amount prescribed by the BMA, with an additional 10% applicable each subsequent year through 2018, when the full ECR will be required.

Ventures Re is registered as a Class 3A insurer subject to the Insurance Act and is a registered segregated accounts company under the Bermuda Segregated Accounts Companies Act 2000, as amended.

AXIS Ventures and AXIS Reinsurance Managers are regulated by the BMA as insurance managers. Insurance managers are subject to the Insurance Act which provides that no person may carry on business as an insurance manager unless registered for the purpose by the BMA under the Insurance Act. Insurance managers are required to comply with the Insurance Manager Code of Conduct.

In November 2017, Glen Rock Holdings Ltd. and Glen Rock Re Ltd. were formed as direct subsidiaries of AXIS Ventures and subsequently merged in December 2018 with Glen Rock Holdings Ltd. as the surviving entity.

AXIS Capital Holdings Limited, AXIS Specialty Bermuda, AXIS Specialty Holdings Bermuda Limited, AXIS Specialty Investments Limited, AXIS Specialty Markets Limited, AXIS Ventures, Ventures Re, AXIS Specialty Investments II Limited, AXIS Reinsurance Managers, Novae Bermuda Holdings Limited, Novae Bermuda Underwriting Limited and Glen Rock

Holdings Ltd. must also comply with provisions of the Bermuda Companies Act 1981, as amended (the "Companies Act"), regulating the payment of dividends and distributions. A Bermuda company may not declare or pay a dividend or make a distribution out of contributed surplus if there are reasonable grounds for believing that: (a) the company is, or would after the payment be, unable to pay its liabilities as they become due; or (b) the realizable value of the company's assets would thereby be less than its liabilities.

The Singapore branch of AXIS Specialty Bermuda, AXIS Specialty Limited (Singapore Branch), established in 2008, is regulated by the Monetary Authority of Singapore (the "MAS") pursuant to The Insurance Act of Singapore which imposes significant regulations relating to capital adequacy, risk management, governance, audit and actuarial requirements. AXIS Specialty Limited (Singapore Branch) is registered by the Accounting and Corporate Regulatory Authority ("ACRA") as a foreign company in Singapore and is also regulated by ACRA pursuant to the Singapore Companies Act. Prior to establishing its Singapore branch, AXIS Specialty Bermuda had maintained a representative office in Singapore since 2004.

AXIS Specialty Bermuda has reinsurance permissions in China and the Netherlands. AXIS Specialty Limited (Singapore Branch) has separate reinsurance permission in China.

AXIS Managing Agency Ltd. may write general insurance and reinsurance in Bermuda using Lloyd's licenses (refer to '*U.K. and Lloyd's of London'* below).

<u>*United States*</u>

U.S. Insurance Holding Company Regulation of AXIS Capital's Insurance Subsidiaries

As members of an insurance holding company system, each of AXIS Insurance Company, AXIS Reinsurance Company, AXIS Specialty Insurance Company and AXIS Surplus Insurance Company, collectively AXIS Capital's U.S. insurance subsidiaries ("U.S. Insurance Subsidiaries") are subject to the insurance holding company system laws and regulations of the states in which they do business. These laws generally require each of the U.S. Insurance Subsidiaries to register with its respective domestic state insurance department and to furnish financial and other information which may materially affect the operations, management or financial condition within the holding company system. All transactions within a holding company system that involve an insurance company must be fair and equitable. Notice to the insurance departments is required prior to the consummation of transactions affecting the ownership or control of an insurer and of certain material transactions between an insurer and an entity in its holding company system, and certain transactions may not be consummated without the department's prior approval.

State Insurance Regulation

AXIS Reinsurance Company is licensed to transact insurance and reinsurance throughout the U.S. including the District of Columbia and Puerto Rico. AXIS Reinsurance Company is also authorized to transact insurance and reinsurance throughout Canada through its Canadian branch and has reinsurance permissions in Brazil, Ecuador, Guatemala, Panama, India and Mexico. AXIS Insurance Company is licensed to transact insurance and reinsurance throughout the U.S. including the District of Columbia. AXIS Specialty Insurance Company is licensed to transact insurance and reinsurance throughout the U.S., except California, Iowa, Maine, New Mexico, New York and Wyoming. AXIS Surplus Insurance Company is eligible to write insurance on a surplus lines basis in all 50 states of the U.S., the District of Columbia, the U.S. Virgin Islands and Puerto Rico.

Our U.S. Insurance Subsidiaries also are subject to regulation and supervision by their respective states of domicile and by other jurisdictions in which they do business. The regulations generally are derived from statutes that delegate regulatory and supervisory powers to an insurance official. The regulatory framework varies from state to state, but generally relates to approval of policy forms and rates, the standards of solvency that must be met and maintained, including risk-based capital standards, material transactions between an insurer and its affiliates, the licensing of insurers, agents and brokers, restrictions on insurance policy terminations, the nature of and limitations on the amount of certain investments, limitations on the net amount of insurance of a single risk compared to the insurer's surplus, deposits of securities for the benefit of policyholders, methods of accounting, periodic examinations of the financial condition and market conduct of insurance companies, the form and content of reports of financial condition required to be filed, reserves for unearned premiums, losses, expenses and other obligations.

Our U.S. Insurance Subsidiaries are required to file detailed quarterly statutory financial statements with state insurance regulators in each of the states in which they conduct business. In addition, the U.S. Insurance Subsidiaries’ operations and accounts are subject to financial condition and market conduct examination at regular intervals by state regulators.

Regulators and rating agencies use statutory surplus as a measure to assess our U.S. Insurance Subsidiaries’ ability to support business operations and pay dividends. Our U.S. Insurance Subsidiaries are subject to various state statutory and regulatory restrictions that limit the amount of dividends that may be paid from earned surplus without prior approval from regulatory authorities. These restrictions differ by state, but generally are based on calculations using statutory surplus, statutory net income and investment income. In addition, many state regulators use the National Association of Insurance Commissioners promulgated risk-based capital requirements as a means of identifying insurance companies which may be under-capitalized.

Although the insurance industry generally is not directly regulated by the federal government, federal legislation and initiatives can affect the industry and our business. Certain sections of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 ("Dodd-Frank") pertain to the regulation and business of insurance. Specifically, the Federal Insurance Office was created ("FIO") has limited authority and serves to collect information and report on the business of insurance to Congress. In addition, Dodd-Frank contains the Non-admitted and Reinsurance Reform Act of 2010 ("NRRA"). NRRA attempts to coordinate the payment of surplus lines taxes, simplify the granting of alien insurers to become surplus lines authorized and coordinates the credit for certain reinsurance. Various sections of Dodd-Frank become effective over time and regulations have yet to be drafted for certain provisions. AXIS does not anticipate that Dodd-Frank will have any material effect on its operations or financial condition this year, but will continue to monitor its implementation.

Ternian Insurance Group LLC, a leading provider of voluntary, limited benefit, affordable health plans and other employee benefits coverage for hourly and part-time workers and their families, is an authorized insurance producer in all 50 of the U.S. except Hawaii. As a resident insurance producer in Arizona, Ternian Insurance Group LLC is subject to regulation and supervision by the Arizona Department of Insurance and is also subject to the regulation and supervision of the other states in which Ternian transacts business.

AXIS Specialty Underwriters, Inc., a Florida licensed reinsurance intermediary is subject to regulation and supervision by the Florida Department of Financial Services. AXIS Specialty Underwriters, Inc. operates as the Latin American and Caribbean regional coverholder for AXIS Syndicate providing facultative reinsurance coverage to the Latin American and Caribbean market with a focus on energy and property business.

U.S. Authorizations of our Non-U.S. Insurance Subsidiaries

The insurance laws of each state of the U.S. regulate or prohibit the sale of (re)insurance within their jurisdictions by (re)insurers that are not admitted to do business within such jurisdictions, or conduct business pursuant to exemptions. AXIS Specialty Europe is eligible to write surplus lines business in all 50 of the U.S., the District of Columbia and Puerto Rico. AXIS Managing Agency Ltd. is eligible to use Lloyd's of London licenses to (i) write surplus lines business in all 50 of the U.S., in the District of Columbia and in all U.S. territories, (ii) to write insurance business, except life insurance business, in the states of Illinois, Kentucky and in the U.S. Virgin Islands and (iii) to write non-life reinsurance business in all 50 of the U.S., the District of Columbia and in all U.S. territories, except for accident and health reinsurance in New York.

In addition to the regulatory requirements imposed by the jurisdictions in which they are licensed, reinsurers’ business operations are affected by regulatory requirements in various states of the U.S. governing "credit for reinsurance" that are imposed on their ceding companies. In general, a ceding company obtaining reinsurance from a reinsurer that is licensed, accredited or approved by the jurisdiction or state in which the ceding company files statutory financial statements is permitted to reflect in its statutory financial statements a credit in an aggregate amount equal to the ceding company’s liability for unearned premiums (which are that portion of premiums written which applies to the unexpired portion of the policy period), loss reserves and loss expense reserves ceded to the reinsurer. The great majority of states, however, permit a credit to statutory surplus resulting from reinsurance obtained from a non-licensed or non-accredited reinsurer to be recognized to the extent that the reinsurer provides a letter of credit, trust fund or other acceptable security arrangement. A few states do not allow credit for reinsurance ceded to non-licensed reinsurers except in certain limited circumstances and others impose additional requirements that make it difficult to become accredited. In connection with the establishment of a Multi-Beneficiary Reinsurance Trust, AXIS Specialty Bermuda obtained accredited or trusteed reinsurer status in all U.S. jurisdictions except for New York.

Ireland

On November 4, 2015, Ireland transposed the Solvency II Directive (Directive 2009/138/EC) as amended by the Omnibus II Directive (2014/51/EC) (together "the Solvency II Directive") into Irish Law effective January 1, 2016. This transposition took the form of secondary Irish legislation in the form of a Statutory Instrument, the European Communities (Insurance and Reinsurance) Regulations 2015, which together with the Solvency II Directive are collectively referred to herein as "Solvency II". Solvency II represents a consolidation and modernization of existing European Commission Solvency I (re)insurance regulation and supervision and includes a new harmonized European Union-wide risk based solvency and reporting regime for the (re)insurance sector. Solvency II covers three main areas: (i) the valuation of assets and liabilities and related solvency capital requirements; (ii) governance requirements including key functions of compliance, internal audit, actuarial and risk management; and (iii) new legal entity and European Union ("E.U.") group reporting and disclosure requirements including public disclosures. The new capital requirement must be computed using the Solvency II standard formula unless the Central Bank of Ireland ("CBI") has previously authorized a company to use its own internal model. Certain of our European legal entities are subject to Solvency II.

AXIS Specialty Europe

AXIS Specialty Europe is a European public limited liability company incorporated as a non-life insurer under the laws of Ireland. It is a Societas Europaea (SE), or European society company, and has been registered in accordance with company law of the E.U. As a SE company, AXIS Specialty Europe can more easily merge with companies in European member states and also transfer its domicile to other member states of the E.U. AXIS Specialty Europe is authorized and regulated by the CBI pursuant to the Insurance Acts 1909 to 2000, as amended, repealed or replaced, the Central Bank Acts 1942 – 2014, as amended, repealed or replaced and E.U. regulation relating to general insurance and statutory instruments made thereunder. AXIS Specialty Europe is authorized to conduct business in 16 non-life insurance classes throughout the E.U. and the European Economic Area ("EEA") which includes each of the member countries of the E.U. with the addition of Iceland, Liechtenstein and Norway. AXIS Specialty Europe may also write reinsurance business within the classes of insurance business for which it is authorized. Significant additional regulation and guidelines apply in relation to compliance with corporate governance requirements as well as fitness to perform assessments.

AXIS Specialty Europe is subject to Solvency II. In accordance with Solvency II, AXIS Specialty Europe is permitted to provide insurance services to clients located in any EEA member state ("Freedom of Services"), provided it has first notified the CBI and subject to compliance with any "general good requirements" as may be established by the applicable EEA Member State regulator. AXIS Specialty Europe has notified the CBI of its intention to provide insurance services on a Freedom of Services basis in all EEA countries.

Solvency II also permits AXIS Specialty Europe to carry on insurance business in any EEA Member State under the principle of "Freedom of Establishment."

AXIS Specialty Europe's U.K. branch transacts general insurance business in the U.K. The CBI remains responsible for the prudential supervision of the branch; however, the branch is subject to limited regulation by the U.K. Financial Conduct Authority ("FCA") and the Prudential Regulation Authority ("PRA"). Upon the U.K.'s withdrawal from the E.U. ("Brexit"), AXIS Specialty Europe expects to lose its Freedom of Establishment rights in the U.K. In order to maintain business continuity upon the exit of the U.K. from the E.U., AXIS Specialty Europe has submitted an application to the PRA for authorization of a third country branch in the U.K., which, if approved, would be regulated by the PRA and the FCA.

Effective January 1, 2019, the shares of Compagnie Belge d’Assurances Aviation NV/SA ("Aviabel") were transferred to AXIS Specialty Europe from AXIS Specialty Holdings Ireland Limited and Aviabel was merged into AXIS Specialty Europe by way of merger by absorption and dissolved without going into liquidation (the "Aviabel Merger").

In connection with the Aviabel Merger, AXIS Specialty Europe established two new branches in Belgium and the Netherlands. These new branches are subject to CBI prudential supervision and limited regulation by the National Bank of Belgium and the Dutch National Bank, respectively.

In October 2015, AXIS Specialty Europe's Australia branch, trading as AXIS Specialty Australia, ceased writing new and renewal business and completed a portfolio transfer of all the insurance policies, assets and liabilities with effect from February 13, 2017.

AXIS Specialty Europe has local regulatory permission to carry on insurance business in Jersey and has reinsurance permissions in India, China, Argentina, Mexico, Panama, Paraguay, Chile, Honduras, Ecuador, Colombia and Guatemala.

AXIS Re SE

AXIS Re SE is a European public limited liability company incorporated as a reinsurer under the laws of Ireland. AXIS Re SE is also a Societas Europaea (SE), or European society company, registered in accordance with the corporate law of the E.U. AXIS Re SE is authorized by the CBI as a composite reinsurer (non-life and life) in accordance with the Insurance Acts 1909 to 2000, as amended, repealed or replaced, the Central Bank Acts 1942 - 2014 as amended, repealed or replaced and E.U. regulation applicable to reinsurance and statutory instruments made thereunder. AXIS Re SE is authorized to transact reinsurance throughout the E.U. and the EEA and is subject to Solvency II. Significant additional regulation and guidelines apply to AXIS Re SE in relation to compliance with corporate governance requirements as well as performing assessments of fitness and probity.

AXIS Re SE's branch in Zurich, Switzerland trades as AXIS Re Europe and is registered in Zurich as AXIS Re SE, Dublin (Zurich branch). The CBI remains responsible for the prudential supervision of the branch. The Swiss Financial Market Supervisory Authority does not impose additional regulation upon a Swiss branch of an EEA reinsurer.

AXIS Re SE has reinsurance permissions in Argentina, Bolivia, Brazil, China, Chile, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, India, Mexico, Nicaragua, Panama, Paraguay, Peru and Venezuela.

AXIS Re SE has marketing offices in Brazil, France and Spain. These offices are representative offices only and no business may be written or any regulated activity conducted from these offices.

AXIS Re SE Escritório de Representação No Brasil Ltda. was established in Brazil as a subsidiary of AXIS Re SE to facilitate the Brazilian Superintendence of Private Insurance ("SUSEP") regulatory requirements for approval of a representative office of AXIS Re SE and for the registration of AXIS Re SE with SUSEP as an Admitted Reinsurer.

AXIS Specialty Holdings Ireland Limited

AXIS Specialty Holdings Ireland Limited is the limited liability holding company for AXIS Specialty Europe and AXIS Re SE, each incorporated under the laws of Ireland, Contessa Limited, a U.K. licensed insurance intermediary and AXIS Reinsurance (DIFC) Limited, a Dubai licensed insurance intermediary.

Effective January 1, 2019, AXIS Specialty Holdings Ireland Limited transferred the shares of Aviabel to AXIS Specialty Europe, described above under *AXIS Specialty Europe* as the Aviabel Merger.

AXIS Managing Agency Ltd. is eligible to use Lloyd's of London licenses to write insurance, except permanent health, and reinsurance business on a Freedom of Services basis in Ireland.

U.K. and Lloyd's of London

In the U.K., under the Financial Services and Markets Act 2000 ("FSMA"), no person may carry on a regulated activity unless authorized or exempt. Effecting or intermediating contracts of insurance or reinsurance are regulated activities requiring authorization. Effecting contracts of insurance requires authorization by the PRA and is regulated by the FCA. Intermediating contracts of insurance requires authorization by the FCA.

Under the Financial Services Act 2012, the FCA is a conduct regulator for all U.K. firms carrying on a regulated activity in the U.K. while the PRA is the prudential regulator of U.K. banks, building societies, credit unions, insurers and major investment firms. As a prudential regulator, the PRA has a general objective to promote the safety and soundness of the firms it regulates. The PRA rules require financial firms to hold sufficient capital and have adequate risk controls in place. Close supervision of firms ensures that the PRA has a comprehensive overview of their activities. The PRA can step in if it believes an insurer is not protecting policyholders adequately.

The FCA has a statutory strategic objective to ensure that relevant markets function well and have operational objectives to: protect consumers; protect financial markets; and promote competition. It makes rules covering how the firm must be managed and requirements relating to the firm's systems and controls; how business must be conducted; and the firm's arrangements to manage financial crime risk. The PRA and the FCA require regular and ad hoc reporting and monitor compliance with their respective rulebooks through a variety of means including the collection of data, industry reviews, and site visits. The directors and senior managers of AXIS Managing Agency Ltd. must be "approved persons" under FSMA making them directly and personally accountable for ensuring compliance with the requirements of the PRA and the FCA.

AXIS Managing Agency Ltd.

AXIS Managing Agency Ltd. is authorized and regulated by the PRA and regulated by the FCA to conduct insurance and reinsurance business and is a Lloyd's managing agent authorized by Lloyd's to manage AXIS Syndicate 1686, Syndicate 2007 and Special Purpose Arrangement 6129.

Effective January 1, 2019, Syndicate 2007 will no longer be accepting new business as we consolidate our Lloyd's business under Syndicate 1686.

Lloyd's is a society of members both corporate and individual, which underwrite insurance and reinsurance (each for its own account) as members of syndicates. A syndicate is made up of one or more members that join together as a group to accept insurance and reinsurance risks. Each syndicate is managed by a managing agent. Managing agents write insurance business on behalf of the member(s) of the syndicate, which member(s) receive profits or bear losses in proportion to their share in the syndicate for each underwriting year of account.

The Society of Lloyd's is subject to U.K. law and is authorized under the FSMA. The Lloyd's Act 1982 defines the governance structure and rules under which the society operates. Under the Lloyd's Act 1982, the Council of Lloyd's is responsible for the management and supervision of the Lloyd's market. The Council of Lloyd's overseas and supports the Lloyd's market. Lloyd's manages and protects the Lloyd's network of international licenses. Lloyd's agrees to syndicates' business plans and evaluates performance against those plans. Syndicates are required to underwrite only in accordance with their agreed business plans. If they fail to do so, Lloyd's can take a range of actions including, as a last resort, stopping a syndicate from underwriting. Lloyd's monitors syndicates' compliance with Lloyd's minimum standards. In addition, Lloyd's is responsible for setting both member and central capital levels.

Lloyd's has a global network of licenses and authorizations and underwriters at Lloyd's may write business in and from countries where Lloyd's has authorized status or exemptions available to non-admitted insurers or reinsurers. Lloyd's licenses can only be used if the Syndicate Business Forecast, agreed annually with Lloyd's, names those countries.

AXIS Managing Agency Ltd. operates an underwriting division at Lloyd's Insurance Company (China) Limited, a wholly owned subsidiary of the Corporation of Lloyd's which allows it to underwrite reinsurance in China.

AXIS Corporate Capital UK Limited

Until December 31, 2018, AXIS Corporate Capital UK Limited was the sole (100%) corporate member of AXIS Syndicate 1686. Effective as of January 1, 2019, AXIS Corporate Capital UK Limited and Novae Corporate Underwriting Limited are the corporate members of AXIS Syndicate 1686, providing 70% and 30% capital support, respectively. AXIS Syndicate 1686 is managed by AXIS Managing Agency Ltd.

Novae Corporate Underwriting Limited

Following the acquisition of Novae Group Limited in October 2017, management of Syndicate 2007 was transferred from Novae Syndicates Limited to AXIS Managing Agency Ltd. on January 1, 2018. Novae Corporate Underwriting Limited is the sole corporate member of Syndicate 2007.

AXIS Underwriting Limited

AXIS Underwriting Limited, formerly known as Novae Underwriting Limited, is authorized and regulated by the FCA as an insurance intermediary and underwrites insurance on behalf of Syndicate 1686 at Lloyd's.

Contessa Limited

Contessa Limited is authorized and regulated by the FCA as an insurance intermediary with offices in London and Belfast and underwrites insurance on behalf of AXIS Specialty Europe in the U.K and in Ireland.

AXIS Specialty UK Holdings Limited

AXIS Specialty UK Holdings Limited is a limited liability holding company for AXIS Managing Agency Ltd., AXIS Corporate Capital UK Limited and Novae Group Limited, incorporated under the laws of England and Wales.

Regulatory Impact due to Brexit

Insurance

AXIS Specialty Europe transacts direct insurance business in the EEA on a Freedom of Services basis and on a Freedom of Establishment basis through its branch in the U.K. Post Brexit, it is expected that AXIS Specialty Europe will lose its authorization to conduct business in the U.K. In order to ensure continuity of services, AXIS Specialty Europe is seeking authorization from the PRA to license its existing U.K. branch as a third-country branch in the U.K.

As an Ireland domiciled insurer authorized to transact insurance in the E.U., AXIS Specialty Europe will remain authorized to service customers within and outside of the EEA to the extent permitted by local law. Post Brexit, AXIS Specialty Europe’s customers based in the EEA will be serviced from AXIS Specialty Europe's head office in Dublin, Ireland or through either of AXIS Specialty Europe’s branches in Belgium or the Netherlands.

AXIS Managing Agency Ltd. transacts direct insurance business in the EEA on a Freedom of Services basis from the U.K. Post Brexit, it is expected that AXIS Managing Agency Ltd. will lose its authorization to conduct direct insurance business in the EEA under a Freedom of Services basis. However, AXIS Managing Agency Ltd. will remain able to access the EEA markets via Lloyd's Insurance Company S.A in Brussels (“Lloyd’s Brussels”) to ensure continuity of services in the EEA post Brexit. Lloyd's Brussels has been approved by the National Bank of Belgium and the Financial Services and Markets Authority with authorization to write non-life insurance risks throughout the EEA via Lloyd's existing distribution channels.

Reinsurance

AXIS Managing Agency Ltd. currently transacts worldwide reinsurance at Lloyd’s including in the EEA. It is expected that full equivalence under Solvency II will be granted by the European Commission to the U.K. as a result of the European Union (Withdrawal) Bill and the transposition of Solvency II into U.K law. In the unlikely event that full equivalence under Solvency II is not granted, AXIS Managing Agency Ltd. will remain able to conduct non-life facultative and proportional excess of loss reinsurance throughout the EEA via Lloyd's Brussels.

AXIS Re SE currently transacts reinsurance business in the EEA and the U.K. Pursuant to the European Union (Withdrawal) Bill and the transposition of Solvency II into U.K law, we anticipate that the PRA will grant full equivalence under Solvency II to EEA supervised reinsurers, including AXIS Re SE, allowing AXIS Re SE to continue its operations without disruption post Brexit.

In the unlikely event that full equivalence under Solvency II is not granted to the U.K., AXIS Capital will continue its reinsurance operations through its entities authorized to conduct reinsurance in the EEA and in the U.K.

Switzerland

AXIS Re SE conducts reinsurance business from its branch, AXIS Re Europe, in Zurich, Switzerland, subject to the supervision of the CBI.

AXIS Managing Agency Ltd. is eligible to use Lloyd's licenses to write all classes of insurance business, except life, sickness and legal expenses and is authorized to write all classes of reinsurance business in Switzerland.

Singapore

AXIS Specialty Bermuda conducts (re)insurance business from its branch in Singapore, AXIS Specialty Limited (Singapore Branch), subject to the supervision of the BMA and the MAS which imposes significant regulations relating to capital adequacy, risk management, governance and audit and actuarial requirements. AXIS Specialty Limited (Singapore Branch) is registered by ACRA as a foreign company in Singapore and regulated by ACRA pursuant to the Singapore Companies Act.

AXIS Managing Agency Ltd. is eligible to use Lloyd's licenses to write insurance from Singapore with the exception of certain compulsory classes and life business. Singaporean business may also be written from outside of Singapore in certain circumstances where it is placed with a Singapore intermediary licensed by the MAS to place business at Lloyd's or by dealing directly with the insured.

Canada

AXIS Reinsurance Company conducts (re)insurance business from AXIS Reinsurance Company (Canadian Branch), its branch in Canada, subject to the supervision of the New York State Department of Financial Services and the Office of the Superintendent of Financial Institutions Canada ("OSFI"), the federal regulatory authority that supervises federal Canadian and non-Canadian insurance companies operating in Canada pursuant to the Insurance Companies Act (Canada). The branch is authorized by OSFI to transact insurance and reinsurance. In addition, the branch is subject to the laws and regulations of each of the provinces and territories in which it is licensed.

AXIS Managing Agency Ltd. is eligible to use Lloyd's licenses subject to the laws and regulations of each of the provinces and territories in which it is licensed, to write insurance in or from Canada, with the following exceptions: hail insurance in respect of crop in the province of Quebec; home warranty insurance in the province of British Columbia; life insurance; credit protection insurance; title insurance; surety; and mortgage default insurance. AXIS Syndicate, through Lloyd's, is authorized to write reinsurance in or from Canada subject to certain restrictions relating to life reinsurance.

Belgium

Through December 31, 2018, Aviabel was authorized to conduct general property and casualty insurance and maintained its registered office in Brussels, Belgium. Aviabel was regulated by the National Bank of Belgium pursuant to the Belgian Act of 2016 and was subject to Solvency II. Aviabel also exercised certain insurance activities through its branch registered in the Netherlands and had a captive subsidiary in Luxembourg, Aviabel RE S.A.

Through 2018, Aviabel was permitted to provide insurance across the EEA on a cross-border basis and had reinsurance permissions in Argentina, Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Venezuela, India, China and South Korea.

As a result of the Aviabel Merger, described above under "*AXIS Specialty Europe*", the insurance and reinsurance portfolio of Aviabel was transferred to AXIS Specialty Europe, a process overseen and coordinated by the National Bank of Belgium in cooperation with other European regulators.

AXIS Managing Agency Ltd. is eligible to use Lloyd's licenses to write insurance (except permanent health) and reinsurance business on a Freedom of Establishment basis in Belgium.

AXIS Specialty Europe has permission to write insurance and reinsurance on a Freedom of Services basis in Belgium.

AXIS Re SE has permission to write reinsurance on a Freedom of Services basis in Belgium.

Luxembourg

Aviabel Re S.A. is a captive reinsurance company in Luxembourg and is authorized by the Commissariat aux Assurances. Aviabel Re S.A. was a wholly owned subsidiary of Aviabel until 1 October 2018, when ownership was transferred to AXIS Specialty Holdings Ireland Limited.

AXIS Specialty Europe has permission to write insurance and reinsurance on a Freedom of Services basis in Luxembourg.

AXIS Re SE has permission to write reinsurance on a Freedom of Services basis in Luxembourg.

Dubai

AXIS Specialty Holdings Ireland Limited recently established AXIS Reinsurance (DIFC) Limited which was granted a prudential Category 4 license from the Dubai Financial Services Authority on December 25, 2017 to provide insurance intermediation and insurance management services. AXIS Reinsurance (DIFC) Limited has been established within the Dubai International Financial Centre and is required to comply with Regulatory Law DIFC Law No. 1 2004 and any amendments.

AXIS Reinsurance (DIFC) Limited will operate as an intermediary under binding authority granted by the Board of Directors of AXIS Re SE to underwrite several lines of business.

AXIS Managing Agency Ltd. is eligible to use Lloyd's licenses to write reinsurance in or from Dubai with certain exceptions.

Non-Admitted (Re)Insurance

The AXIS Capital (re)insurance companies also (re)insure risks in many countries, including the above countries, pursuant to regulatory permissions and exemptions available to non-admitted (re)insurers.

AXIS Managing Agency Ltd. is eligible to use Lloyd's licenses to write insurance and reinsurance business where Lloyd's has authorized status or pursuant to regulatory exemptions available to non-admitted (re)insurers.

Employees

As of February 20, 2019 we had approximately 1,567 employees. We believe that relations with our employees are excellent. We aim to attract and retain the top talent in the industry and to motivate our employees to make decisions that are in the best interest of both our clients and shareholders. We nurture an ethical, risk-aware, achievement-oriented culture that promotes professionalism, responsibility, integrity, discipline and entrepreneurship.

Trademarks

We use our trademarks, including among others, our "AXIS" trademarks for the global marketing of our products and services and believe that we sufficiently safeguard our trademark portfolio to protect our rights.

Available Information

Our Internet website address is *http://www.axiscapital.com*. Information contained in our website is not part of this report.

We make available free of charge, through our internet website, our Annual Report 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 such material is electronically filed with, or furnished to, the SEC. Current copies of the charter for each of our Audit Committee, Corporate Governance and Nominating Committee, Compensation Committee, Finance Committee, Executive Committee and Risk Committee, as well as our Corporate Governance Guidelines and Code of Business Conduct, are available on our internet website at *http://www.axiscapital.com*.

ITEM 1A. RISK FACTORS

You should carefully consider the following risks and all of the other information set forth in this report, including our consolidated financial statements and the notes thereto:

The (re)insurance business is historically cyclical, and we expect to experience periods with excess underwriting capacity and unfavorable premium rates.

The (re)insurance business historically has been a cyclical industry characterized by periods of intense price competition due to excessive underwriting capacity as well as periods when shortages of capacity permitted favorable premium levels. An increase in premium rates is often offset by an increasing supply of (re)insurance capacity, via capital provided by new entrants, new capital market instruments and structures and/or the commitment of additional capital by existing (re)insurers, which may cause prices to decrease. Any of these factors could lead to a significant reduction in premium rates, less favorable policy terms and fewer submissions for our underwriting services. In addition to these considerations, changes in the frequency and severity of losses suffered by insureds and insurers may affect the cycles of the (re)insurance business significantly.

Competition and consolidation in the (re)insurance industry could reduce our growth and profitability.

The (re)insurance industry is highly competitive. We compete on an international and regional basis with major U.S., Bermuda, European and other international (re)insurers and underwriting syndicates, including Lloyd's, some of which have greater financial, marketing and management resources than we do. We also compete with new companies that continue to be formed to enter the (re)insurance markets. In addition, capital market participants have created alternative products that are intended to compete with reinsurance products. New and alternative capital inflows in the (re) insurance industry and the retention by cedants of more business have caused an excess supply of (re)insurance capital. There has been a large amount of merger and acquisition activity in the (re)insurance sector in recent years which may continue and we may experience increased competition as a result of that consolidation with consolidated entities having enhanced market power. Increased competition could result in fewer submissions, lower premium rates, less favorable policy terms and conditions and greater costs of customer acquisition and retention. In addition, if industry pricing does not meet our hurdle rate, we may reduce our future underwriting activities. These factors could have a material adverse effect on our growth and profitability.

Global economic conditions could materially and adversely affect our business, results of operations and financial condition.

Worldwide financial markets can be volatile. In 2008 and 2009, for example, there was volatility and disruption including, among other things, dislocation in the mortgage and asset-backed securities markets, deleveraging and decreased liquidity generally, widening of credit spreads, bankruptcies and government intervention in a number of large financial institutions. These events resulted in extraordinary responses by governments worldwide, including the enactment of the Emergency Economic Stabilization Act of 2008 and the U.S. Recovery and Reinvestment Act in 2009 and Dodd Frank. Uncertainty and market turmoil has affected and may in the future affect, among other aspects of our business, the demand for and claims made under our products, the ability of customers, counterparties and others to establish or maintain their relationships with us, our ability to access and efficiently use internal and external capital resources and our investment performance and portfolio. We also provide coverage to the mortgage industry through insurance and reinsurance of mortgage insurance companies and U.S. Government Sponsored Entity credit risk sharing transactions, and deteriorating economic conditions could cause our mortgage insurance losses to increase and adversely affect our results of operations and financial condition.

In addition, steps taken by governments to stabilize financial markets and improve economic conditions may be ineffective and actual or anticipated efforts to continue to unwind some of such steps could disrupt financial markets and/or could adversely impact the value of our investment portfolio. While inflation has recently been moderate and that trend may continue, it is possible that expansionary monetary policies, recent changes to the U.S. tax law, improving economic conditions, higher commodity prices and tighter labor markets could lead to an inflationary environment.

The current U.S. administration has called for comprehensive regulatory reform and questioned certain existing legislation, including the Affordable Care Act and Dodd Frank. It is uncertain how any such reform could affect our business. Governmental action and legislation resulting from the U.S. administration, including the recently enacted U.S. tax reform commonly referred to as the 2017 Tax Cuts and Jobs Act ("U.S. Tax Reform") as well as political debate, conflicts and compromises related to such actions, may impact the financial markets and consumer confidence and spending or adversely impact the U.S. economy (refer to '*Changes in U.S. federal income tax law could materially adversely affect us'* below).

Given the ongoing global economic uncertainties, evolving market conditions may continue to affect our results of operations, financial position and capital resources. In the event that there is additional deterioration or volatility in financial markets or general economic conditions, our results of operations, financial position, capital resources and competitive landscape could be materially and adversely affected.

Our results of operations and financial condition could be materially adversely affected by the occurrence of natural and man-made disasters.

We have substantial exposure to unexpected losses resulting from natural disasters, man-made catastrophes and other catastrophe events. Catastrophes can be caused by various events, including hurricanes, typhoons, earthquakes, tsunamis, hailstorms, floods, explosions, severe winter weather, fires, drought, and other natural or man-made disasters. Catastrophes can also be man-made, such as terrorist attacks and other intentionally destructive acts, including those involving nuclear, biological, chemical or radiological events, cyber-attacks, explosions and infrastructure failures. The incidence and severity of catastrophes are inherently unpredictable and our losses from catastrophes could be substantial.

Increases in the values and concentrations of insured property, particularly along coastal regions and increases in the cost of construction materials required to rebuild affected properties, may increase the impact of these occurrences on us in the future. Changes in global climate conditions may further increase the frequency and severity of catastrophe activity and losses in the future. Similarly, changes in global political and economic conditions may increase both the frequency and severity of man-made catastrophe events in the future. Examples of the impact of catastrophe events include our recognition of the net losses and loss expenses of:

- $430M in aggregate, primarily related to Hurricanes Michael and Florence, the California Wildfires, and Typhoon Jebi in 2018;
- $835 million, in aggregate, primarily related to U.S. weather-related events, Hurricanes Harvey, Irma and Maria, Mexico earthquakes and California wildfires in 2017;
- $204 million, in aggregate, relating to U.S. weather-related events, Hurricane Matthew, Fort McMurray wildfires, the Japanese, Ecuadorian and South Island earthquakes, North Calgary hailstorm and European floods in 2016;

These events materially reduced our net income in the years noted above. Although we attempt to manage our exposure to such events through the use of underwriting controls and the purchase of third-party reinsurance, catastrophe events are inherently unpredictable and the actual nature of such events when they occur could be more frequent or severe than contemplated in our pricing and risk management expectations. As a result, the occurrence of one or more catastrophe events could have a material adverse effect on our results of operations or financial condition.

With regard to cyber-attacks, this is an area where the threat landscape is evolving, and there is a risk that increases in the frequency and severity of cyber-attacks on our clients could adversely affect our financial condition and operating results. This risk is also dependent on our clients' cybersecurity defenses, and our issuance of policy terms which respond to the evolving threat landscape. In addition, our exposure to cyber-attacks includes exposure to silent cyber risks, meaning risks and potential losses associated with policies where cyber risk is not specifically included nor excluded in the policies. Even in cases where we attempt to exclude losses from cyber-related risks, there can be no assurance that a court or arbitration panel will interpret policy language or otherwise issue a ruling favorable to us.

Global climate change may have a material adverse effect on our results of operations and financial condition if we are not able to adequately assess and reserve for the increased frequency and severity of catastrophes resulting from these environmental factors.

The frequency and severity of natural catastrophe activity, including hurricanes, tsunamis, tornadoes, floods and droughts, has been greater in recent years. Atmospheric concentrations of carbon dioxide and other greenhouse gases have increased dramatically since the industrial revolution and there is debate as to whether this has caused a gradual increase in global average temperatures. Increasing global average temperatures may continue in the future and could impact our business in the long-term.

We attempt to mitigate the risk of financial exposure from climate change through our underwriting risk management practices. This includes sensitivity to geographic concentrations of risks, the purchase of protective reinsurance and selective underwriting criteria which can include, but is not limited to, higher premiums and deductibles and more specifically excluded policy risks. However, due to lack of scientific certainty about the causes of increased frequency and severity of catastrophes and the lack of adequate predictive tools, a continuation and worsening of recent trends may have a material impact on our results of operations and/or financial condition.

We could face unanticipated losses from war, terrorism, political unrest, and geopolitical uncertainty and these or other unanticipated losses could have a material adverse effect on our financial condition, results of operations and/or liquidity.

We have substantial exposure to unexpected losses resulting from war, acts of terrorism, political unrest and geopolitical instability in many regions of the world. In certain instances, we specifically (re)insure risks resulting from acts of terrorism. Even in cases where we attempt to exclude losses from terrorism and certain other similar risks from some coverages written by us, there can be no assurance that a court or arbitration panel will interpret policy language or otherwise issue a ruling favorable to us. Accordingly, we can offer no assurance that our reserves will be adequate to cover losses should they materialize.

We have limited terrorism coverage in our own reinsurance program for our exposure to catastrophe losses related to acts of terrorism. Furthermore, although the Terrorism Risk Insurance Extension Act of 2005 ("TRIEA") provides benefits in the event of certain acts of terrorism, those benefits are subject to a deductible and to other limitations. Under TRIEA, once our losses attributable to certain acts of terrorism exceed 20% of our direct commercial property and liability insurance premiums for the preceding calendar year, the federal government will reimburse us for 85% of such losses in excess of this deductible. Notably, TRIEA does not provide coverage for reinsurance losses. Given the unpredictable frequency and severity of terrorism losses, as well as the limited terrorism coverage in our own reinsurance program, future losses from acts of terrorism could materially and adversely affect our results of operations, financial condition and/or liquidity in future periods. TRIEA expired at the end of 2014 but was reauthorized, with some adjustments to its provisions, in January 2015 for six years through December 31, 2020. Over the six-year life of the reauthorized program, the federal government reimbursement percentage will drop from 85% to 80%.

Our credit and political risk insurance line of business protects insureds with interests in foreign jurisdictions in the event governmental action prevents them from exercising their contractual rights and may also protect their assets against physical damage perils. The insurance provided may include cover for loss arising from expropriation, forced abandonment, license cancellation, trade embargo, contract frustration, non-payment, war on land or political violence (including terrorism, revolution, insurrection and civil unrest).

Our credit and political risk line of business also provides non-payment coverage on specific loan obligations. We insure sovereign non-payment and corporate non-payment as a result of commercial as well as political risk events. The vast majority of the corporate non-payment credit insurance provided is for single-named illiquid risks, primarily in the form of senior bank loans that can be individually analyzed and underwritten. We avoid insurance for structured finance products defined by pools of risks and insurance for synthetic products that would expose us to mark-to-market losses. We also avoid terms in our credit insurance contracts which introduce liquidity risk, most notably, in the form of a collateralization requirement upon a ratings downgrade. We also attempt to manage our exposure, by among other things, setting credit limits by country, region, industry and individual counterparty and regularly reviewing our aggregate exposures. However, due to globalization, political instability in one region can spread to other regions. Geopolitical uncertainty regarding a variety of domestic and international matters, such as the U.S. political and regulatory environment, the potential for default by one or more European sovereign debt issuers and Brexit (as defined below) could have a material adverse effect on our results of operations or financial condition.

A downgrade in our financial strength or credit ratings by one or more rating agencies could materially and negatively impact our business, financial condition, results of operations and/or liquidity.

Our ability to underwrite business is dependent upon the quality of our claims paying and financial strength ratings as evaluated by independent rating agencies. A downgrade, withdrawal or negative watch/outlook by any of these institutions could cause our competitive position in the (re) insurance industry to suffer and make it more difficult for us to market our products. If we experience a credit rating downgrade, withdrawal or negative watch/outlook in the future, we could incur higher borrowing costs and may have more limited means to access capital. A downgrade, withdrawal or negative watch/outlook could also result in a substantial loss of business for us, as ceding companies and brokers that place such business may move to other (re)insurers with higher ratings. We would also be required to post collateral under the terms of certain of our policies of reinsurance.

If actual claims exceed our loss reserves, our financial results could be adversely affected.

While we believe that our loss reserves at December 31, 2018 are adequate, new information, events or circumstances, unknown at the original valuation date, may lead to future developments in our ultimate losses being significantly greater or less than the reserves currently provided. The actual final cost of settling claims outstanding at December 31, 2018 as well as claims expected to arise from the unexpired period of risk is uncertain. There are many other factors that would cause our reserves to increase or decrease, which include, but are not limited to, changes in claim severity, changes in the expected level of reported claims, judicial action changing the scope and/or liability of coverage, changes in the legislative, regulatory, social and economic environment and unexpected changes in loss inflation.

Our operating history, which includes periods of rapid growth, means that our loss reserve estimates, particularly on the longer tailed classes of business, may place more reliance on industry benchmarks than might be the case for companies with longer operating histories; as a result, the potential for volatility in our estimated loss reserves may be more pronounced than for more established companies. When establishing our single point best estimate of loss reserves at December 31, 2018, our management considered actuarial estimates and applied informed judgment regarding qualitative factors that may not be fully captured in actuarial estimates. Such factors included, but were not limited to: the timing of the emergence of claims, volume and complexity of claims, social and judicial trends, potential severity of individual claims and the extent of internal historical loss data versus industry information.

Changes to our previous estimate of prior year loss reserves can adversely impact the reported calendar year underwriting results if reserves prove to be insufficient or favorably impact our reported results if loss reserves prove to be higher than actual claim payments. If our net income is insufficient to absorb a required increase in our loss reserves, we would incur an operating loss and could incur a reduction of our capital.

The effects of emerging claim and coverage issues on our business are uncertain.

As industry practices and legal, judicial, social, political, technological and other environmental conditions change, unexpected issues related to claims and coverage may emerge. These issues may adversely affect our business by either extending coverage beyond our underwriting intent or by increasing the frequency and/or severity of claims. For example, the last global financial crisis resulted in a higher level of claim activity on professional lines (re)insurance business. In some instances, these changes may not become apparent until sometime after we have issued the insurance or reinsurance contracts that are affected by the changes. In addition, our actual losses may vary materially from our current estimate of the loss based on a number of factors (refer to '*If actual claims exceed our loss reserves, our financial results could be adversely affected*' above). As a result, the full extent of liability under an insurance or reinsurance contract may not be known for many years after such contract is issued and a loss occurs.

Our investment and derivative instrument portfolios are exposed to significant capital markets risk related to changes in interest rates, credit spreads and equity prices as well as other risks, which may adversely affect our results of operations, financial condition or cash flows.

The performance of our cash and investments portfolio has a significant impact on our financial results. A failure to successfully execute our investment strategy could have a significant impact on our results of operations or financial condition.

Our investment portfolio is subject to a variety of market risks, including risks relating to general economic conditions, interest rate fluctuations, equity price risk, foreign currency movements, pre-payment or reinvestment risk, liquidity risk and credit risk. Although we attempt to manage market risks through, among other things, stressing diversification and conservation of principal and liquidity in our investment guidelines, it is possible that, in periods of economic weakness or periods of turmoil in capital markets, we may experience significant losses in our portfolio.

Our fixed maturities, which represent 87% of our total investments and 76% of total cash and investments at December 31, 2018, may be adversely impacted by changes in interest rates. Increases in interest rates could cause the fair value of our investment portfolio to decrease, resulting in a lower book value (refer to Item 7A *'Quantitative and Qualitative Disclosure About Market Risk'* for a related sensitivity analysis) and capital resources. In addition, a lower interest rate environment can result in reductions in our investment yield as new funds and proceeds from sales and maturities of fixed income securities are reinvested at lower rates. This reduces our overall future profitability. Interest rates are highly sensitive to many factors, including governmental and central bank monetary policies, inflation, domestic and international economic and political conditions and other factors beyond our control.

Regulators and law-enforcement agencies from a number of governments, including entities in the United States, Japan, Canada and the United Kingdom, have been conducting civil and criminal investigations into whether the banks that contributed to the British Bankers' Association (the BBA), in connection with the calculation of daily London Interbank Overnight Offering Rate (LIBOR) may have underreported or otherwise manipulated or attempted to manipulate LIBOR. Several financial institutions have reached settlements with the U.S. Commodity Futures Trading Commission, the U.S. Department of Justice Fraud Section and the U.K. Financial Conduct Authority in connection with investigations by such authorities into submissions made by such financial institutions to the bodies that set LIBOR and other interbank offered rates. In such settlements, such financial institutions admitted to submitting rates to the BBA that were lower than the actual rates at which such financial institutions could borrow funds from other banks. Additional investigations remain ongoing with respect to other major banks and no assurance can be made that there will not be further admissions or findings of rate setting manipulation or that improper manipulation of LIBOR or other similar inter-bank lending rates will not occur in the future.

Based on a review conducted by the UK Financial Conduct Authority (FCA), and a consultation conducted by the European Commission, proposals have been made for governance and institutional reform, regulation, technical changes and contingency planning. In addition, pursuant to authorization from the FCA, ICE Benchmark Administration Limited (formerly NYSE Euronext Rate Administration Limited) (the IBA) took over the administration of LIBOR from the BBA on February 1, 2014. Any new administrator of LIBOR may make methodological changes to the way in which LIBOR is calculated or may alter, discontinue or suspend calculation or dissemination of LIBOR.

In addition, on July 27, 2017, the FCA announced its intention to cease sustaining LIBOR after 2021. The FCA has statutory powers to require panel banks to contribute to LIBOR where necessary. The FCA has decided not to ask, or to require, that panel banks continue to submit contributions to LIBOR beyond the end of 2021. The FCA has indicated that it expects that the current panel banks will voluntarily sustain LIBOR until the end of 2021. The FCA's intention is that after 2021, it will no longer be necessary for the FCA to ask, or to require, banks to submit contributions to LIBOR. The FCA does not intend to sustain LIBOR through using its influence or legal powers beyond that date. It is possible that the IBA and the panel banks could continue to produce LIBOR on the current basis after 2021, if they are willing and able to do so, but we cannot make assurances that LIBOR will survive in its current form, or at all.

Uncertainty as to the nature of such potential changes, alternative reference rates or other reforms may adversely affect the trading market for LIBOR-based securities, including those held in our investment portfolio. 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 and the value of our investment portfolio.

Our portfolios of "other investments" and equity securities expose us to market price variability, driven by a number of factors outside our control including, but not limited to, global equity market performance.

Given our reliance on external investment managers, we are also exposed to operational risks, which may include, but are not limited to, a failure to follow our investment guidelines, technological and staffing deficiencies and inadequate disaster recovery plans.

Our derivative instrument counterparties may default on amounts owed to us due to bankruptcy, insolvency, lack of liquidity, adverse economic conditions, operational failure, fraud or other reasons. Even if we are entitled to collateral in circumstances of default, such collateral may be illiquid or proceeds from such collateral when liquidated may not be sufficient to recover the full amount of the obligation.

We may be adversely impacted by inflation.

Our operations, like those of other insurer and reinsurers, are susceptible to the effects of inflation because premiums are established before the ultimate amounts of losses and loss adjustment expense are known. Although we consider the potential effects of inflation when setting premium rates, our premiums may not fully offset the effects of inflation and essentially result in our underpricing the risks we insure and reinsure. Our reserve for losses and loss adjustment expenses includes assumptions about future payments for settlement of claims and claims-handling expenses, such as the value of replacing property and associated labor costs for the property business we write and litigation costs. To the extent inflation causes costs to increase above reserves established for claims, we will be required to increase our loss reserves with a corresponding reduction in our net income in the period in which the deficiency is identified, which may have a material adverse effect on our financial condition or results of operations. Unanticipated higher inflation could also lead to higher interest rates, which would negatively impact the value of our fixed income securities and potentially other investments.

The failure of our loss limitation strategy could have a material adverse effect on our results of operations or financial condition.

We seek to mitigate our loss exposure through multiple methods. For example, we write a number of our (re)insurance contracts on an excess of loss basis. Excess of loss (re)insurance indemnifies the insured against losses in excess of a specified amount. We generally limit the line size for each client and line of business on our insurance business and purchase reinsurance for many of our lines of business. In the case of proportional reinsurance treaties, we seek per occurrence limitations or loss and loss expense ratio caps to limit the impact of losses from any one event. In proportional reinsurance, the reinsurer shares a proportional part of the premiums and losses of the reinsured. We also seek to limit our loss exposure through geographic diversification. Geographic zone limitations involve significant underwriting judgments, including the determination of the area of the zones and the inclusion of a particular policy within a particular zone's limits. In addition, various provisions of our insurance policies and reinsurance contracts, such as limitations or exclusions from coverage or choice of forum negotiated to limit our risks may not be enforceable in the manner we intend. We cannot be sure that these loss limitation methods will effectively prevent a material loss exposure which could have a material adverse effect on our results of operations or financial condition.

If we choose to purchase reinsurance, we may be unable to do so, and if we successfully purchase reinsurance, we may be unable to collect amounts due to us.

We purchase reinsurance for our (re)insurance operations in order to mitigate the volatility of losses upon our financial results. From time to time, market conditions have limited, and in some cases have prevented, (re)insurers from obtaining the types and amounts of reinsurance that they consider adequate for their business needs. There is no guarantee that our desired amounts of reinsurance or retrocessional reinsurance will be available in the marketplace in the future. In addition to capacity risk, the remaining capacity may not be on terms we deem appropriate or acceptable or with companies with whom we want to do business.

Also, a reinsurer’s insolvency, or inability or refusal to make payments under the terms of its reinsurance agreement with us, could have a material adverse effect on our business because we remain liable to the insured. We face counterparty risk whenever we purchase reinsurance or retrocessional reinsurance. Consequently, the insolvency, inability or unwillingness of any of our present or future reinsurers to make timely payments to us under the terms of our reinsurance or retrocessional agreements could have an adverse effect on our financial condition or results of operations.

We utilize models to assist our decision making in key areas such as underwriting, reserving, reinsurance purchasing and the evaluation of our catastrophe risk but actual results could differ materially from model output.

We employ various modeling techniques (e.g. scenarios, predictive, stochastic and/or forecasting) to analyze and estimate exposures, loss trends and other risks associated with our assets and liabilities. We utilize modeled outputs and related analyses to assist us in decision-making, for example related to underwriting and pricing, reserving, reinsurance purchasing and the evaluation of our catastrophe risk through estimates of probable maximum losses, or "PMLs". The modeled outputs and related analyses, both from proprietary and third party models, are subject to various assumptions, professional judgment, uncertainties and the inherent limitations of any statistical analysis, including the use and quality of historical internal and industry data. Consequently, our actual losses from loss events, whether from individual components (e.g. wind, flood, earthquake, etc.) or in the aggregate, may differ materially from our modeled results. If, based upon these models or other factors, we misprice our products or underestimate the frequency and/or severity of loss events, our results of operations or financial condition may be adversely affected.

With respect to the evaluation of our catastrophe risk, our modeling utilizes a mix of historical data, scientific theory and mathematical methods. Output from multiple commercially available vendor models serves as a key input in our PML estimation process. We believe that there is considerable uncertainty in the data and parameter inputs for these vendor models. In that regard, there is no universal standard in the preparation of insured data for use in the models and the running of modeling software. In our view, the accuracy of the models depends heavily on the availability of detailed insured loss data from actual recent large catastrophes. Due to the limited number of events, there is significant potential for substantial differences between the modeled loss estimate and actual company experience for a single large catastrophe event. This potential difference could be even greater for perils with limited or no modeled annual frequency. We perform our own vendor model validation (including sensitivity analysis and backtesting, where possible) and supplement model output with historical loss information and analysis and management judgment. In addition, we derive our own estimates for non-modeled perils. Despite this, our PML estimates are subject to a high degree of uncertainty and our actual losses from catastrophe events may differ materially.

The risk associated with reinsurance underwriting could adversely affect us.

We do not always separately evaluate each of the individual risks assumed under reinsurance treaties, which is common among reinsurers. Therefore, we are largely dependent on the original underwriting decisions made by ceding companies. We are subject to the risk that the ceding companies may not have adequately evaluated the risks to be reinsured and that the premiums ceded may not adequately compensate us for the risks we assume. We also have exposure to a range of risks in connection with alternative capital arrangements.

We could be materially adversely affected if managing general agents, general agents, coverholders, other producers and third party administrators in our program business exceed their underwriting and/or claims settlement authorities or otherwise breach obligations owed to us.

In program business conducted by our insurance segment, following our underwriting, financial, claims and information technology due diligence reviews, we authorize managing general agents, general agents, coverholders and other producers to write business on our behalf within underwriting authorities prescribed by us. Once a program/coverholder commences, we must rely on the underwriting controls of these entities to write business within the underwriting authorities provided by us. Although we monitor our programs/coverholders on an ongoing basis, our monitoring efforts may not be adequate or these entities may exceed their underwriting or claims settlement authorities or otherwise breach obligations owed to us. To the extent that these entities exceed their authorities or otherwise breach obligations owed to us in the future, our results of operations and financial condition could be materially adversely affected.

If we experience difficulties with technology and/or data security, our ability to conduct our business might be negatively impacted.

While technology can streamline many business processes and ultimately reduce the cost of operations, technology initiatives present certain risks. Our business is dependent upon our employees' and outsourcers' ability to perform, in an efficient and uninterrupted fashion, necessary business functions such as processing policies and paying claims. A shutdown or inability to access one or more of our facilities, a power outage, or a failure of one or more of our information technology, telecommunications or other systems could significantly impair our ability to perform such functions on a timely basis. If sustained or repeated, such a business interruption, system failure or service denial could result in a deterioration of our ability to write and process business, provide customer service, pay claims in a timely manner or perform other necessary business functions. Unauthorized access, computer viruses, deceptive communications (phishing), malware, hackers and other external hazards including catastrophe events could expose our data systems to security breaches. These risks could expose us to data loss and damages.

Like other global companies, we may be regularly the target of attempted cyber and other security threats and must continuously monitor and develop our information technology networks and infrastructure to prevent, detect, address and mitigate the risk of threats to our data and systems. Over time, and particularly recently, the sophistication of these threats continues to increase. While administrative and technical controls, along with other preventive actions, reduce the risk of cyber incidents and protect our information technology, they may be insufficient to thwart cyber attacks and/or prevent other security breaches to our systems.

To the extent any disruption or security breach results in a loss or damage to our data, or inappropriate disclosure of our confidential information or that of others, it could impact our operations, cause significant damage to our reputation, affect our relationships with our customers and clients, lead to claims against us under various data privacy laws, result in regulatory action and ultimately have a material adverse effect on our business or operations. In addition, we may be required to incur significant costs to mitigate the damage caused by any security breach, to address any interruptions in our business, or to protect against future damage.

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 personnel. Failure to comply with these obligations can give rise to monetary fines and other penalties which could be significant.

Compliance with laws and regulations governing the processing of personal data and information may impede our services or result in increased costs. Failure to comply with such data privacy laws and regulations could result in material fines or penalties imposed by data protection or financial services conduct regulators and/or awards of civil

damages and any data breach may have a material adverse effect on our reputation, results of operations or financial condition, or have other adverse consequences.

Our business relies on the processing of data in many jurisdictions and the movement of data across national borders. The collection, storage, handling, disclosure, use, transfer and security of personal information that occurs in connection with our business is subject to federal, state and foreign data privacy laws. These legal requirements are not uniform and continue to evolve, and regulatory scrutiny in this area is increasing around the world. In many cases, these laws apply not only to third-party transactions, but also to transfers of information among the Company and its subsidiaries. Privacy and data protection laws may be interpreted and applied differently from country to country and may create inconsistent or conflicting requirements.

The General Data Privacy Regulation ("GDPR") came into force throughout the E.U. in May 2018 and has extra-territorial effect. It requires all companies processing data of E.U. citizens to comply with the GDPR, regardless of the company’s location; it also imposes obligations on EU companies processing data of non-E.U. citizens. The GDPR imposes new requirements regarding the processing of personal data, and confers new rights on data subjects including the "right to be forgotten" and the right to "portability" of personal data.

Compliance with the enhanced obligations imposed by the GDPR requires investment in appropriate technical or organizational measures to safeguard the rights and freedoms of data subjects, may result in significant costs to our business and may require us to amend certain of our business practices. Enforcement actions, investigations and the imposition of substantial fines and penalties by regulatory authorities as a result of data security incidents and privacy violations have increased dramatically during 2018. The enactment of more restrictive laws, rules, regulations, or future enforcement actions or investigations could impact us through increased costs or restrictions on our business, and noncompliance could result in regulatory penalties and significant legal liability.

In addition, unauthorized disclosure or transfer of sensitive or confidential client or Company data, whether through systems failure, employee negligence, fraud or misappropriation, by the Company or other parties with whom we do business, could subject us to significant litigation, monetary damages, regulatory enforcement actions, fines and criminal prosecution in one or more jurisdictions. Such events could also result in negative publicity and damage to our reputation and cause us to lose business, which could therefore have a material adverse effect on our results of operations.

Our business may be adversely affected if third-party outsourced service providers fail to satisfactorily perform certain technology and business process functions.

We outsource certain technology and business process functions to third parties and may do so increasingly in the future. If we do not effectively develop and implement our outsourcing strategy, third party providers do not perform as anticipated or we experience technological or other problems with a transition, we may not realize productivity improvements or cost efficiencies and may experience operational difficulties, increased costs and a loss of business. Our outsourcing of certain technology and business process functions to third parties may expose us to enhanced risk related to data security, which could result in monetary and reputational damages. In addition, our ability to receive services from third party providers might be impacted by cultural differences, political instability, unanticipated regulatory requirements or policies. As a result, our ability to conduct our business might be adversely affected.

Our operating results may be adversely affected by currency fluctuations.

Our reporting currency is the U.S. dollar. However, a portion of our gross premiums are written in currencies other than the U.S. dollar and a portion of our loss reserves are in non-U.S. currencies. In addition, a portion of our investment portfolio is denominated in currencies other than the U.S dollar. From time to time, we may experience losses resulting from fluctuations in the values of these non-U.S. currencies, which could adversely affect our operating results. Although we attempt to manage our foreign currency exposure through matching of our major foreign-denominated assets and liabilities, as well as through use of currency derivatives, there is no guarantee that we will successfully mitigate our exposure to foreign exchange losses. Sovereign debt concerns in Europe and related financial restructuring efforts, which may cause the value of the euro to deteriorate, and Brexit (defined below), which caused significant volatility in currency exchange rates, especially between the U.S. dollar and the British pound, may magnify these risks.

Acquisitions that we made or may make could turn out to be unsuccessful.

As part of our strategy, we have pursued and may continue to pursue growth through acquisitions. For example, as part of AXIS Insurance's international specialty insurance growth strategy, in 2017, we acquired Novae Group plc, a specialty (re)insurer that operates through Lloyd's of London. The negotiation of potential acquisitions as well as the integration of an acquired business or new personnel could result in a substantial diversion of management resources. Successful integration will depend on, among other things, our ability to effectively integrate acquired businesses or new personnel into our existing risk management and financial and operational reporting systems, our ability to effectively manage any regulatory issues created by our entry into new markets and geographic locations, our ability to retain key personnel and other operation economic factors. There can be no assurance that the integration of acquired businesses, including Novae Group plc, or new personnel will be successful, that we will realize anticipated synergies, cost savings and operational efficiencies, or that the business acquired will prove to be profitable or sustainable. The failure to integrate acquired businesses successfully or to manage the challenges presented by the integration process may adversely impact our financial results. Acquisitions could 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.

Our ability to grow through acquisitions will depend, in part, on our success in addressing these risks. Any failure by us to effectively implement our acquisitions strategy could have a material adverse effect on our business, financial condition or results of operations.

The exit of the U.K. from the E.U. could adversely affect us.

On June 23, 2016, the U.K. voted to exit the E.U. ("Brexit") and in March 2017, the U.K. government gave official notice of its intention to leave the E.U., commencing the period of up to two years during which the U.K. and the E.U. would negotiate the terms of the U.K.’s withdrawal from the E.U. The effects of Brexit will depend on the outcome of the negotiations regarding the “withdrawal agreement” and the future trading relationship to be agreed between the E.U.
and the U.K. The U.K. is due to exit the E.U. in March 2019.

The Brexit vote had an immediate adverse effect on global financial markets, including foreign currency markets, and could continue to contribute to instability in global financial markets and in European and worldwide economic or market conditions, both during and after the Brexit process. The long-term effect of Brexit on the value of our investment portfolio at this time is uncertain and such volatility and uncertainty will likely continue as negotiations progress to determine the future terms of the U.K.’s relationship with the E.U.

We have significant operations in the U.K. and other E.U. member states. Depending on the final terms of Brexit, we may be required to reorganize our operations, legal entity structure and capitalization in the U.K. and the E.U. in a manner that could be less efficient and more expensive. Brexit may disrupt our U.K. domiciled entities’, including our Lloyd’s managing agency and its syndicates', ability to "passport" within the E.U., which is the system by which our insurance entities currently provide insurance across E.U. member states while only being subject to regulation by their "home state" regulators. Brexit may disrupt the ability of our E.U. operating entities to access U.K. business.

Any of these effects of Brexit, and others we cannot anticipate, could adversely affect our business, business opportunities, results of operations, financial condition and cash flows.

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

Our future capital requirements depend on many factors, including rating agency and regulatory requirements, the performance of our investment portfolio, our ability to write new business successfully, the frequency and severity of catastrophe events and our ability to establish premium rates and reserves at levels sufficient to cover losses. We may need to raise additional funds through financings. If we are unable to do so, it may curtail our ability to conduct our business. Any equity or debt financing, if available at all, may be on terms that are not favorable to us. Equity financings could be dilutive to our existing shareholders and could result in the issuance of securities that have rights, preferences and privileges that are senior to those of our other securities. If we cannot obtain adequate capital on favorable terms or at all, our business, operating results and financial condition could be adversely affected.

Our inability to obtain the necessary credit could affect our ability to offer reinsurance in certain markets.

Neither AXIS Specialty Bermuda nor AXIS Re SE is licensed or admitted as a (re)insurer in any jurisdiction other than Bermuda, Ireland, Singapore and Brazil. Because the U.S. and some other jurisdictions do not permit insurance companies to take credit on their statutory financial statements for reinsurance obtained from unlicensed or non-admitted insurers unless appropriate security mechanisms are in place, our reinsurance clients in these jurisdictions typically require AXIS Specialty Bermuda and AXIS Re SE to provide letters of credit or other collateral. Our credit facilities are used to post letters of credit. However, if our credit facilities are not sufficient or if we are unable to renew our credit facilities or arrange for other types of security on commercially affordable terms, AXIS Specialty Bermuda and AXIS Re SE could be limited in their ability to write business for some of our clients.

The regulatory system under which we operate, and potential changes thereto, could have a material adverse effect on our business.

Our (re)insurance subsidiaries conduct business globally and we are subject to varying degrees of regulation and supervision from these jurisdictions. Additionally, as a result of the Novae acquisition, our presence at Lloyd's has substantially increased. Lloyd's has supervisory powers that pose unique regulatory risks. The laws and regulations of the jurisdictions and markets, including Lloyd's in which our (re)insurance subsidiaries are domiciled or operate require, among other things, that our subsidiaries maintain minimum levels of statutory capital and liquidity, meet solvency standards, participate in guaranty funds and submit to periodic examinations of their financial condition and compliance with underwriting and other regulations. These laws and regulations also limit or restrict payments of dividends and reductions in capital. Statutes, regulations and policies may also restrict the ability of these subsidiaries to write (re)insurance contracts, to make certain investments and to distribute funds. The purpose of insurance laws and regulations generally is to protect insureds and ceding insurance companies, not our shareholders. We may not be able to comply fully with, or obtain appropriate exemptions from, these statutes and regulations. Failure to comply with or to obtain appropriate authorizations and/or exemptions under any applicable laws could result in restrictions on our ability to do business or undertake activities that are regulated in one or more of the jurisdictions in which we conduct business and could subject us to fines and other sanctions. In addition, changes in the laws or regulations to which our (re)insurance subsidiaries are subject or in the interpretation thereof by enforcement or regulatory agencies could have an adverse effect on our business.

Potential government intervention in our industry as a result of recent events and instability in the marketplace for insurance products could hinder our flexibility and negatively affect the business opportunities that may be available to us in the market.

Government intervention and the possibility of future government intervention have created uncertainty in the (re)insurance markets. Government and regulators are generally concerned with having (re)insurers with high solvency ratios and localized capital to ensure the protection of policyholders to the possible detriment of other constituents, including shareholders of (re)insurers. An example of such intervention was the December 2007 extension of the material provisions of TRIA for an additional seven years to December 31, 2014 and expansion of coverage to include domestic acts of terrorism. TRIA expired at the end of 2014 but was reauthorized, with some adjustments to its provisions, in January 2015 for six years through December 31, 2020.

In recent years certain U.S. and non-U.S. judicial and regulatory authorities, including U.S. Attorney’s Offices and certain state attorneys general, have commenced investigations into other business practices in the insurance industry. In addition, although the U.S. federal government has not historically regulated insurance, there have been proposals from time to time, and especially after the most recent global financial crisis, to impose federal regulation on the U.S. insurance industry. For example, in 2010, Dodd-Frank established a Federal Insurance Office ("FIO") within the U.S. Treasury. The FIO has limited regulatory authority and is empowered to gather data and information regarding the insurance industry, and has conducted and submitted a study to the U.S. Congress on how to modernize and improve insurance regulation in the U.S. This study's findings are not expected to have a significant impact on the Company. Further, Dodd-Frank gives the Federal Reserve supervisory authority over a number of U.S. financial services companies, including insurance companies, if they are designated by a two-thirds vote of a Financial Stability Oversight Council as ‘systemically important’. While we do not believe that we are systemically important, as defined in Dodd-Frank, Dodd-Frank or additional federal or state regulation that is adopted in the future could impose significant burdens on us, impact the ways in which we conduct our business and govern our subsidiaries, increase compliance costs, increase the levels of capital required to operate our subsidiaries, duplicate state regulation and/or result in a competitive disadvantage.

Certain of our European legal entities are subject to local laws that implement the Solvency II Directive. Solvency II covers three main areas: (i) the valuation of assets and liabilities on a Solvency II economic basis and risk based solvency and capital requirements; (ii) governance requirements including key function of compliance, internal audit, actuarial and risk management; and (iii) new supervisory legal entity and group reporting and disclosure requirements including public disclosures. The BMA is fully "equivalent" under the Solvency II Directive for Bermuda's commercial insurance sector, including Class 4 insurers.

While we cannot predict the exact nature, timing or scope of possible governmental initiatives, such proposals could adversely affect our business by, among other things:

- Providing reinsurance capacity in markets and to consumers that we target;
- Requiring our further participation in industry pools and guaranty associations;
- Expanding the scope of coverage under existing policies; e.g., following large disasters;
- Further regulating the terms of (re)insurance contracts; or
- Disproportionately benefiting the companies of one country over those of another.

Our international business is subject to applicable 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 and financial sanctions, other trade controls and anti-bribery laws and regulations of the U.S. and other foreign jurisdictions where we operate, including Bermuda, U.K. and the European Community, which apply to our business where we operate. U.S. laws and regulations applicable to us include the economic trade sanctions laws and regulations administered by the U.S. Department of Treasury's Office of Foreign Assets Control as well as certain laws administered by the U.S. Department of State. In addition, we are subject to the Foreign Corrupt Practices Act and other anti-bribery laws, such as the Bermuda Bribery Act and the U.K. Bribery Act that generally bar corrupt payments or unreasonable gifts. 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 an agent acting on our behalf, could fail to comply with applicable laws and regulations and due to the complex nature of the risks, it may not always be possible for us to ascertain compliance with such laws and regulations. In such event, we could be exposed to civil penalties, criminal penalties and other sanctions, including fines or other unintended punitive actions. In addition, such violations could damage our business and/or our reputation. All of the foregoing could have a material adverse effect on our financial condition and operating results.

Since we depend on a few brokers for a large portion of our revenues, loss of business provided by any one of them could adversely affect us.

We market our (re)insurance worldwide primarily through (re)insurance brokers and derive a significant portion of our business from a limited number of brokers. Marsh & McLennan Companies, Inc., including its subsidiary Guy Carpenter & Company, Inc., Aon plc and Willis Towers Watson PLC, provided a total of 43% of our gross premiums written during 2018. Our relationships with these brokers are based on the quality of our underwriting and claim services, as well as our financial strength ratings. Any deterioration in these factors could result in the brokers advising our clients to place their business with other (re)insurers. In addition, these brokers also have, or may in the future acquire, ownership interests in insurance and reinsurance companies that may compete with us and these brokers may favor their own (re)insurers over other companies. Loss of all or a substantial portion of the business provided by one or more of these brokers could have a material adverse effect on our business.

Our reliance on brokers subjects us to credit risk.

In accordance with industry practice, we pay amounts owed on claims under our (re)insurance contracts to brokers, and these brokers pay these amounts over to the clients that have purchased (re)insurance from us. Although the law is unsettled and depends upon the facts and circumstances of the particular case, in some jurisdictions, if a broker fails to make such a payment, we might remain liable to the insured or ceding insurer for the deficiency.

Conversely, in certain jurisdictions, when the insured or ceding insurer pays premiums for these policies to brokers for payment over to us, these premiums might be considered to have been paid to us and the insured or ceding insurer will no longer be liable to us for those amounts, whether or not we have actually received the premiums from the broker. Consequently, we assume a degree of credit risk associated with brokers with whom we transact business. These risks are heightened during periods characterized by financial market instability and/or an economic downturn or recession.

Certain of our policyholders and intermediaries may not pay premiums owed to us due to insolvency or other reasons.

Insolvency, liquidity problems, distressed financial condition or the general effects of economic recession may increase the risk that policyholders or intermediaries, such as insurance brokers, may not pay a part of or the full amount of premiums owed to us, despite an obligation to do so. The terms of our contracts may not permit us to cancel our insurance even though we have not received payment. If non-payment becomes widespread, whether as a result of insolvency, lack of liquidity, adverse economic conditions, operational failure or otherwise, it could have a material adverse impact on our revenues and results of operations.

We could be adversely affected by the loss of one or more key executives or by an inability to attract and retain qualified personnel or by the inability of an executive to obtain a Bermuda work permit.

Our success depends on our ability to retain the services of our existing key executives and to attract and retain additional qualified personnel in the future. The loss of the services of any of our key executives or the inability to hire and retain other highly qualified personnel in the future could adversely affect our ability to conduct our business. Changes in local employment legislation, taxation and the approach of regulatory bodies to compensation practice within our operating jurisdictions may impact our ability to recruit and retain qualified personnel or the cost to us of doing so. There can be no assurance that we will be successful in identifying, hiring or retaining successors on terms acceptable to us.

With a few exceptions generally under Bermuda law only Bermudians, spouses of Bermudians or Permanent Resident Certificate holders (collectively "Residents") may engage in any gainful occupation in Bermuda without an appropriate governmental work permit. Work permits may be granted or extended by the Bermuda government only upon showing that, after proper public advertisement (in most cases), no Residents who meet the minimum standard requirements for the advertised position have applied for the position. Work permits are generally granted for one, three or five year durations. In January 2013, the Bermuda government abolished term limits, meaning expatriate workers can (subject to the above) continue to be employed in Bermuda indefinitely by reapplying for work permits. This removed the immigration policy put in place in 2001, which limited the total duration expatriate workers could remain in Bermuda. All executive officers who work in our Bermuda office who require work permits have obtained them.

Our ability to pay dividends and to make payments on indebtedness may be constrained by our holding company structure.

AXIS Capital is a holding company and has no direct operations of its own. AXIS Capital has no significant operations or assets other than its ownership of the shares of its operating (re)insurance subsidiaries, AXIS Specialty Bermuda, Ventures Re, AXIS Re SE, AXIS Specialty Europe, Compagnie Belge d'Assurances, Aviation NV/SA, Aviabel Re S.A., the Members of Lloyd's (AXIS Corporate Capital UK Limited and Novae Corporate Underwriting Limited), AXIS Re U.S., AXIS Specialty U.S., AXIS Surplus and AXIS Insurance Co. (collectively, our "Insurance Subsidiaries"). Dividends and other permitted distributions from our Insurance Subsidiaries (in some cases through our subsidiary holding companies), are our primary source of funds to meet ongoing cash requirements, including debt service payments and other expenses, and to pay dividends to our shareholders. Our Insurance Subsidiaries are subject to significant regulatory restrictions limiting their ability to declare and pay dividends and make distributions. The inability of our Insurance Subsidiaries to pay dividends in an amount sufficient to enable us to meet our cash requirements at the holding company level could have a material adverse effect on our business and our ability to pay dividends and make payments on our indebtedness.

AXIS Capital is a Bermuda company and it may be difficult for you to enforce judgments against it or its directors and executive officers.

AXIS Capital is incorporated pursuant to the laws of Bermuda and our business is based in Bermuda. In addition, some of our directors and officers reside outside the U.S., and all or a substantial portion of our assets and the assets of such persons are located in jurisdictions outside the U.S. As a result, it may be difficult or impossible to effect service of process within the U.S. upon those persons or to recover against us or them on judgments of U.S. courts, including judgments predicated upon civil liability provisions of the U.S. federal securities laws. Further, it may not be possible to bring a claim in Bermuda against us or our directors and officers for violation of U.S. federal securities laws because these laws may have no extraterritorial application under Bermuda law and do not have force of law in Bermuda. A Bermuda court may, however, impose civil liability, including the possibility of monetary damages, on us or our directors and officers if the facts alleged in a complaint constitute or give rise to a cause of action under Bermuda law.

There are provisions in our organizational documents that may reduce or increase the voting rights of our shares.

Our bye-laws generally provide that shareholders have one vote for each common share held by them and are entitled to vote, on a non-cumulative basis, at all meetings of shareholders. However, the voting rights exercisable by a shareholder may be limited so that certain persons or groups are not deemed to hold 9.5% or more of the voting power conferred by our shares. Under these provisions, some shareholders may have the right to exercise their voting rights limited to less than one vote per share. Moreover, these provisions could have the effect of reducing the voting power of some shareholders who would not otherwise be subject to the limitation by virtue of their direct share ownership. In addition, our board of directors may limit a shareholder's exercise of voting rights where it deems it necessary to do so to avoid adverse tax, legal or regulatory consequences.

We also have the authority under our bye-laws to request information from any shareholder for the purpose of determining whether a shareholder's voting rights are to be limited pursuant to the bye-laws. If a shareholder fails to respond to our request for information or submits incomplete or inaccurate information in response to a request by us, we may, in our sole discretion, eliminate the shareholder's voting rights.

There are provisions in our bye-laws that may restrict the ability to transfer common shares and which may require shareholders to sell their common shares.

Our board of directors may decline to register a transfer of any common shares under some circumstances, including if they have reason to believe that any non-de minimis adverse tax, regulatory or legal consequences to us, any of our subsidiaries or any of our shareholders may occur as a result of such transfer. Our bye-laws also provide that if our board of directors determines that share ownership by a person may result in non-de minimis adverse tax, legal or regulatory consequences to us, any of our subsidiaries or any of our shareholders, then we have the option, but not the obligation, to require that shareholder to sell to us or to third parties to whom we assign the repurchase right for fair value the minimum number of common shares held by such person which is necessary to eliminate the non-de minimis adverse tax, legal or regulatory consequences.

Applicable insurance laws may make it difficult to effect a change of control of our company.

Before a person can acquire control of a U.S. insurance company, prior written approval must be obtained from the insurance commissioner of the state where the domestic insurer is domiciled. Prior to granting approval of an application to acquire control of a domestic insurer, the state insurance commissioner will consider such factors as the financial strength of the acquirer, the integrity and management of the acquirer's board of directors and executive officers, the acquirer's plans for the future operations of the domestic insurer and any anti-competitive results that may arise from the consummation of the acquisition of control. Generally, state statutes provide that control over a domestic insurer is presumed to exist if any person, directly or indirectly, owns, controls, holds with the power to vote, or holds proxies representing, 10% or more of the voting securities of the domestic insurer. Because a person acquiring 10% or more of our common shares would indirectly control the same percentage of the stock of the AXIS U.S. Subsidiaries, the insurance change of control laws of Connecticut, Illinois and New York would likely apply to such a transaction.

The Insurance Act in Bermuda requires that any person acquiring or disposing of a direct or indirect holding in a Bermuda registered (re)insurance company (such as AXIS Specialty Bermuda) that represents 10% or more of the voting power at a shareholders' meeting of such registered insurer or its parent company, or any person who is able to exercise significant influence over the management of the registered insurer or its parent company by virtue of its shareholding or its entitlement to exercise, or control the exercise of, the voting power at any shareholders' meeting, or any person who has increased or decreased that holding to specified levels, must notify the Bermuda Monetary Authority of such acquisition or disposal within 45 days. The Insurance Act also requires that a Bermuda registered (re)insurance company that becomes aware of any acquisitions or disposals of its or its parent company's shares involving the specified levels must notify the Bermuda Monetary Authority of such acquisition or disposal within 45 days. The specified levels are direct or indirect shareholdings of 10%, 20%, 33% and 50% of such Bermuda registered (re)insurance company. The Bermuda Monetary Authority may object to any person who has become a shareholder at a specified level where it appears that such person is not, or is no longer, a fit and proper person to be a shareholder of the Bermuda registered (re)insurance company.

In addition, the Insurance Acts and Regulations in Ireland require that anyone acquiring or disposing of a direct or indirect holding in an Irish authorized (re)insurance company (such as AXIS Specialty Europe or AXIS Re SE) that represents 10% or more of the capital or of the voting rights of such company or that makes it possible to exercise a significant influence over the management of such company, or anyone who proposes to decrease or increase that holding to specified levels, must first notify the CBI of their intention to do so. They also require any Irish authorized (re) insurance company that becomes aware of any acquisitions or disposals of its capital involving the specified levels to notify the CBI. The specified levels are 20%, 33% and 50% or such other level of ownership that results in the company becoming the acquirer's subsidiary within the meaning of article 20 of the European Communities (non-Life Insurance) Framework Regulations 1994.

The CBI has three months from the date of submission of a notification within which to oppose the proposed transaction if the CBI is not satisfied as to the suitability of the acquirer in view of the necessity "to ensure prudent and sound management of the (re)insurance undertaking concerned." Any person owning 10% or more of the capital or voting rights or an amount that makes it possible to exercise a significant influence over the management of AXIS Capital would be considered to have a "qualifying holding" in AXIS Specialty Europe and AXIS Re SE.

The U.K. Prudential Regulation Authority ("PRA") and the U.K. Financial Conduct Authority ("FCA") regulate the acquisition of "control" of any U.K. Insurance companies and Lloyd's managing agents which are authorized under the Financial Services and Markets Act 2000 ("FSMA"). Any legal entity or individual that (together with any person with whom it or he is "acting in concert") directly or indirectly acquires 10% or more of the shares in a U.K. authorized insurance company or Lloyd's managing agent, or their parent company, or is entitled to exercise or control the exercise of 10% or more of the voting power in such authorized insurance company or Lloyd's managing agent or their 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 authorized insurance company or their parent company by virtue of his shareholding or voting power in either. A purchase of 10% or more of the ordinary shares of the Company would therefore be considered to have acquired "control" of AXIS Managing Agency Limited and Novae Syndicates Limited. Under FSMA, any person proposing to acquire "control" over a U.K. authorized insurance company must give prior notification to the PRA of his intention to do so. The PRA, which will consult with the FCA, would then have 60 working days to consider that person's application to acquire "control" (although this 60 working day period can be extended by up to 30 additional working days in certain circumstances where the regulators have questions relating to the application). Failure to make the relevant prior application could result in action being taken against AXIS Managing Agency Limited or Novae Syndicates Limited by the PRA. A person who is already deemed to have "control" will require prior approval of the PRA if such person increases their level of "control" beyond certain percentages. These percentages are 20%, 30% and 50%. Similar requirements apply in relation to the acquisition of control of a U.K. authorized person which is an insurance intermediary (such as AXIS Underwriting Limited or Contessa Limited) except that the approval must be obtained from the FCA rather than the PRA and the threshold triggering the requirement for prior approval is 20% of the shares or voting power in the insurance intermediary or its parent company. The approval of the Council of Lloyd's is also required in relation to the change of control of a Lloyd's managing agent or member. Broadly, Lloyd's applies the same tests in relation to control as are set out in FSMA (see above) and in practice coordinates its approval process with that of the PRA.

While our bye-laws limit the voting power of any shareholder to less than 9.5%, there can be no assurance that the applicable regulatory body would agree that a shareholder who owned 10% or more of our shares did not, because of the limitation on the voting power of such shares, control the applicable Insurance Subsidiary. These laws may discourage potential acquisition proposals and may delay, deter or prevent a change of control of the Company, including transactions that some or all of our shareholders might consider to be desirable.

Anti-takeover provisions in our bye-laws could impede an attempt to replace our directors or to effect a change in control, which could diminish the value of our common shares.

Our bye-laws contain provisions that may make it more difficult for shareholders to replace directors and could delay or prevent a change of control that a shareholder might consider favorable. These provisions include a staggered board of directors, limitations on the ability of shareholders to remove directors other than for cause, limitations on voting rights and restrictions on transfer of our common shares. These provisions may prevent a shareholder from receiving the benefit from any premium over the market price of our shares offered by a bidder in a potential takeover. Even in the absence of an attempt to effect a change in management or a takeover attempt, these provisions may adversely affect the prevailing market price of our shares if they are viewed as discouraging takeover attempts in the future.

We may become subject to taxes in Bermuda after March 31, 2035, which may have a material adverse effect on our results of operations.

The Bermuda Minister of Finance, under the Exempted Undertakings Tax Protection Act 1966 of Bermuda, as amended, has given each of our Bermuda resident companies an assurance that if any legislation is enacted in Bermuda that would impose tax computed on profits or income, or computed on any capital asset, gain or appreciation, or any tax in the nature of estate duty or inheritance tax, then the imposition of any such tax will not be applicable to our Bermuda resident companies or any of their respective operations, shares, debentures or other obligations until March 31, 2035. Given the limited duration of the Minister of Finance’s assurance, we cannot be certain that we will not be subject to any Bermuda tax after March 31, 2035.

Our non-U.S. companies may be subject to U.S. tax that may have a material adverse effect on our results of operations.

We intend to manage our business so that each of our non-U.S. companies, apart from our Lloyd's operations with U.S. effectively connected income, will operate in such a manner that none of these companies should be subject to U.S. tax (other than U.S. excise tax on (re)insurance premium income attributable to insuring or reinsuring U.S. risks and U.S. withholding tax on some types of U.S. source investment income), because none of these companies should be treated as engaged in a trade or business within the U.S. However, because there is considerable uncertainty as to the activities that constitute being engaged in a trade or business within the U.S., we cannot be certain that the U.S. Internal Revenue Service will not contend successfully that any of our non-U.S. companies is/are engaged in a trade or business in the U.S. If any of our non-U.S. companies were considered to be engaged in a trade or business in the U.S., it could be subject to U.S. corporate income and additional branch profits taxes on the portion of its earnings effectively connected to such U.S. business. If this were to be the case, our results of operations could be materially adversely affected.

Our non-U.K. companies may be subject to U.K. tax that may have a material adverse effect on our results of operations.

We intend to operate in such a manner so that none of our non-U.K. companies are resident in the U.K. for tax purposes and that none of our non-U.K. resident companies, other than AXIS Specialty Europe and AXIS Specialty U.S. Services, Inc., should have a permanent establishment in the U.K. Accordingly, we expect that none of our non-U.K. resident companies, other than AXIS Specialty Europe and AXIS Specialty U.S. Services, Inc., should be subject to U.K. tax. Nevertheless, because neither case law nor U.K. statutes conclusively define the activities that constitute trading in the U.K. through a permanent establishment, the U.K. tax authority might contend successfully that any of our non-U.K. companies, in addition to AXIS Specialty Europe and AXIS Specialty U.S. Services, Inc., is/are trading in the U.K. through a permanent establishment in the U.K. and therefore subject to U.K. tax.

In addition, there are circumstances in which companies that are neither resident in the U.K., nor entitled to the protection afforded by a double tax treaty between the U.K. and the jurisdiction in which they are resident, may be exposed to income tax in the U.K. (other than by deduction or withholding) on the profits of a trade carried on there even if that trade is not carried on through a permanent establishment. We intend to operate in such a manner that none of our companies will be subject to U.K. income tax in this respect.

If any of our non-U.K. resident companies were treated as being resident in the U.K. for U.K. corporation tax purposes, or if any of our non-U.K. companies, other than AXIS Specialty Europe or AXIS Specialty U.S. Services, Inc., were to be treated as carrying on a trade in the U.K., whether or not through a permanent establishment, our results of operations could be materially adversely affected.

The U.K. diverted profits tax ("DPT") is separate from U.K. corporation tax and is charged at a higher rate. It is an anti-avoidance measure aimed at protecting the U.K. tax base against the artificial diversion of profits that are being earned by activities carried out in the U.K. but which are not otherwise being taxed in the U.K., in particular as a result of arrangements between companies in the same multinational group. The U.K. network of double tax treaties does not offer protection from a DPT charge. In the event that the rules apply to certain arrangements, upfront payment of the U.K. tax authority’s estimate of the deemed tax liability may be required. If any of our non-U.K. companies is liable to DPT, this could have a material adverse effect on our results.

Our U.K. operations may be affected by future changes in U.K. tax law.

AXIS Specialty Europe, AXIS Specialty U.S. Services, Inc. and our U.K. resident companies should be treated as taxable in the U.K. Any change in the basis or rate of U.K. corporation tax could materially adversely affect the operations of these companies.

Our U.K. operations may be adversely affected by a transfer pricing adjustment in computing U.K. taxable profits.

Any arrangements between our U.K. resident companies, AXIS Specialty Europe or AXIS Specialty U.S. Services, Inc., and other members of the group are subject to the U.K. transfer pricing regime. Consequently, if any arrangement (including any reinsurance or financing arrangements) between such U.K. tax paying company and any of our other companies is found not to be on arm’s length terms and as a result a U.K. tax advantage is being obtained, an adjustment will be required to compute U.K. taxable profits as if such arrangement were on arm’s length terms. Any transfer pricing adjustment could adversely impact the tax charge suffered by the relevant U.K. tax paying company.

With effect from January 1, 2016, the U.K. has implemented country by country reporting ("CBCR") whereby multinational groups are required to report details of their operations and intra-group transactions in each jurisdiction. It is possible that our approach to transfer pricing may become subject to greater scrutiny from the tax authorities in the jurisdictions in which we operate, which may lead to transfer pricing audits in the future.

In April 2016, the E.U. issued proposals to require all E.U. entities (including branches) to publish their CBCR reports. The proposals, if implemented, are likely to cause increased audit activity from E.U. tax authorities. U.K. legislation has been enacted giving power to introduce regulations requiring public disclosure of U.K. CBCR reports, although this power has not yet been exercised.

Our non-Irish companies may be subject to Irish tax that may have a material adverse effect on our results of operations.

We intend to operate our non-Irish resident companies in such a manner so that none of our non-Irish resident companies should be resident in Ireland for tax purposes and that they should not be treated as carrying on a trade through a branch or agency in Ireland.

Accordingly, we expect that none of our non-Irish resident companies should be subject to Irish corporation tax. Nevertheless, since the determination as to whether a company is resident in Ireland is a question of fact to be determined based on a number of different factors and since neither case law nor Irish legislation conclusively defines the activities that constitute trading in Ireland through a branch or agency, the Irish Revenue Commissioners might contend successfully that any of our non-Irish companies is resident in or otherwise trading through a branch or agency in Ireland and therefore subject to Irish corporation tax. If this were the case, our results of operations could be materially adversely affected.

If corporate tax rates in Ireland increase, our results of operations could be materially adversely affected.

Trading income derived from the (re)insurance businesses carried on in Ireland by AXIS Specialty Europe and AXIS Re SE is generally taxed in Ireland at a rate of 12.5%. Over the past number of years, various E.U. member states have, from time to time, called for harmonization of the corporate tax base within the E.U. Ireland, along with other member states, has consistently resisted any movement towards standardized corporate tax rates or tax base in the E.U. The Government of Ireland has also made clear its commitment to retain the 12.5% rate of corporation tax. If, however, tax laws in Ireland change so as to increase the general corporation tax rate in Ireland, our results of operations could be materially adversely affected.

If investments held by AXIS Specialty Europe SE or AXIS Re SE are determined not to be integral to the (re)insurance businesses carried on by those companies, additional Irish tax could be imposed and our business and financial results could be materially adversely affected.

Based on administrative practice, taxable income derived from investments made by AXIS Specialty Europe and AXIS Re SE is generally taxed in Ireland at the rate of 12.5% on the grounds that such investments either form part of the permanent capital required by regulatory authorities, or are otherwise integral to the (re)insurance businesses carried on by those companies. AXIS Specialty Europe and AXIS Re SE intend to operate in such a manner so that the level of investments held by such companies does not exceed the amount that is integral to the (re)insurance businesses carried on by AXIS Specialty Europe and AXIS Re SE. If, however, investment income earned by AXIS Specialty Europe or AXIS Re SE is deemed to be non-trading income, Irish corporation tax could apply to such investment income at a higher rate (currently 25%) instead of the general 12.5% rate, and our results of operations could be materially adversely affected.

Changes in U.S. federal income tax law could materially adversely affect us.

The recently enacted U.S. Tax Reform included certain provisions that were intended to eliminate some perceived tax advantages of companies (including (re)insurance companies) that have legal domiciles outside the U.S., but have certain U.S. connections, will significantly alter existing U.S. federal domestic and international income tax law. Among other things, the U.S. Tax Reform reduced the U.S. corporate tax rate, made extensive changes to the international tax system, eliminated the corporate alternative minimum tax system, modified the loss reserve discounting methodology, and changed the proration percentage on tax-favored investments. Furthermore, under the U.S. Tax Reform, certain U.S. corporations that make deductible payments, including reinsurance premiums, to foreign affiliates in excess of certain amounts will now be required to pay a base erosion minimum tax. Currently, there are only proposed regulations regarding the application of the base erosion minimum tax; and new regulations or pronouncements interpreting or clarifying U.S. federal income tax laws relating to (re)insurance companies may be forthcoming. We cannot be certain if, when, or in what form, such regulations or pronouncements may be provided, and whether such guidance will have a retroactive effect.

Changes in tax laws resulting from the recommendations of the Organization for Economic Corporation and Development ("OECD") could materially adversely affect us.

The OECD has launched a global initiative among member and non-member countries on measures to limit harmful tax competition, known as the "Base Erosion and Profit Shifting" ("BEPS") project and, in 2015, published reports containing a suite of recommended actions. These measures are largely directed at counteracting the effects of tax havens and preferential tax regimes in countries around the world, including expanding the definition of permanent establishment and updating the rules for attributing profits to permanent establishments, tightening 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 for tax purposes and preventing double tax treaty abuse. We expect many countries to change their tax laws in response to the BEPS project, and several countries have already changed or proposed changes to their tax laws. Changes to tax laws and additional reporting requirements could increase the tax burden and the complexity and cost of tax compliance.

Legislation enacted in Bermuda in response to the European Union’s review of harmful tax competition could adversely affect our operations and financial condition.

During 2017, the European Union ("EU") Economic and Financial Affairs Council ("ECOFIN") released a list of non-cooperative jurisdictions for tax purposes. The stated aim of this list, and accompanying report, was to promote good governance worldwide in order to maximize efforts to prevent tax fraud and tax evasion. Bermuda was not on the list of non-cooperative jurisdictions, but did feature in the report (along with approximately 40 other jurisdictions) as having committed to address concerns relating to economic substance by December 31, 2018. In accordance with that commitment, Bermuda has enacted legislation that requires certain entities in Bermuda engaged in "relevant activities" to maintain a substantial economic presence in Bermuda and to satisfy economic substance requirements. The list of "relevant activities" includes carrying on as a business any one or more of: banking, insurance, fund management, financing, leasing, headquarters, shipping, distribution and service center, intellectual property and holding entities. Any entity that must satisfy economic substance requirements but fails to do so could face automatic disclosure to competent authorities in the EU of the information filed by the entity with the Bermuda Registrar of Companies in connection with the economic substance requirements and may also face financial penalties, restriction or regulation of its business activities and/or may be struck off as a registered entity in Bermuda.

At present, the impact of these new economic substance requirements is unclear, and it is not possible to accurately predict the effect of these requirements on us and our business. The requirements may increase the complexity and costs of carrying on our business and could adversely affect our operations and financial condition.

Future changes in current accounting practices may materially impact our reported financial results.

Future changes in accounting practices may result in significant additional expenses and may affect the calculation of financial statement line items. For example, this could occur if we are required to prepare information relating to prior periods or if we are required to apply new requirements retroactively.

The price of our common shares may be volatile.

There has been significant volatility in the market for equity securities in recent years. During 2018, 2017, and 2016 the price of our common shares fluctuated from a low of $47.43 to a high of $60.69, a low of $49.42 to a high of $71.06 and a low of $51.01 to a high of $66.23, respectively. The price of our common shares may not remain at or exceed current levels. The following factors, in addition to those described in other risk factors above, may have an impact on the market price of our common stock:

- actual or anticipated variations in our quarterly results, including as a result of catastrophes or our investment performance;
- any share repurchase program;
- changes in market valuation of companies in the insurance and reinsurance industry;
- changes in expectations of future financial performance or changes in estimates of securities analysts;
- fluctuations in stock market processes and volumes;
- issuances or sales of common shares or other securities in the future;
- the addition or departure of key personnel;
- changes in tax law; and
- announcements by us or our competitors of acquisitions, investments or strategic alliances.

Stock markets in the U.S. continue to experience volatile price and volume fluctuations. Such fluctuations, as well as the general political situation, current economic conditions or interest rate or currency rate fluctuations, could adversely affect the market price of our stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

At December 31, 2018, the Company has no outstanding, unresolved comments from the SEC staff.

ITEM 2. PROPERTIES

We maintain office facilities in Bermuda, the U.S., Europe, Canada, Singapore, Latin America and the Middle East. We own the property in which our office is located in Dublin, Ireland, and we lease office space in the other countries. We renew and enter into new leases in the ordinary course of business as required. Our global headquarters is located at 92 Pitts Bay Road, AXIS House, Pembroke HM 08, Bermuda. We believe that our office space is sufficient for us to conduct our operations for the foreseeable future.

ITEM 3. LEGAL PROCEEDINGS

From time to time, the Company is subject to routine legal proceedings, including arbitrations, arising in the ordinary course of business. These legal proceedings generally relate to claims asserted by or against the Company in the ordinary course of insurance or reinsurance operations. Estimated amounts payable related to these proceedings are included in the reserve for losses and loss expenses in the Company's consolidated balance sheets.

The Company is not party to any material legal proceedings arising outside the ordinary course of business.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

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

Our common shares are listed on the New York Stock Exchange under the symbol "AXS".

On February 20, 2019, the number of holders of record of our common shares was 17. This figure does not represent the actual number of beneficial owners of our common shares because shares are frequently held in "street name" by securities dealers and others for the benefit of beneficial owners who may vote the shares.

We have a history of paying quarterly cash dividends. While we expect to continue paying comparable cash dividends in the foreseeable future, the declaration and payment of future dividends will be at the discretion of our Board of Directors and will depend upon many factors, including our net income, financial condition, business needs, capital and surplus requirements of our operating subsidiaries and regulatory and contractual restrictions, including those set forth in our credit facilities. Refer to Item 7 *'Management’s Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources'* for additional information regarding our liquidity and capital resources.

Issuer Purchases of Equity Securities

Common Shares

Information regarding the number of common shares we repurchased in the quarter ended December 31, 2018 is shown in the following table:

Period	Total number of shares purchased[(a) (b)]	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs	Maximum number (or approximate dollar value) of shares that may yet be purchased under the plans or programs[(b)]
October 1-31, 2018	17	$57.45	—	—
November 1-30, 2018	4	$52.54	—	—
December 1-31, 2018	3	$54.93	—	—
Total	**24**		**—**	—

(a) In thousands.

(b) Shares are repurchased from employees to satisfy withholding tax liabilities that arise upon the vesting of restricted stock units.

ITEM 6. SELECTED FINANCIAL DATA

The following table shows selected consolidated financial information for the last five years. This data should be read in conjunction with Item 7 '*Management's Discussion and Analysis of Financial Condition and Results of Operations*' and Item 8 '*Consolidated Financial Statements and the accompanying notes*'.

	At and for the year ended December 31,				
	2018	**2017**	**2016**	**2015**	**2014**
	(in thousands, except per share amounts)				
Selected Statement of Operations Data:					
Gross premiums written	**$ 6,910,065**	$ 5,556,273	$ 4,970,208	$ 4,603,730	$ 4,711,519
Net premiums earned	**4,791,495**	4,148,760	3,705,625	3,686,417	3,870,999
Net investment income	**438,507**	400,805	353,335	305,336	342,766
Net investment gains (losses)	**(150,218)**	28,226	(60,525)	(138,491)	132,108
Net losses and loss expenses	**3,190,287**	3,287,772	2,204,197	2,176,199	2,186,722
Acquisition costs	**968,835**	823,591	746,876	718,112	737,197
General and administrative expenses	**627,389**	579,428	602,717	596,821	621,876
Interest expense and financing costs	**67,432**	54,811	51,360	50,963	74,695
Preferred share dividends	**42,625**	46,810	46,597	40,069	40,088
Net income (loss) available (attributable) to common shareholders[(1) (2) (3) (4) (5)]	**$ 396**	$ (415,779)	$ 465,462	$ 601,562	$ 770,657
Per Common Share Data:					
Earnings (loss) per common share	**$ —**	$ (4.94)	$ 5.13	$ 6.10	$ 7.38
Earnings (loss) per diluted common share	**—**	(4.94)	5.08	6.04	7.29
Cash dividends declared per common share	**$ 1.57**	$ 1.53	$ 1.43	$ 1.22	$ 1.10
Weighted average common shares outstanding	**83,501**	84,108	90,772	98,609	104,368
Weighted average diluted common shares outstanding	**84,007**	84,108	91,547	99,629	105,713
Operating Ratios:[(6)]					
Net loss and loss expense ratio	**66.6%**	79.2%	59.5%	59.0%	56.5%
Acquisition cost ratio	**20.2%**	19.9%	20.2%	19.5%	19.0%
General and administrative expense ratio	**13.1%**	14.0%	16.2%	16.2%	16.1%
Combined ratio	**99.9%**	113.1%	95.9%	94.7%	91.6%
Selected Balance Sheet Data:					
Investments	**$ 13,155,560**	$ 14,784,210	$ 13,459,507	$ 13,386,118	$ 13,778,911
Cash and cash equivalents	**1,830,020**	1,363,786	1,241,507	1,174,751	1,209,695
Reinsurance recoverable on unpaid and paid losses	**3,781,902**	3,338,840	2,334,922	2,096,104	1,926,145
Total assets	**24,132,566**	24,760,177	20,813,691	19,981,891	19,955,736
Reserve for losses and loss expenses	**12,280,769**	12,997,553	9,697,827	9,646,285	9,596,797
Unearned premiums	**3,635,758**	3,641,399	2,969,498	2,760,889	2,735,376
Senior notes and notes payable	**1,341,961**	1,376,529	992,950	991,825	990,790
Total shareholders' equity attributable to AXIS Capital	**$ 5,030,071**	$ 5,341,264	$ 6,272,370	$ 5,866,882	$ 5,821,121
Book value per common share[(7)(8)]	**$ 50.91**	$ 54.91	$ 59.54	$ 55.32	$ 52.23
Book value per diluted common share[(7)(8)]	**$ 49.93**	$ 53.88	$ 58.27	$ 54.08	$ 50.63
Common shares outstanding[(8)]	**83,586**	83,161	86,441	94,708	99,426
Diluted common shares outstanding[(8)]	**85,229**	84,745	88,317	96,883	102,577

(1) During 2018 and 2017, the Company recognized transaction and reorganization expenses of $67 million and $27 million, respectively, related to its transformation program which was launched in 2017. This program encompasses the integration of Novae Group plc ("Novae") which commenced in the fourth quarter of 2017, the realignment of our accident and health business, together with other initiatives designed to increase our efficiency and enhance our profitability while delivering a customer-centric operating model. During 2015, the Company implemented a number of profitability enhancement initiatives which resulted in recognition of transaction and reorganization expenses of $46 million and general and administrative expenses of $5 million.

(2) During 2017, the Company recognized a tax expense of $42 million due to the revaluation of net deferred tax assets pursuant to the U.S. Tax Reform. Refer to Item 8, Note 18 to the Consolidated Financial Statements *'Income Taxes'* for further details.

(3) During 2018 and 2017, the Company recognized amortization of value of business acquired ("VOBA") of $171 million and $50 million, respectively, related to the acquisition of Novae. Refer to Item 8, Note 3 and Note 5 to the Consolidated Financial Statements '*Business Combinations*' and '*Goodwill and Intangible Assets*' for further details.

(4) During 2015, the Company accepted a request from PartnerRe Ltd., a Bermuda exempted company ("PartnerRe") to terminate the Agreement and Plan of Amalgamation (the "Amalgamation Agreement") with the Company. PartnerRe paid the Company a termination fee of $280 million.

(5) During 2015, the Company early adopted the Accounting Standard Update ("ASU") 2015-02 "Consolidation (Topic 810) *Amendments to the Consolidation Analysis*", issued by the Financial Accounting Standards Board. The adoption of this accounting guidance resulted in the Company concluding that it was no longer required to consolidate the results of operations and the financial position of Ventures Re. The Company adopted this accounting guidance using the modified retrospective approach and ceased to consolidate Ventures Re effective January 1, 2015. For the year ended December 31, 2014, net income available to common shareholders included an amount attributable from noncontrolling interests of $6,181.

(6) Operating ratios are calculated by dividing the respective operating expenses by net premiums earned.

(7) Book value per common share and book value per diluted common share are based on total common shareholders’ equity divided by common shares and diluted common share outstanding, respectively.

(8) Calculations and share amounts at December 31, 2015 include 1,358,380 additional shares delivered to the Company in January 2016 under the Company's Accelerated Share Repurchase ("ASR") agreement entered into on August 17, 2015. Refer to Item 8, Note 14 to the Consolidated Financial Statements *'Shareholders' Equity'* for further details.

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 the years ended December 31, 2018, 2017 and 2016 and our financial condition at December 31, 2018 and 2017. This should be read in conjunction with Item 8 '*Consolidated Financial Statements and the accompanying notes'* of this report. Tabular dollars are in thousands, except per share amounts. Amounts in tables may not reconcile due to rounding differences.

2018 FINANCIAL HIGHLIGHTS

2018 Consolidated Results of Operations

- Net income available to common shareholders of $0.4 million
- Operating income(1) of $161 million, or $1.92 per diluted common share(1)
- Gross premiums written of $6.9 billion
- Net premiums written of $4.7 billion
- Net premiums earned of $4.8 billion
- Estimated pre-tax catastrophe and weather-related losses, net of reinstatement premiums, of $430 million (insurance: $204 million and reinsurance: $226 million), or 9.0 points on current accident year loss ratio related to the California Wildfires, Hurricanes Michael and Florence, Typhoon Jebi as well as U.S. and European weather-related events
- Net favorable prior year reserve development of $200 million
- Underwriting income(2) of $124 million and combined ratio of 99.9%
- Net investment income of $439 million
- Net investment losses of $150 million
- Amortization of value of business acquired ("VOBA") of $172 million
- Transaction and reorganization expenses of $67 million
- Foreign exchange gains of $29 million

2018 Consolidated Financial Condition

- Total cash and investments of $15.0 billion; fixed maturities, cash and short-term securities comprise 89% of total cash and investments and have an average credit rating of AA-
- Total assets of $24.1 billion
- Reserve for losses and loss expenses of $12.3 billion and reinsurance recoverable on unpaid and paid losses of $3.8 billion
- Total debt of $1.3 billion and a debt to total capital ratio of 21.1%
- Total common shares repurchased were 0.2 million for $10 million
- Common shareholders' equity of $4.3 billion; diluted book value per common share of $49.93

(1) Operating income (loss) and operating income (loss) per diluted common share are non-GAAP financial measures as defined in Item 10(e) of SEC Regulation S-K. The reconciliations of non-GAAP measures to the most comparable GAAP financial measures (net income (loss) available (attributable) to common shareholders and earnings per diluted common share, respectively) are provided in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operations'*.

(2) Consolidated underwriting income (loss) is a non-GAAP financial measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliation to net income (loss) before income taxes and interest in income (loss) of equity method investments, the most comparable GAAP measure, is presented in the *'Management's Discussion and Analysis of Financial Condition – Executive Summary – Results of Operations.'*

EXECUTIVE SUMMARY

Business Overview

AXIS Capital Holdings Limited ("AXIS Capital"), through its operating subsidiaries, is a global provider of specialty lines insurance and reinsurance products with operations in Bermuda, the U.S., Europe, Singapore, Canada, Latin America and the Middle East. Our underwriting operations are organized around our global underwriting platforms, AXIS Insurance and AXIS Re.

We provide our clients and distribution partners with a broad range of risk transfer products and services and meaningful capacity, backed by significant financial strength. We manage our portfolio holistically, aiming to construct the optimum consolidated portfolio of funded and unfunded risks, consistent with our risk appetite and development of our franchise. We nurture an ethical, entrepreneurial and disciplined culture that promotes outstanding client service, intelligent risk taking and the achievement of superior risk-adjusted returns for our shareholders. We believe that the achievement of our objectives will position us as a global leader in specialty risks. Our execution of this strategy in 2018 included the following:

- increasing our relevance in a select number of attractive specialty insurance and global reinsurance markets and continuing the implementation of a more focused distribution strategy;
- continuing to grow a leadership position in business lines with strong growth potential including U.S. excess and surplus lines, and North America professional lines;
- increasing our presence at Lloyd's of London ("Lloyd's") achieved through our acquisition of Novae Group plc ("Novae") in 2017 which provides us with access to Lloyd's worldwide licenses and an extensive distribution network;
- continuing to re-balance our portfolio towards less volatile lines of business that carry attractive rates;
- launching a new phase of our transformation efforts, an enterprise-wide program to enhance all of our functions and position us to lead in a transforming industry;
- continuing to improve in the effectiveness and efficiency of our operating platforms and processes;
- increasing investment in data and analytics; and
- broadening risk-funding sources and the development of vehicles that utilize third-party capital.

Reinsurance Agreement with Alturas Re Ltd ("Alturas")

In January 2019, we obtained protection for our insurance and reinsurance segments through a reinsurance agreement with Alturas. In connection with the reinsurance agreement, Alturas issued notes on December 19, 2018 to unrelated investors in an amount equal to the full $130 million of coverage provided under the reinsurance agreement covering a one year period. At the time of the agreement, we concluded that we do not have a variable interest in Alturas as the variability in results is expected to be absorbed entirely by the investors in Alturas. Accordingly, the results of Alturas are not included in our consolidated financial statements.

Outlook

We are committed to leadership in specialty insurance risk and global reinsurance, areas where we have depth of talent and expertise and have earned a strong reputation for client service and intelligent risk-taking. As a mid-sized player that is both sophisticated and agile, we believe we are well-positioned to thrive in the rapidly evolving insurance and reinsurance marketplace. Through our hybrid strategy, we have developed substantial platforms in insurance and reinsurance, providing us with both balance and diversification. We believe our market positioning, underwriting expertise, best-in-class claims management capabilities, and strong relationships with our distributors and clients will provide opportunities for profitable growth in 2019 and beyond, with variances among our lines driven by our tactical response to market conditions.

Since late 2017, rates across most insurance lines have generally improved, with catastrophe exposed property insurance lines, U.S. excess casualty and U.K. professional liability experiencing the most upward rate momentum. Market conditions will likely remain competitive in the near term. However, we would expect many specialty segments will experience improved market conditions as carriers assess pricing, portfolio construction and account preferences. In this competitive market environment with mixed market conditions, we are focusing on lines of business and market segments that are adequately priced, and we are trading off growth for profitability in other areas. In addition, our acquisition of Novae increases our leadership and relevance in the London marketplace, and we expect to be well-positioned to capitalize on new opportunities and benefit from improved market conditions emerging through the international specialty insurance market, including Lloyd's.

The reinsurance market is also experiencing increased momentum in rates (stable supply with increasing demand). Given the above average market losses in the last couple of years; we continue to emphasize underwriting discipline to actively manage our portfolios. At the same time, we also see opportunities to support clients in a world of changing exposures, regulation and reinsurance panels. We believe that there is a real opportunity to achieve more relevance by focusing on our clients to produce new streams of income in the future while still defending the quality of our existing portfolio. We are also focused on managing the volatility and capital efficiency of our portfolio by further expanding our already strong group of strategic capital partners. Taken together, we balance short term needs and long term priorities, with the ultimate goal of adding value to our clients and to our communities.

Non-GAAP Financial Measures

We present our results of operations in a way we believe will be most meaningful and useful to investors, analysts, rating agencies and others who use our financial information to evaluate our performance. Some of the measurements we use are considered non-GAAP financial measures under SEC rules and regulations. In this Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A"), we present underwriting-related general and administrative expenses, consolidated underwriting income (loss), operating income (loss) (*in total and on a per share basis*), operating return on average common equity ("operating ROACE"), amounts presented on a constant currency basis, pre-tax total return on cash and investments excluding foreign exchange movements, ex-PGAAP operating income (loss) (*in total and on a per share basis*) and ex-PGAAP operating ROACE which are non-GAAP financial measures as defined in Item 10(e) of SEC Regulation S-K. We believe that these non-GAAP financial measures, which may be defined and calculated differently by other companies, better explain and enhance the understanding of our results of operations. However, these measures should not be viewed as a substitute for those determined in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

Underwriting-Related General and Administrative Expenses

Underwriting-related general and administrative expenses include those general and administrative expenses that are incremental and/or directly attributable to our individual underwriting operations. While this measure is presented in Item 8, Note 4 to the Consolidated Financial Statements *'Segment Information'*, it is considered a non-GAAP financial measure when presented elsewhere on a consolidated basis.

Corporate expenses include holding company costs necessary to support our worldwide insurance and reinsurance operations and costs associated with operating as a publicly-traded company. As these costs are not incremental and/or directly attributable to our individual underwriting operations, these expenses are excluded from underwriting-related general and administrative expenses and, therefore, consolidated underwriting income (loss). General and administrative expenses, the most comparable GAAP financial measure to underwriting-related general and administrative expenses, also includes corporate expenses.

The reconciliation of underwriting-related general and administrative expenses to general and administrative expenses, the most comparable GAAP measure, is presented in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operations'*.

Consolidated Underwriting Income (Loss)

Consolidated underwriting income (loss) is a pre-tax measure of underwriting profitability that takes into account net premiums earned and other insurance related income (losses) as revenues and net losses and loss expenses, acquisition costs and underwriting-related general and administrative expenses as expenses. While this measure is presented in Item 8, Note 4 to the Consolidated Financial Statements *'Segment Information'*, it is considered a non-GAAP financial measure when presented elsewhere on a consolidated basis.

We evaluate our underwriting results separately from the performance of our investment portfolio. As such, we believe it is appropriate to exclude net investment income and net investment gains (losses) from our underwriting profitability measure.

Foreign exchange losses (gains) in our consolidated statements of operations primarily relate to the impact of foreign exchange rate movements on our net insurance-related liabilities. However, we manage our investment portfolio in such a way that unrealized and realized foreign exchange losses (gains) on our investment portfolio generally offset a large portion of the foreign exchange losses (gains) arising from our underwriting portfolio. As a result, we believe that foreign exchange losses (gains) are not a meaningful contributor to our underwriting performance, therefore, foreign exchange losses (gains) are excluded from consolidated underwriting income (loss).

Interest expense and financing costs primarily relate to interest payable on our senior notes and notes payable. As these expenses are not incremental and/or directly attributable to our individual underwriting operations, these expenses are excluded from underwriting-related general and administrative expenses, and therefore, consolidated underwriting income (loss).

Bargain purchase gain, recognized upon the acquisition of Compagnie Belge d'Assurances Aviation NV/SA ("Aviabel"), reflects the excess of the fair value of the net identifiable assets acquired over the fair value of consideration transferred and is not indicative of future revenues of the Company, therefore, this revenue is excluded from consolidated underwriting income (loss).

Transaction and reorganization expenses are primarily driven by business decisions, the nature and timing of which are not related to the underwriting process, therefore, these expenses are excluded from consolidated underwriting income (loss).

Amortization of intangibles including VOBA arose from business decisions, the nature and timing of which are not related to the underwriting process, therefore, these expenses are excluded from consolidated underwriting income (loss).

The revaluation of net deferred tax asset ("DTA") represents a tax expense recognized in the fourth quarter of 2017 related to the revaluation of our net DTA, due to the reduction in the U.S. corporate income tax rate from 35% to 21% enacted as part of the Tax Cuts and Jobs Act of 2017 ("U.S. Tax Reform"). The nature and timing of the tax expense associated with the U.S. Tax Reform is not related to the underwriting process, therefore, this expense is excluded from consolidated underwriting income (loss).

Loss on repurchase of preferred shares arose from capital transactions that are not reflective of underlying business performance, therefore, this expense is excluded from consolidated underwriting income (loss).

We believe that presentation of underwriting-related general and administrative expenses and consolidated underwriting income (loss) provides investors with an enhanced understanding of our results of operations, by highlighting the underlying pre-tax profitability of our underwriting activities. The reconciliation of consolidated underwriting income (loss) to income (loss) before income taxes and interest in income (loss) of equity method investments, the most comparable GAAP financial measure, is presented in the *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operations'*.

Operating Income (Loss)

Operating income (loss) represents after-tax operational results exclusive of net realized investment gains (losses), foreign exchange losses (gains), transaction and reorganization expenses, revaluation of net deferred tax asset and bargain purchase gain.

Although the investment of premiums to generate income and investment gains (losses) is an integral part of our operations, the determination to realize investment gains (losses) is independent of the underwriting process and is heavily influenced by the availability of market opportunities. Furthermore, many users believe that the timing of the realization of investment gains (losses) is somewhat opportunistic for many companies.

Foreign exchange losses (gains) in our consolidated statements of operations primarily relate to the impact of foreign exchange rate movements on net insurance related-liabilities. However, this movement is only one element of the overall impact of foreign exchange rate fluctuations on our financial position. In addition, we recognize unrealized foreign exchange losses (gains) on our available-for-sale investments in other comprehensive income (loss) and foreign exchange losses (gains) realized upon the sale of these investments in net investments gains (losses). These unrealized and realized foreign exchange gains (losses) generally offset a large portion of the foreign exchange losses (gains) reported separately in net income (loss) available (attributable) to common shareholders, thereby minimizing the impact of foreign exchange rate movements on total shareholders' equity. As such, foreign exchange losses (gains) in our Statements of Operations in isolation are not a fair representation of the performance of our business.

Transaction and reorganization expenses are primarily driven by business decisions, the nature and timing of which are not related to the underwriting process, therefore, these expenses are excluded from operating income (loss).

The revaluation of net deferred tax asset represents a tax expense recognized in the fourth quarter of 2017 related to the revaluation of our net DTA, due to the reduction in the U.S. corporate income tax rate from 35% to 21% enacted as part of the Tax Cuts and Jobs Act of 2017 ("U.S. Tax Reform"). The nature and timing of the tax expense associated with the U.S. Tax Reform is not related to the underwriting process, therefore, this expense is excluded from operating income (loss).

Bargain purchase gain, recognized upon the acquisition of Compagnie Belge d'Assurances Aviation NV/SA ("Aviabel"), reflects the excess of the fair value of the net identifiable assets acquired over the fair value of consideration transferred and is not indicative of future revenues of the Company, therefore, this revenue is excluded from operating income (loss).

Loss on repurchase of preferred shares arose from capital transactions that are not reflective of underlying business performance and therefore, is excluded from operating income (loss).

Certain users of our financial statements evaluate performance exclusive of after-tax net investment gains (losses), foreign exchange losses (gains), transaction and reorganization expenses, revaluation of net deferred tax asset, bargain purchase gain and loss on repurchase of preferred shares to understand the profitability of recurring sources of income.

We believe that showing net income (loss) available (attributable) to common shareholders exclusive of after-tax net investment gains (losses), foreign exchange losses (gains), transaction and reorganization expenses, bargain purchase gain, revaluation of net deferred tax asset and loss on repurchase of preferred shares reflects the underlying fundamentals of our business. In addition, we believe that this presentation enables investors and other users of our financial information to analyze performance in a manner similar to how our management analyzes the underlying business performance. We also believe this measure follows industry practice and, therefore, facilitates comparison of our performance with our peer group. We believe that equity analysts and certain rating agencies that follow us, and the insurance industry as a whole, generally exclude these items from their analyses for the same reasons. The reconciliation of operating income (loss) to net income (loss) available (attributable) to common shareholders, the most comparable GAAP measure, is presented in the *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operations'*.

We also present operating income (loss) per diluted common share and operating ROACE, which are derived from the operating income (loss) measure and are reconciled to the most comparable GAAP financial measures, earnings per diluted common share and return on average common equity ("ROACE"), respectively, in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operations'*.

Constant Currency Basis

We present gross premiums written, net premiums written and net premiums earned on a constant currency basis in this MD&A. The amounts presented on a constant currency basis are calculated by applying the average foreign exchange rate from the current year to the prior year amounts. We believe this presentation enables investors and other users of our financial information to analyze growth in gross premiums written, net premiums written and net premiums earned on a constant basis. The reconciliation to gross premiums written, net premiums written and net premiums earned on a GAAP basis is presented in the '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Underwriting Results – Consolidated'*.

Pre-Tax Total Return on Cash and Investments excluding Foreign Exchange Movement

Pre-tax total return on cash and investments excluding foreign exchange movements measures net investment income (loss), net investments gains (losses), interest in income (loss) of equity method investments and change in unrealized investment gains (losses) generated by average cash and investment balances. The reconciliation of pre-tax total return on cash and investments excluding foreign exchange movements to pre-tax total return on cash and investments, the most comparable GAAP financial measure, is presented in the '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Net Investment Income and Net Investment Gains (Losses)'*. We believe this presentation enables investors and other users of our financial information to better analyze the performance of our investment portfolio.

Ex-PGAAP Operating Income (Loss)

Ex-PGAAP operating income (loss) represents operating income (loss) exclusive of amortization of VOBA and intangible assets, net of tax and amortization of acquisition costs, net of tax associated with Novae's balance sheet at October 2, 2017 (the "closing date" or "acquisition date"). The reconciliation of ex-PGAAP operating income (loss) to net income (loss) available (attributable) to common shareholders, the most comparable GAAP financial measure, is presented in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operations'*.

We also present ex-PGAAP operating income (loss) per diluted common share and ex-PGAAP operating ROACE, which are derived from the ex-PGAAP operating income (loss) measure and are reconciled to the most comparable GAAP financial measures, earnings per diluted common share and ROACE, respectively, are also presented in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operations*'.

We believe the presentation of ex-PGAAP operating income (loss), ex-PGAAP operating income (loss) per diluted common share and ex-PGAAP operating ROACE enables investors and other users of our financial information to better analyze the performance of our business.

Acquisition of Novae

On October 2, 2017, we acquired Novae. We identified VOBA which represents the present value of the expected underwriting profit within policies that were in-force at the closing date of the transaction. In addition, the allocation of the acquisition price to the assets acquired and liabilities assumed of Novae based on estimated fair values at the acquisition date, resulted in the write-off of the deferred acquisition cost asset on Novae's balance sheet at the acquisition date as the value of policies in-force on that date are considered within VOBA. Consequently, underwriting income (loss) in 2018 and 2017 included the recognition of premium attributable to Novae's balance sheet at the acquisition date without the recognition of the associated acquisition costs.

Results of Operations

Year ended December 31,	2018	% Change	2017	% Change	2016
Underwriting revenues:					
Net premiums earned	**$ 4,791,495**	15%	$ 4,148,760	12%	$ 3,705,625
Other insurance related income (losses)	**10,622**	nm	(1,240)	nm	7,222
Underwriting expenses:					
Net losses and loss expenses	**(3,190,287)**	(3%)	(3,287,772)	49%	(2,204,197)
Acquisition costs	**(968,835)**	18%	(823,591)	10%	(746,876)
Underwriting general and administrative expenses (1)	**(519,168)**	16%	(449,483)	(7%)	(482,701)
Underwriting Income (Loss)	**$ 123,827**		$ (413,326)		$ 279,073
Corporate expenses (1)	**(108,221)**	(17%)	(129,945)	8%	(120,016)
Net investment income	**438,507**	9%	400,805	13%	353,335
Net investment gains (losses)	**(150,218)**	nm	28,226	nm	(60,525)
Other (expenses) revenues, net	**(38,267)**	(80%)	(189,548)	nm	69,935
Transaction and reorganization expenses	**(66,940)**	nm	(26,718)	nm	—
Amortization of value of business acquired	**(172,332)**	nm	(50,104)	nm	—
Amortization of intangible assets	**(13,814)**	nm	(2,543)	nm	—
Bargain purchase gain	**—**	nm	15,044	nm	—
Income (loss) before income taxes and interest in income (loss) of equity method investments	**12,542**		(368,109)		521,802
Income tax (expense) benefit	**29,486**	nm	7,542	nm	(6,340)
Interest in income (loss) of equity method investments	**993**	nm	(8,402)	nm	(2,094)
Net income (loss)	**43,021**		(368,969)		513,368
Preferred share dividends	**(42,625)**	(9%)	(46,810)	—%	(46,597)
Loss on repurchase of preferred shares	**—**	nm	—	nm	(1,309)
Net income (loss) available (attributable) to common shareholders	**$ 396**	nm	$ (415,779)	nm	$ 465,462
Net investment (gains) losses, net of tax (2)	**138,576**	nm	(26,204)	nm	62,355
Foreign exchange losses (gains), net of tax (3)	**(33,496)**	nm	126,960	nm	(119,181)
Transaction and reorganization expenses, net of tax(4)	**55,904**	nm	23,879	nm	—
Revaluation of net deferred tax (5)	**—**	nm	41,629	nm	—
Bargain purchase gain (5)	**—**	nm	(15,044)	nm	—
Loss on repurchase of preferred shares (5)	**—**	nm	—	nm	1,309
Operating income (loss)(6)	**$ 161,380**	nm	$ (264,559)	nm	$ 409,945

nm – not meaningful

(1) Underwriting-related general and administrative expenses is a non-GAAP measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliation to total general and administrative expenses, the most comparable GAAP measure, also included corporate expenses of $108,221, $129,945 and $120,016 for the years ended December 31, 2018, 2017 and 2016, respectively. Refer to *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Other (Expenses) Revenues, Net'* for additional information related to the corporate expenses. Refer to *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures'* for additional information.

(2) Tax cost (benefit) of ($11,642), $2,022 and $1,830 for the years ended December 31, 2018, 2017 and 2016, respectively. Tax impact is estimated by applying the statutory rates of applicable jurisdictions, after consideration of other relevant factors including the ability to utilize capital losses.

(3) Tax cost (benefit) of ($4,331), ($7,777) and $2,114 for the years ended December 31, 2018, 2017 and 2016, respectively. Tax impact is estimated by applying the statutory rates of applicable jurisdictions, after consideration of other relevant factors including the tax status of specific foreign exchange transactions.

(4) Tax cost (benefit) of ($11,036), ($2,839) and $nil for the year ended December 31, 2018, 2017 and 2016, respectively. Tax impact is estimated by applying the statutory rates of applicable jurisdictions.

(5) Tax impact is $nil.

(6) Operating income (loss) is a non-GAAP financial measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliations to the most comparable GAAP financial measures (net income (loss) available (attributable) to common shareholders) is provided in the table above, and a discussion of the rationale for the presentation of this item is included in '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures*'.

Non-GAAP Financial Measures

We also present operating income per diluted common share and operating return on average common equity ("operating ROACE"), which are derived from the operating income measure and can be reconciled to the most comparable GAAP financial measures as follows:

Year ended December 31,		**2018**		**2017**		**2016**
Net income (loss) available (attributable) to common shareholders	**$**	**396**	$	(415,779)	$	465,462
Operating income (loss)	**$**	**161,380**	$	(264,559)	$	409,945
Weighted average diluted common shares outstanding[(1)]		**84,007**		84,108		91,547
Earnings (loss) per diluted common share	**$**	**—**	$	(4.94)	$	5.08
Operating income (loss) per diluted common share[(2)]	**$**	**1.92**	$	(3.15)	$	4.48
Average common shareholders' equity	**$**	**4,410,668**	$	4,856,280	$	5,192,668
Return on average common equity[(3)]		**—%**		(8.6%)		9.0%
Operating return on average common equity[(4)]		**3.7%**		(5.4%)		7.9%

(1) Refer to Item 8, Note 13 to the Consolidated Financial Statements *'Earnings Per Common Share'* for further details on the dilution calculation.

(2) Operating income (loss) per diluted common share is a non-GAAP financial measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliation to the most comparable GAAP financial measures (earnings per diluted common share) is provided in the table above, and a discussion of the rationale for the presentation of this item is included in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures'.*

(3) Return on average common equity ("ROACE") is calculated by dividing net income (loss) available (attributable) to common shareholders for the year by the average common shareholders' equity determined by using the common shareholders' equity balances at the beginning and end of the year.

(4) Operating ROACE, a non-GAAP measure as defined in Item 10(e) of SEC Regulation S-K, is calculated by dividing operating income (loss) for the year by the average common shareholders' equity. The reconciliation to ROACE, the most comparable GAAP measure, is presented in the table above. Refer to '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures*' for additional information.

Ex-PGAAP Operating Income

We also present ex-PGAAP operating income (loss), ex-PGAAP operating income (loss) per diluted common share and ex-PGAAP operating ROACE which are derived from the operating income measure and can be reconciled to the most comparable GAAP financial measures as follows:

Year ended December 31,		**2018**	**% Change**		**2017**	**% Change**		**2016**
Net income (loss) available (attributable) to common shareholders	**$**	**396**	nm	$	(415,779)	nm	$	465,462
Net investment (gains) losses, net of tax		**138,576**	nm		(26,204)	nm		62,355
Foreign exchange losses (gains), net of tax		**(33,496)**	nm		126,960	nm		(119,181)
Transaction and reorganization expenses, net of tax		**55,904**	nm		23,879	nm		—
Revaluation of net deferred tax		**—**	nm		41,629	nm		—
Bargain purchase gain		**—**	nm		(15,044)	nm		—
Loss on repurchase of preferred shares		**—**	nm		—	nm		1,309
Operating income (loss)	**$**	**161,380**	nm	$	(264,559)	nm	$	409,945
Amortization of VOBA and intangible assets, net of tax [(2)]		**149,470**	nm		42,644	nm		—
Amortization of acquisition costs, net of tax [(3)]		**(101,628)**	nm		(26,443)	nm		—
Ex-PGAAP operating income (loss)[(1)]	**$**	**209,222**		$	(248,358)		$	409,945
Earnings (loss) per diluted common share	**$**	**—**		$	(4.94)		$	5.08
Net investment (gains) losses, net of tax		**1.65**			(0.31)			0.68
Foreign exchange losses (gains), net of tax		**(0.40)**			1.51			(1.29)
Transaction and reorganization expenses, net of tax		**0.67**			0.28			—
Revaluation of net deferred tax asset		**—**			0.49			—
Bargain purchase gain		**—**			(0.18)			—
Loss on repurchase of preferred shares		**—**			—			0.01
Operating income (loss) per diluted common share		**1.92**			(3.15)			4.48
Amortization of VOBA and intangible assets, net of tax[(2)]		**1.78**			0.51			—
Amortization of acquisition cost, net of tax[(3)]		**(1.21)**			(0.31)			—
Ex-PGAAP operating income (loss) per diluted common share[(1)]	**$**	**2.49**		$	(2.95)		$	4.48
Weighted average diluted common shares outstanding		**84,007**			84,108			91,547
Average common shareholders' equity	**$**	**4,410,668**		$	4,856,280		$	5,192,668
Return on average common equity		**—%**			(8.6)%			9.0%
Operating return on average common equity		**3.7%**			(5.4)%			7.9%
Ex-PGAAP operating return on average common equity[(1)]		**4.7%**			(5.1)%			n/a

(1) Ex-PGAAP operating income (loss), ex-PGAAP operating income (loss) per diluted common share and ex-PGAAP operating return on average common equity are non-GAAP financial measures as defined in SEC Regulation S-K. Ex-PGAAP operating ROACE, is calculated by dividing ex-PGAAP operating income (loss) for the year by the average common shareholders' equity. The reconciliation of ex-PGAAP operating income (loss), ex-PGAAP operating income (loss) per diluted common share and ex-PGAAP operating return on average common equity to the most comparable GAAP financial measures, (net income (loss) available (attributable) to common shareholders, earnings (loss) per diluted common share, and ROACE, respectively) are provided in the table above, and a discussion of the rationale for the presentation of these items is included in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures'*.

(2) Tax cost (benefit) of $(35,061), $(10,003) and $nil for the years ended December 31, 2018, 2017 and 2016, respectively. Tax impact is estimated by applying the statutory rates of applicable jurisdictions.

(3) Tax cost (benefit) of $23,839, $6,203 and $nil for the years ended December 31, 2018, 2017 and 2016, respectively. Tax impact is estimated by applying the statutory rates of applicable jurisdictions.

Underwriting Results

2018 versus 2017: Total underwriting income increased by $537 million in 2018, compared to 2017, primarily driven by a decrease in catastrophe and weather-related losses and a decrease in the current accident year loss ratio excluding catastrophe and weather-related losses.

Our insurance segment underwriting income increased by $319 million in 2018, compared to 2017. The increase in underwriting income was primarily driven by a decrease in catastrophe and weather-related losses, a decrease in the current accident year loss ratio excluding catastrophe and weather-related losses, an increase in net favorable prior year reserve development and a decrease in the general and administrative expense ratio, partially offset by an increase in the acquisition cost ratio.

Our reinsurance segment underwriting income increased by $218 million in 2018, compared to 2017. The increase in underwriting income was primarily driven by a decrease in catastrophe and weather-related losses, a decrease in the current accident year loss ratio excluding catastrophe and weather-related losses and an increase in other insurance related income, partially offset by a decrease in net favorable prior year reserve development.

2017 versus 2016: Total underwriting income decreased by $692 million in 2017, compared to 2016, primarily driven by an increase in catastrophe and weather-related losses, an increase in the current accident year loss ratio excluding catastrophe and weather-related losses and a decrease in net favorable prior year reserve development, partially offset by a decrease in general and administrative expenses.

Our insurance segment underwriting income decreased by $264 million in 2017, compared to 2016. The decrease in underwriting income was primarily driven by an increase in catastrophe and weather-related losses, an increase in acquisition costs and an increase in the current accident year loss ratio excluding catastrophe and weather-related losses.

Our reinsurance segment underwriting income decreased by $428 million in 2017, compared to 2016. The decrease in underwriting income was primarily driven by an increase in catastrophe and weather-related losses, a decrease in net favorable prior year reserve development and an increase in the current accident year loss ratio excluding catastrophe and weather-related losses, partially offset by a decrease in general and administrative expenses and acquisition costs.

Net Investment Income

The variability in net investment income from 2016 through 2018 was largely attributable to the performance of our other investments portfolio. Income from this portfolio decreased by $28 million in 2018, compared to 2017, attributable to lower returns from hedge funds due to lower returns from equity markets and a decrease in our hedge fund holdings, together with lower returns from direct lending funds due to lower returns from credit markets. Comparatively, income from this portfolio increased by $34 million in 2017, compared to 2016, attributable to higher returns from investments in hedge funds and direct lending funds due to the strong performance of global equity and credit markets.

In addition, net investment income increased by $43 million in 2018 compared to 2017, attributable to contributions from fixed income, due to an increase in yields as well as the larger investment base associated with the acquisitions of Novae and Aviabel. Comparatively, net investment income increased by $13 million in 2017 compared to 2016, attributable to contributions from fixed income following the acquisitions of Novae and Aviabel.

Net Investment Gains (Losses)

During 2018, net investment losses were $150 million compared to net investment gains of $28 million in 2017 and net investment losses of $61 million in 2016. Net investment losses in 2018 were primarily attributable to net realized investment losses on the sale of agency RMBS, U.S. government and corporate debt securities, and net unrealized investment losses on equity securities of $67 million which were reported in net investment gains (losses) as opposed to other comprehensive income following the adoption of Accounting Standards Update ("ASU") 2016-01 "Financial Instruments - Overall (Subtopic 825-10) - *Recognition and Measurement of Financial Assets and Financial Liabilities*," in the first quarter of 2018.

Net investment gains in 2017 were primarily attributable to net realized investments gains associated with the sale of ETFs, due to the strong performance of global equity markets. Net investment losses in 2016 were primarily due to foreign exchange losses on non-U.S. denominated fixed maturities, due to the strengthening of the U.S. dollar. Other than temporary impairment ("OTTI") charges were $10 million, $14 million and $26 million in 2018, 2017 and 2016, respectively.

Other Expenses (Revenues), Net

Corporate expenses decreased to $108 million in 2018 from $130 million in 2017. The decrease was primarily driven by an increase in the allocation of corporate costs to our insurance and reinsurance segments, together with a decrease in personnel costs, partially offset by an increase in information technology project costs. Corporate expenses also increased to $130 million in 2017 from $120 million in 2016. The increase was primarily driven by higher personnel costs including senior executive transition costs as well as executive retirement costs, and information technology project costs, partially offset by a decrease in performance-related compensation costs.

The foreign exchange gains of $29 million in 2018 were driven primarily by the impact of the strengthening of the U.S. dollar on the re-measurement of net insurance-related liabilities mainly denominated in pound sterling and euro. Foreign exchange losses of $135 million in 2017 were driven primarily by the impact of the weakening of the U.S. dollar on the re-measurement of net insurance-related liabilities mainly denominated in pound sterling and euro, and foreign exchange gains of $121 million in 2016 were driven primarily by the strengthening of the U.S. dollar against the pound sterling.

Interest expense and financing costs increased to $67 million in 2018 from $55 million in 2017. The increase was primarily attributable to costs associated with the 4.0% Senior Notes issued in the fourth quarter of 2017. Interest expense and financing costs increased by $4 million in 2017 compared to 2016, primarily attributable to costs associated with Dekania Notes issued by Novae in 2004.

The financial results for 2018 resulted in a tax benefit of $29 million primarily attributable to the geographic distribution of pre-tax losses with the benefit being driven by losses in our U.K. and European operations, partially offset by income in our U.S. operations.

The tax benefit of $8 million in 2017 was primarily driven by the geographic distribution of pre-tax losses with the benefit being driven by losses in our U.K. and U.S. operations, largely offset by a tax charge of $42 million related to the revaluation of net deferred tax assets associated with the reduction in the U.S. corporate income tax rate from 35% to 21% enacted as part of the U.S. Tax Reform.

The tax expense of $6 million in 2016 was primarily by attributable to the geographic distribution of pre-tax income with the expense being driven by income in our European and partially offset by losses in our U.S. operations.

Transaction and Reorganization Expenses

Transaction and reorganization expenses were $67 million and $27 million for 2018 and 2017, respectively, related to the transformation program launched in 2017. This program encompasses the integration of Novae which commenced in the fourth quarter of the prior year, the realignment of our accident and health business, together with other initiatives designed to increase our efficiency and enhance our profitability while delivering a customer-centric operating model. Pre-tax transaction and reorganization charges of $94 million have been incurred since the third quarter of 2017. These expenses are not included in operating income.

We expect to achieve annual run-rate pre-tax cost savings of approximately $100 million with effect from 2020. These expense savings will be achieved through the elimination of redundant roles, efficiencies introduced through organizational redesign, operating efficiency improvements, integration of systems and the rationalization of third party contracts and professional fees.

Amortization of Value of Business Acquired

On October 2, 2017, we acquired Novae, a diversified property and casualty (re)insurance business which operates through Syndicate 2007 at Lloyd’s. The acquisition of Novae was undertaken to accelerate the growth strategy of our international insurance business, and to significantly scale up its capabilities to enable us to even better serve our clients and brokers. At the acquisition date, we identified VOBA, which represents the present value of the expected underwriting profit within policies that were in-force at the closing date of the transaction, of $257 million.

VOBA is amortized over its economic useful life and this expense is included in amortization of value of business acquired in the consolidated statement of operations.

Bargain Purchase Gain

On April 1, 2017, we acquired Aviabel, a general aviation insurer and reinsurer. The purchase price was allocated to the assets acquired and liabilities assumed of Aviabel based on estimated fair values on the closing date and a bargain purchase gain of $15 million was recognized.

Interest in Income (Loss) of Equity Method Investments

Interest in income (loss) of equity method investments represents our share of income (loss) related to investments where we have significant influence over the operating and financial policies of the investee.

Interest in income (loss) of equity method investments of $1 million in 2018 related to our share of income in an investee.

Interest in loss of equity method investments of $8 million in 2017 included impairment losses of $9 million related to an investment in a U.S. based insurance company, partially offset by income of $1 million related to our share of income of another investee.

Interest in loss of equity method investments of $2 million in 2016 represented our share of losses of an investee.

Financial Measures

We believe that the following financial indicators are important in evaluating our performance and measuring the overall growth in value generated for our common shareholders:

Year ended and at December 31,		**2018**		**2017**		**2016**
ROACE		**—%**		(8.6%)		9.0%
Operating ROACE		**3.7%**		(5.4%)		7.9%
Ex-PGAAP operating ROACE		**4.7%**		(5.1%)		n/a
Book value per diluted common share[(1)]	**$**	**49.93**	$	53.88	$	58.27
Cash dividends declared per common share		**1.57**		1.53		1.43
Increase (decrease) in book value per diluted common share adjusted for dividends	**$**	**(2.38)**	$	(2.86)	$	5.62

(1) Book value per diluted common share represents total common shareholders' equity divided by the number of common shares and diluted common share outstanding, determined using the treasury stock method. Cash settled awards are excluded.

Return on Equity

Our objective is to generate superior returns on capital that appropriately reward our common shareholders for the risks we assume and to grow revenue only when we expect the returns will meet or exceed our requirements. We recognize that the nature of underwriting cycles and the frequency or severity of large loss events in any one year may challenge the ability to achieve a profitability target in any specific period, therefore our goal is to achieve top-quintile industry operating ROACE and growth in book value per diluted common share adjusted for dividends, with volatility consistent with the industry average across underwriting cycles.

ROACE reflects the impact of net income (loss) available (attributable) to common shareholders including net investment gains (losses), foreign exchange losses (gains), transaction and reorganization expenses, revaluation of net deferred tax assets, bargain purchase gain and loss on repurchase of preferred shares.

ROACE increased in 2018, compared to 2017, primarily driven by the underwriting income generated and foreign exchange gains in 2018 compared to the underwriting loss generated and foreign exchange losses in 2017. An increase in net investment income and a decrease in corporate expenses, also contributed to the increase in ROACE. These benefits were partially offset by an increase in amortization of VOBA and intangible assets associated with the acquisition of Novae, net investment losses, as well as transaction and reorganization expenses. In addition, ROACE in 2018 was impacted by a decrease in average common equity due to net unrealized investment losses reported in other comprehensive income and common share dividends declared.

ROACE decreased in 2017, compared to 2016, which was primarily driven by the underwriting loss generated and foreign exchange losses in 2017 compared to underwriting income generated and foreign exchange gains in 2016. Transaction and reorganization expenses, together with amortization of VOBA and intangible assets associated with the acquisition of Novae incurred in 2017, also contributed to the decrease in ROACE. In addition, ROACE in 2017 was negatively impacted by a tax charge associated with the revaluation of net deferred tax assets. These expenses were partially offset by an increase in net investment income and net realized investment gains together with the benefit of the bargain purchase gain.

Operating ROACE excludes the impact of net investment gains (losses), foreign exchange losses (gains), transaction and reorganization expenses, revaluation of net deferred tax assets, bargain purchase gain and loss on repurchase of preferred shares.

The increase in operating ROACE in 2018, compared to 2017, was primarily driven by the underwriting income generated in 2018, an increase in net investment income, an increase in the tax benefit, as well as a decrease in corporate expenses, partially offset by an increase in the amortization expenses associated with the acquisition of Novae.

The decrease in operating ROACE in 2017, compared to 2016, was primarily driven by the underwriting loss generated in 2017, as well as the amortization expenses associated with the acquisition of Novae partially offset by an increase in net investment income and a tax benefit in 2017 compared to a tax expense in 2016.

Ex-PGAAP operating ROACE excludes the impact of amortization of VOBA and intangible assets, net of tax and amortization of acquisition costs, net of tax both associated with Novae's balance sheet at October 2, 2017. Ex-PGAAP operating ROACE for the years ending 2018 and 2017 was 4.7% and (5.1)%, respectively.

Book Value per Diluted Common Share

We consider book value per diluted common share to be an appropriate measure of our returns to common shareholders, as we believe growth in our book value on a diluted basis will ultimately translate into appreciation of our stock price.

In 2018, our book value per diluted common share decreased by 7%, driven primarily by an increase in net unrealized investment losses reported in other comprehensive income and common dividends declared. The net unrealized investment losses in 2018 reflected a widening of credit spreads which negatively impacted the market values of fixed maturity securities.

In 2017, our book value per diluted common share decreased by 8%, driven by net loss attributable to common shareholders of $416 million and common dividends declared, partially offset by net unrealized investment gains. The net unrealized investment gains in 2017 reflected a tightening of credit spreads and the weakening of the U.S. dollar against the euro and pound sterling which positively impacted the market values of non-U.S. government and corporate debt securities.

Cash Dividends Declared per Common Share

We believe in returning excess capital to our shareholders by way of dividends as well as share repurchases. Accordingly, our dividend policy is an integral part of the value we create for our shareholders. Our cumulatively strong earnings have permitted our Board of Directors to approve fifteen successive annual increases in quarterly common share dividends.

Book Value per Diluted Common Share Adjusted for Dividends

Taken together, we believe that growth in book value per diluted common share and common share dividends declared represent the total value created for our common shareholders. As companies in the insurance industry have differing dividend payout policies, we believe that investors use the book value per diluted common share adjusted for dividends metric to measure comparable performance across the industry.

Book value per diluted common share adjusted for dividends decreased in 2018, due to net unrealized investment losses reported in other comprehensive income.

In 2017, the decrease in book value per diluted common share adjusted for dividends was due to the net loss attributable to common shareholders, partially offset by net unrealized investment gains included in other comprehensive income.

UNDERWRITING RESULTS – CONSOLIDATED

The following table provides our underwriting results for the years indicated. Underwriting income is a pre-tax measure of underwriting profitability that takes into account net premiums earned and other insurance related income (loss) as revenues and net losses and loss expenses, acquisition costs and underwriting-related general and administrative expenses as expenses.

Year ended December 31,	2018	% Change	2017	% Change	2016
Revenues:					
Gross premiums written	**$ 6,910,065**	24%	$ 5,556,273	12%	$ 4,970,208
Net premiums written	**4,658,962**	16%	4,027,143	7%	3,752,974
Net premiums earned	**4,791,495**	15%	4,148,760	12%	3,705,625
Other insurance related income (losses)	**10,622**	nm	(1,240)	nm	7,222
Expenses:					
Current year net losses and loss expenses	**(3,389,949)**		(3,487,826)		(2,496,574)
Prior year reserve development	**199,662**		200,054		292,377
Acquisition costs	**(968,835)**		(823,591)		(746,876)
Underwriting-related general and administrative expenses[(1)]	**(519,168)**		(449,483)		(482,701)
Underwriting income (loss)[(2)]	**$ 123,827**	nm	$ (413,326)	nm	$ 279,073
General and administrative expenses[(1)]	**$ 627,389**		$ 579,428		$ 602,717
Income (loss) before income taxes and interest in income (loss) of equity method investments[(2)]	**$ 12,542**		$ (368,109)		$ 521,802

nm – not meaningful

(1) Underwriting-related general and administrative expenses is a non-GAAP measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliation to total general and administrative expenses, the most comparable GAAP measure, is presented in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operations'.*

(2) Consolidated underwriting income (loss) is a non-GAAP financial measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliation to income (loss) before income taxes and interest in income (loss) of equity investments, the most comparable GAAP measure, is presented in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary – Results of Operation'.*

Underwriting Revenues

Gross and net premiums written by segment were as follows:

Year ended December 31,	Gross premiums written 2018	% Change	2017	% Change	2016
Insurance	**$ 3,797,592**	35%	$ 2,814,918	16%	$ 2,432,475
Reinsurance	**3,112,473**	14%	2,741,355	8%	2,537,733
Total	**$ 6,910,065**	24%	$ 5,556,273	12%	$ 4,970,208
% ceded					
Insurance	**39%**	2 pts	37%	(1) pts	38%
Reinsurance	**25%**	7 pts	18%	6 pts	12%
Total	**33%**	5 pts	28%	4 pts	24%
	Net premiums written				
	2018	**% Change**	**2017**	**% Change**	**2016**
Insurance	**$ 2,324,747**	31%	$ 1,775,825	17%	$ 1,519,559
Reinsurance	**2,334,215**	4%	2,251,318	1%	2,233,415
Total	**$ 4,658,962**	16%	$ 4,027,143	7%	$ 3,752,974

Gross Premiums Written:

2018 versus 2017: Gross premiums written in 2018 increased by $1,354 million or 24% compared to 2017 due to increases in our insurance and reinsurance segments.

The increase in our insurance segment's gross premiums written of $983 million or 35% included $923 million attributable to property, marine, professional lines, and credit and political risk lines associated with our acquisition of Novae. In addition, gross premiums written increased by $60 million or 2% ($45 million or 2% on a constant currency basis) primarily attributable to professional lines and liability lines, partially offset by a decrease in property, marine, and accident and health lines.

The increase in our reinsurance segment's gross premiums written of $371 million or 14% included $100 million attributable to catastrophe, and marine and aviation lines associated with our acquisition of Novae. In addition, gross premiums written increased by $271 million or 10% ($192 million or 7% on a constant currency basis[(1)]) primarily attributable to credit and surety, motor, accident and health, and catastrophe lines.

2017 versus 2016: Gross premiums written in 2017 increased by $586 million or 12% compared to 2016 due to increases in our insurance and reinsurance segments.

The increase in our insurance segment's gross premiums written of $382 million or 16% compared to 2016 was driven by an increase in gross premiums written of $241 million associated with our acquisition of Novae. In addition, gross premiums written increased by $141 million or 6% ($137 million or 6% on a constant currency basis) primarily attributable to accident and health, liability, professional lines and aviation lines. These increases were partially offset by a decrease in property and marine lines.

The increase in our reinsurance segment's gross premiums written of $204 million or 8% was attributable to catastrophe, agriculture, property and motor lines, partially offset by a decrease in credit and surety lines. The increase in gross premiums written was driven by new business, favorable premium adjustments and reinstatement premium, partially offset by the impact of foreign exchange movements and a lower level of premiums written on a multi-year basis in 2017, compared to 2016.

(1) Amounts presented on a constant currency basis are non-GAAP financial measures as defined in Item 10(e) of SEC Regulation S-K. The constant currency basis is calculated by applying the average foreign exchange rate from the current year to the prior year balance.

Ceded Premiums Written:

Ceded premiums written in 2018 were $2,251 million, or 33% of gross premiums written, compared to $1,529 million, or 28%, in 2017. The increase in the ceded premiums written was attributable to our insurance and reinsurance segments.

Ceded premiums written in 2017 were $1,529 million, or 28% of gross premiums written, compared to $1,217 million, or 24%, in 2016. The increase in the ceded premiums written was mainly attributable to our reinsurance segment due to an increase in premiums ceded to retrocessional treaties which cover catastrophe, credit and surety, and agriculture lines.

2018 Reinsurance Agreement with Northshore Limited ("Northshore")

In July 2018, we obtained catastrophe protection for our insurance and reinsurance segments through a reinsurance agreement with Northshore. In connection with the reinsurance agreement, Northshore issued notes to unrelated investors in an amount equal to the full $200 million of coverage provided under the reinsurance agreement covering a three year period. At the time of the agreement, we performed an evaluation of Northshore to determine if it meets the definition of a variable interest entity ("VIE"). We concluded that Northshore is a VIE. In addition, we concluded that we do not have a variable interest in the entity, as the variability in results is expected to be absorbed entirely by the investors in Northshore. Accordingly, the results of Northshore are not included in our consolidated financial statements. The premium ceded to Northshore for the year ended December 31, 2018 was $44 million.

2017 Reinsurance Agreement with Northshore

In June 2017, we obtained catastrophe protection for our insurance and reinsurance segments through a reinsurance agreement with Northshore. In connection with the reinsurance agreement, Northshore issued notes to unrelated investors in an amount equal to the full $350 million of coverage provided under the reinsurance agreement covering a three year period. At the time of the agreement, we performed an evaluation of Northshore to determine if it meets the definition of a VIE. We concluded that Northshore is a VIE. In addition, we concluded that we do not have a variable interest in the entity, as the variability in results is expected to be absorbed entirely by the investors in Northshore. Accordingly, Northshore is not consolidated in our consolidated financial statements. The premium ceded to Northshore for the year ended December 31, 2017 was $27 million.

Net Premiums Earned:

Net premiums earned by segment were as follows:

Year ended December 31,	2018		2017		2016		% Change 2017 to 2018	% Change 2016 to 2017
Insurance	**$ 2,362,606**	**49%**	$ 1,816,438	44%	$ 1,534,282	41%	30%	18%
Reinsurance	**2,428,889**	**51%**	2,332,322	56%	2,171,343	59%	4%	7%
Total	**$ 4,791,495**	**100%**	$ 4,148,760	100%	$ 3,705,625	100%	15%	12%

Changes in net premiums earned reflect period to period changes in net premiums written and business mix, together with normal variability in premium earning patterns.

2018 versus 2017: Net premiums earned in 2018 increased by $643 million or 15% compared to 2017 due to increases in our insurance and reinsurance segments.

Net premiums earned in our insurance segment in 2018 increased by $546 million or 30% compared to 2017. The increase in net premiums earned included $575 million primarily attributable to property, marine, credit and political risk, and professional lines associated with our acquisition of Novae. Excluding the impact of Novae, net premiums earned decreased by $29 million or 2% ($40 million or 2% on a constant currency basis) attributable to property lines, partially offset by an increase in liability lines.

Net premiums earned in our reinsurance segment in 2018 increased by $97 million or 4% compared to 2017. The increase in net premiums earned included $50 million primarily attributable to catastrophe, and marine and aviation lines associated with our acquisition of Novae. In addition, net premiums earned increased $47 million or 2% ($27 million or 1% on a constant currency basis) attributable to our motor, liability and property lines, partially offset by decreases in marine and other, and agriculture lines.

2017 versus 2016: Net premiums earned in 2017 increased by $443 million or 12%, compared to 2016 due to increases in our insurance and reinsurance segments.

Net premiums earned in our insurance segment in 2017 increased by $282 million or 18%, compared to 2016. The increase in net premiums earned included $162 million attributable to our acquisition of Novae. In addition, net premiums earned increased by $120 million or 8% ($110 million or 7% on a constant currency basis) attributable to accident and health, property and aviation lines.

Net premiums earned in our reinsurance segment in 2017 increased by $161 million or 7%, compared to 2016. The increase in net premiums earned was driven by an increase in gross premiums earned attributable to agriculture, motor and property lines partially offset by an increase in ceded premium earned in professional lines, agriculture and property lines together with a decrease in gross premiums earned in professional lines.

Other Insurance Related Income (Loss):

Other insurance related income in 2018 of $11 million compared to other insurance related loss in 2017 of $1 million, an increase of $12 million, was primarily driven by our reinsurance segment.

Other insurance related loss in 2017 of $1 million compared to other insurance related income in 2016 of $7 million, a decrease of $8 million, was primarily driven by our reinsurance segment.

Underwriting Expenses

The following table provides details of the components of our combined ratio:

Year ended December 31,	2018	% Point Change	2017	% Point Change	2016
Current accident year loss ratio excluding catastrophe and weather-related losses	**61.7%**	(2.0)	63.7%	1.9	61.8%
Catastrophe and weather-related losses	**9.0%**	(11.4)	20.4%	14.8	5.6%
Current accident year loss ratio	**70.7%**	(13.4)	84.1%	16.7	67.4%
Prior year reserve development	**(4.1%)**	0.8	(4.9%)	3.0	(7.9%)
Net loss and loss expense ratio	**66.6%**	(12.6)	79.2%	19.7	59.5%
Acquisition cost ratio	**20.2%**	0.3	19.9%	(0.3)	20.2%
General and administrative expense ratio[1]	**13.1%**	(0.9)	14.0%	(2.2)	16.2%
Combined ratio	**99.9%**	(13.2)	113.1%	17.2	95.9%

(1) The general and administration expense ratio includes corporate expenses not allocated to underwriting segments of 2.3%, 3.1% and 3.2% for 2018, 2017 and 2016, respectively. These costs are further discussed in the '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Other Expenses (Revenues), Net*' section.

Current Accident Year Loss Ratio:

2018 versus 2017: The current accident year loss ratio decreased to 70.7% in 2018 from 84.1% in 2017. The decrease was primarily due to a decrease in catastrophe and weather-related losses. During 2018, we incurred pre-tax catastrophe and weather-related losses, net of reinstatement premiums, of $430 million or 9.0 points, attributable to the California Wildfires, Hurricanes Michael and Florence, Typhoon Jebi as well as U.S. and European weather-related events. Comparatively, in 2017 we incurred $835 million or 20.4 points of losses attributable to catastrophe and weather-related events.

After adjusting for the impact of the catastrophe and weather-related losses, our current accident year loss ratio decreased to 61.7% in 2018 from 63.7% in 2017. The decrease in the current accident year loss ratio after adjusting for the impact of the catastrophe and weather-related losses was principally due to changes in business mix predominately related to the acquisition of Novae, together with favorable impact of rate and trend, partially offset by elevated loss experience in reinsurance property lines.

2017 versus 2016: The current accident year loss ratio increased to 84.1% in 2017 from 67.4% in 2016. The increase was primarily due to an increase in catastrophe and weather-related losses. During 2017, we incurred pre-tax catastrophe and weather-related losses, net of reinstatement premiums, of $835 million or 20.4 points, attributable to Hurricanes Harvey, Irma and Maria, the two earthquakes in Mexico, the wildfires in Northern and Southern California, and other U.S. weather-related events. Comparatively, in 2016 we incurred $204 million or 5.6 points of losses attributable to catastrophe and weather-related events.

After adjusting for the impact of the catastrophe and weather-related losses, our current accident year loss ratio increased to 63.7% in 2017 from 61.8% in 2016. The increase in the current accident year loss ratio after adjusting for the impact of the catastrophe and weather-related losses was principally due to elevated loss experience in insurance and reinsurance property lines, together with the impact of the Ogden Rate change on reinsurance motor lines, and adverse impact of the rate and trend, partially offset by favorable changes in business mix in accident and health lines.

For further discussion on current accident year loss ratios, refer to the insurance and reinsurance segment discussions below.

Estimates for Significant Catastrophe Events:

Our December 31, 2018 net reserve for losses and loss expenses includes estimated amounts for numerous catastrophe events. We caution that the magnitude and/or complexity of losses arising from these events, in particular California Wildfires, Hurricanes Michael and Florence which occurred in 2018 as well as Hurricanes Harvey, Irma and Maria and the two earthquakes in Mexico which occurred in 2017 inherently increase the level of uncertainty and, therefore, the level of management judgment involved in arriving at our estimated net reserve for losses and loss expenses. As a result, our actual losses for these events may ultimately differ materially from our current estimates.

Our estimated net losses in relation to the catastrophe events described above were derived from ground-up assessments of our in-force contracts and treaties providing coverage in the affected regions. These assessments take into account the latest information available from clients, brokers and loss adjusters. In addition, we consider industry insured loss estimates, market share analyses and catastrophe modeling analyses, when appropriate. Our estimates remain subject to change as additional loss data becomes available.

We continue to monitor paid and incurred loss development for catastrophe events of prior years and update our estimates of ultimate losses accordingly.

Prior Year Reserve Development:

Our net favorable prior year reserve development arises from changes to losses and loss expense estimates related to loss events that occurred in previous calendar years. The following table presents prior year reserve development by segment:

Year ended December 31,	**2018**	**2017**	**2016**
Insurance	**$ 92,806**	$ 60,459	$ 48,978
Reinsurance	**106,856**	139,595	243,399
Total	**$ 199,662**	$ 200,054	$ 292,377

Overview

Short-tail business

Short-tail business includes the underlying exposures in the property and other, marine and aviation reserve classes within our insurance segment and the property and other reserve class within our reinsurance segment.

These reserve classes contributed net favorable prior year development of $86 million in 2018 primarily reflecting the recognition of overall better than expected loss emergence related to the 2017 catastrophe events. These reserve classes contributed net favorable prior year reserve development of $60 million and $148 million in 2017 and 2016, respectively, reflecting the recognition of better than expected loss emergence.

Medium-tail business

Medium-tail business consists primarily of our insurance and reinsurance professional reserve classes, our insurance credit and political risk reserve class and our reinsurance credit and surety reserve class.

Our insurance professional reserve class recorded net favorable prior year development of $32 million, $26 million and $14 million in 2018, 2017 and 2016, respectively. Our reinsurance professional reserve class recognized $21 million, $44 million and $30 million of net favorable prior year development in 2018, 2017 and 2016, respectively. The net favorable prior year loss development on these reserve classes continued to reflect the generally favorable experience on older accident years as we continued to transition to more experience based methods.

Reinsurance credit and surety reserve class recorded net favorable prior year reserve development of $33 million, $33 million and $10 million in 2018, 2017 and 2016, respectively, due to the recognition of generally better than expected loss emergence.

Long-tail business

Long-tail business consists primarily of our insurance and reinsurance liability reserve classes and our reinsurance motor reserve class.

Our insurance liability reserve class recorded net adverse prior year development of $22 million, $8 million and $8 million in 2018, 2017 and 2016, respectively. The net adverse prior year reserve development on our insurance liability reserve class in 2018 was primarily related to reserve strengthening within our U.S. excess casualty book of business. The net adverse prior year reserve development in 2017 and 2016 was primarily attributable to reserve strengthening within our run-off Bermuda excess casualty book of business.

Our reinsurance liability reserve class contributed net favorable prior year reserve development of $23 million, $43 million and $44 million in 2018, 2017 and 2016, respectively. The net favorable prior year reserve development for 2018 was due to progressively increased weight given by management to experience based indications on older accident years. Net favorable prior year reserve development in 2017 and 2016 was also primarily due to the progressively increased weight given by management to experience based indications on older accident years, which have generally been favorable.

Our reinsurance motor reserve class contributed net favorable prior year reserve development of $23 million, $1 million and $55 million in 2018, 2017 and 2016, respectively. The net favorable prior year reserve development on our motor reserve class in 2018 was primarily attributable to non proportional treaty business on older accident years. Net favorable prior year development in 2017 was adversely impacted by the decrease in the discount rate used to calculate lump sum awards in U.K. bodily injury cases, known as the Ogden Rate, which changed from plus 2.5% to minus 0.75% effective March 20, 2017. The net favorable prior year reserve development on the motor reserve class in 2016 related to favorable loss emergence trends on several classes of business spanning multiple accident years.

At the acquisition date, the fair value of reserves for losses and loss expenses for Syndicate 2007 was established giving weight to the observable value of these reserves based on a Reinsurance to Close ("RITC") transaction of the Syndicate's 2015 and prior years of account, which was completed prior to the allocation of purchase price. Management made no change to the initial estimate when establishing its best estimate of reserves for losses and loss expenses at December 31, 2017 (refer to *'Critical Accounting Estimates – Reserve for Losses and Loss Expenses'* for further details).

We caution that conditions and trends that impacted the development of our reserve for losses and loss expenses in the past may not recur in the future.

The following tables map our lines of business to reserve classes and the expected claim tails:

Insurance segment	**Reserve class and tail**					
	Property and other	Marine	Aviation	Credit and political risk	Professional lines	Liability
	Short	Short	Short/Medium	Medium	Medium	Long
Reported lines of business						
Property	X					
Marine		X				
Terrorism	X					
Aviation			X			
Credit and political risk				X		
Professional lines					X	
Liability						X
Accident and health	X					
Discontinued lines - Novae	<div sty					