

**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, 2021
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	Trading Symbol(s)	Name of each exchange on which registered
Common shares, par value \$0.0125 per share	AXS	New York Stock Exchange
Depository Shares, each representing a 1/100th interest in a 5.50% Series E preferred shares	AXS PRE	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 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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the 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 at the last business day of the registrant's most recently completed second fiscal quarter, June 30, 2021, was approximately \$4.1 billion.

At February 22, 2022, there were 84,802,318 common shares outstanding, \$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 6, 2022 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, 2021.

AXIS CAPITAL HOLDINGS LIMITED

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Cautionary Note 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 ("U.S.") 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", "intend" or similar expressions. These forward-looking statements are not historical facts, and are based on 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 for catastrophes and other weather-related losses including losses related to the COVID-19 pandemic, 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 pricing and other market conditions, our growth prospects, and valuations of the potential impact of movements in interest rates, credit spreads, equity securities' prices 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 events or results to differ materially from those indicated in such statements. We believe that these factors include, but are not limited to, those described below in '*Summary of Risk Factors*' and in more detail under Item 1A, '*Risk Factors*' of this report, as those factors may be updated from time to time in our periodic and other filings with the Securities and Exchange Commission (the "SEC"), which are accessible on the SEC's website at www.sec.gov. Readers are urged to carefully consider all such factors as the COVID-19 pandemic may have the effect of heightening many of the other risks and uncertainties described.

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

Summary of Risk Factors

Investing in our common stock involves substantial risks, and our ability to successfully operate our business is subject to numerous risks, including those that are generally associated with operating in the insurance/reinsurance industry. Some of the more significant material challenges and risks include the following:

COVID-19

We have been and may continue to be adversely affected by the ongoing novel coronavirus (COVID-19) pandemic. The pandemic continues to pose a risk and the impacts from the pandemic potentially interact with all areas of our business and exacerbate many of the other risk factors described below. The threat and outcome are better understood now than in the earlier stages, but the ultimate scale and scope remains uncertain and the impact on our business, results of operations, financial condition and liquidity could be material.

Insurance Risk

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

- The insurance/reinsurance business is historically cyclical, and we expect to experience periods with excess underwriting capacity and unfavorable premium rates.
- We may be adversely impacted by a wide variety of natural catastrophes or man-made catastrophes. The incidence and severity of catastrophes are inherently unpredictable and losses from catastrophes could be substantial. Our exposure to natural catastrophe losses may be increased by climate change, where we may have exposure to physical, transition and liability risks, as well as increasing regulation in the area of climate change. Other man-made catastrophes, such as cyber

attacks, remain relatively new and fast-evolving and therefore incorporate high degrees of uncertainty around the extent of their impact.

- We may be adversely affected by the effects of emerging claims and coverage issues and/or if actual claims exceed our loss reserves. The actual final cost of settling outstanding claims, as well as claims expected to arise from the unexpired period of risk is uncertain. There are many other factors that would cause loss reserves to increase or decrease, which include, but are not limited to emerging claims and coverage issues such as 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.
- We may be adversely impacted by inflation. Our operations, like those of other insurers and reinsurers, are susceptible to the effects of inflation because premiums are established before the ultimate amounts of losses and loss expenses are known.
- We may be adversely affected by the failure of our loss limitation strategy, including the use of reinsurance.
- We may be adversely affected by the failure of models used to support key decisions.

Strategic Risk

Strategic risks affect or are created by an organization's business strategy and strategic objectives. Our review of strategic risk evaluates not only internal and external challenges that might cause our chosen strategy to fail but also evaluates major risks that could affect our long-term performance and position.

- We may be adversely affected by competition and consolidation in the insurance and reinsurance industry. Increased competition could result in fewer submissions, lower premium rates, less favorable policy terms and conditions and greater costs of customer acquisition and retention.
- We have been and may continue to be adversely affected by a deterioration in global economic conditions. Economic 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. A persistent low interest rate environment may reduce our profitability as investment income falls.
- We may be adversely affected by the exit of the U.K. from the E.U.
- We may be adversely affected by loss of business provided by a major broker.
- We may be adversely affected by a downgrade in our financial strength or credit rating. 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. It could also result in a substantial loss of business for us.

Market Risk

Market risk is the risk that our financial instruments may be negatively impacted by movements in financial market prices or foreign currency exchange rates.

- Our investment and derivative instrument portfolios may be adversely impacted by capital markets risk related to changes in equity prices, interest rates, credit spreads and other factors.
- Our operating results may be adversely affected by foreign currency exchange rate fluctuations.

Liquidity Risk

Liquidity risk is the risk that we may not have sufficient financial resources to meet our obligations when they are due, or would have to incur excessive costs to do so.

- Our underwriting activities may expose us to liquidity risk. This stems mainly from the need to cover potential extreme loss events and regulatory constraints that limit the flow of funds within the Group.

Credit Risk

Credit risk represents the risk of incurring financial loss due to the diminished creditworthiness (reduced financial strength and, ultimately, possibly default) of our third-party counterparties.

- We may be adversely impacted if we are unable to collect amounts due to us from our counterparties – most materially reinsurers, but also including brokers, agents and customers.

Operational Risk

Operational risk represents the risk of loss as a result of inadequate processes, system failures, human error or external events, including but not limited to direct or indirect financial loss, reputational damage, customer dissatisfaction and legal and regulatory penalties.

- We may be adversely impacted by failure of the processes, people or systems that we rely on to maintain our operations and manage the operational risks inherent to our business, including those outsourced to third parties.

Regulatory Risk

Regulatory risk represents the risk arising from our failure to comply with legal, statutory or regulatory obligations.

- Our insurance and reinsurance subsidiaries conduct business globally and are subject to varying degrees of regulation in multiple jurisdictions. We may be adversely affected if we fail to comply fully with, or obtain exemption, from relevant regulations.

Risks Related to the Ownership of our Securities

- In addition to the risks to our business listed above, there are certain other risks related to the ownership of our securities for example relating to our holding company structure or provisions in our organizational documents and bye-laws.

Risks Related to Taxation

- We may be adversely impacted by changes in tax rules or changes in the interpretation of existing tax rules in the multiple jurisdictions in which we operate.

Readers should carefully consider the risks noted above together with the risks detailed in Item 1A, '*Risk Factors*' and all of the other information included in this report.

Website and Social Media Disclosure

We use our website (www.axiscapital.com) and our corporate LinkedIn (AXIS Capital) and Twitter (@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 by those 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 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 references to "we", "us", "our", "AXIS", the "Group" or the "Company" refer to AXIS Capital Holdings Limited and its direct and indirect subsidiaries and branches, including: AXIS Specialty Holdings Bermuda Limited, AXIS Specialty Limited ("AXIS Specialty Bermuda"), AXIS Specialty Limited (Singapore Branch), AXIS Specialty Investments Limited, AXIS Specialty Investments II Limited, AXIS Specialty UK Holdings Limited, AXIS Managing Agency Ltd., AXIS Corporate Capital UK Limited (corporate member which provides 70% capital support to AXIS Syndicate 1686 ("Syndicate 1686")), Novaeh Group Limited, AXIS UK Services Limited, AXIS Underwriting Limited, AXIS Corporate Capital UK II Limited (corporate member which provides 30% capital support to Syndicate 1686), AXIS Ventures Limited ("AXIS Ventures"), AXIS Reinsurance Managers Limited ("AXIS Reinsurance Managers"), AXIS Specialty Holdings Ireland Limited, AXIS Specialty Europe SE ("AXIS Specialty Europe"), AXIS Specialty Europe SE (U.K. Branch), AXIS Specialty Europe SE (Belgium Branch), AXIS Re SE, AXIS Re SE, Dublin (Zurich Branch) ("AXIS Re Europe"), AXIS Re SE Escritório de Representação No Brasil Ltda., Contessa Limited, AXIS Specialty Global Holdings Limited, AXIS Specialty U.S. Holdings, Inc., AXIS Reinsurance Company ("AXIS Re U.S."), AXIS Reinsurance Company (Canadian Branch), AXIS Specialty U.S. Services, Inc., AXIS Specialty U.S. Services, Inc. (U.K. Branch), AXIS Specialty Canada Services, ULC, AXIS Group Services, Inc., AXIS ILS, Inc. (formerly AXIS Specialty Underwriters, Inc.) AXIS Insurance Company ("AXIS Insurance Co."), AXIS Surplus Insurance Company ("AXIS Surplus"), AXIS Specialty Insurance Company ("AXIS Specialty U.S."), Ternian Insurance Group LLC, AXIS Specialty Finance LLC and AXIS Specialty Finance PLC, unless the context suggests otherwise.

Unless otherwise noted, tabular dollars are in thousands. Amounts may not reconcile due to rounding differences.

General

AXIS provides a broad range of specialty lines insurance and treaty reinsurance to our clients on a worldwide basis, through operating subsidiaries and branch networks based in Bermuda, the United States ("U.S."), Europe, Singapore and Canada. Our underwriting operations are organized around our global underwriting platforms, AXIS Insurance and AXIS Re.

The markets in which we operate have historically been cyclical. During periods of reduced underwriting capacity, pricing, and policy terms and conditions are generally more favorable for insurers and reinsurers. Conversely, during periods of excess underwriting capacity, defined by the availability of capital, competition can result in lower pricing and less favorable policy terms and conditions for insurers and reinsurers. 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. In 2021, we leveraged firming market conditions to increase our relevance in a select number of attractive specialty lines and treaty reinsurance markets and we continued to re-balance our portfolio towards less volatile lines of business.

At December 31, 2021, we had common shareholders' equity of \$4.9 billion, total capital of \$6.7 billion and total assets of \$27.4 billion.

Our Business Strategy

We are a hybrid specialty lines insurance and treaty 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, operating efficiency, corporate citizenship 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 hybrid specialty lines insurance and treaty reinsurance company gives us insight into the opportunities and challenges in a variety of markets. We are headquartered in Bermuda and have locations in the U.S., Canada and Europe including Dublin, London, Zurich and Brussels. Our Singapore office serves as our regional hub in Asia and provides specialty insurance and reinsurance solutions in the Asia Pacific region. We service the Latin America specialty insurance and facultative reinsurance market through London and our other locations.

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 may return excess capital to our shareholders through share repurchases and dividends.

We develop and maintain deep, trusting 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. We invest in data and technology capabilities and tools to empower our underwriters and enhance the service that we provide to our customers. 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 \$6.7 billion at December 31, 2021, as well as our high-quality and liquid investment portfolio and our operating subsidiary ratings of "A+" ("Strong") by Standard & Poor's and "A" ("Excellent") 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 top talent in the industry and to motivate our employees to make decisions that are in the best interest of 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 AXIS.

In 2021, 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 – Non-GAAP Financial Measures Reconciliation' on an annual basis and relative total shareholder return ("TSR") over the long-term. We believe that the successful execution against long-term strategic plans should drive an increase in TSR over the long-term, and that TSR directly correlates to other relevant key performance metrics, including book value per diluted common share adjusted for dividends. 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 assets by segment, with the exception of goodwill and intangible assets.

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 3 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,	2021	2020	2019
Insurance	\$ 4,863,232	\$ 4,018,399	\$ 3,675,931
Reinsurance	2,822,752	2,808,539	3,222,927
Total	\$ 7,685,984	\$ 6,826,938	\$ 6,898,858

Insurance Segment

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 renewable 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, renewable offshore energy, cargo, liability, recreational marine, fine art, specie, and hull war. Offshore energy coverage includes physical damage, business interruption, operator's 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 and corporate 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 public and private 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 to 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 business 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 Group plc ("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 and facultative 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 by broker were 10% or more of the total in any of the last three years, were as follows:

Years ended December 31,	2021		2020		2019	
Aon plc	\$ 621,879	13 %	\$ 485,113	12 %	\$ 393,645	11 %
Marsh & McLennan Companies Inc.	548,964	11 %	496,913	12 %	434,108	12 %
Other brokers	2,915,070	60 %	2,310,687	58 %	2,015,822	54 %
Managing general agencies and underwriters	777,320	16 %	725,686	18 %	832,356	23 %
Total	\$ 4,863,232	100 %	\$ 4,018,399	100 %	\$ 3,675,931	100 %

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, service, availability in the form of capacity, appetite and distribution, among other considerations, we compete globally and locally with U.S. and non-U.S carriers. 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 top caliber claim service levels to our customers. 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 while advancing our efforts to deliver value to our customers while strengthening our portfolio and driving profitable growth.

Reinsurance Segment

Lines of Business and Distribution

Our reinsurance segment provides treaty reinsurance to insurance companies on a worldwide basis, written on an excess of loss or a proportional basis. For excess of loss business, we typically indemnify the reinsured for a portion of losses, individually and in the aggregate, in excess of a specified individual or aggregate loss deductible. For proportional business, we assume an agreed percentage of the underlying premiums and accept liability for the same percentage of losses and loss expenses. Our business is primarily produced through reinsurance brokers worldwide. 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 an excess of loss basis.
- *Property*: provides protection for property damage and related losses resulting from natural and man-made perils that are covered in underlying personal and commercial lines insurance policies written by our cedants. The predominant exposure is to 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 freezes, riots, floods, industrial explosions, fires, 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 protection for directors' and officers' liability, employment practices liability, medical malpractice, professional indemnity, environmental liability, cyber, 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. Surety reinsurance provides protection 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. Mortgage reinsurance is provided to mortgage guaranty insurers and U.S. government-sponsored entities for losses related to credit risk transfer into the private sector.
- *Motor*: provides protection 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 protection to insurers of admitted casualty business, excess and surplus lines casualty business and specialty casualty programs. The primary focus of the underlying business is general liability, workers' compensation, auto liability, and excess casualty.
- *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. The 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. The Company exited this line of business in 2020.
- *Marine and Aviation*: includes specialty marine classes such as cargo, hull, pleasure craft, marine liability, inland marine and offshore energy. The principal perils covered by policies in this portfolio include physical loss, damage and/or liability arising from natural perils of the seas or land, man-made events including fire and explosion, stranding/sinking/salvage, pollution, shipowners and maritime employers liability. This business is written on a non-proportional and proportional basis. Aviation provides cover for airline, aerospace and general aviation exposures. This business is written on a proportional and non-proportional basis.
- *Accident and Health*: includes personal accident, specialty health, accidental death, travel, life and disability reinsurance products which are offered on a proportional and catastrophic or per life excess of 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 and international facultative property.

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

Years ended December 31,	2021		2020		2019	
Marsh & McLennan Companies Inc.	\$ 858,049	30 %	\$ 818,821	29 %	\$ 838,617	26 %
Aon plc	716,585	25 %	694,712	25 %	887,602	28 %
Willis Tower Watson PLC	367,973	13 %	435,498	16 %	403,402	13 %
Other brokers	514,736	19 %	582,368	20 %	795,352	24 %
Direct	187,583	7 %	105,777	4 %	135,614	4 %
Managing general agencies and underwriters	177,826	6 %	171,363	6 %	162,339	5 %
Total	\$ 2,822,752	100 %	\$ 2,808,539	100 %	\$ 3,222,927	100 %

(1) Effective December 1, 2021, Arthur J. Gallagher & Co. completed the acquisition of substantially all of the treaty reinsurance brokerage operations from Willis Towers Watson plc. and the combined businesses commenced trading as Gallagher Re. The above table includes gross premiums written by Willis Towers Watson plc. for the eleven month period ended November 30, 2021.

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 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 solutions 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 offerings, 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 increasing book value with 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. A significant portion of our investment portfolio is dedicated to investment grade fixed maturities that will generate cash flows that match expected claim payouts.

To diversify risk and optimize the growth in book value, we may invest in other asset classes such as equity securities, high yield securities and alternative investments (e.g. private equity 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 primarily utilize third-party investment managers for security selection and trade execution functions, subject to 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 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 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, comprised of members of our senior management team, 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 5 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.

REGULATION

General

The business of insurance and reinsurance 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 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 (refer to '*Ireland*' below) 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 Group. 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. AXIS Capital also files an annual capital and solvency return and must ensure compliance with minimum and enhanced capital requirements.

Effective September 23, 2020, AXIS Ventures Reinsurance Limited deregistered as a Class 3A insurer with the BMA and deregistered as an insurance manager with the BMA. AXIS Ventures Reinsurance Limited was liquidated, effective March 12, 2021.

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

AXIS Capital, AXIS Specialty Bermuda, AXIS Specialty Holdings Bermuda Limited, AXIS Specialty Investments Limited, AXIS Ventures, AXIS Specialty Investments II Limited and AXIS Reinsurance Managers must 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 permissions in China.

AXIS Re SE may write reinsurance in Bermuda under Solvency II equivalence between Bermuda and the E.U.

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

United States

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

As members of an insurance holding company system, each of AXIS Insurance Co., AXIS Re U.S., AXIS Specialty U.S. and AXIS Surplus, collectively AXIS Capital's U.S. insurance subsidiaries (collectively, the "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 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 applicable insurance department 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 Re U.S. is licensed to transact insurance and reinsurance throughout the U.S. and in Puerto Rico. AXIS Re U.S. is also authorized to transact insurance and reinsurance throughout Canada through its Canadian branch and has reinsurance permissions in Argentina, Brazil, China, Columbia, Ecuador, Guam, Guatemala, Honduras, Panama, India and Mexico. AXIS Insurance Co. is licensed to transact insurance and reinsurance throughout the U.S. AXIS Specialty U.S. is licensed to transact insurance and reinsurance throughout the U.S., except California, Iowa, Maine, New Mexico, New York and Wyoming. AXIS Surplus is eligible to write insurance on a surplus lines basis throughout the U.S., Puerto Rico and the U.S. Virgin Islands.

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 generally the insurance industry 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 ("FIO") has limited authority 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. The Company continues to monitor the implementation of Dodd-Frank.

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 states 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, previously provided facultative reinsurance coverage to the Latin American and Caribbean market and was subject to regulation and supervision by the Florida Department of Financial Services. As AXIS' Florida office closed in 2021, the coverholder agreement with Syndicate 1686 was terminated, effective December 31, 2021. We intend to terminate all regulatory licenses for AXIS Specialty Underwriters, Inc. in 2022.

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 insurance and reinsurance by insurers and reinsurers that are not admitted to do business within their jurisdictions, or conduct business pursuant to exemptions. AXIS Specialty Europe is eligible to write surplus lines business throughout the U.S. and in Puerto Rico. AXIS Managing Agency Ltd. is eligible to use Lloyd's licenses to (i) write surplus lines business throughout the U.S. and in all U.S. territories, (ii) write insurance business, except life insurance business, in the states of Illinois, Kentucky and in the U.S. Virgin Islands and (iii) write non-life reinsurance business throughout the U.S. 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 is 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 trusted reinsurer status in all U.S. jurisdictions except for New York.

Ireland

Our Ireland domiciled insurer and reinsurer are subject to the Solvency II Directive (Directive 2009/138/EC), as amended. Solvency II represents a consolidation and modernization of existing European Commission Solvency I insurance and reinsurance regulation and supervision and includes a harmonized risk-based solvency and reporting regime for the insurance/reinsurance 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) legal entity and European Union ("E.U.") group reporting and disclosure requirements including public disclosures. The 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 E.U. law. 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 States 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.

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"), 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" subject to the prior approval of the CBI. AXIS Specialty Europe operates under Freedom of Establishment in Belgium and the Netherlands through its branches established in each of these jurisdictions.

AXIS Specialty Europe also has a U.K. branch that transacts general insurance business in the U.K. and trades as AXIS Specialty London. The U.K. withdrew from the E.U. on December 31, 2020 and is now considered a third-country. In order to maintain business continuity, AXIS Specialty Europe submitted an application to the Prudential Regulatory Authority (the "PRA") in 2018 for authorization of a third-country branch. As this application is still pending, AXIS Specialty Europe entered into the PRA's Temporary Permissions Regime (the "TPR"), under which it is able to maintain business continuity. AXIS Specialty Europe will remain in the TPR, fully regulated by the PRA and the Financial Conduct Authority ("FCA"), until the earlier of December 30, 2023 and the date the PRA application has been fully assessed and approved.

Effective January 1, 2019, Compagnie Belge d'Assurances Aviation NV/SA 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 (see '*Belgium*' and the '*Netherlands*' below).

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 E.U. law. 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.

AXIS Re SE conducts business through its branch in Zurich, Switzerland, trading as AXIS Re Europe (see '*Switzerland*' below).

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 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 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, and Contessa Limited, a U.K. licensed insurance intermediary.

AXIS Specialty Bermuda may write reinsurance under Solvency II equivalence granted to Bermuda by the E.U.

AXIS Managing Agency Ltd. is eligible to write insurance (except permanent health) and reinsurance business in Ireland through Lloyd's Europe (see '*Regulatory Impact Due to Brexit*' below).

AXIS Specialty Global Holdings Limited

AXIS Specialty Global Holdings Limited is the limited liability holding company for AXIS Capital's U.S. Insurance subsidiaries.

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 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's general objective is 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.

The FCA's statutory strategic objective is 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 rule books 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 our syndicate, Syndicate 1686.

To consolidate our Lloyd's business under Syndicate 1686, Novae Syndicate 2007 ("Syndicate 2007") ceased accepting new business and was placed into run-off on January 1, 2019. The final underwriting year of Syndicate 2007, and of SPA 6129, a third-party Lloyd's special purpose arrangement, closed by way of reinsurance to close arrangements which took effect on January 1, 2021.

Lloyd's is a society of corporate and individual members which underwrite insurance and reinsurance as members of syndicates. A syndicate is made up of one or more members that form 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 members of the syndicate, which members receive profits or bear losses in proportion to their respective shares in the syndicate for each underwriting year of account.

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 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, prohibiting a syndicate from underwriting. Lloyd's also monitors syndicates' compliance with Lloyd's minimum standards and 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. operated an underwriting division at Lloyd's Insurance Company (China) Limited, a wholly owned subsidiary of the Corporation of Lloyd's which allowed it to underwrite reinsurance in China. Syndicate 1686 ceased underwriting business on the Lloyd's China platform effective December 31, 2021. This business was placed in run-off effective January 1, 2022.

AXIS Corporate Capital UK Limited

AXIS Corporate Capital UK Limited is a corporate member of Syndicate 1686, providing 70% capital support. Syndicate 1686 is managed by AXIS Managing Agency Ltd.

AXIS Corporate Capital UK II Limited

(formerly Novae Corporate Underwriting Limited)

AXIS Corporate Capital UK II Limited is a corporate member of Syndicate 1686, providing 30% capital support.

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 at Lloyd's on behalf of Syndicate 1686.

Contessa Limited

Effective December 2019, Contessa Limited ceased writing insurance on behalf of AXIS Specialty Europe. AXIS Specialty Europe now manages this book of business on a run-off basis.

In January 2021, Contessa Limited surrendered its license as an insurance intermediary with the FCA and is currently in liquidation proceedings.

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, and is incorporated under the laws of England and Wales.

Regulatory Impact Due to Brexit

On June 23, 2016, the U.K. voted to exit the E.U. ("Brexit") and on December 31, 2020, the U.K. completed its withdrawal from the E.U. Although an agreement was reached between the E.U. and the U.K., this agreement does not cover financial services. The following addresses the current impact to our insurers and reinsurers as a result of the U.K.'s withdrawal from the E.U.

Insurance

AXIS Specialty Europe established its branch in the U.K. in 2003 pursuant to the right to Freedom of Establishment under E.U. law. As it was anticipated that AXIS Specialty Europe would lose its authorization to conduct business in the U.K. as a result of the U.K.'s exit from the E.U., an application for authorization of a third-country branch was submitted to the PRA in 2018. As this application is still pending, AXIS Specialty Europe entered into the TPR to obtain temporary authorization. Under the TPR, AXIS Specialty Europe has deemed authority to operate as a third-country branch in the U.K. and is fully regulated by the PRA and FCA. As a result, AXIS Specialty Europe's operations in the U.K. have been able to continue without interruption.

In preparation for Brexit, Lloyd's established Lloyd's Insurance Company S.A in Brussels ("Lloyd's Europe") to retain access to the EEA markets and transferred all EEA risks to Lloyd's Europe. Lloyd's Europe has been approved by the National Bank of Belgium ("NBB") and the Belgian conduct regulator, the Financial Services and Markets Authority ("Belgian FSMA") with authorization to write non-life insurance risks throughout the EEA. Effective with Brexit, all EEA risks are written by Lloyd's Europe. AXIS Managing Agency Ltd. has retained its access to the EEA markets through Lloyd's Europe.

In January 2021, Lloyd's Europe updated Lloyd's managing agents on its ongoing discussions with Lloyd's, NBB and the Belgian FSMA regarding Lloyd's Europe's operating model and the activities performed on behalf of Lloyd's Europe by Lloyd's managing agents. We continue to work with Lloyd's Europe to monitor these discussions and are actively addressing required changes to our operating model in the U.K. and the EEA.

Reinsurance

AXIS Managing Agency Ltd. remains able to conduct non-life facultative, proportional and excess of loss reinsurance throughout the EEA via Lloyd's Europe. The E.U. has yet to make equivalence decisions for the U.K. under Solvency II. As a result, UK regulated firms' access to E.U. markets generally depends on the rules each Member State applies to third country regulated firms.

AXIS Re SE currently transacts reinsurance business in the EEA pursuant to European law. In November 2020, the U.K. granted equivalence under Solvency II to EEA supervised reinsurers, including AXIS Re SE, allowing such reinsurers to continue operations without interruption.

Switzerland

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 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 insurance and reinsurance 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. Singapore business may also be written from outside 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 Re U.S. conducts insurance and reinsurance 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 and 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. Syndicate 1686, through Lloyd's, is authorized to write reinsurance in or from Canada subject to certain restrictions relating to life reinsurance.

Belgium

AXIS Specialty Europe conducts insurance from its Belgium branch, AXIS Specialty Europe SE (Belgium Branch), which is subject to CBI prudential supervision and limited regulation by the NBB.

AXIS Specialty Europe also 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. AXIS Managing Agency Ltd. is eligible to write insurance (except permanent health) and reinsurance business in Belgium through Lloyd's Europe (see '*Regulatory Impact Due to Brexit*' above).

Netherlands

AXIS Specialty Europe (Netherlands Branch) was established as part of the Aviabel merger and commenced trading on January 1, 2019. AXIS Specialty Europe (Netherlands Branch) closed effective December 31, 2021 and has been deregistered from the local commercial register.

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

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

AXIS Managing Agency Ltd. is eligible to write insurance (except permanent health) and reinsurance business in the Netherlands through Lloyd's Europe (see '*Regulatory Impact Due to Brexit*' above).

Dubai

AXIS Reinsurance (DIFC) Limited was granted a prudential Category 4 license by the Dubai Financial Services Authority in December 2017 and operated as an intermediary under binding authority granted by the Board of Directors of AXIS Re SE to underwrite accident and health reinsurance. In December 2020, AXIS Reinsurance (DIFC) Limited surrendered its license and was liquidated effective March 8, 2021.

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

Non-Admitted Insurance and Reinsurance

The Company also insures and reinsures risks in many countries, including the above countries, pursuant to regulatory permissions and exemptions available to non-admitted insurers and reinsurers.

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 insurers and reinsurers.

TRADEMARKS

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

HUMAN CAPITAL MANAGEMENT

AXIS Capital's mission is not only to deliver outstanding financial results, but also to help our clients, brokers and partners navigate the challenges of a volatile world. We believe our employees distinguish us from our competitors and are critical to our success as an insurance and reinsurance company that leads with purpose. Our workforce's strength is grounded in our One AXIS culture, which celebrates collaboration, diversity and integrity, as well as relentless execution and continuous learning, adapting and improving. We recognize that our strength lies in our people, and therefore, one of our core strategies is to invest in and support our employees, including in the following areas of focus:

Health, Safety and Wellness

We are committed to the health, safety and wellness of our workforce. In response to the ongoing COVID-19 pandemic, most of our employees have worked remotely since March 2020, although all of our offices are now open on a voluntary basis. We provided employees with an office and technology stipend to assist with the transition to work from home and have

developed educational tools and materials focused on the well-being of our employees, including remote working best practices, leadership of virtual teams and managing stress while working from home. We have also continued to offer flexible work schedules, added half-day well-being days and allowed flexibility with paid time off and sick leave policies for employees directly impacted by COVID-19.

As COVID-19 vaccines became available, we strongly encouraged our employees to receive the vaccine when eligible to ensure the safest workplace possible for our people. Employees were offered up to a half a day of paid time off to receive primary or booster vaccinations. Effective January 2022, we implemented a Company-wide vaccination policy, which requires employees to be fully vaccinated prior to entering the office or, if unvaccinated, undergo weekly COVID-19 testing. Our policy also encourages all employees to follow local guidelines regarding face coverings and social distancing. We have also launched a contact tracing program that allows us to identify employees who have been in close contact with individuals who have tested positive for COVID-19.

Our Board of Directors is focused on our response to the COVID-19 pandemic, receiving regular updates on the health and safety of employees, protocols to address actual or suspected COVID-19 exposures or cases and the status of any return to work decisions.

Flex for Your Day

The COVID-19 pandemic and AXIS' successful transition to remote work has changed the way we think about where and how we work. In 2021 we announced Flex for Your Day, our new hybrid work format, which provides most of our employees with the flexibility to work both remotely and from an AXIS office. Structured collaboration hours ensure that our employees connect with colleagues and clients, either in-person or online, and are a key component of our Flex for Your Day approach. Outside of these hours, employees can structure their solo hours as they see fit to meet their goals. Our Flex for Your Day program empowers each of our employees to craft a working schedule that works best for them and their team. We strive to be an employer of choice and we expect this approach will help us recruit and retain talent.

Diversity, Equity and Inclusion

We see diversity, equity and inclusion as a strategic imperative that is core to our business and our culture. We believe that encouraging a wide range of experiences, backgrounds and perspectives and ensuring equal treatment for all makes AXIS a more rewarding place to work, enables us to attract talented teammates, enriches our perspectives and makes us stronger as a global organization.

Below are strategies and initiatives enacted in 2021, in partnership with the AXIS volunteer D&I Council and D&I Advocates, to foster a diverse, equitable and inclusive culture:

- *Diversity & Inclusion Council:* We established a Diversity & Inclusion Council comprised of global employees representing a full spectrum of experiences and viewpoints. The Council was established to ensure that employees with diverse perspectives and backgrounds can share their thoughts, ideas and recommendations. The Council is supported by an ancillary group of D&I Advocates who actively engage and promote the work of the Council.
- *Internal Education and Awareness:* AXIS continued to host various diversity, equity and inclusion educational initiatives, including monthly diversity, equity and inclusion learning experiences created by AXIS employees and internal education events, such as the annual D&I Forum (2021 focused on mental health) and a Women in Technology panel. In addition, we sponsored initiatives, curated resources, provided donation opportunities for Juneteenth, Pride Month, Mental Health Awareness Month and International Women's Day.
- *Recruitment and Mobility:* We continued to broaden our recruiting strategies to identify, recruit and develop a diverse pipeline of candidates. Recent initiatives included:
 - Establishing and enhancing existing relationships with diverse universities and external professional organizations;
 - Continuing to build pipelines through diverse apprenticeship and internship programs in Bermuda, London and the U.S.;
 - Further building out our internship program with increased diverse representation;
 - Including our diversity, equity and inclusion values in recruitment materials; and
 - Launching a pilot recruitment source in the UK with a program that brings women back to the workforce.

- *Support of Diverse Colleagues in Their Careers:*
 - Launching employee resource groups (ERGs), employee-led groups comprised of individuals with common interests, backgrounds or demographic factors. AXIS hosts ERGs for women, parents, veterans, LGBTQ+ and ethnically diverse employees;
 - Launching a leadership coaching program with 50% diverse participation; and
 - Enrolling 28 AXIS women in a 12-month "Emerging Leaders" program.
- *Tools and Measurement:* AXIS continued its quarterly measurement of diverse hiring, turnover and promotions. In support of this work, we conduct an annual pay equity audit. We have also scaled up our internal analytics capabilities to help us set, track and consistently improve our diversity, equity and inclusion efforts.

Additionally, in 2021, AXIS took steps to encourage our suppliers and clients to value diversity and inclusion and equal rights for all. In particular, AXIS launched and publicized a Supplier Diversity Program to promote diversity in our supplier base and a Supplier Code of Conduct to set forth our expectations for suppliers regarding social, environmental and ethical responsibilities. AXIS also adopted the Free, Prior and Informed Consent ("FPIC") principle in accordance with the United Nations Declaration on the Rights of Indigenous Peoples. As a result, it is our policy to not provide insurance coverage on projects undertaken on indigenous territories without obtaining the FPIC of the indigenous community affected by the project.

AXIS is proud to promote diversity, equity and inclusion issues, policies and initiatives to drive significant change in the (re)insurance industry. Representative 2021 advocacy efforts include the following:

- AXIS scaled up engagement in the 2021 Lloyd's Dive In Festival, an initiative focused on diversity, equity and inclusion in the insurance industry, by serving as a Global Festival Partner and supporting our AXIS colleagues who spoke on panels as part of the festival.
- AXIS sponsored and placed third at the National African American Association Talent Competition with St. John's University.
- We were also proud to support AXIS colleagues as they continued leadership positions in a variety of industry organizations dedicated to advancing diversity, equity and inclusion, such as Insider Progress, the National African American Insurance Association, the Association of Professional Insurance Women and the WSIA Insurance Industry Diversity Foundation.

For the second consecutive year, AXIS participated in the Bloomberg Gender Equality Index (GEI), an index of public companies committed to disclosing their efforts to achieve gender equality, to build greater parity between genders within our organization. This participation, in turn, earned AXIS inclusion in the 2022 and 2021 Bloomberg GEI. AXIS was also awarded the "5-Star Diversity, Equity and Inclusion" by *Insurance Business America*, which showcases companies in the insurance and reinsurance industry that demonstrate effective diversity, equity and inclusion programs.

Talent Development

At AXIS, investing in our people is a top priority. We provide our employees with a variety of professional development resources to help them achieve their career goals. Some of our 2021 initiatives in furtherance of this goal are described below:

- *Career Mobility Within the Organization:* In 2021, 14% of our open positions were filled by internal candidates and 18% of our employees progressed in their AXIS careers either through a promotion, transfer or role expansion.
- *AXIS Academy:* We provide our employees access to AXIS Academy, which serves as our learning and development hub and reflects our commitment to continuing education. AXIS Academy includes over 8,500 online training courses.
- *Professional Development:* We offer financial assistance for external professional development opportunities and tuition reimbursement for certain part-time business-related degree programs.
- *Early Careers Program:* Our Early Careers Program aims to build a strong pipeline of early career talent through our internship and development programs.

- *AXIS Careers*: We created AXIS Careers to ensure our people feel empowered to "own their careers." AXIS Careers offers employees a comprehensive suite of professional development tools, resources and training modules to help navigate career experiences and upskilling across our global organization. This includes leadership development, mentoring programs, and job secondments, shadows and swaps. In 2021, AXIS employees completed over 14,000 on-demand or instructor-led virtual learning and development courses through AXIS Academy and AXIS Careers.

Employee Engagement

We understand that employee engagement leads to a more satisfying and fulfilling workplace and motivates employees to do their best work. Our employee engagement initiatives include:

- AXIS Applause (our global recognition program to recognize the contributions of other AXIS members and drive strong employee performance);
- Community building events for AXIS employees and their families; and
- Employee-led charitable giving program which helps our employees give back to their communities.

In addition, to provide an open and frequent line of communication between senior management and our employees, we host all-employee calls led by our CEO on a quarterly basis and we encourage our people managers to periodically check in with their employees.

Each year, we conduct an enterprise-wide engagement survey to better understand and improve the employee experience and identify opportunities to strengthen our culture. Managers and teams reflect on the survey results and develop enterprise-wide and local action plans to address areas identified for growth. In 2021, 85% of employees participated in our annual employee survey. Last year, we saw our highest Engagement Index Score since launching our survey, including significant increases in our scores relating to DE&I and employee well-being.

Compensation and Benefits

To attract and retain our industry's top talent, we offer employees a total rewards program that is designed to incentivize exceptional performance. Our compensation packages are aligned with our pay-for-performance philosophy and are assessed on an annual basis through year-end performance reviews. Our packages are also regularly benchmarked against similarly sized insurance, reinsurance and financial services companies in each of our talent markets. Compensation components include market competitive salaries and short-term annual incentive programs (i.e., bonus payments) and, for senior level employees, long-term incentives such as equity grants. Our comprehensive benefits packages include health and welfare plans for employees and their families, flexible spending accounts, retirement savings plans with employer contributions and work-life benefits, including parental leave policies, flexible work arrangements for eligible employees and charitable matching programs.

At AXIS, we are committed to fair pay and delivering equal pay for equal work regardless of gender, race or other personal characteristics. In support of our commitment to equal pay practices, we conduct an annual pay equity audit and take action to address any areas of concern. In addition, we have published the results of our global gender pay audits in connection with our participation in the Bloomberg Gender Equality Index.

Succession Planning

We have a robust talent and succession planning process. On an annual basis, management conducts a talent and succession plan for each member of our Executive Committee and their direct reports, focusing on high performing and high potential talent, diverse talent and the succession plan for each position. On an annual basis, our Board receives a comprehensive succession plan for each member of our Executive Committee.

Employees

At December 31, 2021, we had 2,082 employees. During 2021, the number of employees increased by approximately 8%. During 2021, our voluntary turnover rate was approximately 11.5%.

Below is a summary of our employees by region at December 31, 2021:

	Employees
North America	1,319
Europe, Middle East and Africa	730
Asia Pacific	33
Total employees	2,082

At December 31, 2021, our global employees had approximately the following gender demographics:

	Women	Men
Total employees ⁽¹⁾	45%	55%

(1) <1% of employees did not identify.

At December 31, 2021, our U.S. employees had approximately the following racial and ethnic demographics:

	All U.S. Employees⁽¹⁾⁽²⁾
Black / African American	15%
Asian	11%
Hispanic / Latinx	4%
White	57%
Multiracial, Native American and Pacific Islander	2%

(1) This information is presented for U.S. employees only. We continue to gather global demographic information to demonstrate our racial and ethnic diversity.

(2) 11% of employees did not identify.

INFORMATION SECURITY

Information security is one of our highest priorities. Our information security ecosystem is designed to evolve with the changing security threat environment through ongoing assessment and measurement. We use commercial and proprietary security monitoring technologies and techniques to continuously monitor and respond to cyber threats. We also regularly engage independent third-party security auditors to test our systems and controls against relevant security standards and regulations.

Our employees and contractors are required to comply with our IT End User policy and certify their compliance annually. Information security awareness training is mandatory for all new hires and for existing employees and contractors on a regular basis.

Our Board of Directors, along with the Risk Committee and Audit Committee of the Board of Directors, oversee our information security program. In 2021, our Board of Directors and Risk and Audit Committees received periodic updates throughout the year on cybersecurity matters, and these updates are part of their standing agendas.

AVAILABLE INFORMATION

Our Internet website address is 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.

RISK AND CAPITAL MANAGEMENT

Risk Management Framework – Overview

Mission and Objectives

The mission of Enterprise Risk Management ("ERM") at the Company is to promptly identify, assess, manage, monitor, and report 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.

The risk management framework applies to all lines of business and corporate functions across our insurance and reinsurance segments.

Risk Governance

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

To support our governance process, we rely on our documented policies and procedures. 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 limits and improvement actions 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.

Our internal capital model is an integral part of the business planning process which provides an assessment as to whether our prospective business and investment strategies are in line with our defined risk appetite and objectives at 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. The internal capital model is subject to regular updates and validations.

Risk Diversification

As a global insurer and reinsurer 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 in terms of pre/post diversified internal risk capital requirements.

Risk Appetite and Limit Framework

Our integrated risk management framework considers material risks that arise from our operations. Material 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 the 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 risks 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/reinsurance 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 of Directors ("Risk Committee") assists the 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, 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 the Board of Directors 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 the Board of Directors, which is supported by Internal Audit, is responsible for overseeing internal controls and compliance procedures, and also reviews with management and the Chairman of the Risk Committee, the Group's policies regarding risk assessment and risk management.

Group Executive Level

The Executive Committee formulates our business objectives and risk strategy within the overall risk appetite set by the Board of Directors. It allocates capital resources and sets limits across the Group, with the objective of balancing return and risk. While the Executive Committee is responsible overall for risk management, it has delegated some authority to the executive level Risk Management Committee ("RMC") consisting of the Chief Executive Officer, Chief Financial Officer, Chief Strategy Officer, Head of Group Underwriting, Chief Executive Officers of each segment, Chief Risk Officer, Group Chief Actuary and General Counsel & Corporate Secretary.

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:

Management Committees

- The Business Council oversees underwriting strategy and performance, establishes return targets, and manages risk/exposure constraints across each line of business, consistent with the Company's strategic goals.
- The Product Board for each major line of business aims to develop a coherent strategy for portfolio management, set underwriting guidelines and risk appetite and leverage expertise across the multiple geographies where we operate. The Product Boards also oversee exposure management frameworks and view of risk.
- The Investment & Finance Committee oversees the Group's investment activities which includes 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 of Directors for approval.
- 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, and oversees the availability of capital within the Group.
- The Group Reserving Committee ensures appropriate oversight and challenge of the Group and Segment loss reserves.

RMC Sub-Committees

- The Natural Catastrophe Committee oversees the Group's natural catastrophe risk management framework, including the validation of modeling and accumulation practices.
- The Non-Natural Catastrophe Committee oversees the Group's non-natural catastrophe risk management framework, including the validation of modeling and accumulation practices.
- The Reinsurance Security Committee ("RSC") sets out the financial security requirements of our reinsurance counterparties and approves our counterparties, as needed.
- 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 identifying, assessing, managing, monitoring, and reporting of operational risk and facilitates the embedding of effective operational risk management practices throughout the Group.
- The Emerging Risks Working Group oversees the processes for identifying, assessing, managing, monitoring, and reporting current and potential emerging risks.
- The Climate Change Working Group focuses specifically on climate-related risks and oversees the implementation of our climate risk management framework.

Group Risk Management Organization

As a general principle, management in each of the lines of business, segments and corporate functions is responsible in the first instance for 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.

The Chief Risk Officer reports to the Chief Financial Officer and the Chairman of the 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, assessing, managing, monitoring, 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, Executive Committee, RMC, and the Risk Committee.

Internal Audit, an independent, objective function, reports to the Audit Committee of the Board of Directors 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 team which seeks to mitigate legal and regulatory compliance risks with support from other teams. 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 insurance, strategic, market, liquidity, credit, and operational risks that arise as a result of undertaking our business activities. We provide definitions of these risk categories as well as descriptions of management of these risks below. 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 exposures.

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.

Insurance Risk

Insurance risk is the inherent uncertainty as to the occurrence, amount and timing of insurance and reinsurance 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 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 guidelines and procedures. 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 lines of business, 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 and claims 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 to protect our short and long-tail lines of business on a treaty (covering a portfolio of risks) and facultative (single risk) basis.

For treaty reinsurance, we purchase proportional and non-proportional cover. Under proportional reinsurance, we cede an agreed percentage of the premiums and the losses and loss 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, where 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 surety portfolios, which includes cessions to our Strategic Capital Partners. In addition, we 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 is 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).
- 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 (including retrocession) across the Group and a separate AXIS ILS (Insurance Linked Securities) team, which coordinates the sourcing and structuring of third-party capital to support AXIS underwriting. Risk funding and AXIS ILS is overseen by our Reinsurance Purchasing Group ("RPG"). The RPG, which includes, among others, our Chief Executive Officer, Chief Financial Officer, Chief Risk Officer, Head of Group Underwriting and representatives from the business leadership team, 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. In certain circumstances, we use facultative reinsurance to complement treaty reinsurance by covering additional risks above and beyond what is already covered by treaties. Facultative reinsurance is monitored by the risk funding team.

Natural Peril Catastrophe Risk

Natural catastrophes such as hurricanes, windstorms, earthquakes, floods, tornados, hail and fire 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 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 10% of common equity to a single event within a single zone.

The table below shows our net PML to a single natural peril catastrophe event within certain defined single zones which correspond to peak industry catastrophe exposures at January 1, 2022 and 2021:

Estimated Net Exposures (millions of U.S. dollars)		2022			2021		
Territory	Peril	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	\$ 131	\$ 186	\$ 262	\$ 286	\$ 408	\$ 625
Northeast	U.S. Hurricane	39	115	238	42	115	262
Mid-Atlantic	U.S. Hurricane	71	193	362	90	263	520
Gulf of Mexico	U.S. Hurricane	119	164	234	175	263	431
California	Earthquake	123	240	327	193	396	504
Europe	Windstorm	90	124	165	136	182	240
Japan	Earthquake	82	204	318	103	179	336
Japan	Windstorm	75	144	166	113	186	220

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 \$0.2 billion. According to our modeling, there is a one percent chance that on an annual basis losses incurred from a Southeast U.S. hurricane event could be in excess of \$0.2 billion. Conversely, there is a 99% chance that on an annual basis the loss from a Southeast U.S. hurricane will fall below \$0.2 billion.

We have developed our PML estimates by combining judgment and experience with the outputs from the catastrophe model, commercially available from AIR Worldwide ("AIR"), which we also use for pricing catastrophe risk. This model covers the major peril regions where we face potential exposure. Additionally, we have included our estimate of non-modeled perils and other factors which we believe provides us with a more complete view of 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. Models are continuously validated at the line of business and at a group level by our catastrophe model validation team. These validation procedures include sensitivity testing of models to understand their key variables and, where possible, back testing the model outputs to actual results.

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 to internal modeling, underwriting portfolios, reinsurance purchasing strategy and foreign exchange rates.

Man-Made Catastrophe Risk

Consistent with our management of natural peril catastrophe exposures, we take a similarly focused and analytical approach to the management of man-made catastrophes. Man-made catastrophes, which include such risks as train collisions, airplane crashes or terrorism, and other intentionally destructive acts, including cyber-attacks, 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 related 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 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 loss reserves is subject to uncertainty as the settlement of claims that arise before the balance sheet date is dependent on future events and developments. There are many factors that would cause loss reserves to increase or decrease, which include, but are not limited to emerging claims and coverage issues, changes in the legislative, regulatory, social and economic environment and unexpected changes in loss inflation. The estimation of loss reserves could also be adversely affected by the failure of our loss limitation strategy and/or the failure of models used to support key decisions.

We calculate reserves for losses and loss expenses ("loss reserves") in accordance with actuarial best practice based on substantiated methodologies and assumptions. In addition, we have well established processes in place for determining loss reserves, which we ensure are consistently applied. Our loss reserving process demands data quality and reliability and requires a quantitative and qualitative review of 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 of losses that have occurred throughout the insurance markets. The detailed and analytical reserving approach that follows is designed to absorb and understand the latest information on reported and unreported claims, to recognize the resultant exposure as quickly as possible, and to record appropriate loss reserves in our consolidated financial statements.

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: loss reserves recorded in our consolidated financial statements 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 2021, long-tail net premiums written (namely liability and motor business) represented 23% of total net premiums written and long-tail net loss reserves represented 35% of total net loss reserves. We also purchase reinsurance on liability business to manage our net positions. Second, 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. Refer also to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Reserving for Significant Catastrophic Events*' for further details.

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 embedded in our main lines of business. 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 which include details on claims reporting controls and claims reporting escalation procedures in all our claims teams. 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 teams and to develop group-wide best practices.

When we receive notice of a claim, regardless of size, it is recorded in our claims and underwriting systems. In addition, we produce alerts regarding significant events and potential losses, regardless of whether we have exposure. These alerts allow 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, analyzing, and reporting of loss information as it develops from early modeled results to fully adjusted and paid losses.

Strategic Risk

Strategic risks affect or are created by an organization's business strategy and strategic objectives. Our review of strategic risk evaluates not only internal and external challenges that might cause our chosen strategy to fail but also evaluates major risks that could affect our long-term performance and position. We believe it is imperative that we consider the business risks associated with, and mitigated by, each strategy. We also view strategic risk not only as the negative impact of risk but also the sub-optimization of gain. Fundamentally, we believe that we are set up for success if we analyze both value protection and value creation.

A strategy function was formed as part of our enterprise-wide transformation to ensure that the prioritization and coordination of enterprise-wide resources is done efficiently and effectively to drive targeted strategic outcomes. On no less than a quarterly basis, the Executive Committee meets and receives holistic information about execution against strategy and makes decisions to adjust and/or advance strategy. In addition, strategies employed throughout our business in support of the broader enterprise strategy are reviewed in the context of a broader governance structure by the Business Council and business leadership, and are ultimately approved by the Board of Directors.

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 currency exchange rates. Fluctuations in market prices or 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 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). Our investments team manages asset classes to control aggregation of risk and provide a consistent approach to constructing portfolios and 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).

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 insurance and reinsurance liabilities payable in foreign currencies with assets, including cash and investments that are denominated in the same 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.

Liquidity Risk

Liquidity risk is the risk that we may not have sufficient financial resources to meet our obligations when they are due or would have to incur excessive costs to do so. As an insurer and reinsurer, our core business generates liquidity primarily through premiums, 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 procedures in place which are described below:

- We maintain cash and cash equivalents and a high quality, liquid investment portfolio to meet expected outflows, as well as those that could result from a range of potential stress events. We place limits on the maximum percentage of cash and investments which may be in an illiquid form as well as on the minimum percentage of unrestricted cash and liquid investment grade fixed income securities.
- 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.

Credit Risk

Credit risk represents the risk of incurring financial loss due to the diminished creditworthiness (reduced financial strength and, ultimately, possibly 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, such as corporate bonds; counterparty exposure in a direct contractual relationship, such as reinsurance; the credit risk related to our premium 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 credit and surety 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 by single counterparty (or parent of affiliated counterparties). 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 take specific actions to reduce our risk exposures

Credit Risk Relating to Cash and Investments

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 limit acceptable counterparties based on current rating, outlook, and other relevant factors.

Our fixed maturity investment portfolio, which represents approximately \$12.8 billion or 47% of our total assets, is exposed to potential losses arising from the diminished creditworthiness of issuers of bonds. Our investment portfolio is managed by external investment managers in accordance with its investment guidelines. We limit such credit risk through diversification and issuer exposure limits graded by ratings and, with respect to custodians, contractual and other legal remedies. Excluding U.S. government and agency securities, we limit our concentration of credit risk to any single corporate issuer to less than 2% of our investment grade fixed maturities portfolio for securities rated A- or above and less than 1% of our investment grade fixed maturities portfolio for securities rated below A-.

Credit Risk Relating to Reinsurance Recoverable Assets

We are exposed to the credit risk of a reinsurer failing to meet its obligations under our reinsurance contracts. To help mitigate this, our purchases of reinsurance are subject to financial security requirements specified by our RSC. The RSC maintains a list of approved reinsurers, performs 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. Generally, the RSC requires reinsurers who do not meet specified requirements to provide collateral.

Credit Risk Relating to Premium Receivables

The diversity of our client base limits credit risk associated with premium receivables. In addition, for insurance contracts we have contractual rights to cancel coverage for non-payment of premiums, and for reinsurance contracts we have contractual rights to offset premium receivables against corresponding payments for losses and loss expenses.

Brokers and other intermediaries collect premiums from customers on our behalf. We have procedures in place to manage and monitor credit risk from intermediaries with a focus on day-to-day monitoring of the largest positions.

These contractual rights contribute to the mitigation of credit risk, together with the monitoring of aged premium receivable balances. In light of these mitigating factors and considering that a significant portion of premium receivables are not currently due based on the terms of the underlying contracts, we do not utilize specific credit quality indicators to monitor our premium receivable balances.

Credit Risk Relating to our Underwriting Portfolio

In the insurance segment, we provide credit insurance primarily for lenders (financial institutions) and commodity traders seeking to mitigate the risk of non-payment from their borrowers and trading counterparties. This product complements our traditional political risk insurance business. For the credit insurance contracts, it is necessary for the buyer of the insurance, most often a bank or commodity trader, to hold an insured asset, most often an underlying loan, or sale and purchase contract in order to claim compensation under the insurance contract. The majority of the credit insurance provided is for single-name illiquid risks, primarily in the form of senior secured bank loans but also unsecured payment obligations in the case of shorter term trade credit, that can be individually analyzed and underwritten. As part of the underwriting process, an evaluation of creditworthiness and reputation of the obligor is critical. We generally require our clients to 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.

Generally, we do not underwrite insurance for structured finance products that would expose us to mark-to-market losses. In addition, our credit insurance contracts typically do not include terms which would 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 the reinsurance segment, we provide reinsurance of credit and surety 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 of obligations (surety). Our credit insurance exposures are concentrated primarily within developed economies, while our surety bond exposures are concentrated primarily in Latin America 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 Federal Home Loan Mortgage Corporation and Federal National Mortgage Association, in the single-family, fixed rate, conforming mortgage space. We provide this cover globally on a proportional and non-proportional basis. 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.

Operational Risk

Operational risk represents the risk of loss as a result of inadequate processes, system failures, human error or external events, including but not limited to direct or indirect financial loss, reputational damage, customer dissatisfaction and legal and regulatory penalties.

Group Risk is responsible for coordinating and overseeing a group-wide framework for operational risk management. As part of this oversight, we maintain an operational loss-event database which helps us monitor and analyze potential operational risk issues, 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 which are described below:

- 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 services and the functions which support these business services from these effects to enable us to carry out our core tasks in time and at the quality required. During 2021, 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.

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 which are described below:

- 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 21 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 details.

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 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 to our shareholders through share repurchases and/or 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.

ITEM 1A. RISK FACTORS

COVID-19

The novel coronavirus (COVID-19) pandemic continues to pose a risk and the impact on our business, results of operations, financial condition and liquidity could be material. The threat and outcome are better understood now than in the earlier stages, but the ultimate scale and scope remains uncertain.

During the first quarter of 2020, there was a global outbreak of the novel coronavirus, COVID-19, which has spread throughout the world and is present in all of our key business locations. During 2021, COVID-19 has continued to impact all the world's major economies although there have been positive responses through the roll-out of vaccines to the world's population. As the virus has developed over the year, and new variants have emerged, restrictions have remained in place to some extent, limiting travel, economic and social activity materially below pre-pandemic levels. Such actions have created disruption in global supply chains, and adversely impacted operations in many sectors of the economy. The outbreak will likely have a continued adverse impact on economic and market conditions and the arrival of the Omicron variant in the fourth quarter of 2021 has triggered a slowdown and potential reversal in the global economic recovery.

The scale and scope of the COVID-19 pandemic may heighten the potential adverse effects on our business, results of operation, financial condition or liquidity of many of the other risk factors described herein, including without limitation:

- We have substantial exposure to losses resulting from catastrophe events, including pandemics. Losses have been incurred from the COVID-19 pandemic and we remain exposed to additional losses or deterioration. Total losses resulting from the COVID-19 pandemic will ultimately depend on its severity and duration and such losses could have a material adverse effect on our results of operations, financial condition or liquidity. We have identified exposures arising from our underwriting of insurance and reinsurance policies that cover accident and health (including travel), event cancellation, property/business interruption, and potential exposures arising from our underwriting of insurance and reinsurance policies that cover credit and surety (including mortgage) and professional lines (medical malpractice and directors' and officers' liability) among others. These exposures and potential exposures include direct claims relating to COVID-19 (e.g. business interruption following a shelter-in-place order) and indirect exposures arising from an ensuing economic downturn. We note that other lines may be affected as the pandemic and associated economic downturn develop and new information is discovered.
- Our exposures are controlled and limited by our insurance and reinsurance contracts, which include specific terms and conditions defining if and how our policies respond to losses arising from the COVID-19 pandemic. However, legislative, regulatory, or judicial actions (e.g. the UK Financial Conduct Authority test case on business interruption insurance and subsequent legal actions, including appeals) and social influences could alter the interpretation of our contracts or extend or change coverage (beyond the obligations set forth within those contracts or beyond what was intended by the parties). We set our reserves based on our best interpretation of the current legal position in applicable jurisdictions, but these legislative, regulatory, or judicial actions make it difficult to precisely predict the total amount of losses we could incur as a result of the pandemic.
- Actual claims may exceed loss reserves. While we believe that net reserves for losses and loss expenses at December 31, 2021 are adequate, changes in the duration, severity, and scope of the impact of the COVID-19 pandemic from current expectations may result in ultimate losses being materially greater or less than the net reserves for losses and loss expenses currently provided. Among the factors that would cause net reserves for losses and loss expenses to increase or decrease are changes in claim frequency or severity driven by the COVID-19 pandemic or its related impact on the economy.
- Uncertainty and market turmoil caused by the COVID-19 pandemic could continue to affect, among other aspects of our business, the demand for our products and the ability of customers, counterparties and others to establish or maintain their relationships with us. In addition, the market for insurance and reinsurance could be smaller and certain industries for which we write business have been, and will likely continue to be, particularly impacted by the pandemic (such as, energy, aviation, retail, hospitality, and construction lines, among others), resulting in downward pressure on our premium levels.

- The performance of our cash and investments portfolio has a significant impact on our financial results. The impact of the COVID-19 pandemic has heightened the risks to which our portfolios are subject to, 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. Government imposed restrictions on movements and/or social distancing practices have, and could continue to, lead to sharp declines in the revenue of many companies and industries, and we have some debt and/or equity exposure to some of these highly impacted sectors. We believe that the negative impacts of the COVID-19 pandemic may continue for some time.
- The COVID-19 pandemic may impact cash flows and could require access to liquidity in excess of prior forecasts. There is a risk that accessing additional required liquidity may be difficult or have costs associated as a result of the COVID-19 pandemic.
- The impact of the COVID-19 pandemic on financial markets may impact our ability to acquire additional capital, should we desire to do so, or our ability to effectively deploy existing capital resources.
- 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 due to the impact of the COVID-19 pandemic 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, or actions by our regulators, may not permit us to cancel our insurance even though we have not received payment. We may further decide (or be obliged by regulation) to refund premiums already paid where it is judged that the COVID-19 pandemic has reduced the customer need for insurance. If refunds or non-payments become 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.
- The COVID-19 pandemic could impact our ability to obtain reinsurance and retrocessional arrangements on favorable terms, which could limit the amount of business we are willing to write or reduce our reinsurance protection for large loss events.
- While the financial strength of the reinsurance industry generally remains strong, it is possible that our reinsurance and retrocession counterparties may experience financial distress and therefore, may be unable to pay the amounts owed to us under the applicable contracts.
- Our reinsurers and retrocession counterparties may be unwilling to pay claims due to disagreements or differing interpretation of contracts.
- There is a risk of reputational damage resulting from claims disputes and underwriting renewal actions.

In addition, the ongoing COVID-19 pandemic may have an adverse impact on our business and financial condition due to significant disruption in other areas, including:

- We may experience decreased worker productivity as a result of prolonged remote working arrangements, or increased medical, emergency or other leave.
- The extended period of remote working by our employees increases certain operational risks, including cybersecurity risk. Remote working environments are likely to be less secure and more susceptible to hacking attacks, including phishing and social engineering attempts that seek to exploit the COVID-19 pandemic.
- Similarly, third parties on whom we rely to provide key business services on an outsourced basis (including, but not limited to delegated underwriting, claims processing, finance operations and IT support) may also experience operational or system disruption, or cybersecurity issues, impacting their provision of service to us, and in turn, our operational performance.
- Limitation on travel, social distancing requirements implemented in response to COVID-19, alongside economic conditions, may challenge our ability to write new insurance or reinsurance business and market our products and services as anticipated prior to COVID-19.

The duration and extent of the impact from the COVID-19 pandemic depends on future developments that cannot be accurately predicted at this time, such as the severity and transmission rate of the virus, the extent and effectiveness of containment actions and the extent and effectiveness of government actions to support the economy. The duration and severity of the economic downturn is uncertain, as well as the impact of these and other factors on our employees, customers and partners. Such impact on our business, results of operations, financial condition or liquidity could be material.

Insurance Risk

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

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

The insurance/reinsurance business historically has been a cyclical industry characterized by periods of intense price competition due to excess 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 insurance and reinsurance capacity, via capital provided by new entrants, new capital market instruments and structures and/or the commitment of additional capital by existing insurers and reinsurers, 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 insurance/reinsurance business significantly.

Results of operations, financial condition or liquidity could be adversely affected by the occurrence of natural and man-made disasters, as well as outbreaks of pandemic or contagious diseases.

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, severe winter weather, fires, drought and other natural disasters and outbreaks of pandemic or contagious diseases, including the COVID-19 pandemic. 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 losses from catastrophes could be substantial.

Increases in the values and concentrations of insured property, particularly along coastal regions, as well as increases in the cost of construction materials required to rebuild affected properties, may increase the impact of natural catastrophe events in the future. Changes in global climate conditions may further increase the frequency and severity of natural 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. Other man-made catastrophes, such as cyber-attacks, are fast-evolving, and therefore the extent of their impact is highly uncertain. The impact of catastrophe events in years 2021, 2020 and 2019 included the recognition of the net losses and loss expenses of:

- \$443 million in the aggregate, primarily related to Hurricane Ida, U.S. Winter Storms Uri and Viola, and July European Floods in 2021;
- \$774 million, in the aggregate, primarily related to the COVID-19 pandemic, Hurricanes Laura, Sally, Zeta and Delta, Midwest derecho and wildfires across the West Coast of the United States in 2020; and
- \$336 million, in the aggregate, primarily related to Japanese Typhoons Hagibis, Faxai and Tapah, Hurricane Dorian and Australia Wildfires in 2019.

These events materially reduced net income in the years noted. Although we 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, financial condition or liquidity.

Cyber events are man-made perils and as such the threat landscape is dynamic and evolving. This risk of cyber attacks could be exacerbated by geopolitical tensions, including hostile actions taken by nation-states and terrorist organizations. There is a risk that increases in the frequency and severity of losses to our clients from cyber events could adversely affect our results of operations, financial condition or liquidity. The losses incurred from this risk are also dependent on our clients' cybersecurity practices and defenses and the interaction of our policy wordings with the evolving threat landscape. In addition, our exposure to cyber events potentially includes exposure through 'non-affirmative' coverages, meaning risks and potential losses associated with policies where cyber risk is not explicitly included or excluded in the policy wording. As this is a relatively new peril, even in cases where losses from cyber events are explicitly excluded, there can be no assurance that a court or arbitration panel will interpret policy language in line with the intention of the exclusion.

Global climate change, as well as increasing regulation in the area of climate change, may have an adverse effect on our results of operations, financial condition or liquidity.

We are potentially exposed to different aspects of climate risk, specifically, physical, liability and transition risks, as a result of climate change.

Physical risks describe weather-related events and longer-term shifts in climate and emanate primarily from underwriting of property insurance and reinsurance. Climate change has added to the unpredictability and frequency of natural disasters in certain parts of the world and has created additional uncertainty as to future trends and exposures. Although the loss experience of catastrophe insurers and reinsurers has historically been characterized as low frequency, there is a growing concern today that climate change increases the frequency and severity of severe weather events, and, in recent years, the frequency of severe weather-related events has increased and this trend may continue to increase in the future. Climate change is likely to expose us to an increased frequency and/or severity of these weather-related losses, and there is a risk that our pricing of these perils or our management of the associated aggregations does not appropriately allow for changes in climate. Over the longer term, climate change may have an impact on the economic viability of certain lines of business if suitable adjustments in price and coverage cannot be achieved.

We may also be exposed to liability risks. Liability risks relate to losses or damages suffered by our insureds from physical or transition risks, such as losses stemming from climate-related litigation in liability lines. These risks could arise from management and boards of directors not fully considering or responding to the impacts of climate change, or not appropriately disclosing current and future risks.

There is additionally a risk that certain elements of our business cease to be viable as a result of climate change 'transition' risks, which relate to losses driven by changes in technology, governments and regulators putting into place measures to encourage and support this transition, and society as a whole adapting to a lower-carbon economy. Recognizing the importance of this transition, effective 2020, AXIS Capital ceased underwriting risks for (and investing in the securities of) companies whose primary activity relates to thermal coal mining or power generation, or tar sands extraction, and effective 2021, AXIS Capital committed to not underwrite new insurance or facultative reinsurance contracts, or provide investment support, for projects covering the exploration, production or transportation of oil and gas in the Arctic National Wildlife Refuge. There remains a risk that our financial condition or operating performance may be impacted by changes in our business model arising from climate change transition, and by the performance of strategies we put in place to manage this transition.

Environmental, social and governance ("ESG") and sustainability have become major topics that encompass a wide range of issues, including climate change and other environmental risks. We are also subject to complex and changing laws, regulation and public policy debates relating to climate change which are difficult to predict and quantify and may have an adverse impact on our business. Changes in regulations relating to climate change or our own leadership decisions implemented as a result of assessing the impact of climate change on our business may result in an increase in the cost of doing business or a decrease in premiums in certain lines of business.

Furthermore, we may be exposed to losses in the value of our investments arising from the physical and transition impacts of climate change, including 'stranded assets', on the companies and securities in which we invest.

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

We have substantial exposure to unexpected losses resulting from war, acts of terrorism, political unrest and geopolitical instability, including, but not limited to, events related to the recent Russian invasion of Ukraine, in many regions of the world. In certain instances, we specifically insure and reinsurance 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 for losses and loss expenses ("loss 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. On December 20, 2019, the President of the United States signed the Terrorism Risk Insurance Program Reauthorization Act of 2019 ("TRIP"), extending the program through December 31, 2027. Although TRIP provides benefits in the event of certain acts of terrorism, those benefits are subject to a deductible and to other limitations. Under TRIP, once losses attributable to certain acts of terrorism exceed 20% of direct commercial property and liability insurance premiums for the preceding calendar year, the federal government will reimburse insurers for 80% of losses in excess of this deductible.

Notably, TRIP 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 or liquidity in future periods.

Our credit and political risk insurance line of business protects insureds with interests in foreign jurisdictions in the event that 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 losses 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 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, financial condition or liquidity.

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 insurance and reinsurance business. Moreover, legislative, regulatory, judicial or social influences may impose new obligations on insurers or reinsurers in connection with the COVID-19 pandemic that extend coverage beyond the intended contractual obligations, or result in an increase in the frequency or severity of claims beyond expected levels, as described in the COVID-19 risk factor above. In some instances, the effects of these changes may not become apparent until sometime after we have issued the impacted insurance or reinsurance contracts. In addition, actual losses may vary materially from the current estimate of losses based on a number of factors (refer to '*If actual claims exceed our loss reserves, our financial results could be adversely affected.*' below). As a result, the full extent of liability under an insurance or reinsurance contract may not be known for many years after the contract is issued and a loss occurs.

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

While we believe that loss reserves at December 31, 2021 are adequate, new information, events or circumstances, unknown at the original valuation date, may lead to future developments in ultimate losses being significantly greater or less than the loss reserves currently provided. The actual final cost of settling claims outstanding at December 31, 2021, as well as claims expected to arise from the unexpired period of risk, is uncertain. For example, our loss reserves recorded in 2021 associated with the COVID-19 pandemic remain subject to significant uncertainty. There are many factors that would cause loss 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.

When establishing our single point best estimate of loss reserves at December 31, 2021, 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 previous estimates of prior year loss reserves can adversely impact the reported calendar year underwriting results if loss reserves prove to be insufficient or can favorably impact reported results if loss reserves prove to be higher than actual claim payments. If net income is insufficient to absorb a required increase in loss reserves, we would incur a net loss and could incur a reduction in capital.

We may be adversely impacted by inflation.

Our operations, like those of other insurers and reinsurers, are susceptible to the effects of inflation because premiums are established before the ultimate amounts of losses and loss expenses are known. Although we consider the potential effects of inflation when setting premium rates, premiums may not fully offset the effects of inflation and thereby essentially result in underpricing the risks we insure and reinsurance. Loss reserves include assumptions about future payments for settlement of claims and claims-handling expenses, such as the value of replacing property, associated labor costs for the property business we write and litigation costs. To the extent inflation causes costs to increase above loss reserves established for claims, we will be required to increase loss reserves with a corresponding reduction in net income in the period in which the deficiency is identified, which may have a material adverse effect on our results of operations or financial condition. 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 an adverse effect on our results of operations, financial condition or liquidity.

We seek to mitigate loss exposure through multiple methods. For example, we write a number of reinsurance contracts on an excess of loss basis. Excess of loss reinsurance indemnifies the reinsured for 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 losses and loss expenses 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, financial condition or liquidity.

If we choose to purchase reinsurance, we may be unable to do so.

We purchase reinsurance for our insurance and reinsurance operations in order to mitigate the volatility of losses on our financial results. From time to time, market conditions have limited, and in some cases have prevented, insurers and reinsurers 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 retrocessionary reinsurance will be available in the marketplace in the future. In the current environment, our ability to renew our current reinsurance or retrocessionary reinsurance arrangements or obtain desired amounts of new or replacement coverage on favorable terms may be substantially reduced as a result of the COVID-19 pandemic. 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. If we are unable to renew our current reinsurance or retrocessionary reinsurance or purchase new or replacement coverage, the amount of business we are willing to write may be limited or our protection from losses due to large loss events may be materially reduced.

We utilize models to assist our decision making in key areas such as underwriting, reserving, investment management, capital assessment, risk management, reinsurance purchasing and the evaluation of our catastrophe risk and we could be adversely impacted if these models are inadequate or unfit for the purpose for which they are being used.

We employ various modeling techniques (for example, scenarios, predictive, stochastic and/or forecasting) to analyze and estimate exposures and 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, investment, capital assessment, risk management, 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. These models may turn out to be inadequate representations of the underlying subject matter and consequently, actual losses from loss events, whether from individual components (for example, wind, flood, earthquake, etc.) or in the aggregate, may differ materially from 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, financial condition or liquidity 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 inherent 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 actual losses from catastrophe events may differ materially.

We could be 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 the 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 and settle claims on our behalf within authorities prescribed by us. Once a program/coverholder commences, we must rely on the underwriting, operational and claims controls of these entities to write business within the 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 or financial condition could be materially adversely affected.

Strategic Risk

Strategic risks affect or are created by an organization's business strategy and strategic objectives. Our review of strategic risk evaluates not only internal and external challenges that might cause our chosen strategy to fail but also evaluates major risks that could affect our long-term performance and position.

Competition and consolidation in the insurance/reinsurance industry could reduce our growth and profitability.

The insurance/reinsurance industry is highly competitive. We compete on an international and regional basis with major U.S., Bermuda, European and other international insurers and reinsurers 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 insurance/reinsurance markets. In addition, capital market participants have created alternative products that are intended to compete with insurance and reinsurance products. New and alternative capital inflows in the insurance/reinsurance industry and the retention by insured and cedants of more business may cause an excess supply of insurance and reinsurance capital. There has been a large amount of merger and acquisition activity in the insurance/reinsurance sector in recent years, which may continue; 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. 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.

The insurance industry is undergoing extensive technological change. There is increasing focus by traditional insurance industry participants, technology companies, "InsurTech" start-up companies and others on using technology and innovation to disrupt current business models. This will potentially enable enhanced customer focus, greater efficiencies, more relevant products and other sources of competitive advantage. If we do not adapt to these technological changes, it could harm our ability to compete, which could have a material adverse impact on our growth or profitability.

Furthermore, enhanced competition could drive innovation, technological change and changing customer preferences in the markets in which we operate and these changes could pose other risks to our businesses. For example, they could result in increasing expenses as we are required to make investments to allow our products and services to reflect such innovation and changes.

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

Worldwide financial markets can be volatile, and the COVID-19 pandemic has set off a period of increased volatility with respect to global economic conditions. Governments in the U.S. and other countries have reacted to the COVID-19 outbreak with unprecedented levels of fiscal and monetary intervention, including interest rate cuts and major economic stimulus programs. Many of these interventions are ongoing at December 31 2021, and their long-term impact on financial markets and the real economy is still uncertain. 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 mortgage insurance losses to increase and adversely affect our results of operations or 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. Continuation of the current low interest rate environment may result in reductions in our investment income as new funds and proceeds from sales and maturities of fixed income securities are reinvested at lower rates. This reduces our overall future profitability. Recent inflation has been elevated and steps taken by governments throughout the world in response to the COVID-19 pandemic, expansionary monetary policies and other factors could lead to an even higher inflationary environment. Higher inflation could lead to even higher interest rates, which would continue to negatively impact the value of our existing fixed income or other investments.

Given the ongoing global economic uncertainties, evolving market conditions may continue to affect our results of operations, financial condition, 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 condition, capital resources, and competitive landscape could be materially and adversely affected.

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 our strategy to develop a market leading international specialty insurance business, we acquired Novae, a specialty insurer and reinsurer that operated through Lloyd's in 2017. 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 operational and economic factors. There can be no assurance that the integration of acquired businesses 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, results of operations or financial condition.

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

On June 23, 2016, the U.K. voted in favor of Brexit and on December 31, 2020, the U.K. left the EU. A Trade and Cooperation Agreement, excluding financial services, was entered into between the E.U. and the U.K. on December 24, 2020. As the U.K. has officially left the single market, AXIS Specialty Europe SE has retained its access to the U.K. market under the PRA's Temporary Permissions Regime. In order to maintain its access to the U.K. market beyond the Temporary Permissions Regime, AXIS Specialty Europe SE has applied for authorization to operate in the U.K. through a third-country branch, AXIS Specialty Europe SE (UK Branch). There is a risk that the PRA could reject this application, in which case, AXIS Specialty Europe SE would be placed into the Supervised Run-Off Regime and required to seek regulatory approval for a new U.K.-domiciled insurance company. This could impact AXIS Specialty Europe SE's ability to operate in the U.K.

AXIS Managing Agency Ltd. accesses the EEA market through Lloyd's Insurance Company, based in Belgium, which has been approved by the National Bank of Belgium and the Financial Services and Markets Authority. However, discussions among Lloyd's Insurance Company and the Belgium regulators are currently in process regarding certain elements of the corporate structure of Lloyd's Insurance Company. Depending upon the outcome, AXIS Managing Agency Ltd.'s access to the EEA market could be impacted.

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

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 insurance and reinsurance products worldwide primarily through insurance and reinsurance 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 45% of gross premiums written in 2021. Arthur J. Gallagher & Co.'s acquisition of the treaty reinsurance brokerage business of Willis Towers Watson further concentrated the broker market. Our relationships with these brokers are based on the quality of our underwriting and claims 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 insurers and reinsurers. In addition, these brokers also have, or may in the future acquire, ownership interests in insurance and reinsurance companies that may compete with us; these brokers may then favor their own insurers and reinsurers 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.

A downgrade in our financial strength or credit ratings by one or more rating agencies could adversely affect our business, results of operations, financial condition or liquidity.

Claims paying and financial strength ratings are important factors in establishing the competitive position of insurance companies and maintaining customer confidence in us and in our ability to market insurance products. Independent rating agencies analyze the financial performance and condition of insurers on an ongoing basis.

There can be no assurance that we will not experience a ratings downgrade from one of the independent rating agencies. This could arise from a change in our financial performance, our financial condition or a change in ratings methodology. A downgrade, withdrawal or negative watch/outlook by any independent rating agency could cause our competitive position in the insurance/reinsurance industry to suffer and make it more difficult for us to market our products. In addition, if we experience a credit rating downgrade, withdrawal or negative watch/outlook in the future, we could incur higher borrowing costs and may have more limited means to access capital. 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 insurers and reinsurers with higher ratings. We would also be required to post collateral under the terms of certain of our policies of reinsurance.

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 loss 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. As the COVID-19 pandemic continues, it is possible that access to the capital markets may become more constrained and cost of capital may increase (refer to '*The novel coronavirus (COVID-19) pandemic continues to pose a risk and the impact on our business, results of operations, financial condition and liquidity could be material. The threat and outcome are better understood now than in the earlier stages, but the ultimate scale and scope remains uncertain.*' above). 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 adversely affect our ability to offer reinsurance in certain markets.

Neither AXIS Specialty Bermuda nor AXIS Re SE is licensed or admitted as an insurer or reinsurer 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.

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. In addition, the COVID-19 pandemic could impact our ability to attract and retain key personnel. 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. Expatriate workers can, subject to the above, continue to be employed in Bermuda indefinitely by reapplying for work permits. All executive officers who work in our Bermuda office who require work permits have obtained them.

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 currency exchange rates.

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 or financial condition.

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 manage market risks through, among other things, stressing diversification and conservation of principal and liquidity in our investment guidelines, the volatility in global financial markets that resulted from the COVID-19 pandemic adversely impacted, and may once again adversely impact the value of our investments portfolio (refer to '*The novel coronavirus (COVID-19) pandemic continues to pose a risk and the impact on our business, results of*

operations, financial condition and liquidity could be material. The threat and outcome are better understood now than in the earlier stages, but the ultimate scale and scope remains uncertain.' above).

Our fixed maturities, which represent 84% of our total investments and 78% of total cash and investments at December 31, 2021, 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 further details) and capital resources. A decline in interest rates or a continuation of the current low interest rate environment may result in reductions in our investment income 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.

Our portfolios of "other investments" and equity securities expose us to market price variability, driven by a number of factors outside of 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.

Changes in the method for determining LIBOR and the potential replacement of LIBOR may adversely affect our cost of capital and net investment income.

Effective January 1, 2022, the FCA ceased publication of the one-week and two-month USD LIBOR immediately after December 31, 2021 and will cease publication of the remaining tenors immediately after June 30, 2023. Additionally, the U.S. Federal Reserve Board has advised banks to stop entering into new USD LIBOR based contracts.

The transition to replacements for LIBOR and other interest rate benchmarks, including EONIA and EURIBOR (collectively with LIBOR, the "IBORs"), is ongoing and the outcome remains uncertain. The Alternative Reference Rates Committee, convened by the Federal Reserve, has identified the Secured Overnight Financing Rate (SOFR) as its preferred alternative rate for USD LIBOR. SOFR is a measure of the cost of borrowing cash overnight, collateralized by U.S. Treasury securities, and is based on directly observable U.S. Treasury-backed repurchase transactions. Uncertainty as to the adoption, market acceptance or availability of SOFR or alternative reference rates or other reforms may adversely affect the trading market for LIBOR-based and alternative-based securities, including those held in our investment portfolio. Changes or reforms to the determination or supervision of LIBOR, SOFR or any other successor reference rate may result in a sudden or prolonged increase or decrease in reported LIBOR, SOFR or to a successor, which could have an adverse impact on the market for floating rate securities and the value of our investment portfolio and insurance products which directly or indirectly reference LIBOR, SOFR or its successor.

At December 31, 2021, our investment portfolio included \$2.4 billion of floating rate investments, of which over 90% were tied to LIBOR. The instruments and agreements governing our investments generally provide for appropriate fall-back language to select an alternative index and spread adjustment if the current index is no longer available, however there is no assurance that the alternative index will provide comparable returns. The potential effect of any such event on net investment income cannot yet be determined and any changes to benchmark interest rates could decrease net investment income, which could impact our results of operations, liquidity, or the market value of our investments.

The Company continues to develop and implement plans to mitigate the risks associated with the discontinuation of the IBORs. In particular, the Company has ceased offering and purchasing IBOR-linked securities and has included fallback language or designated an alternate benchmark rate in IBOR-linked material instruments and agreements, including interest rate swap agreements.

Our operating results may be adversely affected by currency fluctuations.

Our reporting currency is the U.S. dollar. However, a portion of gross premiums are written and ceded in currencies other than the U.S. dollar and a portion of gross and ceded 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. We may experience losses or gains resulting from fluctuations in the values of these non-U.S. currencies. Although we 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 due to unfavorable currency fluctuations. Political unrest, sovereign debt concerns or other economic factors in jurisdictions in which we operate, as well as the COVID-19 pandemic, may magnify these risks.

Liquidity Risk

Liquidity risk is the risk that we may not have sufficient financial resources to meet our obligations when they are due, or would have to incur excessive costs to do so.

Our underwriting activities may expose us to liquidity risks.

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. We maintain cash and cash equivalents and high quality, liquid securities 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 on the minimum percentage of our asset portfolio which must be invested in unrestricted cash and liquid investment grade fixed income securities.

Additionally, we have access to diverse funding sources to cover contingencies. Funding sources include asset sales and external debt issuances and we may seek to establish borrowing facilities to cover such contingencies. We conduct stress tests to ensure the sufficiency of these funding sources in extreme scenarios; however, there remains a risk that in certain circumstances, our results of operations or financial condition may be adversely impacted by our inability to access appropriate liquidity, or the cost of doing so.

Credit Risk

Credit risk represents the risk of incurring financial loss due to the diminished creditworthiness (reduced financial strength and, ultimately, possibly default) and concentration of our third-party counterparties (refer to '*Market Risk*' above for a discussion of credit risk as it relates to the investment portfolio).

If we successfully purchase reinsurance, we may be unable to collect amounts due to us.

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, and the COVID-19 pandemic has heightened this risk as counterparties experience economic strains and uncertainty. 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 a material adverse effect on our results of operations, financial condition, or liquidity.

Our reliance on brokers subjects us to credit risk.

In accordance with industry practice, we pay amounts owed on claims under our insurance and reinsurance contracts to brokers, and these brokers pay these amounts over to the clients that have purchased insurance and reinsurance 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, including due to the effects of the COVID-19 pandemic, 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.

Operational Risk

Operational risk represents the risk of loss as a result of inadequate processes, system failures, human error or external events, including but not limited to direct or indirect financial loss, reputational damage, customer dissatisfaction and legal and regulatory penalties.

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

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. However, our robust business continuity plan addresses the risk of such business interruption, system failure or service denial with input from both internal and external stakeholders. 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 are 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, although we purchase limited cyber insurance, 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, which costs may not be covered by our cyber insurance.

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 that could be material.

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. 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. The COVID-19 pandemic has increased the strain on business processes and technology at our third-party partners. In addition, our ability to receive services from third-party providers might be impacted by political instability or unanticipated regulatory requirements. As a result, our ability to conduct our business might be materially adversely affected.

We rely on internal processes to maintain our operations and manage the operational risks inherent to our business; employee misconduct, errors or omissions in the execution of these processes may result in financial losses.

We rely on the execution of internal processes to maintain and execute our operations. We seek to monitor and control our exposure to risks arising from these processes through an enterprise risk management framework, internal controls, management review and other processes. We cannot provide total assurance that these processes will effectively identify or control all risks, or that our employees and third-party agents will effectively execute them. Loss may result from, among other things, fraud; errors; or failure to document transactions properly, obtain proper internal authorization, comply with underwriting or other internal guidelines, or comply with regulatory requirements. These risks could result in losses that adversely affect our business, results of operations, or financial condition. An extended period of remote work arrangements could increase or introduce new operational risk and adversely affect our ability to manage our exposure to risks arising from our internal processes. Furthermore, insurance policies provided by third parties may not cover us if we experience a significant loss from these risks.

Regulatory Risk

Regulatory risk represents the risk arising from our failure to comply with legal, statutory or regulatory obligations.

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 these 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 an 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 within the Group. 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") 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, and also imposes obligations on E.U. companies processing data of non-E.U. citizens. In particular, the GDPR imposes requirements regarding the processing of personal data and confers new rights on data subjects, including rights of access to their personal data, deletion of their personal data, the "right to be forgotten" and the right to "portability" of personal data. Since Brexit, the UK General Data Protection Regulation ("UK GDPR") has introduced similar requirements in respect of the processing of data of UK and non-UK citizens.

The California Consumer Privacy Act ("CCPA") became effective on January 1, 2020 and confers rights on California residents including rights to know what personal information is collected about them and whether their personal information is sold (and if so, to whom), to access their personal information that has been collected and to require a business to delete their personal information. The California Privacy Rights Act ("CPRA") will take effect on January 1, 2023 and become fully enforceable on July 1, 2023. There will be a "look back" to January 1, 2022, meaning that data collected in the 2022 calendar year is subject to the terms of the CPRA beginning on January 1, 2023. The CPRA will work as an addendum to the CCPA, strengthening the rights of California residents, tightening business regulations on the use of personal information and establishing a new government agency for state-wide data privacy enforcement.

Compliance with the enhanced obligations imposed by the GDPR, the UK GDPR, the CCPA (as enhanced by the CPRA) and other legislation (including Singapore's recently amended Personal Data Protection Act and Bermuda's Personal Information Protection Act) 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 modify 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 over the past several years. 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 or financial condition.

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

Our insurance and reinsurance subsidiaries conduct business globally and are subject to varying degrees of regulation and supervision in multiple jurisdictions. In the U.K., 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 insurance and reinsurance 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 insurance and reinsurance contracts, make certain investments and 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, which 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 insurance and reinsurance subsidiaries are subject or in the interpretation thereof by enforcement or regulatory agencies could have a material 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 insurance and reinsurance markets. Government and regulators are generally concerned with having insurers and reinsurers with high solvency ratios and localized capital to ensure the protection of policyholders to the possible detriment of other constituents, including shareholders of insurers and reinsurers. Government, regulatory and judicial actions across multiple jurisdictions in relation to business interruption insurance have exacerbated the uncertainty by altering the interpretation of our contracts or extending or changing coverage (beyond the obligations set forth within those contracts or beyond what was intended by the parties).

Certain U.S. and non-U.S. judicial and regulatory authorities, including U.S. Attorney's Offices and certain state attorneys general, occasionally commence investigations into 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 to impose federal regulation on the U.S. insurance industry. In 2010, Dodd-Frank established a Federal Insurance Office ("FIO") within the U.S. Treasury. The FIO has limited regulatory authority 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 as 'systemically important' by a two-thirds vote of a Financial Stability Oversight Council. 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 requirements relating to the key functions 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 materially 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 insurance and reinsurance 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, the U.K. and the European Community. 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. These laws and regulations are complex, frequently changing, and increasing in number, and they may impose additional prohibitions or compliance obligations on our dealings in certain countries and territories, including sanctions imposed on Russia and certain Ukraine territories. In addition, we are subject to the Foreign Corrupt Practices Act and other anti-bribery laws, such as the Irish Criminal Justice (Corruption Offences) Act, the Bermuda Bribery Act and the U.K. Bribery Act, which 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.

Risks Related to the Ownership of our Securities

In addition to the risks to our business listed above, there are certain other risks related to the ownership of our securities.

The price of our common shares may be volatile.

There has been significant volatility in the market for equity securities in recent years. During 2021, 2020, and 2019, the price of our common shares fluctuated from a low of \$44.93 to a high of \$57.93, a low of \$33.29 to a high of \$65.80 and a low of \$50.95 to a high of \$67.25, 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 a material adverse effect 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/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 materially adversely affect the market price of our stock.

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 insurance and reinsurance subsidiaries, AXIS Specialty Bermuda, AXIS Re SE, AXIS Specialty Europe, the Members of Lloyd's (AXIS Corporate Capital UK Limited and AXIS Corporate Capital UK II 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. In addition, certain jurisdictions may consider imposing dividend restrictions on insurance companies in response to the COVID-19 pandemic which, if enacted, could further limit our Insurance Subsidiaries' ability to declare and pay dividends and make distributions (refer to '*The novel coronavirus (COVID-19) pandemic continues to pose a risk and the impact on our business, results of operations, financial condition and liquidity could be material. The threat and outcome are better understood now than in the earlier stages, but the ultimate scale and scope remains uncertain.*' above). 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 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 not have extraterritorial effect and/or may not be enforceable in Bermuda. A Bermuda court may, however, impose civil liability, including the possibility of monetary damages, on us or our directors and officers in a suit brought in the Supreme Court of Bermuda if the Bermuda court considers that it has jurisdiction to hear and decide any such claim.

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 where the shares of a registered insurer or reinsurer, or the shares of its parent, are traded on a recognized stock exchange, and a person becomes a 10%, 20%, 33% or 50% shareholder controller of that insurer or reinsurer, that person shall, within 45 days, notify the BMA in writing that they have become such a controller. In addition, a person who is a shareholder controller of a class 4 insurer or reinsurer (such as AXIS Specialty Bermuda) whose shares or shares of its parent company are traded on a recognized stock exchange must serve the BMA with a notice in writing that they have reduced or disposed of their holding in the insurer or reinsurer where the proportion of voting rights in the insurer or reinsurer held by them will have reached or has fallen below 10%, 20%, 33% or 50%, as the case may be, not later than 45 days after such reduction or disposal. The definition of shareholder controller is set out in the Insurance Act but generally refers to a person who (i) holds 10% or more of the shares carrying rights to vote at a shareholders' meeting of the registered insurer or reinsurer or its parent; (ii) is entitled to exercise, or control the exercise of, 10% or more of the voting power at any shareholders meeting of the registered insurer or reinsurer or its parent; or (iii) is able to exercise significant influence over the management of the registered insurer or reinsurer or its parent by virtue of its shareholding or its entitlement to exercise, or control the exercise of, the voting power at any shareholders' meeting. The BMA may object to any person holding 10% or more of our common shares if it appears to the BMA that such person is not, or is no longer, a fit and proper person to be such a holder. In such a case, the BMA may require the shareholder to reduce its holding of common shares or direct, among other things, that voting rights attaching to the common shares shall not be exercisable. A person who does not comply with such a notice or direction from the BMA will be guilty of an offense.

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 insurance or reinsurance 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 Central Bank of Ireland ("CBI") of their intention to do so. They also require any Irish authorized insurance or reinsurance 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 insurance or reinsurance 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 SE and AXIS Re SE.

In the U.K., the Prudential Regulation Authority ("PRA") and the 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 they are "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 their 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 Ltd. Under FSMA, any person proposing to acquire "control" over a U.K. authorized insurance company must give prior notification to the PRA of their 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 Ltd. 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) 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 the 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.

Risks Related to Taxation

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

The OECD 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 low-tax 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. Many countries have changed or announced future changes to their tax laws in response to the BEPS project. In particular, the E.U. has sought to harmonize the response of member states to the BEPS reports via the Anti-Tax Avoidance Directives ("the ATAD and the ATAD II"). The ATAD and the ATAD II require all E.U. member states to apply certain specified anti-avoidance measures, including a controlled foreign companies regime, limitations on interest deduction and anti-hybrid rules. Changes to tax laws and additional reporting requirements could increase the tax burden and the complexity and cost of tax compliance.

On May 31, 2019, the OECD published a "Programme of Work", designed to address the tax challenges created by an increasingly digitalized economy. This was divided into two pillars. Pillar One addresses the broader challenge of a digitalized economy and focuses on the allocation of group profits among taxing jurisdictions, based on a market-based concept rather than the historical "permanent establishment" concept. Pillar Two addresses the remaining BEPS risk of profit shifting to entities in low tax jurisdictions by introducing a global minimum tax. On December 20, 2021, the OECD released proposed model legislation for Pillar Two which was approved by 135 countries. The Pillar Two legislation would impose a minimum tax rate of 15% on each jurisdiction that has an effective tax rate less than the minimum. The model rules now need to be implemented through domestic legislation. The OECD proposed timeline for these rules to come into effect is 2023 (some portions in 2024). If enacted these rules may have a material impact on our effective tax rate.

On December 22, 2021, the European Commission proposed a Directive to effect a global minimum tax rate of 15% for any large group with combined financial revenues of more than 750 million euros a year and either a parent company or a subsidiary situated in an EU Member State. This delivers on the EU's pledge to implement global tax reform agreed by the OECD/G20 Inclusive Framework on BEPS. Importantly, the proposal sets out how the effective tax rate will be calculated per jurisdiction and incorporates legal requirements to ensure that large groups in the EU pay a 15% minimum rate of tax for every jurisdiction in which they operate. If enacted, it is anticipated that these rules may have a material impact on our effective tax rate.

We may become subject to taxes in Bermuda after March 31, 2035, which may have an 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. However, as noted above, if the Pillar Two rules are adopted in our relevant jurisdictions, the profits earned in Bermuda would nonetheless be subject to taxation up to the minimum tax rate of 15%.

Our non-U.S. companies may be subject to U.S. tax that may have an 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 insurance or reinsurance premiums 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.

Changes in U.S. tax law could adversely affect us.

The tax treatment of non-U.S. companies and their U.S. and non-U.S. subsidiaries may be the subject of future legislation. We cannot predict the particulars of any proposed legislation, or whether such legislation would have any effect on us. Future legislation in the U.S. may arise in an effort to harmonize US tax law with OECD Pillar Two initiatives. No assurance may be given that future legislative, administrative, or judicial developments will not produce an adverse U.S. tax consequence to us. If any such adverse developments do occur, our results of operations may be materially adversely affected.

Our non-U.K. companies may be subject to U.K. tax that may have an 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., 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., will 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 one or more of our non-U.K. companies, in addition to AXIS Specialty Europe and AXIS Specialty U.S. Services, Inc., is 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, our results could be materially adversely affected.

Changes in U.K. tax law could adversely affect us.

AXIS Specialty Europe, AXIS Specialty U.S. Services, Inc. and our U.K. resident companies are treated as taxable in the U.K. In June 2021, the U.K. increased its corporate tax rate from 19% to 25% with effect from April 1, 2023. This rate increase did not have a material impact on our effective tax rate. However, future changes in the basis or rate of U.K. corporation tax could materially adversely affect the operations of these companies.

Our non-Irish companies may be subject to Irish tax that may have an 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 are resident in Ireland for tax purposes and are not treated as carrying on a trade through a branch or agency in Ireland.

Accordingly, we expect that none of our non-Irish resident companies will 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 one or more 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.

Changes in Irish tax law could adversely affect us.

Trading income derived from the insurance and reinsurance business 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, our results of operations could be materially adversely affected. Irish profits would become subject to the 15% global minimum tax rate pursuant to the European Commission Directive discussed above.

If investments held by AXIS Specialty Europe SE or AXIS Re SE are determined not to be integral to the insurance and reinsurance business carried on by those companies, additional Irish tax could be imposed and our business and financial results could be 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 insurance and reinsurance business 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 insurance and reinsurance business 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 rate higher than the general 12.5% rate, and our results of operations could be materially adversely affected.

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

Any affiliated arrangements between contracting parties established in different jurisdictions are subject to transfer pricing regimes. Consequently, if any arrangement (including any reinsurance or financing arrangements) is found not to be on arm's length terms, an adjustment will be required to compute taxable profits as if the arrangement were on arm's length terms. Any transfer pricing adjustment could materially adversely impact the tax charge suffered by the relevant tax-paying company.

Effective January 1, 2016, Bermuda 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.

General Risk Factors

Future changes in current accounting practices may adversely 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.

ITEM 1B. UNRESOLVED STAFF COMMENTS

At December 31, 2021, we had no outstanding, unresolved comments from the SEC staff.

ITEM 2. PROPERTIES

We maintain office facilities in Bermuda, the U.S., Europe, Singapore, and Canada. We own the building in which our office is located in Dublin, Ireland, and we lease office space in the other countries. We renew and enter into 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, we are 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 us in the ordinary course of its insurance or reinsurance operations. Estimated amounts payable related to these proceedings are included in reserve for losses and loss expenses in our consolidated balance sheets.

We are not party to any material legal proceedings arising outside the ordinary course of business.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

PART II

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 22, 2022, the number of holders of record of our common shares was 20. 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 is at the discretion of our Board of Directors and will depend on many factors including, but not limited to, 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 further details.

Issuer Purchases of Equity Securities

Common Shares

The following table shows information regarding the number of common shares repurchased:

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, 2021	—	\$45.95	—	—
November 1-30, 2021	3	\$53.74	—	—
December 1-31, 2021	1	\$49.74	—	—
Total	4		—	—

(a) In thousands.

(b) Shares are repurchased from employees to facilitate the satisfaction of their personal withholding tax liabilities that arise on the vesting of share-settled restricted stock units.

ITEM 6. [RESERVED]

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, 2021 and 2020, and our financial condition at December 31, 2021 and 2020. This should be read in conjunction with Item 8 '*Financial Statements and Supplementary Data*' of this report. Unless otherwise noted, tabular dollars are in thousands, except per share amounts. Amounts may not reconcile due to rounding differences.

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2021 FINANCIAL HIGHLIGHTS

2021 Consolidated Results of Operations

- Net income attributable to common shareholders of \$588 million, or \$6.95 per common share, and \$6.90 per diluted common share
- Operating income⁽¹⁾ of \$436 million, or \$5.12 per diluted common share⁽¹⁾
- Gross premiums written of \$7.7 billion
- Net premiums written of \$4.9 billion
- Net premiums earned of \$4.7 billion
- Pre-tax catastrophe and weather-related losses, net of reinsurance and reinstatement premiums, of \$443 million (Insurance: \$175 million; Reinsurance: \$268 million), or 9.5 points on the current accident year loss ratio, primarily attributable to Hurricane Ida, Winter Storms Uri and Viola which principally impacted the state of Texas, July European floods, and other weather-related events.
- Net favorable prior year reserve development of \$32 million
- Underwriting income⁽²⁾ of \$266 million and combined ratio of 97.5%
- Net investment income of \$454 million
- Net investment gains of \$134 million

2021 Consolidated Financial Condition

- Total cash and investments of \$16.5 billion; fixed maturities, short-term investments, and cash and cash equivalents comprise 86% of total cash and investments and have an average credit rating of AA-
- Total assets of \$27.4 billion
- Reserve for losses and loss expenses of \$14.7 billion and reinsurance recoverable on unpaid and paid losses and loss expenses of \$5.7 billion
- Debt of \$1.3 billion and a debt to total capital ratio⁽³⁾ of 19.5%
- Common shareholders' equity of \$4.9 billion; book value per diluted common share of \$55.78

(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 to the most comparable GAAP financial measures, net income (loss) available (attributable) to common shareholders and earnings (loss) per diluted common share, respectively, and a discussion of the rationale for the presentation of these items are provided in '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures Reconciliation*'.

(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 the most comparable GAAP financial measure, net income (loss), is presented in '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Consolidated Results of Operations*', and a discussion of the rationale for its presentation is provided in '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures Reconciliation*'.

(3) The debt to total capital ratio is calculated by dividing debt by total capital. Total capital represents the sum of total shareholders' equity and debt.

OVERVIEW

Business Overview

AXIS Capital, through its operating subsidiaries, is a global provider of specialty lines insurance and treaty reinsurance with operations in Bermuda, the U.S., Europe, Singapore and Canada. 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 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, disciplined and diverse culture that promotes outstanding client service, intelligent risk taking, operating efficiency, corporate citizenship 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. The execution of our business strategy in 2021 included the following:

- increasing our relevance in a select number of attractive specialty lines insurance and treaty reinsurance markets including U.S. excess and surplus lines, North America professional lines and Lloyd's specialty insurance business;
- re-balancing our portfolio towards less volatile lines of business that carry attractive returns while deploying capital with risk limits, diversification and risk management;
- continuing the implementation of a more focused distribution strategy while building mutually beneficial relationships with clients and partners;
- improving the effectiveness and efficiency of our operating platforms and processes;
- investing in data and technology capabilities, and tools to empower our underwriters and enhance the service we provide to our customers;
- utilizing reinsurance markets and third-party capital relationships;
- fostering a positive workplace environment that enables us to attract, retain and develop top talent; and
- growing our corporate citizenship program to give back to our communities and help contribute to a more sustainable future.

For discussion of our results of operations and changes in financial condition for year ended December 31, 2020, compared to year ended December 31, 2019, refer to [Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations](#) in our 2020 Form 10-K, which was filed with the SEC on February 26, 2021, and such discussions are incorporated herein by reference.

Outlook

We are committed to leadership in our core specialty insurance and global reinsurance markets, where we have depth of talent and expertise. We believe our market positioning, underwriting expertise, claims management capabilities and strong relationships with our distributors and clients will provide opportunities for increased profitability, with differences among our lines driven by our tactical response to market conditions.

Rates, and terms and conditions across virtually all insurance lines and geographies continued to be favorable through the fourth quarter of 2021. We expect many specialty segments will continue to experience further pricing improvements, as carriers assess pricing adequacy, portfolio construction, economic conditions and account preferences. In this market environment, we are focusing on growth in lines of business and market segments that are adequately priced.

The reinsurance market is also experiencing an improvement in rates, and terms and conditions, but more is needed to achieve price adequacy. In light of 2021 marking the fifth consecutive year of challenging market loss events, carriers are aiming to reduce net volatility and increase profitability. However, the case for change is dampened due to the very strong industry capitalization. Overall, we believe the reinsurance market will continue to gain momentum and will achieve the required risk adjusted rate increases.

We are encouraged by the pricing improvements we are seeing across both the insurance and reinsurance segments, that we expect will carry into 2022 and beyond. Where prices deliver adequate profitability, we will look to grow within our risk and volatility guidelines. With a strengthened book of business, and growing footprint in attractive markets that are seeing the most favorable conditions, we believe AXIS is well positioned to drive profitable growth within the current environment.

CONSOLIDATED RESULTS OF OPERATIONS

Years ended December 31,	2021	% Change	2020	% Change	2019
Underwriting revenues:					
Gross premiums written	\$ 7,685,984	13%	\$ 6,826,938	(1%)	\$ 6,898,858
Net premiums written	4,926,624	14%	4,336,409	(3%)	4,489,615
Net premiums earned	4,709,850	8%	4,371,309	(5%)	4,587,178
Other insurance related income (loss)	23,295	nm	(8,089)	nm	16,444
Underwriting expenses:					
Net losses and loss expenses	(3,008,783)	(8%)	(3,281,252)	8%	(3,044,798)
Acquisition costs	(921,834)	(1%)	(929,517)	(9%)	(1,024,582)
Underwriting-related general and administrative expenses ⁽¹⁾	(536,834)	12%	(477,968)	(5%)	(505,735)
Underwriting income (loss)⁽²⁾	265,694		(325,517)		28,507
Net investment income	454,301	30%	349,601	(27%)	478,572
Net investment gains	134,279	4%	129,133	42%	91,233
Corporate expenses ⁽¹⁾	(126,470)	24%	(101,822)	(21%)	(129,096)
Foreign exchange (losses) gains	(315)	nm	(81,069)	nm	12,041
Interest expense and financing costs	(62,302)	(17%)	(75,049)	10%	(68,107)
Reorganization expenses	—	nm	(7,881)	(79%)	(37,384)
Amortization of value of business acquired	(3,854)	(25%)	(5,139)	(81%)	(26,722)
Amortization of intangible assets	(12,424)	9%	(11,390)	(2%)	(11,597)
Income (loss) before income taxes and interest in income (loss) of equity method investments	648,909		(129,133)		337,447
Income tax (expense) benefit	(62,384)	nm	12,321	nm	(23,692)
Interest in income (loss) of equity method investments	32,084	nm	(3,612)	nm	9,718
Net income (loss)	618,609		(120,424)		323,473
Preferred share dividends	(30,250)	—%	(30,250)	(26%)	(41,112)
Net income (loss) available (attributable) to common shareholders	\$ 588,359		\$ (150,674)		\$ 282,361
<hr/>					

nm – not meaningful is defined as a variance greater than +/-100%

- (1) Underwriting-related general and administrative expenses is a non-GAAP financial measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliation to general and administrative expenses, the most comparable GAAP financial measure, also included corporate expenses of \$126 million, \$102 million, and \$129 million for 2021, 2020, and 2019, respectively. Refer to 'Management's Discussion and Analysis of Financial Condition and Results of Operations – Other Expenses (Revenues), Net' for further details on corporate expenses. Refer also to 'Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures Reconciliation' for further details.
- (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), the most comparable GAAP financial measure, is presented in the table above. Refer also to 'Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures Reconciliation' for further details.

Underwriting Revenues

Underwriting revenues by segment were as follows:

Years ended December 31,	2021	% Change	2020	% Change	2019
Gross premiums written:					
Insurance	\$ 4,863,232	21%	\$ 4,018,399	9%	\$ 3,675,931
Reinsurance	2,822,752	1%	2,808,539	(13%)	3,222,927
Total gross premiums written	\$ 7,685,984	13%	\$ 6,826,938	(1%)	\$ 6,898,858
Percent of gross premiums written ceded:					
Insurance	40%	(1 pt)	41%	1 pt	40%
Reinsurance	28%	(2 pts)	30%	1 pt	29%
Total percent of gross premiums ceded	36%	— pts	36%	1 pt	35%
Net premiums written:					
Insurance	\$ 2,894,885	23%	\$ 2,357,501	7%	\$ 2,209,155
Reinsurance	2,031,739	3%	1,978,908	(13%)	2,280,460
Total net premiums written	\$ 4,926,624	14%	\$ 4,336,409	(3%)	\$ 4,489,615
Net premiums earned:					
Insurance	\$ 2,651,339	15%	\$ 2,299,038	5%	\$ 2,190,084
Reinsurance	2,058,511	(1%)	2,072,271	(14%)	2,397,094
Total net premiums earned	\$ 4,709,850	8%	\$ 4,371,309	(5%)	\$ 4,587,178

Refer to '*Management's Discussion and Analysis of Financial Condition and Results of Operations - Results by Segment*' for further details on underwriting revenues.

Combined Ratio

The components of the combined ratio were as follows:

Years ended December 31,	2021	% Point Change	2020	% Point Change	2019
Current accident year loss ratio, excluding catastrophe and weather-related losses	55.1%	(2.6)	57.7%	(2.9)	60.6%
Catastrophe and weather-related losses ratio	9.5%	(8.2)	17.7%	10.2	7.5%
Current accident year loss ratio	64.6%	(10.8)	75.4%	7.3	68.1%
Prior year reserve development ratio	(0.7%)	(0.4)	(0.3%)	1.4	(1.7%)
Net losses and loss expenses ratio	63.9%	(11.2)	75.1%	8.7	66.4%
Acquisition cost ratio	19.6%	(1.7)	21.3%	(1.0)	22.3%
General and administrative expense ratio ⁽¹⁾	14.0%	0.8	13.2%	(0.7)	13.9%
Combined ratio	97.5%	(12.1)	109.6%	7.0	102.6%

(1) The general and administration expense ratio included corporate expenses not allocated to underwriting segments of 2.7%, 2.3% and 2.8% for 2021, 2020 and 2019, respectively. Refer to '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Other Expenses (Revenues), Net*' for further details.

Refer to '*Management's Discussion and Analysis of Financial Condition and Results of Operations - Results by Segment*' for further details on underwriting expenses.

RESULTS BY SEGMENT

Insurance Segment

Results for the insurance segment were as follows:

Year ended December 31,	2021	% Change	2020	% Change	2019
Revenues:					
Gross premiums written	\$ 4,863,232	21%	\$ 4,018,399	9%	\$ 3,675,931
Net premiums written	2,894,885	23%	2,357,501	7%	2,209,155
Net premiums earned	2,651,339	15%	2,299,038	5%	2,190,084
Other insurance related income	1,662	(37%)	2,647	(7%)	2,858
Expenses:					
Current accident year net losses and loss expenses	(1,533,358)		(1,705,951)		(1,331,981)
Prior year reserve development	18,360		8,937		53,302
Acquisition costs	(484,344)		(461,533)		(468,281)
Underwriting-related general and administrative expenses	(429,282)		(378,839)		(401,963)
Underwriting income (loss)	\$ 224,377		\$ (235,701)		\$ 44,019
Ratios:					
		% Point Change		% Point Change	
Current accident year loss ratio, excluding catastrophe and weather-related losses	51.4%	(3.7)	55.1%	(1.9)	57.0%
Catastrophe and weather-related losses ratio	6.4%	(12.7)	19.1%	15.3	3.8%
Current accident year loss ratio	57.8%	(16.4)	74.2%	13.4	60.8%
Prior year reserve development ratio	(0.7%)	(0.3)	(0.4%)	2.0	(2.4%)
Net losses and loss expenses ratio	57.1%	(16.7)	73.8%	15.4	58.4%
Acquisition cost ratio	18.3%	(1.8)	20.1%	(1.3)	21.4%
Underwriting-related general and administrative expense ratio	16.2%	(0.3)	16.5%	(1.8)	18.3%
Combined ratio	91.6%	(18.8)	110.4%	12.3	98.1%

Gross Premiums Written

Gross premiums written by line of business were as follows:

Year ended December 31,	2021			2020			2019			% Change	
										2020 to 2021	2019 to 2020
Property	\$ 1,136,508	24%	\$ 996,650	26%	\$ 943,760	26%				14%	6%
Marine	469,853	10%	419,405	10%	411,309	11%				12%	2%
Terrorism	56,117	1%	55,781	1%	60,120	2%				1%	(7%)
Aviation	110,809	2%	87,671	2%	74,670	2%				26%	17%
Credit and political risk	163,602	3%	156,414	4%	154,999	4%				5%	1%
Professional lines	1,816,041	37%	1,378,503	34%	1,177,274	32%				32%	17%
Liability	931,075	19%	763,155	19%	699,876	19%				22%	9%
Accident and health	178,899	4%	158,585	4%	144,103	4%				13%	10%
Discontinued lines - Novae	328	—%	2,235	—%	9,820	—%				nm	nm
Total	\$ 4,863,232	100%	\$ 4,018,399	100%	\$ 3,675,931	100%				21%	9%

nm – not meaningful

Gross premiums written in 2021 increased by \$845 million, or 21%, (\$802 million, or 20% on a constant currency basis⁽¹⁾), compared to 2020. The increase was primarily attributable to professional lines, liability, property, marine, aviation, and accident and health lines.

The increases in professional lines, liability, property, and marine lines were due to new business and favorable rate changes. The increase in aviation lines was due to premium adjustments, favorable rate changes, and new business. The increase in accident and health lines was due to new business.

Ceded Premiums Written

Ceded premiums written in 2021 was \$1,968 million, or 40% of gross premiums written, compared to \$1,661 million, or 41% in 2020. The increase in ceded premiums written of \$307 million, or 19% was primarily driven by increases in professional lines, liability, property, and accident and health lines, partially offset by a decrease in marine lines.

Net Premiums Earned

Net premiums earned by line of business were as follows:

Year ended December 31,	2021			2020			2019			% Change	
										2020 to 2021	2019 to 2020
Property	\$ 662,977	25%	\$ 605,650	26%	\$ 633,550	29%				9%	(4%)
Marine	354,193	13%	293,746	13%	281,764	13%				21%	4%
Terrorism	47,995	2%	47,378	2%	47,345	2%				1%	—%
Aviation	84,882	3%	70,910	3%	55,028	3%				20%	29%
Credit and political risk	96,604	4%	105,869	5%	91,698	4%				(9%)	15%
Professional lines	898,307	34%	715,276	31%	661,250	30%				26%	8%
Liability	354,518	13%	313,291	14%	264,667	12%				13%	18%
Accident and health	151,134	6%	143,723	6%	144,499	7%				5%	(1%)
Discontinued lines - Novae	729	—%	3,195	—%	10,283	—%				(77%)	(69%)
Total	\$ 2,651,339	100%	\$ 2,299,038	100%	\$ 2,190,084	100%				15%	5%

(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.

Net premiums earned in 2021 increased by \$352 million, or 15%, (\$317 million, or 14% on a constant currency basis), compared to 2020. The increase was primarily driven by increases in gross premiums earned in professional lines, liability, property, marine, and aviation lines, partially offset by increases in ceded premiums earned in professional lines, liability and property lines.

Loss Ratio

The components of the loss ratio were as follows:

Year ended December 31,	2021	% Point Change	2020	% Point Change	2019
Current accident year loss ratio	57.8%	(16.4)	74.2%	13.4	60.8%
Prior year reserve development ratio	(0.7%)	(0.3)	(0.4%)	2.0	(2.4%)
Loss ratio	57.1%	(16.7)	73.8%	15.4	58.4%

Current Accident Year Loss Ratio

The current accident year loss ratio decreased to 57.8% in 2021 from 74.2% in 2020. The decrease in the current accident year loss ratio was impacted by a lower level of catastrophe and weather-related losses. During 2021, catastrophe and weather-related losses, net of reinstatement premiums, were \$175 million, or 6.4 points, primarily attributable to Hurricane Ida, Winter Storms Uri and Viola, and other weather-related events. Comparatively, in 2020, catastrophe and weather-related losses, net of reinstatement premiums, were \$443 million, or 19.1 points, primarily attributable to the COVID-19 pandemic, Hurricanes Laura, Sally, Zeta and Delta, and other weather-related events. During 2020, catastrophe and weather-related losses included \$204 million, or 8.8 points, attributable to the COVID-19 pandemic which were largely associated with property-related coverages, but also included event cancellation coverages.

After adjusting for the impact of the catastrophe and weather-related losses, the current accident year loss ratio decreased to 51.4% in 2021 from 55.1% in 2020. 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 the impact of favorable pricing over loss trends and a decrease in loss experience in property lines, largely associated with repositioning the portfolio, professional lines, and credit and political risk lines.

Prior Year Reserve Development

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses*' for details on the reserve classes, the expected claim tails, and prior year development.

Acquisition Cost Ratio

The acquisition cost ratio decreased to 18.3% in 2021 from 20.1% in 2020, respectively, principally related to changes in business mix attributable to the decrease in program business in property lines written in recent periods, a decrease in variable acquisition costs associated with marine lines, partially offset by an increase in variable acquisition costs associated with professional lines.

Underwriting-Related General and Administrative Expense Ratio

The underwriting-related general and administrative expense ratio decreased to 16.2% in 2021 from 16.5% in 2020, mainly driven by an increase in net premiums earned, partially offset by an increase in personnel costs, performance-related compensation costs and information technology costs together with a decrease in fees related to arrangements with strategic capital partners.

Reinsurance Segment

Results for the reinsurance segment were as follows:

Year ended December 31,	2021	% Change	2020	% Change	2019
Revenues:					
Gross premiums written	\$ 2,822,752	1%	\$ 2,808,539	(13%)	\$ 3,222,927
Net premiums written	2,031,739	3%	1,978,908	(13%)	2,280,460
Net premiums earned	2,058,511	(1%)	2,072,271	(14%)	2,397,094
Other insurance related income (loss)	21,633	nm	(10,736)	nm	13,586
Expenses:					
Current accident year net losses and loss expenses	(1,507,835)		(1,591,210)		(1,791,717)
Prior year reserve development	14,049		6,972		25,598
Acquisition costs	(437,490)		(467,984)		(556,301)
Underwriting-related general and administrative expenses	(107,552)		(99,129)		(103,772)
Underwriting income (loss)	\$ 41,317		\$ (89,816)		\$ (15,512)
Ratios:					
Current accident year loss ratio, excluding catastrophe and weather-related losses	59.9%	(0.7)	60.6%	(3.4)	64.0%
Catastrophe and weather-related losses ratio	13.3%	(2.9)	16.2%	5.5	10.7%
Current accident year loss ratio	73.2%	(3.6)	76.8%	2.1	74.7%
Prior year reserve development ratio	(0.6%)	(0.2)	(0.4%)	0.6	(1.0%)
Net losses and loss expenses ratio	72.6%	(3.8)	76.4%	2.7	73.7%
Acquisition cost ratio	21.3%	(1.3)	22.6%	(0.6)	23.2%
Underwriting-related general and administrative expense ratio	5.1%	0.3	4.8%	0.5	4.3%
Combined ratio	99.0%	(4.8)	103.8%	2.6	101.2%

nm – not meaningful

Gross Premiums Written:

Gross premiums written by line of business were as follows:

Year ended December 31,	2021			2020			2019			% Change	
										2020 to 2021	2019 to 2020
Catastrophe	\$ 492,397	16%	\$ 551,143	19%	\$ 718,514	24%			(11%)	(23%)	
Property	213,394	8%	245,744	9%	304,166	9%			(13%)	(19%)	
Credit and surety	208,108	7%	232,699	8%	269,733	8%			(11%)	(14%)	
Professional lines	353,671	13%	312,935	11%	261,072	8%			13%	20%	
Motor	279,960	10%	304,439	11%	334,887	10%			(8%)	(9%)	
Liability	722,316	26%	618,913	22%	546,479	17%			17%	13%	
Engineering	(6,464)	—%	25,886	1%	57,028	2%			nm	(55%)	
Agriculture	86,128	3%	70,500	3%	224,961	7%			22%	(69%)	
Marine and aviation	73,866	3%	73,103	3%	74,781	2%			1%	(2%)	
Accident and health	398,641	14%	371,828	13%	432,670	13%			7%	(14%)	
Discontinued lines - Novae	735	—%	1,349	—%	(1,364)	—%			(46%)	nm	
Total	\$ 2,822,752	100%	\$ 2,808,539	100%	\$ 3,222,927	100%			1%	(13%)	

nm – not meaningful

Gross premiums written in 2021 increased by \$14 million, or 1%, (decreased by \$16 million, or 1% on a constant currency basis), compared to 2020. The increase was primarily attributable to liability, professional lines, and accident and health lines, partially offset by decreases in catastrophe, property, engineering, credit and surety, and motor lines.

The increases in liability, professional lines, and accident and health lines were driven by favorable market conditions associated with renewals and new business. The increase in liability lines was also due to the restructuring of several significant contracts. The increase in professional lines was also due to premium adjustments associated with favorable market conditions. The increase in accident and health lines was also due to premium adjustments following the exit from Middle East business in 2020.

The decrease in catastrophe lines was driven by non-renewals and decreased line sizes associated with the repositioning of the portfolio, partially offset by reinstatement premiums associated with significant catastrophe losses. The decreases in property and motor lines were driven by non-renewals and decreased line sizes associated with the repositioning of the portfolio. The decrease in engineering lines was driven by non-renewals and premium adjustments following the exit from this line of business in 2020. The decrease in credit and surety lines was driven by premium adjustments.

Ceded Premiums Written

Ceded premiums written in 2021 was \$791 million, or 28%, of gross premiums written, compared to \$830 million, or 30%, in 2020. The decrease in ceded premiums written of \$39 million, or 5%, was primarily driven by decreases in catastrophe, property, and credit and surety lines, partially offset by increases in liability, and accident and health lines.

The decrease in catastrophe lines was attributable to the non-renewal of significant excess of loss treaties and a significant quota share retrocessional treaty, partially offset by an increase in premiums ceded to strategic partners largely due to the restructuring of several quota share retrocessional treaties and additional costs associated with the purchase of catastrophe bond protection. The decrease in property lines was attributable to the non-renewal of a fronting arrangement and the non-renewal of significant excess of loss treaties. The decrease in credit and surety lines reflected the decrease in gross premiums written in 2021, compared to 2020, partially offset by an increase in premium ceded due to the restructuring of two significant quota share retrocessional treaties.

The increase in liability lines reflected the increase in gross premiums written in 2021, compared to 2020, partially offset by a decrease in premiums ceded due to the restructuring of a significant quota share retrocessional treaty. The increase in accident and health lines reflected the increase in gross premiums written in 2021, compared to 2020.

Net Premiums Earned

Net premiums earned by line of business were as follows:

Year ended December 31,	2021			2020			2019			% Change	2020 to 2021	2019 to 2020
	\$	238,775	11%	\$	244,934	12%	\$	267,591	10%	(3%)	(8%)	
Catastrophe	\$ 238,775	11%	\$ 244,934	12%	\$ 267,591	10%				(3%)	(8%)	
Property	231,080	11%	256,244	12%	311,625	13%				(10%)	(18%)	
Credit and surety	158,549	8%	187,721	9%	208,717	9%				(16%)	(10%)	
Professional lines	220,448	11%	207,605	10%	206,328	9%				6%	1%	
Motor	247,092	12%	255,916	12%	398,565	17%				(3%)	(36%)	
Liability	431,012	21%	396,906	19%	373,664	16%				9%	6%	
Engineering	28,238	1%	60,521	3%	63,899	3%				(53%)	(5%)	
Agriculture	82,744	4%	73,696	4%	188,925	8%				12%	(61%)	
Marine and aviation	58,678	3%	53,516	3%	59,209	2%				10%	(10%)	
Accident and health	361,197	18%	333,996	16%	319,619	13%				8%	4%	
Discontinued lines - Novae	698	—%	1,216	—%	(1,048)	—%				(43%)	nm	
Total	\$ 2,058,511	100%	\$ 2,072,271	100%	\$ 2,397,094	100%				(1%)	(14%)	

nm – not meaningful

Net premiums earned in 2021 decreased by \$14 million, or 1%, (\$10 million, or 0.5% on a constant currency basis), compared to 2020. The decrease was primarily driven by decreases in gross premiums earned in credit and surety, property and engineering lines, together with increases in ceded premiums earned in liability and professional lines. These decreases were partially offset by increases in gross premiums earned in liability, professional lines, and accident and health lines and decreases in ceded premiums earned in credit and surety, accident and health, and property lines.

Other Insurance Related Income (Loss)

Other insurance related income was \$22 million in 2021, compared to other insurance related loss of \$11 million in 2020. Other insurance related income in 2021, was primarily associated with fees related to arrangements with strategic capital partners. Other insurance related loss in 2020 was primarily due to the recognition of a full limit loss of \$10 million associated with the WHO pandemic risk-linked swap.

Loss Ratio

The components of the loss ratio were as follows:

Year ended December 31,	2021	% Point Change	2020	% Point Change	2019
		2020		2019	
Current accident year loss ratio	73.2%	(3.6)	76.8%	2.1	74.7%
Prior year reserve development ratio	(0.6%)	(0.2)	(0.4%)	0.6	(1.0%)
Loss ratio	72.6%	(3.8)	76.4%	2.7	73.7%

Current Accident Year Loss Ratio

The current accident year loss ratio decreased to 73.2% in 2021 from 76.8% in 2020. The decrease in the current accident year loss ratio was impacted by a lower level of catastrophe and weather-related losses. During 2021, catastrophe and weather-related losses, net of reinstatement premiums, were \$268 million, or 13.3 points, primarily attributable to Hurricane Ida, July European Floods, Winter Storms Uri and Viola, June European Convective Storms, December Convective Storms which principally impacted the U.S. Southwest and the Upper Midwest, Quad-state tornadoes, and other weather-related events.

Comparatively, in 2020, catastrophe and weather-related losses, net of reinstatement premiums, were \$330 million or 16.2 points, primarily attributable to the COVID-19 pandemic, the Midwest derecho, Hurricane Laura, wildfires across the West Coast of the United States, and other weather-related events. During 2020, catastrophe and weather-related losses included \$156 million, or 7.6 points, attributable to the COVID-19 pandemic which were largely associated with property-related coverages, but also included accident and health, and mortgage-related coverages.

After adjusting for the impact of the catastrophe and weather-related losses, the current accident year loss ratio decreased to 59.9% in 2021 from 60.6% in 2020, principally due to the impact of favorable pricing over loss trends, partially offset by the impact of changes to retrocessional arrangements.

Prior Year Reserve Development

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses*' for details on the reserve classes, the expected claim tails, and prior year development.

Acquisition Cost Ratio:

The acquisition cost ratio decreased to 21.3% in 2021 from 22.6% in 2020, principally related to the impact of retrocessional contracts.

Underwriting-Related General and Administrative Expense Ratio

The underwriting-related general and administrative expense ratio increased to 5.1% in 2021 from 4.8% in 2020, mainly driven by an increase in performance-related compensation costs, partially offset by an increase in fees related to arrangements with strategic capital partners.

NET INVESTMENT INCOME AND NET INVESTMENT GAINS (LOSSES)

Net Investment Income

Net investment income from our cash and investment portfolio by major asset class was as follows:

Year ended December 31,	2021	% Change	2020	% Change	2019
Fixed maturities	\$ 262,049	(17%)	\$ 317,121	(17%)	\$ 384,053
Other investments	181,906	nm	16,059	(73%)	60,038
Equity securities	12,752	37%	9,328	(11%)	10,434
Mortgage loans	17,427	13%	15,432	5%	14,712
Cash and cash equivalents	4,454	(67%)	13,582	(49%)	26,882
Short-term investments	664	(76%)	2,749	(61%)	7,053
Gross investment income	479,252	28%	374,271	(26%)	503,172
Investment expense	(24,951)	1%	(24,670)	—%	(24,600)
Net investment income	\$ 454,301	30%	\$ 349,601	(27%)	\$ 478,572
Pre-tax yield:⁽¹⁾					
Fixed maturities		2.2%		2.6%	3.2%

nm – not meaningful

(1) Pre-tax yield is calculated by dividing net investment income by the average month-end amortized cost balances.

Fixed Maturities

2021 versus 2020: Net investment income in 2021 decreased by \$55 million or 17%, compared to 2020 due to a decrease in yields.

Other Investments

Other investments include hedge funds, direct lending funds, private equity funds, real estate funds, other privately held investments and an indirect investment in CLO-Equities. These investments are recorded at fair value, with changes in fair value and income distributions reported in net investment income. Consequently, the pre-tax return on other investments may vary materially year over year, particularly during volatile equity and credit markets.

Net investment income from other investments was as follows:

Year ended December 31,	2021	2020	2019
Hedge, direct lending, private equity and real estate funds	\$ 133,923	\$ 16,267	\$ 42,186
Other privately held investments	44,482	5,809	18,050
CLO-Equities	3,501	(6,017)	(198)
Total net investment income from other investments⁽¹⁾	\$ 181,906	\$ 16,059	\$ 60,038
Pre-tax return on other investments⁽²⁾	21.4%	2.2%	8.5%

(1) Excluded overseas deposits in 2020 and 2019. Overseas deposits in 2020 and 2019 included investments in private funds held by Syndicate 2007 where the underlying investments were primarily U.S. government, non-U.S. government and corporate debt securities.

(2) The pre-tax return on other investments is calculated by dividing total net investment income from other investments by the average month-end fair value balances held for the periods indicated, excluding overseas deposits.

2021 versus 2020: Pre-tax return on other investments in 2021 increased to 21.4%, compared to 2.2% in 2020. The increase was primarily attributable to higher returns from direct lending, real estate and private equity funds and other privately held investments.

Net Investment Gains (Losses)

Fixed maturities classified as available for sale are reported at fair value. Realized gains (losses) on fixed maturities are reported in net investment gains (losses) when these securities are sold or impaired.

Equity securities are reported at fair value. Realized gains (losses) on equity securities are also reported in net investment gains (losses) when securities are sold or impaired. In addition, changes in the fair values of equity securities are reported in net investment gains (losses).

Changes in the fair value of investment derivatives, mainly foreign exchange forward contracts and exchange traded interest rate swaps, are recorded in net investment gains (losses).

Net investment gains (losses) were as follows:

Year ended December 31,	2021	2020	2019
<i>On sale of investments:</i>			
Fixed maturities and short-term investments	\$ 95,116	\$ 92,119	\$ 36,645
Equity securities	4,717	19,808	3,126
	99,833	111,927	39,771
Change in allowance for expected credit losses	11	(323)	—
Impairment losses ⁽¹⁾	(22)	(1,486)	—
Other-than-temporary-impairment ("OTTI") losses	—	—	(6,984)
Change in fair value of investment derivatives	4,346	(2,434)	(1,823)
Net unrealized gains (losses) on equity securities	30,111	21,449	60,269
Net investment gains (losses)	\$ 134,279	\$ 129,133	\$ 91,233

(1) Related to instances where we intend to sell securities, or it is more likely than not that we will be required to sell securities before their anticipated recovery.

2021 versus 2020: Net investment gains in 2021 were \$134 million compared to net investment gains of \$129 million in 2020. Net investment gains reported in 2021 mainly reflected net realized gains on the sale of corporate debt, non-U.S. government and CMBS and net unrealized gains on equity securities. Net investment gains reported in 2020 mainly reflected

net realized gains on the sale of U.S Government, agency RMBS and exchange traded funds and net unrealized gains on equity securities.

On Sale of Investments

Generally, sales of individual securities occur when there are changes in the relative value, credit quality, or duration of a particular issue. We may also sell securities to re-balance our investment portfolio in order to change exposure to particular asset classes or sectors.

Impairment and OTTI Losses

The impairment losses (refer to '*Critical Accounting Estimates – Impairment losses*' for further details) recognized in net income by asset class were as follows:

2021 versus 2020: Impairment losses in 2021 were \$nil compared to impairment losses of \$1 million in 2020. The impairment losses in 2020 were principally due to impairments of non-investment grade corporate debt securities that we intended to sell or more likely than not were required to sell.

Change in Fair Value of Investment Derivatives

From time to time, we economically hedge foreign exchange exposure and interest rate risk with derivative contracts.

During 2021, foreign exchange hedges resulted in \$4 million of net gains which primarily related to securities denominated in euro which experienced volatility during 2021.

During 2020, foreign exchange hedges resulted in \$2 million of net losses which primarily related to securities denominated in euro which experienced volatility during 2020.

Our derivative instruments are not designated as hedges under current accounting guidance, therefore, net unrealized gains (losses) on the hedged securities were recorded in accumulated other comprehensive income in the statement of changes in shareholders' equity.

Total Return

Our investment strategy is to take a long-term view by actively managing our investment portfolio to maximize total return within certain guidelines and constraints. In assessing returns under this approach, we include net investment income, net investment gains (losses), the change in unrealized gains (losses) on fixed maturities, and interest in income (loss) of equity method investments generated by our investment portfolio.

Total return on cash and investments was as follows:

Year ended December 31,	2021	2020	2019
Net investment income	\$ 454,301	\$ 349,601	\$ 478,572
Net investments gains (losses)	134,279	129,133	91,233
Change in net unrealized gains (losses) on fixed maturities ⁽¹⁾	(405,378)	269,937	385,364
Interest in income (loss) of equity method investments	32,084	(3,612)	9,718
Total	\$ 215,286	\$ 745,059	\$ 964,887
Average cash and investments⁽²⁾	\$ 16,107,523	\$ 15,562,097	\$ 15,322,688
Total return on average cash and investments, pre-tax:			
Including investment related foreign exchange movements	1.3%	4.8%	6.3%
Excluding investment related foreign exchange movements ⁽³⁾	1.6%	4.4%	6.1%

(1) Change in net unrealized gains (losses) on fixed maturities is calculated by taking net unrealized gains (losses) at period end less net unrealized gains (losses) at the prior period end.

(2) The average cash and investments balance represents the average of total cash and investments including receivable for investments sold, payable for investments purchased and accrued interest for each period

(3) Pre-tax total return on cash and investments excluding foreign exchange rate movements is a non-GAAP financial measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliation to pre-tax total return on cash and investments, the most comparable GAAP financial measure, included foreign exchange gains (losses) of \$(40) million, \$55 million and \$25 million for the years ended December 31, 2021, 2020 and 2019, respectively.

OTHER EXPENSES (REVENUES), NET

The following table provides a summary of other expenses (revenues), net:

Year ended December 31,	2021	% Change	2020	% Change	2019
Corporate expenses	\$ 126,470	24%	\$ 101,822	(21%)	\$ 129,096
Foreign exchange losses (gains)	315	nm	81,069	nm	(12,041)
Interest expense and financing costs	62,302	(17%)	75,049	10%	68,107
Income tax expense (benefit)	62,384	nm	(12,321)	nm	23,692
Total	\$ 251,471		\$ 245,619		\$ 208,854

nm – not meaningful

Corporate Expenses

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 a percentage of net premiums earned, corporate expenses increased to 2.7% in 2021 from 2.3% in 2020.

The increase in corporate expenses in 2021 was mainly driven by increases in performance-related compensation costs and personnel costs.

Foreign Exchange Losses (Gains)

Some of our business is written in currencies other than the U.S. dollar.

Foreign exchange losses in 2021 were primarily related to the impact of the weakening of the U.S. dollar on the remeasurement of net insurance-related liabilities denominated in pound sterling, Australian dollar and other currencies, largely offset by the strengthening of the U.S. dollar on the remeasurement of net insurance-related liabilities denominated in euro and Japanese yen.

Foreign exchange losses in 2020 were primarily related to the impact of the weakening of the U.S. dollar on the remeasurement of net insurance-related liabilities denominated in pound sterling and the euro.

Interest Expense and Financing Costs

Interest expense and financing costs are related to interest due on the 5.875% senior unsecured notes ("5.875% Senior Notes") issued in 2010 and repaid in June 2020, the 5.150% senior unsecured notes ("5.150% Senior Notes") issued in 2014, the 4.000% senior unsecured notes ("4.000% Senior Notes") issued in 2017, the 3.900% senior unsecured notes ("3.900% Senior Notes"), and the 4.900% fixed-rate reset junior subordinated notes ("Junior Subordinated Notes") issued in 2019.

Interest expense and financing costs decreased by \$13 million in 2021, compared to 2020, due to the repayment of the 5.875% Senior Notes on June 1, 2020.

Income Tax Expense (Benefit)

Income tax expense (benefit) primarily results from income (loss) generated by our foreign operations in the U.S. and Europe. Our effective tax rate, which is calculated as income tax expense (benefit), divided by income (loss) before tax including interest in income (loss) of equity method investments, was 9.2%, 9.3%, and 6.8% in 2021, 2020, and 2019, respectively. This effective rate can vary between years depending on the distribution of net income (loss) among tax jurisdictions, as well as other factors.

The tax expense of \$62 million in 2021 was principally due to the generation of pre-tax income in our U.S., U.K. and European operations.

The tax benefit of \$12 million in 2020 was principally due to the generation of pre-tax losses in our U.K. operations.

FINANCIAL MEASURES

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

Year ended and at December 31,	2021	2020	2019
Return on average common equity ⁽¹⁾	12.2%	(3.2%)	6.3%
Operating return on average common equity ⁽²⁾	9.1%	(3.7%)	4.7%
Book value per diluted common share ⁽³⁾	\$ 55.78	\$ 55.09	\$ 55.79
Cash dividends declared per common share	\$ 1.69	\$ 1.65	\$ 1.61
Increase in book value per diluted common share adjusted for dividends	\$ 2.38	\$ 0.95	\$ 7.47

- (1) 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 using the common shareholders' equity balances at the beginning and end of the year.
- (2) Operating return on average common equity ("operating ROACE"), 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 measure, ROACE, and a discussion of the rationale for its presentation is provided in *'Management's Discussion and Analysis of Financial Condition and Results of Operations – Non-GAAP Financial Measures Reconciliation'*.
- (3) Book value per diluted common share represents common shareholders' equity divided by the number of diluted common share outstanding, determined using the treasury stock method. Cash-settled restricted stock units are excluded.

Return on Average Common Equity

Our objective is to generate superior returns on capital that appropriately reward 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.

ROACE reflects the impact of net income (loss) available (attributable) to common shareholders, including net investment gains (losses), foreign exchange losses (gains), reorganization expenses, and interest in income (loss) of equity method investments.

The increase in ROACE in 2021 compared to 2020, was primarily driven by the underwriting income, an increase in net investment income, a decrease in foreign exchange losses and the interest in income of equity method investments, partially offset by the income tax expense, and an increase in corporate expenses.

Operating ROACE excludes the impact of net investment gains (losses), foreign exchange losses (gains), reorganization expenses, and interest in income (loss) of equity method investments.

The increase in operating ROACE in 2021, compared to 2020, was primarily driven by the underwriting income and an increase in investment income, partially offset by the income tax expense, and an increase corporate expenses.

Book Value per Diluted Common Share

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

In 2021, book value per diluted common share increased by 1%, due to the net income generated, partially offset by a decrease in net unrealized investment gains reported in other comprehensive income and common dividends declared.

In 2020, book value per diluted common share decreased by 1%, due to the net loss generated and common dividends declared, partially offset by net unrealized investment gains reported in other comprehensive income.

Cash Dividends Declared per Common Share

We believe in returning excess capital to shareholders by way of dividends. Accordingly, dividend policy is an integral part of the value we create for shareholders. Our Board of Directors have approved eighteen 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 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.

In 2021, the increase in total value of \$2.38, or 4%, was driven by the net income generated in the year, partially offset by a decrease in net unrealized investment gains recognized in other comprehensive income.

In 2020, the increase in total value of \$0.95, or 2%, was driven by net unrealized investment gains recognized in other comprehensive income, partially offset by the net loss generated for the year.

NON-GAAP FINANCIAL MEASURES RECONCILIATION

Years ended December 31,	2021	2020	2019
Net income (loss) available (attributable) to common shareholders	\$ 588,359	\$ (150,674)	\$ 282,361
Net investment gains ⁽¹⁾	(134,279)	(129,133)	(91,233)
Foreign exchange losses (gains) ⁽²⁾	315	81,069	(12,041)
Reorganization expenses ⁽³⁾	—	7,881	37,384
Interest in (income) loss of equity method investments ⁽⁴⁾	(32,084)	3,612	(9,718)
Income tax expense	<u>14,166</u>	<u>13,023</u>	<u>6,656</u>
Operating income (loss)	<u><u>\$ 436,477</u></u>	<u><u>\$ (174,222)</u></u>	<u><u>\$ 213,409</u></u>
Earnings (loss) per diluted common share ⁽⁵⁾	\$ 6.90	\$ (1.79)	\$ 3.34
Net investment gains	(1.57)	(1.53)	(1.08)
Foreign exchange losses (gains)	—	0.96	(0.14)
Reorganization expenses	—	0.09	0.44
Interest in (income) loss of equity method investments	(0.38)	0.04	(0.12)
Income tax expense	<u>0.17</u>	<u>0.15</u>	<u>0.08</u>
Operating income (loss) per diluted common share ⁽⁵⁾	<u><u>\$ 5.12</u></u>	<u><u>\$ (2.08)</u></u>	<u><u>\$ 2.52</u></u>
Weighted average diluted common shares outstanding ⁽⁶⁾	85,291	84,262	84,473
Average common shareholders' equity	\$ 4,803,175	\$ 4,757,351	\$ 4,512,040
Return on average common equity	12.2%	(3.2%)	6.3%
Operating return on average common equity	9.1%	(3.7%)	4.7%

- (1) Tax expense (benefit) of \$11 million, \$18 million and \$12 million for the years ended December 31, 2021, 2020 and 2019, 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.
- (2) Tax expense (benefit) of \$3 million, \$(4) million and \$1 million for the years ended December 31, 2021, 2020 and 2019, 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.
- (3) Tax (benefit) of \$(1) million and \$(7) million for the years ended December 31, 2020 and 2019, respectively. Tax impact is estimated by applying the statutory rates of applicable jurisdictions.
- (4) Tax expense (benefit) of \$nil for the years ended December 31, 2021, 2020 and 2019, respectively. Tax impact is estimated by applying the statutory rates of applicable jurisdictions.
- (5) Loss per diluted common share and operating loss per diluted common share for the year ended December 31, 2020, were calculated using weighted average common shares outstanding due to the net loss attributable to common shareholders and the operating loss recognized in that year.
- (6) Refer to Item 8, Note 13 to the Consolidated Financial Statements '*Earnings Per Common Share*' for further details.

Rationale for the Use of Non-GAAP Financial Measures

We present our results of operations in a way we believe will be 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 and pre-tax total return on cash and investments excluding foreign exchange movements 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, help 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 underwriting operations. While this measure is presented in Item 8, Note 3 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 underwriting operations, these costs 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 financial measure, is presented in '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Consolidated 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 (loss) 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 3 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 a result, 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) in our consolidated statements of operations in isolation 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 debt. As these expenses are not incremental and/or directly attributable to our underwriting operations, these expenses are excluded from underwriting-related general and administrative expenses, and therefore, consolidated underwriting income (loss).

Reorganization expenses are related to the transformation program which was launched in 2017. This program encompasses the integration of Novae, which commenced in the fourth quarter of 2017, the realignment of our accident and health business, together with other initiatives designed to increase efficiency and enhance profitability, while delivering a customer-centric operating model. 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 intangible assets including value of business acquired ("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).

We believe that the 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 net income (loss), the most comparable GAAP financial measure, is presented in '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Consolidated Results of Operations*'.

Operating Income (Loss)

Operating income (loss) represents after-tax operational results exclusive of net investment gains (losses), foreign exchange losses (gains), reorganization expenses and interest in income (loss) of equity method investments.

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. In addition, we recognize unrealized foreign exchange losses (gains) on our equity securities and foreign exchange losses (gains) realized on the sale of our available for sale investments and equity securities in net investment gains (losses). We also recognize unrealized foreign exchange losses (gains) on our available for sale investments in other comprehensive income (loss). These unrealized foreign exchange losses (gains) generally offset a large portion of the foreign exchange losses (gains) reported in net income (loss), thereby minimizing the impact of foreign exchange rate movements on total shareholders' equity. As a result, we believe that foreign exchange losses (gains) in our consolidated statements of operations in isolation are not a meaningful contributor to the performance of our business, therefore, foreign exchange losses (gains) are excluded from consolidated operating income (loss).

Reorganization expenses are related to the transformation program which was launched in 2017. This program encompasses the integration of Novae, which commenced in the fourth quarter of 2017, the realignment of our accident and health business, together with other initiatives designed to increase efficiency and enhance profitability, while delivering a customer-centric operating model. 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).

Interest in income (loss) of equity method investments is primarily driven by business decisions, the nature and timing of which are not related to the underwriting process, therefore, this income (loss) 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), reorganization expenses, and interest in income (loss) of equity method investments 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), reorganization expenses and interest in income (loss) of equity method investments 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 financial measure, is presented above.

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 above to the most comparable GAAP financial measures, earnings (loss) per diluted common share and return on average common equity ("ROACE"), respectively.

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 '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Results by Segment*'.

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

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 gains (losses) generated by average cash and investment balances. We believe this presentation enables investors and other users of our financial information to analyze the performance of our investment portfolio. 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 '*Management's Discussion and Analysis of Financial Condition and Results of Operations – Net Investment Income and Net Investment Gains (Losses)*'.

CASH AND INVESTMENTS

Details of cash and investments are as follows:

	December 31, 2021	December 31, 2020
	Fair value	Fair value
Fixed maturities, available for sale	\$ 12,313,200	\$ 12,041,799
Fixed maturities, held to maturity ⁽¹⁾	445,033	—
Equity securities	655,675	518,445
Mortgage loans	594,088	593,290
Other investments	947,982	829,156
Equity method investments	146,293	114,209
Short-term investments	31,063	161,897
Total investments	\$ 15,133,334	\$ 14,258,796
Cash and cash equivalents ⁽²⁾	\$ 1,317,690	\$ 1,503,232

(1) Presented at net carrying value of \$446 million (2020: \$nil) in the consolidated balance sheets.

(2) Includes restricted cash and cash equivalents of \$473 million and \$600 million for 2021 and 2020, respectively.

Overview

The fair value of total investments increased by \$875 million in 2021, driven by cash inflows from operations, partially offset by the decrease in market value of fixed maturities due to the increase in yields.

An analysis of our investment portfolio by asset class is detailed below:

Fixed Maturities

Details of our fixed maturities portfolio are as follows:

	December 31, 2021		December 31, 2020	
	Fair value	% of total	Fair value	% of total
Fixed maturities:				
U.S. government and agency	\$ 2,682,448	21%	\$ 1,918,699	16%
Non-U.S. government	795,178	6%	671,273	6%
Corporate debt	4,532,884	36%	4,655,951	39%
Agency RMBS	1,074,589	8%	1,286,209	11%
CMBS	1,248,191	10%	1,353,587	11%
Non-agency RMBS	186,164	1%	140,104	1%
ABS	2,029,941	16%	1,720,078	14%
Municipals ⁽¹⁾	208,838	2%	295,898	2%
Total	\$ 12,758,233	100%	\$ 12,041,799	100%
Credit ratings:				
U.S. government and agency	\$ 2,682,448	21%	\$ 1,918,699	16%
AAA ⁽²⁾	4,491,643	34%	4,551,312	37%
AA	981,837	8%	913,707	8%
A	1,917,006	15%	1,896,407	16%
BBB	1,595,285	13%	1,732,058	14%
Below BBB ⁽³⁾	1,090,014	9%	1,029,616	9%
Total	\$ 12,758,233	100%	\$ 12,041,799	100%

(1) Includes bonds issued by states, municipalities, and political subdivisions.

(2) Includes U.S. government-sponsored agencies, residential mortgage-backed securities ("RMBS") and commercial mortgage-backed securities ("CMBS").

(3) Non-investment grade and non-rated securities.

At December 31, 2021, fixed maturities had a weighted average credit rating of AA- (2020: AA-), a book yield of 1.9% (2020: 2.3%), and an average duration of 3.0 years (2020: 3.3 years). At December 31, 2021, fixed maturities together with short-term investments and cash and cash equivalents (i.e. total investments of \$14.1 billion), had a weighted average credit rating of AA- (2020: AA-) and an average duration of 2.8 years (2020: 3.0 years).

Our methodology for assigning credit ratings to fixed maturities is in line with the methodology used for the Barclays U.S. Aggregate Bond index. This methodology uses the midpoint of Standard & Poor's (S&P), Moody's and Fitch ratings. When ratings from only two of these agencies are available, the lower rating is used. When only one agency rates a security, that rating is used. When ratings provided by S&P, Moody's and Fitch are not available, ratings from other nationally recognized agencies are used.

To calculate the weighted average credit rating for fixed maturities, we assign points to each rating with the highest points assigned to the highest rating (AAA) and the lowest points assigned to the lowest rating (D) and then calculate the weighted average based on the fair values of the individual securities. Securities that are not rated are excluded from weighted average calculations. At December 31, 2021, the fair value of fixed maturities not rated was \$18 million (2020: \$50 million).

In addition to managing credit risk exposure within our fixed maturities portfolio we also monitor the aggregation of country risk exposure on a group-wide basis (refer to Item 1 '*Risk and Capital Management*' for further details). Country risk

exposure is the risk that events in a country, such as currency crises, regulatory changes and other political events, will adversely affect the ability of obligors in the country to honor their obligations. For corporate debt and structured securities, we measure the country of risk exposure based on a number of factors including, but not limited to, location of management, principal operations and country of revenues.

An analysis of our fixed maturities portfolio by major asset classes is detailed below.

Non-U.S. Government

Non-U.S. government securities include bonds issued by non-U.S. governments and their agencies along with supranational organizations (collectively also known as sovereign debt securities).

Details of exposures to governments in the eurozone and other non-U.S. government concentrations by fair value are as follows:

Country	December 31, 2021			December 31, 2020		
	Fair value	% of total	Weighted average credit rating	Fair value	% of total	Weighted average credit rating
<i>Eurozone countries:</i>						
Supranationals ⁽¹⁾	\$ 16,799	2%	AAA	\$ 19,773	3%	AAA
Netherlands	10,065	1%	AA+	14,482	2%	AA+
Germany	5,083	1%	AAA	3,689	1%	AAA
Austria	2,317	—%	AA+	3,629	1%	AA+
France	1,303	—%	AA	503	—%	AA
Total eurozone	35,567	4%	AA+	42,076	7%	AA+
<i>Other concentrations:</i>						
United Kingdom	248,601	31%	AA-	305,083	45%	AA-
Canada	372,333	47%	AAA	139,834	21%	AAA
Mexico	19,839	2%	BBB	21,404	3%	BBB
Other	118,838	16%	AA+	162,876	24%	AA
Total other concentrations	759,611	96%	AAA	629,197	93%	AA+
Total non-U.S. government	\$ 795,178	100%	AA	\$ 671,273	100%	AA-

(1) Includes supranationals only in the eurozone.

At December 31, 2021, net unrealized gains on non-U.S. government securities were \$0.5 million (2020: \$38 million) which included gross unrealized foreign exchange losses of \$5 million (2020: \$1 million), mainly related to U.K. government bonds.

Corporate Debt

Corporate debt securities consist primarily of investment grade debt of a wide variety of corporate issuers and industries.

Details of our corporate debt securities portfolio by sector are as follows:

	December 31, 2021			December 31, 2020		
	Fair value	% of total	Weighted average credit rating	Fair value	% of total	Weighted average credit rating
Financial institutions:						
U.S. banking	\$ 821,650	18%	A	\$ 905,944	19%	A
Foreign banking	383,360	8%	A	274,462	6%	A+
Corporate/commercial finance	380,558	8%	BBB-	273,682	6%	BBB-
Insurance	155,735	3%	A+	135,843	3%	A+
Investment brokerage	87,923	2%	A-	62,340	1%	A-
Total financial institutions	1,829,226	39%	A-	1,652,271	35%	A-
Consumer non-cyclicals	597,163	13%	BBB-	660,513	14%	BBB
Consumer cyclical	435,314	10%	BB	463,953	10%	BB+
Communications	406,700	9%	BB+	427,266	9%	BBB-
Industrials	390,674	9%	BB-	424,506	9%	BB
Technology	288,754	6%	BB+	339,666	7%	BBB-
Utilities	198,387	4%	BBB+	181,641	4%	BBB+
Energy	173,606	4%	BBB	179,570	4%	BBB+
Other	213,060	6%	A	326,565	8%	A+
Total	\$ 4,532,884	100%	BBB	\$ 4,655,951	100%	BBB
<i>Credit quality summary:</i>						
Investment grade	\$ 3,501,370	77%	A-	\$ 3,720,558	80%	A-
Non-investment grade	1,031,514	23%	B	935,393	20%	B
Total	\$ 4,532,884	100%	BBB	\$ 4,655,951	100%	BBB

At December 31, 2021, our non-investment grade portfolio had a fair value of \$1,032 million (2020: \$935 million), a weighted average credit rating of B (2020: B) and duration of 1.7 years (2020: 2.0 years). At December 31, 2021, our corporate debt portfolio, including non-investment grade securities, had a duration of 3.7 years (2020: 3.7 years).

Mortgage-Backed Securities

Details of the fair values of our RMBS and CMBS portfolios by credit rating are as follows:

	December 31, 2021		December 31, 2020	
	RMBS	CMBS	RMBS	CMBS
Government agency	\$ 1,074,589	\$ 83,936	\$ 1,286,209	\$ 311,698
AAA	166,553	1,069,276	109,903	972,222
AA	3,601	89,813	8,378	64,459
A	9,936	5,166	7,101	1,608
BBB	621	—	677	2,375
Below BBB ⁽¹⁾	5,453	—	14,045	1,225
Total	\$ 1,260,753	\$ 1,248,191	\$ 1,426,313	\$ 1,353,587

(1) Non-investment grade securities.

Residential MBS

Agency RMBS consist of bonds issued by the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation and the Government National Mortgage Association which are primarily AAA rated and are supported by loans which are diversified across geographical areas. At December 31, 2021, agency RMBS had an average duration of 4.4 years (2020: 3.2 years).

Non-agency RMBS mainly include investment grade bonds originated by non-agencies. At December 31, 2021, approximately 91% (2020: 84%) of our non-agency RMBS were rated AA or better. At December 31, 2021, non-agency RMBS had an average duration of 2.1 years (2020: 1.5 years) and weighted average life of 4.8 years (2020: 4.7 years).

Commercial MBS

CMBS mainly include investment grade bonds originated by non-agencies. At December 31, 2021, approximately 99% (2020: 99%) of our CMBS were rated AA or better. At December 31, 2021, the weighted average estimated subordination percentage of the portfolio was 37% (2020: 29%), which represents the current weighted average estimated percentage of the capital structure subordinated to the investment holding that is available to absorb losses before the security incurs the first dollar loss of principal. At December 31, 2021, CMBS had an average duration of 3.1 years (2020: 4.8 years) and weighted average life of 4.0 years (2020: 5.5 years).

Asset-Backed Securities

ABS mainly include investment grade bonds backed by pools of loans with a variety of underlying collateral, including auto loans, student loans, credit card receivables and collateralized loan obligations ("CLOs") originated by a variety of financial institutions.

Details of the fair value of our ABS portfolio by underlying collateral and credit rating are as follows:

	Asset-backed securities						Total
	AAA	AA	A	BBB	Below BBB		
At December 31, 2021							
CLO - debt tranches	\$ 953,731	\$ 251,204	\$ 73,595	\$ 33,343	\$ 31,707	\$ 1,343,580	
Auto	245,653	4,938	—	—	—	—	250,591
Student loan	149,801	5,166	2,476	—	—	—	157,443
Credit card	12,977	—	—	—	—	—	12,977
Other	224,348	11,893	23,311	5,394	404	265,350	
Total	\$ 1,586,510	\$ 273,201	\$ 99,382	\$ 38,737	\$ 32,111	\$ 2,029,941	
% of total	78%	13%	5%	2%	2%	100%	
At December 31, 2020							
CLO - debt tranches	\$ 820,870	\$ 55,107	\$ 48,269	\$ 46,150	\$ 75,954	\$ 1,046,350	
Auto	278,964	—	—	—	—	—	278,964
Student loan	113,294	7,513	—	—	—	—	120,807
Credit card	10,254	—	—	—	—	—	10,254
Other	214,749	15,744	17,075	15,641	494	263,703	
Total	\$ 1,438,131	\$ 78,364	\$ 65,344	\$ 61,791	\$ 76,448	\$ 1,720,078	
% of total	84%	5%	4%	4%	3%	100%	

At December 31, 2021, the average duration our ABS portfolio was 0.7 years (2020: 0.9 years) and the weighted average life was 4.1 years (2020: 3.6 years).

Municipals

Municipals comprise revenue bonds and general obligation bonds issued by U.S. domiciled state and municipal entities and are primarily held in the taxable portfolios of our U.S. subsidiaries.

Details of the fair value of our municipals portfolio by state and between Revenue bonds and General Obligation bonds are as follows:

	General Obligation	Revenue	Total	% of total fair value	Gross unrealized gains	Gross unrealized losses	Weighted average credit rating
At December 31, 2021							
New York	\$ 798	\$ 31,900	\$ 32,698	16%	\$ 1,416	\$ (2)	AA+
California	2,472	43,945	46,417	22%	1,118	(223)	A+
Texas	9,327	16,587	25,914	12%	677	(238)	AA
Massachusetts	12,511	2,577	15,088	7%	403	(5)	AA
Michigan	—	14,894	14,894	7%	460	(31)	AA-
Other	7,612	66,215	73,827	36%	1,854	(147)	A+
	\$ 32,720	\$ 176,118	\$ 208,838	100%	\$ 5,928	\$ (646)	AA-
At December 31, 2020							
New York	\$ 18,346	\$ 39,597	\$ 57,943	20%	\$ 3,287	\$ —	AA
California	8,041	33,340	41,381	14%	1,881	(2)	AA-
Texas	8,884	25,193	34,077	12%	1,635	—	AA
Massachusetts	21,090	10,842	31,932	11%	700	—	AA+
Michigan	—	15,413	15,413	5%	948	—	AA-
Other	20,426	94,726	115,152	38%	4,697	(29)	A+
	\$ 76,787	\$ 219,111	\$ 295,898	100%	\$ 13,148	\$ (31)	AA-

General Obligation bonds are backed by the full faith and credit of the authority that issued the debt and are secured by the taxing powers of those authorities. Revenue bonds are backed by the revenue stream generated by the services provided by the issuer (e.g. sewer, water or utility projects). As issuers of revenue bonds do not have the ability to draw from tax revenues or levy taxes to fund obligations, revenue bonds may carry a greater risk of default than General Obligation bonds. At December 31, 2021, 97% (2020: 75%) of municipals are taxable with the remainder being tax exempt.

Gross Unrealized Losses

At December 31, 2021, the gross unrealized losses on our fixed maturities portfolio were \$94 million (2020: \$19 million).

The severity of the unrealized loss position as a percentage of amortized cost for all investment grade fixed maturities in an unrealized loss position including any impact of foreign exchange losses (gains) was as follows:

Severity of Unrealized Loss	December 31, 2021			December 31, 2020		
	Fair value	Gross unrealized losses	% of total gross unrealized losses	Fair value	Gross unrealized losses	% of total gross unrealized losses
0-10%	\$ 6,172,912	\$ (83,380)	96%	\$ 1,212,074	\$ (9,553)	87%
10-20%	10,127	(1,639)	2%	6,102	(726)	7%
20-30%	3,576	(1,138)	1%	2,374	(626)	6%
30-40%	1,188	(539)	1%	—	—	—%
40-50%	—	—	—%	—	—	—%
> 50%	6	(25)	—%	—	—	—%
Total	\$ 6,187,809	\$ (86,721)	100%	\$ 1,220,550	\$ (10,905)	100%

The increase in gross unrealized losses on investment grade fixed maturities reflected the impact of the increase in yields and the widening of credit spreads on investment grade corporate debt securities.

The severity of the unrealized loss position as a percentage of amortized cost for all non-investment grade fixed maturities in an unrealized loss position including any impact of foreign exchange losses (gains) was as follows:

Severity of Unrealized Loss	December 31, 2021			December 31, 2020		
	Fair value	Gross unrealized losses	% of total gross unrealized losses	Fair value	Gross unrealized losses	% of total gross unrealized losses
0-10%	\$ 396,033	\$ (6,493)	85%	\$ 220,424	\$ (4,833)	60%
10-20%	3,085	(448)	6%	14,068	(1,889)	24%
20-30%	209	(38)	1%	258	(87)	1%
30-40%	—	—	—%	1,279	(799)	10%
40-50%	267	(194)	3%	88	(1)	—%
> 50%	427	(352)	5%	346	(397)	5%
Total	\$ 400,021	\$ (7,525)	100%	\$ 236,463	\$ (8,006)	100%

The decrease in gross unrealized losses on non-investment grade fixed maturities reflected the impact of the tightening of credit spreads on non-investment grade high yield corporate debt securities.

Equity Securities

At December 31, 2021, net unrealized gains on equity securities were \$127 million (2020: \$97 million). The increase was due to improved performance of global equity markets.

Mortgage Loans

During 2021, investment in commercial mortgage loans increased to \$594 million from \$593 million, an increase of \$1 million. The commercial mortgage loans are high quality and collateralized by a variety of commercial properties and are diversified geographically throughout the U.S. and by property type to reduce the risk of concentration. At December 31, 2021 and 2020, there were no credit losses or past due amounts associated with our commercial mortgage loans portfolio.

Other Investments

Details of our other investments portfolio are as follows:

	December 31, 2021		December 31, 2020	
Hedge funds				
Long/short equity funds	\$ 3,476	—%	\$ 25,300	3%
Multi-strategy funds	56,012	6%	121,420	15%
Total hedge funds	59,488	6%	146,720	18%
Direct lending funds	289,867	31%	272,131	33%
Private equity funds	249,974	26%	124,706	15%
Real estate funds	238,222	25%	164,250	20%
Total hedge, direct lending, private equity and real estate funds	837,551	88%	707,807	86%
CLO-Equities	5,910	1%	6,173	1%
Other privately held investments	104,521	11%	70,011	8%
Overseas deposits	—	—%	45,165	5%
Total other investments	\$ 947,982	100%	\$ 829,156	100%

Refer to Item 8, Note 5(c) to the Consolidated Financial Statements '*Investments*'.

Equity Method Investments

In our consolidated results, our ownership interest in Harrington Reinsurance Holdings Limited ("Harrington") is reported in interest in income (loss) of equity method investments. Interest in income (loss) of equity method investments was \$32 million in 2021, compared to \$(4) million in 2020. The increase was attributable to positive investment returns realized by Harrington.

Restricted Assets

Refer to Item 8, Note 5(g) to the Consolidated Financial Statements '*Investments*'.

LIQUIDITY AND CAPITAL RESOURCES

Liquidity

Liquidity is a measure of a company's ability to generate cash flows sufficient to meet the short-term and long-term cash requirements of its business operations. We manage liquidity at the holding company and operating subsidiary level.

Holding Company

As a holding company, AXIS Capital has no operations of its own and its assets consist primarily of investments in its subsidiaries. Accordingly, AXIS Capital's future cash flows depend on the availability of dividends or other statutorily permissible distributions, such as returns of capital, from its subsidiaries. The ability to pay such dividends and/or distributions is limited by the applicable laws and regulations of the various countries and states in which AXIS Capital's subsidiaries operate (refer to Item 8, Note 21 to the Consolidated Financial Statements '*Statutory Financial Information*' for further details), as well as the need to maintain capital levels to adequately support insurance and reinsurance operations, and to preserve financial strength ratings issued by independent rating agencies. During 2021, AXIS Capital received \$300 million (2020: \$350 million) of distributions from its subsidiaries. AXIS Capital's primary uses of funds are dividend payments to common and preferred shareholders, interest and principal payments on debt, capital investments in subsidiaries, and payment of corporate operating expenses. We believe the dividend/distribution capacity of AXIS Capital's subsidiaries, which was \$0.9 billion at December 31, 2021, will provide AXIS Capital with sufficient liquidity for the foreseeable future.

Operating Subsidiaries

AXIS Capital's operating subsidiaries primarily derive cash from the net inflow of premiums less claim payments related to underwriting activities and from net investment income. Historically, these cash receipts have been sufficient to fund the operating expenses of these subsidiaries, as well as to fund dividend payments to AXIS Capital. The subsidiaries' remaining cash flows are generally invested in our investment portfolio. The remaining cash flows have also been used to fund common share repurchases and to fund acquisitions in recent years.

The insurance and reinsurance business of our operating subsidiaries inherently provide liquidity, as premiums are received in advance (sometimes substantially in advance) of the time losses are paid. However, the amount of cash required to fund loss payments can fluctuate significantly from period to period, due to the low frequency/high severity nature of certain types of business we write.

Consolidated cash flows from operating, investing and financing activities in the last three years were as follows:

Total cash provided by (used in) ⁽¹⁾	2021	2020	2019
Operating activities	\$ 1,114,822	\$ 343,503	\$ 199,004
Investing activities	(1,114,195)	489,921	(774,315)
Financing activities	(186,095)	(908,803)	277,510
Effect of exchange rate changes on cash	(74)	2,154	44,238
Decrease in cash and cash equivalents	\$ (185,542)	\$ (73,225)	\$ (253,563)

(1) Refer to Item 8, '*Consolidated Statements of Cash Flows*' for further details.

- Net cash provided by operating activities was \$1,115 million in 2021 compared to \$344 million in 2020. Cash inflows from insurance and reinsurance operations typically include premiums, net of acquisition costs, and reinsurance recoverables. Cash outflows principally include payments of losses and loss expenses, payments of premiums to reinsurers and operating expenses. Cash provided by operating activities can fluctuate due to timing differences between the collection of premiums and reinsurance recoverables and the payment of losses and loss expenses, and the payment of premiums to reinsurers. Operating cash inflows increased in 2021 compared to 2020, primarily attributable to an increase in premiums received, a decrease in payments of losses and loss expenses, partially offset by a decrease in interest and dividends received from our fixed maturity securities portfolio, an increase in income taxes paid and an increase in operating expenses.
- Investing cash outflows in 2021 principally related to the net purchases of fixed maturities of \$1,154 million and equity securities of \$112 million, partially offset by the net proceeds from the sale and redemption of short-term investments of \$130 million, and the net proceeds from the sale of other investments of \$61 million. Investing cash inflows in 2020 principally related to the net proceeds from the sale and redemption of fixed maturities of \$816 million, partially offset by net purchases of mortgage loans of \$160 million and short-term investments of \$123 million.
- Financing cash outflows in 2021 were principally due to dividends paid to common and preferred shareholders of \$176 million. In 2020, financing cash outflows were principally due to the repayment of \$500 million 5.875% Senior Notes, the redemption of \$225 million Series D preferred shares and dividends paid to common and preferred shareholders of \$173 million. The declaration and payment of future dividends and share repurchases is at the discretion of our Board of Directors and will depend on many factors including, but not limited to, our net income, financial condition giving due consideration to the impact of the COVID-19 pandemic, 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 '*Capital Resources – Share Repurchases*' below for further details).

We have generated positive operating cash flows in all years since 2003, with the exception of 2009 which was impacted by the global financial crisis. These positive cash flows were generated even with the recognition of significant catastrophe and weather-related losses including the impact of the COVID-19 pandemic in 2020 and 2021.

Net losses and loss expenses, gross of reinstatement premiums, included estimates of ultimate losses for catastrophe and weather-related losses of \$450 million in 2021, \$773 million in 2020 and \$351 million in 2019. There remains significant uncertainty associated with estimates of ultimate losses for certain of these events (refer to '*Underwriting Results – Insurance segment – Current Accident Year Loss*' and '*Underwriting Results – Reinsurance segment – Current Accident Year Loss Ratio*' for further details), as well as the timing of the associated cash outflows.

Should claim payment obligations accelerate beyond our ability to fund payments from operating cash flows, we would utilize cash and cash equivalent balances and/or liquidate a portion of our investment portfolio. Our investment portfolio is heavily weighted towards conservative, high quality and highly liquid securities. We expect that, if necessary, approximately \$13.3 billion of cash and invested assets at December 31, 2021 could be available in one to three business days under normal market conditions; of this amount, \$5.4 billion related to restricted assets, which primarily support our obligations in regulatory jurisdictions where we operate as a non-admitted carrier (refer to Item 8, Note 5(g) to the Consolidated Financial Statements '*Investments*' for further details). For context, at January 1, 2022, our largest 1-in-250 year return period, single occurrence, single-zone modeled probable maximum loss (Southeast U.S. Hurricane) was approximately \$0.3 billion, net of reinsurance. Claim payments pertaining to such an event would be paid out over a period spanning many months. Our internal risk tolerance framework aims to limit 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 (refer to Item 1 '*Risk and Capital Management*' for further details).

We expect that cash flows generated from operations, combined with the liquidity provided by our investment portfolio, to be sufficient to cover required cash outflows and other contractual commitments through the foreseeable future (refer to '*Contractual Obligations and Commitments*' below for further details).

Capital Resources

In addition to common equity, we have utilized other external sources of financing, including debt, preferred shares, and letter of credit facilities to support our business operations. We believe that we hold sufficient capital to allow us to take advantage of market opportunities and to maintain our financial strength ratings, as well as to comply with various local statutory regulations. We monitor capital adequacy on a regular basis and will seek to adjust our capital base according to the needs of our business (refer to Item 1 '*Risk and Capital Management*' for further details).

The following table summarizes consolidated capital:

At December 31,	2021	2020
Debt	\$ 1,310,975	\$ 1,309,695
Preferred shares	550,000	550,000
Common equity	4,860,656	4,745,694
Shareholders' equity	<u>5,410,656</u>	<u>5,295,694</u>
Total capital	\$ 6,721,631	\$ 6,605,389
Ratio of debt to total capital	19.5%	19.8%
Ratio of debt and preferred equity to total capital	27.7%	28.2%

We finance our operations with a combination of debt and equity capital. Debt to total capital, and debt and preferred equity to total capital ratios, provide an indication of our capital structure, along with some insight into our financial strength.

While the impact of catastrophe and weather-related losses have reduced common shareholders' equity, we believe that our financial flexibility remains strong, and adjustments are made if there are developments that are different from previous expectations.

Debt

Debt represents the 5.150% Senior Notes issued in 2014, which will mature in 2045, the 4.000% Senior Notes issued in 2017, which will mature in 2027, the 3.900% Senior Notes issued in 2019, which will mature in 2029, and the 4.900% Junior Subordinated Notes issued in 2019, which will mature in 2040 (refer to Item 8, Note 10(a) to the Consolidated Financial Statements '*Debt and Financing Arrangements*' for further details).

The 3.900% Senior Notes and the 4.900% Junior Subordinated Notes were issued to finance the repayment of \$500 million aggregate principal amount of 5.875% Senior Notes that matured in June 2020 and to finance the redemption of Series D preferred shares on January 17, 2020 (refer to '*Preferred Shares*' below for further details).

Preferred Shares

Series D Preferred Shares

On May 20, 2013, we issued \$225 million of 5.50% Series D preferred shares with a liquidation preference of \$25.00 per share. Dividends on the Series D preferred shares were non-cumulative. To the extent declared, dividends accumulated, with respect to each dividend period, in an amount per share equal to 5.50% of the liquidation preference per annum. On January 17, 2020, we redeemed all outstanding Series D preferred shares, for an aggregate liquidation preference of \$225 million (refer to Item 8, Note 14 to the Consolidated Financial Statements '*Shareholders' Equity*' for further details).

Series E Preferred Shares

On November 7, 2016, we issued \$550 million of 5.50% Series E preferred shares with a liquidation preference of \$2,500 per share (equivalent to \$25 per depositary share). Dividends on the Series E preferred shares are non-cumulative. To the extent declared, dividends accumulate, with respect to each dividend period, in an amount per share equal to 5.50% of the liquidation preference per annum (equivalent to \$137.50 per Series E preferred share and \$1.375 per depositary share). We may redeem these shares on or after November 7, 2021 at a redemption price of \$2,500 per Series E preferred share (equivalent to \$25 per depositary share).

Secured Letter of Credit Facilities

We routinely enter into agreements with financial institutions to obtain secured letter of credit facilities. These facilities are primarily used for the issuance of letters of credit, in the normal course of operations, to certain insurance and reinsurance entities that purchase reinsurance protection from us. These letters of credit allow those operations to take credit, under local insurance regulations, for reinsurance obtained in jurisdictions where AXIS Capital's subsidiaries are not licensed or otherwise admitted as an insurer. The value of our letters of credit outstanding is driven by, among other factors, the amount of unearned premiums, development of loss reserves, the payment patterns of loss reserves, the expansion of our business and the loss experience of that business. A portion of these facilities may also be used for liquidity purposes.

On November 20, 2013, certain of AXIS Capital's operating subsidiaries (the "Participating Subsidiaries") entered into an amendment to extend the term of its secured \$750 million letter of credit facility with Citibank Europe plc ("Citibank") (the "\$750 million Facility").

On March 31, 2015, the Participating Subsidiaries entered into an amendment to reduce the maximum aggregate utilization capacity of the \$750 million Facility to \$500 million (the "\$500 million Facility"). All other material terms and conditions remained unchanged.

On March 27, 2017, the Participating Subsidiaries amended their existing \$500 million Facility to include an additional \$250 million of secured letter of credit capacity (the "\$250 million Facility"). Under the terms of the amended \$750 million Facility, letters of credit to a maximum aggregate amount of \$250 million are available for issuance on behalf of the Participating Subsidiaries once the \$500 million Facility has been fully utilized.

On December 24, 2019, the expiration date of the \$500 million Facility was extended to December 31, 2023.

On March 28, 2020, the expiration date of the \$250 million Facility was extended to March 31, 2021.

On March 31, 2021, the Participating Subsidiaries amended their existing secured \$750 million Facility to extend the expiration date of the \$250 million Facility to March 31, 2022, to reduce the utilization capacity available under the \$250 million Facility to \$150 million, and to make administrative changes to the remaining \$500 million Facility.

At December 31, 2021, letters of credit outstanding were \$356 million (refer to Item 8, Note 10 to the Consolidated Financial Statements '*Debt and Financing Arrangements*' for further details).

Common Equity

During the year ended December 31, 2021, common equity increased by \$115 million. The following table reconciles opening and closing common equity positions:

Year ended December 31,	2021	2020
Common equity - opening	\$ 4,745,694	\$ 4,769,008
Net income (loss)	618,609	(120,424)
Change in unrealized gains on available for sale investments, net of tax	(358,480)	239,114
Share repurchases	(10,242)	(10,382)
Common share dividends	(147,221)	(142,405)
Preferred share dividends	(30,250)	(30,250)
Share-based compensation expense	40,780	35,574
Foreign currency translation adjustment	621	3,571
Other	1,145	1,888
Common equity - closing	\$ 4,860,656	\$ 4,745,694

Share Repurchases

During 2021, we repurchased 205,000 common shares from employees to facilitate the satisfaction of their personal withholding tax liabilities that arise on vesting of share-settled restricted stock units granted under our 2017 Long-Term Equity Compensation Plans for a total cost of \$10 million.

On December 2, 2021, the Company's Board of Directors authorized a new share repurchase plan for up to \$100 million of the Company's common shares through December 31, 2022. The new plan is effective January 1, 2022.

Shelf Registrations

On November 19, 2019, we filed an unallocated universal shelf registration statement with the SEC, which became effective on filing. Pursuant to the shelf registration, we may issue an unlimited amount of equity, debt, warrants, purchase contracts or a combination of these securities. Our intent and ability to issue securities pursuant to this registration statement will depend on market conditions at the time of any proposed offering.

Financial Strength Ratings

Our principal insurance and reinsurance operating subsidiaries are assigned financial strength ratings from internationally recognized rating agencies, including Standard & Poor's, A.M. Best, and Moody's Investors Service. These ratings are publicly announced and are available directly from the agencies, and on our website.

Financial strength ratings represent the opinions of the rating agencies on the overall financial strength of a company and its capacity to meet the obligations of its insurance and reinsurance contracts. Independent ratings are one of the important factors that establish a competitive position in insurance and reinsurance markets. The rating agencies consider many factors in determining the financial strength rating of an insurance company, including the relative level of statutory surplus necessary to support the business operations of the company. These ratings are based on factors considered by the rating agencies to be relevant to policyholders, agents and intermediaries and are not directed toward the protection of investors. Ratings are not recommendations to buy, sell or hold securities.

The following are the most recent financial strength ratings from internationally recognized agencies in relation to our principal insurance and insurance operating subsidiaries:

Rating agency	Agency's description of rating	Rating and outlook	Agency's rating definition	Ranking of rating
Standard & Poor's	An "opinion about the financial security characteristics of an insurance organization, with respect to its ability to pay under its insurance policies and contracts, in accordance with their terms".	A+ (Negative) ⁽¹⁾	"Strong capacity to meet its financial commitments"	The 'A' category is the third highest out of ten major rating categories. The second through eighth major rating categories may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories.
A.M. Best	An "opinion of an insurer's financial strength and ability to meet its ongoing insurance policy and contract obligations".	A (Stable) ⁽²⁾	"Excellent ability to meet ongoing insurance obligations"	The 'A' category is the third highest rating out of fourteen. Ratings outlooks ('Positive', 'Negative' and 'Stable') are assigned to indicate a rating's potential direction over an intermediate term, generally defined as 36 months.
Moody's Investors Service	"Opinions of the ability of insurance companies to pay punctually senior policyholder claims and obligations."	A2 (Negative) ⁽³⁾	"Offers good financial security"	The 'A' category is the third highest out of nine rating categories. Each of the second through seventh categories are subdivided into three subcategories, as indicated by an appended numerical modifier of '1', '2' and '3'. The '1' modifier indicates that the obligation ranks in the higher end of the rating category, the '2' modifier indicates a mid-category ranking and the '3' modifier indicates a ranking in the lower end of the rating category.

(1) On May 11, 2020, Standard & Poor's revised its outlook from stable to negative due to unfavorable trends in operating performance.

(2) On May 5, 2020, A.M. Best revised its rating and outlook from A+ and negative to A and stable, respectively. The revised rating was based on unfavorable trends in operating performance over the past five years, particularly emanating from the insurance segment. The revised outlook continues to reflect our strong balance sheet, favorable business profile and appropriate risk management practices.

(3) In April 2019, Moody's Investor Service revised its outlook from stable to negative reflecting higher operational and financial leverage and lower capitalization relative to peers.

Contractual Obligations and Commitments

At December 31, 2021, contractual obligations and commitments by period due were:

Contractual obligations and commitments	Payment due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating activities					
Estimated gross losses and loss expenses payments ⁽¹⁾	\$ 14,653,094	\$ 3,771,770	\$ 4,943,342	\$ 2,580,024	\$ 3,357,958
Operating lease obligations ⁽²⁾	119,512	18,653	26,176	18,393	56,290
Investing activities					
Unfunded investment commitments ⁽³⁾	700,229	265,910	182,956	120,937	130,426
Financing activities					
Debt (principal payments) ⁽⁴⁾	1,325,000	—	—	—	1,325,000
Debt (interest payments) ⁽⁴⁾⁽⁵⁾	652,050	60,739	121,665	121,934	347,712
Total	\$ 17,449,885	\$ 4,117,072	\$ 5,274,139	\$ 2,841,288	\$ 5,217,386

- (1) We are obligated to pay claims for specified loss events covered by the insurance and reinsurance contracts that we write. Loss payments represent our most significant future payment obligation. In contrast to our other contractual obligations, cash payments are not determinable from the terms specified within the underlying contracts. Our best estimate of reserve for losses and loss expenses is reflected in the table above. Actual amounts and timing may differ materially from our best estimate (refer to '*Critical Accounting Estimates – Reserve for Losses and Loss Expenses*' for further details). We have not taken into account corresponding reinsurance recoverable on unpaid amounts that would be due to us.
- (2) In the ordinary course of business, we renew and enter into new leases for office space which expire at various dates (refer to Item 8, Note 12 to the Consolidated Financial Statements '*Leases*' for further details).
- (3) We have \$649 million of unfunded investment commitments related to our other investments portfolio, which are callable by our investment managers (refer to Item 8, Note 5(c) to the Consolidated Financial Statements '*Investments*' for further details). In addition, we have \$33 million of unfunded commitments related to our commercial mortgage loans portfolio and \$19 million of unfunded commitments related to our corporate debt portfolio.
- (4) Refer to Item 8, Note 10(a) to the Consolidated Financial Statements '*Debt and Financing Arrangements*' for further details.
- (5) Debt (interest payments) includes \$14 million of unamortized discount and debt issuance expenses.

CRITICAL ACCOUNTING ESTIMATES

The consolidated financial statements include certain amounts that are inherently uncertain and judgmental in nature. As a result, we are required to make assumptions and best estimates in order to determine the reported values. We consider an accounting estimate to be critical if: (1) it requires that significant assumptions be made in order to deal with uncertainties and (2) changes in the estimate could have a material impact on our results of operations, financial condition or liquidity.

We believe that the material items requiring such subjective and complex estimates are:

- reserves for losses and loss expenses;
- reinsurance recoverable on unpaid losses and loss expenses, including the allowance for expected credit losses;
- gross premiums written and net premiums earned;
- fair value measurements of financial assets and liabilities; and
- the allowance for credit losses associated with fixed maturities, available for sale.

Significant accounting policies are also important to understanding the consolidated financial statements (refer to Item 8, Note 2 to the Consolidated Financial Statements '*Basis of Presentation and Significant Accounting Policies*' for further details).

We believe that the amounts included in the consolidated financial statements reflect management's best judgment. However, factors such as those described in Item 1A '*Risk Factors*' could cause actual events or results to differ materially from the underlying assumptions and estimates which could lead to a material adverse impact on our results of operations, financial condition or liquidity.

Reserve for Losses and Loss Expenses

Overview

We believe the most significant accounting judgment we make is the estimate of reserve for losses and loss expenses ("loss reserves"). Loss reserves represent management's estimate of the unpaid portion of our ultimate liability for losses and loss expenses ("ultimate losses") for insured and reinsured events that have occurred at or before the balance sheet date. Loss reserves reflect claims that have been reported ("case reserves") to us and claims that have been incurred but not reported ("IBNR") to us. Loss reserves represent our best estimate of what the ultimate settlement and administration of claims will cost, based on our assessment of facts and circumstances known at that particular point in time.

Loss reserves are not an exact calculation of the liability but instead, are complex estimates. The process of estimating loss reserves involves a number of variables (refer to '*Selection of Reported Reserves – Management's Best Estimate*' below for further details). We review estimates of loss reserves each reporting period and consider all significant facts and circumstances known at that particular point in time. As additional experience and other data become available and/or laws and legal interpretations change, we may adjust previous estimates of loss reserves. Adjustments are recognized in the period in which they are determined, therefore they can impact that period's underwriting results either favorably (indicating that current estimates are lower than previous estimates) or adversely (indicating that current estimates are higher than previous estimates).

Case Reserves

With respect to insurance business, we are generally notified of losses by our insureds and/or their brokers. Based on this information, our claims personnel estimate ultimate losses arising from the claim, including the cost of administering the claims settlement process. These estimates reflect the judgment of our claims personnel based on general reserving practices, the experience and knowledge of such personnel regarding the nature of the specific claim and, where appropriate, the advice of legal counsel, loss adjusters and other relevant consultants.

With respect to reinsurance business, we are generally notified of losses by ceding companies and/or their brokers. For excess of loss contracts, we are typically notified of insured losses on specific contracts and record a case reserve for the estimated ultimate liability arising from the claim. For contracts written on a proportional basis, we typically receive aggregated claims information and record a case reserve for the estimated ultimate liability arising from the claim based on that information. Proportional reinsurance contracts typically require that losses in excess of pre-defined amounts be separately notified so we can adequately evaluate them. Our claims department evaluates each specific loss notification we receive and records additional case reserves when a ceding company's reserve for a claim is not considered adequate. We also undertake an extensive program of cedant audits, using outsourced legal and industry experience where necessary. This allows us to review cedants' claims administration practices to ensure that reserves are consistent with exposures, adequately established, and properly reported in a timely manner.

IBNR

The estimation of IBNR is necessary due to potential development on reported claims and the time lag between when a loss event occurs and when it is actually reported, which is referred to as a reporting lag. Reporting lags may arise from a number of factors, including but not limited to, the nature of the loss, the use of intermediaries and complexities in the claims adjusting process. As we do not have specific information on IBNR, it must be estimated. IBNR is calculated by deducting incurred losses (i.e. paid losses and case reserves) from management's best estimate of ultimate losses. In contrast to case reserves, which are established at the contract level, IBNR reserves are generally estimated at an aggregate level and cannot be identified as reserves for a particular loss event or contract (refer to '*Reserving for Significant Catastrophic Events*' below for further details).

Reserving Methodology

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Sources of Information*' for a description of the collection and analysis of data used in our quarterly loss reserving process;

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Actuarial Analysis*' for a description of the reserve estimation methods, Expected Loss Ratio Method ("ELR Method"), Loss Development Method (also referred to as the "Chain Ladder Method" or "Link Ratio Method") and Bornhuetter-Ferguson Method ("BF Method") which are commonly employed by our actuaries together with a discussion of their strengths and weaknesses.

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Key Actuarial Assumptions*' which notes that the most significant assumptions used in our quarterly loss reserving process are expected loss ratios ("ELRs) and loss development patterns and that the weight given to our experience differs for each of the three claim tail classes (refer to '*Claim Tail Analysis*' below for further details).

Claim Tail Analysis

Gross loss reserves for each of the reportable segments, segregated between case reserves and IBNR, by reserve class are shown below:

At December 31,	2021			2020		
	Case reserves	IBNR	Total	Case reserves	IBNR	Total
Insurance segment:						
Property and other	\$ 612,611	\$ 530,369	\$ 1,142,980	\$ 704,107	\$ 642,413	\$ 1,346,520
Marine	258,758	365,472	624,230	221,243	317,869	539,112
Aviation	127,545	38,228	165,773	132,613	38,018	170,631
Credit and political risk ⁽¹⁾	(105,469)	146,175	40,706	8,917	152,134	161,051
Professional lines	1,003,660	2,577,021	3,580,681	801,565	2,279,712	3,081,277
Liability	408,443	1,840,716	2,249,159	376,486	1,635,421	2,011,907
Total Insurance	2,305,548	5,497,981	7,803,529	2,244,931	5,065,567	7,310,498
Reinsurance segment:						
Property and other	1,191,909	1,042,732	2,234,641	1,086,265	1,027,316	2,113,581
Credit and surety	134,616	170,024	304,640	149,778	157,196	306,974
Professional lines	559,204	670,305	1,229,509	516,011	673,082	1,189,093
Motor	737,097	486,978	1,224,075	809,389	540,623	1,350,012
Liability	611,597	1,245,103	1,856,700	525,526	1,131,082	1,656,608
Total Reinsurance	3,234,423	3,615,142	6,849,565	3,086,969	3,529,299	6,616,268
Total	\$ 5,539,971	\$ 9,113,123	\$ 14,653,094	\$ 5,331,900	\$ 8,594,866	\$ 13,926,766

- (1) During 2021, significant gross claims associated with certain political risk contracts were paid in advance of recoveries being received from the corresponding security which resulted in negative case reserves of \$(128) million (2020: \$(15) million) and related negative reinsurance recoverable on unpaid losses and loss expenses of \$(56) million (2020: \$12 million). Refer to *Reserving for Credit and Political Risk Business* below for further details.

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Sources of Information*' for the mapping of our lines of business to reserve classes and expected claim tails.

In order to capture the key dynamics of loss reserve development and potential volatility, reserve classes should be considered according to their potential expected length of loss emergence and settlement, generally referred to as the "tail". We consider our business to consist of three claim tail classes, short-tail, medium-tail and long-tail. Favorable development on prior accident year reserves indicates that current estimates are lower than previous estimates, while adverse development on prior accident year reserves indicates that current estimates are higher than previous estimates. Below is a discussion of the specifics of our loss reserve process as it applies to each claim tail class.

Short-tail Business

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Claim Tail Analysis*' for details of the reserve classes included in short-tail business and the associated key actuarial assumptions.

Although estimates of ultimate losses for short-tail business are inherently more certain than for medium and long-tail business, significant judgment is still required. For example, much of our excess insurance and excess of loss reinsurance business has high attachment points, therefore, it is often difficult to estimate whether claims will exceed those attachment points. In addition, the inherent uncertainties relating to catastrophe events further add to the complexity of estimating potential exposure. Further, we use managing general agents ("MGAs") and other producers for certain business in the insurance segment which can delay the reporting of loss information. We expect the majority of development for an accident year or underwriting year to be recognized in the subsequent one to three years.

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserve for Losses and Loss Expenses – Prior Year Reserve Development*' for a detailed discussion of prior year reserve development by line of business and see further details below.

Medium-tail Business

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Claim Tail Analysis*' for details of the reserve classes included in medium-tail business and the associated key actuarial assumptions.

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserve for Losses and Loss Expenses – Prior Year Reserve Development*' for a detailed discussion of prior year reserve development by line of business.

Refer to '*Reserving for Credit and Political Risk Business*' below for a detailed discussion of specific loss reserve issues related to the credit and political risk line of business.

Long-tail Business

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Claim Tail Analysis*' for details of the reserve classes included in long-tail business and the associated key actuarial assumptions.

Factors that contribute additional uncertainty to estimates for long-tail business include, but are not limited to:

- more significant weight given to industry benchmarks in forming our key actuarial assumptions;
- potential volatility of actuarial estimates, given the number of years of development it takes to produce a meaningful incurred loss as a percentage of ultimate losses;
- inherent uncertainties about loss trends, claims inflation (e.g. medical, judicial, social) and general economic conditions; and
- the possibility of future litigation, legislative or judicial change that may impact future loss experience relative to the prior industry loss experience relied on in reserve estimation.

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserve for Losses and Loss Expenses – Prior Year Reserve Development*' for a detailed discussion of prior year reserve development by line of business and see further details below.

Reserving for Credit and Political Risk Business

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – 'Net incurred and Paid Claims Development Tables by Accident Year – Insurance segment – Insurance Credit and Political Risk'*' for details of the lines of business included in this reserve class and the associated key actuarial assumptions.

An important and distinguishing feature of many of these contracts is the contractual right, subsequent to payment of a claim to an insured, to be subrogated to, or otherwise have an interest in, the insured's rights of recovery under an insured loan or facility agreement. These estimated recoveries are recorded as an offset to credit and political risk gross loss reserves. The lag between the date of a claim payment and the ultimate recovery from the corresponding security can result in negative case reserves at a point in time. During 2021, significant gross claims associated with certain political risk contracts were paid in advance of recoveries being received from the corresponding security which resulted in negative case reserves of \$(128) million (2020: \$(15) million) and related negative reinsurance recoverable on unpaid losses and loss expenses of \$(56) million (2020: \$12 million). Refer to '*Critical Accounting Estimates – Reinsurance Recoverable on Unpaid Losses and Loss Expenses*' for further details.

The nature of the underlying collateral is specific to each transaction therefore we estimate the value of this collateral on a contract-by-contract basis. This valuation process is inherently subjective and involves the application of management's judgment because active markets for the collateral often do not exist. Estimates of values are based on numerous inputs, including information provided by our insureds, as well as third-party sources including rating agencies, asset valuation specialists and other publicly available information. We also assess any post-event circumstances, including restructurings, liquidations and possession of asset proposals/agreements.

In some instances, on becoming aware of a loss event related to credit and political risk business, we negotiate a final settlement of all of our policy liabilities for a fixed amount. In most circumstances, this occurs when the insured moves to realize the benefit of the collateral that underlies the insured loan or facility and presents us with a net settlement proposal that represents a full and final payment by us under the terms of the policy. In consideration for this payment, we secure a cancellation of the policy, or a release of all claims, and waive our right to pursue a recovery of these settlement payments against the collateral that may have been available to us under the insured loan or facility agreement. In certain circumstances, cancellation by way of net settlement or full payment can result in an adjustment to the premium associated with the policy.

Additionally, when we consider prior year reserve development for the credit and political risk line of business, it is important to note that the multi-year nature of this business distorts loss ratios when a single accident year is considered in isolation. In recent years, the average term of these contracts has been four to five years. Premiums for these contracts generally earn evenly over the contract term, therefore, are reflected in multiple accident years. In contrast, losses incurred on these contracts, which can be characterized as low in frequency and high in severity, are reflected in a single accident year.

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserve for Losses and Loss Expenses – Prior Year Reserve Development*' for further details.

Reserving for Significant Catastrophic Events

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Reserving for Significant Catastrophic Events*' for further details.

In addition to those noted in Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Reserving for Significant Catastrophic Events*' there are additional risks that affect our ability to accurately estimate ultimate losses for catastrophic events. For example, the estimates of loss reserves related to hurricanes and earthquakes can be affected by factors including, but not limited to, the inability to access portions of impacted areas, infrastructure disruptions, the complexity of factors contributing to losses, legal and regulatory uncertainties, complexities involved in estimating business interruption losses and additional living expenses, the impact of demand surge, fraud and the limited nature of information available. For hurricanes, additional complex coverage factors may include determining whether damage was caused by flooding or wind, evaluating general liability and pollution exposures, and mold damage. The timing of a catastrophe, for example, near the end of a reporting period, can also affect the level of information available to us to estimate loss reserves for that reporting period.

Results of operations for 2021 were impacted by natural catastrophe activity (refer to '*Underwriting Results – Insurance segment – Current Accident Year Loss Ratio*' and '*Underwriting Results – Reinsurance segment – Current Accident Year Loss Ratio*' for further details).

Selection of Reported Reserves – Management's Best Estimate

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses – Reserving Methodology – Selection of Reported Reserves – Management's Best Estimate*' for further details.

Acquisition of Novae Group plc ("Novae")

With regard to establishing the fair value of reserves for losses and loss expenses for Novae at the acquisition date, weight was given to the observable value of these reserves based on the RITC transaction of the 2015 and prior years of account of Syndicate 2007, 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. This is consistent with our general approach of recognizing all or part of the anticipated cost of third-party liability commutations if the transaction has either completed or is considered sufficiently likely to be completed in the near term.

Independent Actuarial Review

On an annual basis, we use an independent actuarial firm to provide an actuarial opinion on the reasonableness of loss reserves for each of our operating subsidiaries and statutory reporting entities as these actuarial opinions are required to meet various insurance regulatory requirements. The actuarial firm also discusses its conclusions from the annual review with management and presents its findings to the Audit Committee of the Board of Directors.

Sensitivity Analysis

While we believe that loss reserves at December 31, 2021 are adequate, new information, events or circumstances may result in ultimate losses that are materially greater or less than provided for in our loss reserves. As previously noted, there are many factors that may cause reserves to increase or decrease, particularly those related to catastrophe losses and long-tail lines of business.

Expected loss ratios are a key assumption in estimates of ultimate losses for business at an early stage of development. A higher expected loss ratio results in a higher ultimate loss estimate, and vice versa. Assumed loss development patterns are another significant assumption in estimating loss reserves. Accelerating a loss reporting pattern (i.e. shortening the claim tail) results in lower ultimate losses, as the estimated proportion of losses already incurred would be higher. The uncertainty in the timing of the emergence of claims (i.e. the length of the development pattern) is generally greater for a company with a relatively limited operating history, therefore, we rely on industry benchmarks to a certain extent when establishing loss reserve estimates.

The effect on estimates of gross loss reserves of reasonably likely changes in the two key assumptions used to estimate gross loss reserves at December 31, 2021 was as follows:

INSURANCE				
Development pattern	Expected loss ratio			
	Higher Loss Reserves (Lower Loss Reserves)			
<i>Property and other</i>	5% lower	Unchanged	5% higher	
3 months shorter	\$ (90,585)	\$ (51,822)	\$ (42,924)	
Unchanged	(10,383)	—	10,356	
3 months longer	61,130	73,957	87,981	
<i>Marine</i>	5% lower	Unchanged	5% higher	
3 months shorter	\$ (36,363)	\$ (21,821)	\$ (7,211)	
Unchanged	(14,412)	—	15,369	
3 months longer	14,809	29,926	45,336	
<i>Aviation</i>	5% lower	Unchanged	5% higher	
3 months shorter	\$ (7,598)	\$ (6,659)	\$ (5,720)	
Unchanged	(1,272)	—	1,272	
3 months longer	8,235	10,007	11,780	
<i>Credit and political risk</i>	10% lower	Unchanged	10% higher	
6 months shorter	\$ (20,611)	—	\$ 20,611	
Unchanged	(20,611)	—	20,611	
6 months longer	(20,177)	—	20,611	
<i>Professional lines</i>	10% lower	Unchanged	10% higher	
6 months shorter	\$ (363,296)	\$ (161,658)	\$ 46,618	
Unchanged	(207,829)	—	214,430	
6 months longer	18,287	239,411	462,549	
<i>Liability</i>	10% lower	Unchanged	10% higher	
6 months shorter	\$ (187,221)	\$ (41,862)	\$ 103,889	
Unchanged	(143,504)	—	144,452	
6 months longer	(74,598)	64,916	212,119	

REINSURANCE					
Development pattern	Expected loss ratio				
	Higher Loss Reserves (Lower Loss Reserves)				
<i>Property and other</i>		5% lower	Unchanged	5% higher	
3 months shorter	\$ (89,314)	\$ (60,686)	\$ (27,526)		
Unchanged	(33,527)	—	34,132		
3 months longer	23,202	62,581	96,973		
<i>Credit and surety</i>		10% lower	Unchanged	10% higher	
6 months shorter	\$ (28,284)	\$ (11,702)	\$ 5,015		
Unchanged	(17,434)	—	17,282		
6 months longer	2,080	18,401	35,116		
<i>Professional lines</i>		10% lower	Unchanged	10% higher	
6 months shorter	\$ (124,483)	\$ (54,814)	\$ 19,389		
Unchanged	(72,235)	—	73,581		
6 months longer	(9,345)	69,012	144,525		
<i>Motor</i>		10% lower	Unchanged	10% higher	
6 months shorter	\$ (64,540)	\$ (20,517)	\$ 24,900		
Unchanged	(46,005)	—	46,867		
6 months longer	(11,492)	37,098	87,775		
<i>Liability</i>		10% lower	Unchanged	10% higher	
6 months shorter	\$ (210,106)	\$ (72,057)	\$ 74,080		
Unchanged	(138,579)	—	143,393		
6 months longer	(53,967)	84,092	231,478		

The results show the cumulative increase (decrease) in loss reserves across all accident years. For example, if assumed loss development pattern for insurance property and other business was three months shorter with no accompanying change in ELR assumption, loss reserves may decrease by approximately \$52 million. Each of the impacts set forth in the tables is estimated individually, without consideration for any correlation among key assumptions or among reserve classes. Therefore, it would be inappropriate to take each of the amounts and add them together in an attempt to estimate total volatility. Additionally, it is noted that in some instances, for example the projection of catastrophe estimates or credit and political risks, development patterns are not appropriate as more bespoke techniques are used. While we believe the variations in the expected loss ratios and loss development patterns presented could be reasonably expected, our historical loss data regarding variability is generally limited and actual variations may be greater or less than these amounts. It is also important to note that the variations are not meant to be a "best-case" or "worst-case" series of scenarios and, therefore, it is possible that future variations in loss reserves may be more or less than the amounts presented. While we believe that these are reasonably likely scenarios, we do not believe this sensitivity analysis should be considered an actual reserve range.

Reinsurance Recoverable on Unpaid Losses and Loss Expenses

In the normal course of business, we purchase treaty and facultative reinsurance protection to limit ultimate losses from catastrophic events and to reduce loss aggregation risk. To the extent that reinsurers do not meet their obligations under the reinsurance agreements, we remain liable. Consequently, we are exposed to credit risk associated with reinsurance recoverable on unpaid losses and loss expenses ("reinsurance recoverables") to the extent that any of our reinsurers are unable or unwilling to pay claims.

Reinsurance recoverables for each of the reportable segments, segregated between case reserves and IBNR, by reserve class are shown below:

At December 31,	2021			2020		
	Case reserves	IBNR	Total	Case reserves	IBNR	Total
Insurance segment:						
Property and other	\$ 201,279	\$ 216,535	\$ 417,814	\$ 232,796	\$ 275,429	\$ 508,225
Marine	94,078	88,506	182,584	74,065	88,331	162,396
Aviation	55,508	2,559	58,067	60,955	3,297	64,252
Credit and political risk ⁽¹⁾	(53,764)	30,383	(23,381)	7,239	44,428	51,667
Professional lines	436,903	1,057,585	1,494,488	317,600	909,583	1,227,183
Liability	188,705	1,132,764	1,321,469	185,453	997,191	1,182,644
Total Insurance	922,709	2,528,332	3,451,041	878,108	2,318,259	3,196,367
Reinsurance segment:						
Property and other	315,236	268,965	584,201	235,508	261,703	497,211
Credit and surety	22,022	44,943	66,965	29,138	41,005	70,143
Professional lines	67,453	183,888	251,341	58,646	127,599	186,245
Motor	104,500	124,695	229,195	105,793	122,660	228,453
Liability	104,914	329,954	434,868	76,352	241,870	318,222
Total Reinsurance	614,125	952,445	1,566,570	505,437	794,837	1,300,274
Total	\$ 1,536,834	\$ 3,480,777	\$ 5,017,611	\$ 1,383,545	\$ 3,113,096	\$ 4,496,641

(1) During 2021, significant gross claims associated with certain political risk contracts were paid in advance of recoveries being received from the corresponding security which resulted in negative case reserves of \$(128) million (2020: \$(15) million) and related negative reinsurance recoverable on unpaid losses and loss expenses of \$(56) million (2020: \$12 million). Refer to *Critical Accounting Estimates – Reserve for Losses and Loss Expenses – Reserving for Credit and Political Risk Business* for further details.

Refer to Item 8, Note 8 to the Consolidated Financial Statements '*Reserve for Losses and Loss Expenses*' for the mapping of our lines of business to reserve classes and the expected claim tails.

At December 31, 2021, reinsurance recoverables as a percentage of loss reserves was 34% (2020: 32%). At December 31, 2021, reinsurance recoverables that were collectible from reinsurers rated A- or better by A.M Best were 85.7% (2020: 87.6%). Refer to Item 8, Note 11 to the Consolidated Financial Statements '*Commitments and Contingencies*' for an analysis of the credit risk associated with reinsurance recoverables at December 31, 2021.

The recognition of reinsurance recoverables requires two key estimates as follows:

- The first estimate is the amount of loss reserves to be ceded to our reinsurers. This amount consists of amounts related to case reserves and amounts related to IBNR. Refer to Item 8, Note 2 to the Consolidated Financial Statements '*Basis of Presentation and Significant Accounting Policies*' for further details.
- The second estimate is the amount of the reinsurance recoverable balance that we believe ultimately will not be collected from reinsurers. We are selective in choosing reinsurers, buying reinsurance principally from reinsurers with a strong financial condition and industry ratings. The amount we ultimately collect may differ from our estimate due to the ability and willingness of reinsurers to pay claims, which may be negatively impacted by factors such as insolvency, contractual disputes over contract language or coverage and/or other reasons. In addition, economic conditions and/or operational performance of a particular reinsurer may deteriorate, and this could also affect the ability and willingness of a reinsurer to meet their contractual obligations.

Consequently, we review reinsurance recoverables at least quarterly to estimate an allowance for expected credit losses. Refer to Item 8, Note 2 to the Consolidated Financial Statements '*Basis of Presentation and Significant Accounting Policies*' for further details.

At December 31, 2021 the allowance for expected credit losses was \$30 million (2020: \$24 million). We have not written off any significant reinsurance recoverable balances in the last three years.

At December 31, 2021, the use of different assumptions could have a material effect on the allowance for expected credit losses. To the extent the creditworthiness of our reinsurers deteriorates due to an adverse event affecting the reinsurance industry, such as a large number of catastrophes, uncollectible amounts could be significantly greater than the allowance for expected credit losses. Given the various considerations used to estimate the allowance for expected credit losses, we cannot precisely quantify the effect a specific industry event may have on the allowance for expected credit losses.

Gross Premiums Written

Revenues primarily relate to premiums generated by our underwriting operations. The basis for recognizing gross premiums written varies by policy or contract type. Refer to Item 8, Note 2 to the Consolidated Financial Statements '*Basis of Presentation and Significant Accounting Policies*' for further details.

Insurance Segment

For the majority of our insurance business, a fixed premium which is identified in the policy is recorded at the inception of the policy. This premium is adjusted if underlying insured values change. We actively monitor underlying insured values and any adjustments to premiums are recognized in the period in which they are determined. Gross premiums written on a fixed premium basis accounted for 87% and 86% of the segment's gross premiums written for the years ended December 31, 2021 and 2020, respectively. Some of this business is written through MGAs, third parties granted authority to bind risks on our behalf in accordance with our underwriting guidelines. For this business, premiums are recorded based on monthly statements received from MGAs or best estimates based on historical experience.

The remainder of our insurance business is written on a line slip or proportional basis, where we assume an agreed proportion of the premiums and losses of a particular risk or group of risks along with other unrelated insurers. As premiums for this business are not identified in the policy, premiums are recognized at the inception of the policy based on estimates provided by clients through brokers (refer to '*Reinsurance Segment*' below for further details). We review these premium estimates on a quarterly basis and any adjustments to premium estimates are recognized in the period in which they are determined. Gross premiums written on a line slip or proportional basis accounted for 13% and 14% of the segment's gross premiums written for the years ended December 31, 2021 and 2020, respectively.

For the credit and political risk line of business, we write certain policies on a multi-year basis. Premiums in respect of these policies are recorded at the inception of the policy based on management's best estimate of premiums to be received, including assumptions relating to prepayments/refinancing. At December 31, 2021, the average duration of unearned premiums for credit and political risk line of business was 5.2 years (2020: 5.3 years).

Reinsurance Segment

The reinsurance segment provides cover to cedants (i.e. insurance companies) on an excess of loss or on a proportional basis. In most cases, cedants seek protection from us for business that they have not yet written at the time they enter into agreements with us, therefore, cedants must estimate their underlying premiums when purchasing reinsurance cover from us.

Excess of loss reinsurance contracts with cedants typically include minimum or deposit premium provisions. For excess of loss reinsurance contracts, minimum or deposit premiums are generally considered to be the best estimate of premiums at the inception of the contract. The minimum or deposit premium is normally adjusted at the end of the contract period to reflect changes in the underlying risks in force during the contract period. Any adjustments to minimum or deposit premiums are recognized in the period in which they are determined. Gross premiums written for excess of loss reinsurance contracts accounted for 49% and 52% of the reinsurance segment's gross premiums written for the years ended December 31, 2021 and 2020, respectively.

Many of our excess of loss reinsurance contracts also include provisions for automatic reinstatement of coverage in the event of a loss. In a year of significant loss events, reinstatement premiums will be higher than in a year in which there are no large loss events. Refer to Item 8, Note 2 to the Consolidated Financial Statements '*Basis of Presentation and Significant Accounting Policies*' and '*Critical Accounting Estimates – Reserve for Losses and Loss Expenses*' above for further details.

For proportional reinsurance contracts, premiums are recognized at the inception of the contract based on estimates received from ceding companies. We review these premium estimates on a quarterly basis and evaluate their reasonability in light of premiums reported by cedants. Factors contributing to changes in initial premium estimates may include:

- changes in renewal rates or rates of new business accepted by cedants (changes could result from changes in the relevant insurance market that could affect more than one of our cedants or could be a consequence of changes in the marketing strategy or risk appetite of an individual cedant);
- changes in underlying exposure values; and/or
- changes in rates being charged by cedants.

As a result of this review process, any adjustments to premium estimates are recognized in the period in which they are determined. Changes in premium estimates could be material to gross premiums written in the period. Changes in premium estimates could be also material to net premiums earned in the period in which they are determined as any adjustment may be substantially or fully earned. Gross premiums written for proportional reinsurance contracts, including adjustments to premium estimates established in prior years, accounted for 51% and 48% of the reinsurance segment's gross premiums written for the years ended December 31, 2021 and 2020, respectively.

Gross premiums written for proportional reinsurance contracts incepting during the year were as follows:

Year ended December 31,	2021	2020	2019
Catastrophe	\$ 12,733	\$ 13,863	\$ 17,149
Property	117,397	135,312	184,552
Credit and surety	93,638	91,940	162,948
Professional lines	205,305	156,643	159,234
Motor	187,569	228,754	194,871
Liability	383,232	265,358	251,515
Engineering	—	15,472	51,052
Agriculture	72,897	52,682	194,379
Accident and health	302,520	300,646	335,538
Marine and Aviation	23,912	19,065	22,697
Total estimated premiums	\$ 1,399,203	\$ 1,279,735	\$ 1,573,935
Gross premiums written (reinsurance segment)	\$ 2,822,752	\$ 2,808,539	\$ 3,222,927
As a % of total gross premiums written	50 %	46 %	49 %

Historical experience has shown that cumulative adjustments to initial premium estimates for proportional reinsurance contracts have ranged from 0% to 5% over the last 5 years. Giving more weight to recent years where premium volume was comparable to current levels, we believe that a reasonably likely change to 2021 initial premium estimates for proportional reinsurance contracts would be 3% in either direction. A change in initial premium estimates of this magnitude would result in a change in gross premiums written of approximately \$44 million. A change in initial premium estimates of this magnitude would not have a material impact on pre-tax net income, after considering current losses and loss expenses ratios. However, larger variations, positive or negative, are possible.

Net Premiums Earned

Premiums are earned evenly over the period during which we are exposed to the underlying risk. Changes in circumstances subsequent to the inception of contracts can impact the earning periods. For example, when exposure limits for a contract are reached, any associated unearned premiums are fully earned. This can have a significant impact on net premiums earned, particularly for multi-year contracts such as those in the credit and political risk line of business.

Fixed premium insurance policies and excess of loss reinsurance contracts are generally written on a "losses occurring" or "claims made" basis over the term of the contract. Consequently, premiums are earned evenly over the contract term, which is generally 12 months.

Line slip or proportional insurance policies and proportional reinsurance contracts are generally written on a "risks attaching" basis, covering claims that relate to the underlying policies written during the terms of these contracts. As the underlying business incepts throughout the contract term which is typically one year, and the underlying business typically has a one year coverage period, these premiums are generally earned evenly over a 24-month period.

Fair Value Measurements of Financial Assets and Liabilities

Fair value is defined as the price to sell an asset or transfer a liability (i.e. the "exit price") in an orderly transaction between market participants. Refer to Item 8, Note 6 to the Consolidated Financial Statements '*Fair Value Measurements*' for information on the valuation techniques including significant inputs and assumptions generally used in estimating the fair values of our financial instruments.

Fixed Maturities and Equity Securities

At December 31, 2021, the fair values of 94% (2020: 95%) of total fixed maturities and equity securities were based on prices provided by globally recognized independent pricing services where we have a current and detailed understanding of how their prices were derived. The remaining securities were priced by either non-binding broker quotes or internal valuation models.

Generally, we obtain quotes directly from broker-dealers who are active in the corresponding markets when prices are unavailable from independent pricing services. This may also be the case if the pricing from pricing services is not reflective of current market levels, as detected by our pricing control tolerance procedures. Generally, broker-dealers value securities through their trading desks based on observable market inputs. Their pricing methodologies include mapping securities based on trade data, bids or offers, observed spreads and performance on newly issued securities. They may also establish pricing through observing secondary trading of similar securities.

At December 31, 2021 and 2020, we did not adjust any pricing provided by independent pricing services.

Management Pricing Validation

While we obtain pricing from pricing services and/or broker-dealers, management is ultimately responsible for determining the fair value measurements of all securities. To ensure fair value measurement is applied consistently and in accordance with U.S. GAAP, annually, we update our understanding of the pricing methodologies used by the pricing services and broker-dealers.

We also challenge any prices we believe may not be representative of fair value under current market conditions. Our review process includes, but is not limited to:

- initial and ongoing evaluation of the pricing methodologies and valuation models used by outside parties to calculate fair value;
- quantitative analysis;
- a review of multiple quotes obtained in the pricing process and the range of resulting fair values for each security, if available; and
- randomly selecting purchased or sold securities and comparing the executed prices to the fair value estimates provided by the independent pricing sources and broker-dealers.

Other Investments

Hedge Funds, Direct Lending Funds, Private Equity Funds and Real Estate Funds

The fair values of hedge funds, direct lending funds, private equity funds and real estate funds are estimated using net asset values (NAVs) as advised by external fund managers or third-party administrators. At December 31, 2021, the estimated fair value of our investments in these funds was \$838 million (2020: \$708 million). Refer to Item 8, Note 6 to the Consolidated Financial Statements '*Fair Value Measurements*' for further details.

CLO-Equity Securities

CLO-Equities, is estimated using a discounted cash flow model prepared by an external investment manager. At December 31, 2021, the estimated fair value of our indirect investment in CLO-Equities was \$6 million (2020: \$6 million). Refer to Item 8, Note 6 to the Consolidated Financial Statements '*Fair Value Measurements*' for further details.

Other Privately Held Investments

Other privately held investments include convertible preferred shares, common shares, convertible notes, investments in limited partnership and a variable yield security. These investments are initially valued at cost which approximates fair value. In subsequent measurement periods, the fair values of these investments are generally based on transaction prices from capital raises, capital statements obtained from each investee or by applying a multiplier to investee company earnings. In 2021, the fair value of the variable yield security was determined using an externally developed discounted cash flow model. At December 31, 2021, the estimated fair value of these investments was \$105 million (2020: \$70 million). Refer to Item 8, Note 6 to the Consolidated Financial Statements '*Fair Value Measurements*' for further details.

Overseas Deposits

Refer to Item 8, Note 6 to the Consolidated Financial Statements '*Fair Value Measurements*' for further details.

Impairment Losses and the Allowance for Expected Credit Losses - Fixed Maturities, Available for Sale

Fixed maturities classified as available for sale are reported at fair value at the balance sheet date and are presented net of an allowance for expected credit losses. Our available for sale ("AFS") investment portfolio is the largest component of consolidated total assets and it is a multiple of shareholders' equity. As a result, impairment losses could be material to our results of operations and financial condition particularly during periods of dislocation in financial markets.

Fixed maturities, available for sale are impaired if the fair value of the investment is below amortized cost. On a quarterly basis, the Company evaluates all fixed maturities, available for sale for impairment losses.

Details regarding our processes for the identification of impairments of fixed maturities, available for sale following the adoption of ASU 2016-13, "Financial Instruments - Credit Losses (Topic 326) - *Measurement of Credit Losses on Financial Instruments*," on January 1, 2020 and the recognition of the related impairment losses are disclosed in Item 8, Note 2 to the Consolidated Financial Statements '*Basis of Presentation and Significant Accounting Policies*'.

In addition, the methodologies and significant inputs used to estimate the allowance for expected credit losses are disclosed in Item 8, Note 5 (f) to the Consolidated Financial Statements '*Investments*'.

During 2021, we recorded an allowance for expected credit losses of \$0.3 million (2020: \$0.3 million) and an impairment loss of \$nil (2020: \$1.5 million) (refer to '*Net Investment Income* and *Net Investment Gains (Losses)*' for further details). The allowance for expected credit loss is charged to net income (loss) and is included in net investment gains (losses) in the consolidated statements of operations.

Intent or Requirement to Sell

From time to time, we may sell fixed maturities, available for sale subsequent to the balance sheet date that we did not intend to sell at the balance sheet date. Conversely, we may not sell fixed maturities, available for sale that we intended to sell at the balance sheet date. These changes in intent may arise due to events occurring subsequent to the balance sheet date. The types of events that may result in a change in intent include, but are not limited to, significant changes in the economic facts and circumstances related to the specific issuer, changes in liquidity needs, or changes in tax laws or the regulatory environment.

U.S. Treasury Securities and Other Highly Rated Debt Instruments

Our credit impairment review process excludes fixed maturities, available for sale guaranteed, either explicitly or implicitly, by the U.S. government and its agencies (*U.S. Government, U.S. Agency and U.S. Agency RMBS*) because we anticipate these securities will not be settled below amortized cost. These securities are evaluated for intent or requirement to sell at a loss.

RECENT ACCOUNTING PRONOUNCEMENTS

At December 31, 2021, there were no recently issued accounting pronouncements that we have not yet adopted that we expect could have a material impact on our results of operations, financial condition or liquidity.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT 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 currency exchange rates (refer to Item 1 '*Risk and Capital Management*' for further details).

We own a substantial amount of assets whose fair values are subject to market risks.

At December 31, 2021 97% (2020: 100%) our fixed maturities are classified as available for sale, therefore changes in fair values caused by changes in interest rates and foreign currency exchange rates have an immediate impact on other comprehensive income, total shareholders' equity and book value per common share but do not have an immediate impact on net income. Changes in these market risks impact net income when, and if, securities are sold, or an impairment charge or an allowance for expected credit losses is recorded.

Equity securities are reported at fair value, with changes in fair values recognized in net income.

At December 31, 2021 and 2020, we also invested in alternative investments including hedge funds, direct lending funds, private equity funds, real estate funds, CLO-Equities, other privately held investments and overseas deposits. These investments are also exposed to market risks, with the changes in fair values immediately reported in net income.

Sensitivity Analysis

The following is a sensitivity analysis of our primary market risk exposures at December 31, 2021 and 2020.

Our policies to address these risks in 2021 were not materially different from 2020. We do not currently anticipate significant changes in our primary market risk exposures or in how those exposures are managed in future reporting periods based on what is known or expected to be in effect in future reporting periods.

Interest Rate and Credit Spread Risk

Interest rate risk includes fluctuations in interest rates and credit spreads that have a direct impact on the fair values of fixed maturities. As interest rates rise and credit spreads widen, the fair value of fixed maturities falls.

We monitor sensitivity to interest rate and credit spread changes by revaluing fixed maturities using a variety of different interest rates (inclusive of credit spreads). We use duration and convexity at the security level to estimate the change in fair value that would result from a change in each security's yield. Duration measures the price sensitivity of an asset to changes in yield rates. Convexity measures how the duration of the security changes with interest rates. The duration and convexity analysis take into account changes in prepayment expectations for MBS and ABS. The analysis is performed at the security level and aggregated to the asset category levels.

The following table presents the estimated pre-tax impact on the fair value of fixed maturities classified as available for sale due to an instantaneous increase in the U.S. yield curve of 100 basis points and an additional 100 basis point credit spread widening for corporate debt, non-agency residential and commercial MBS, ABS and municipal bond securities.

	Potential adverse change in fair value			
	Fair value	Increase in interest rate by 100 basis points	Widening of credit spreads by 100 basis points	Total
<u>At December 31, 2021</u>				
U.S. government and agency	\$ 2,682,448	\$ (85,129)	\$ —	\$ (85,129)
Non-U.S. government	795,178	(22,607)	—	(22,607)
Agency RMBS	1,074,589	(47,406)	—	(47,406)
<i>Securities exposed to credit spreads:</i>				
Corporate debt	4,495,312	(163,656)	(172,830)	(336,486)
CMBS	1,248,191	(38,536)	(49,568)	(88,104)
Non-agency RMBS	186,164	(3,927)	(5,036)	(8,963)
ABS	1,622,480	(14,552)	(62,633)	(77,185)
Municipals	208,838	(8,941)	(9,593)	(18,534)
	<u>\$ 12,313,200</u>	<u>\$ (384,754)</u>	<u>\$ (299,660)</u>	<u>\$ (684,414)</u>
<u>At December 31, 2020</u>				
U.S. government and agency	\$ 1,918,699	\$ (67,495)	\$ —	\$ (67,495)
Non-U.S. government	671,273	(23,491)	—	(23,491)
Agency RMBS	1,286,209	(41,345)	—	(41,345)
<i>Securities exposed to credit spreads:</i>				
Corporate debt	4,655,951	(169,961)	(174,114)	(344,075)
CMBS	1,353,587	(64,430)	(68,978)	(133,408)
Non-agency RMBS	140,104	(2,137)	(4,022)	(6,159)
ABS	1,720,078	(15,460)	(53,007)	(68,467)
Municipals	295,898	(15,314)	(15,375)	(30,689)
	<u>\$ 12,041,799</u>	<u>\$ (399,633)</u>	<u>\$ (315,496)</u>	<u>\$ (715,129)</u>

U.S. government agencies have a limited range of spread widening, therefore, 100 basis points of spread widening for these securities is highly improbable in normal market conditions. Our non-U.S. government debt obligations are highly-rated and we believe the potential for future widening of credit spreads would also be limited for these securities. Certain of our holdings in non-agency RMBS and ABS have floating interest rates, which mitigate interest rate risk exposure.

The above sensitivity analysis reflects our view of changes that are reasonably possible over a one-year period. Note this should not be construed as our prediction of future market events, but rather an illustration of the impact of such events.

In addition, our investment in bond mutual funds is exposed to interest rate risk, however, this exposure is largely mitigated by the short duration of the underlying securities.

Our investment in CLO-Equities is also exposed to interest rate risk, but an increase in the risk free yield curve of 100 basis points would have an insignificant impact on its fair value.

Equity Price Risk

Our portfolio of equity securities, excluding the bond mutual funds, has exposure to equity price risk. This risk is defined as the potential loss in fair value resulting from adverse changes in stock prices. The global equity portfolio is managed to a benchmark composite index, which consists of a blend of the S&P 500 and MSCI World indices. Changes in the underlying indices have a corresponding impact on the overall portfolio. At December 31, 2021, the fair value of equity securities was

\$338 million (2020: \$241 million). At December 31, 2021, the impact of a 20% decline in the overall market prices of our equity exposures would be \$68 million (2020: \$48 million), on a pre-tax basis.

Our investment in hedge funds has significant exposure to equity strategies with net long positions. At December 31, 2021, the fair value of hedge funds was \$59 million (2020: \$147 million). At December 31, 2021, the impact of an instantaneous 15% decline in the fair value of our investment in hedge funds would be \$9 million (2020: \$22 million), on a pre-tax basis.

Foreign Currency Risk

The following table presents a sensitivity analysis of total net foreign currency exposures.

	AUD	NZD	CAD	EUR	GBP	JPY	Other	Total
At December 31, 2021								
Net managed assets (liabilities), excluding derivatives	\$ 34,315	\$ 8,565	\$ 270,300	\$ (528,430)	\$ (333,144)	\$ (72,230)	\$ (14,221)	\$ (634,845)
Foreign currency derivatives, net	(6,549)	(1,713)	(260,890)	476,603	332,251	83,152	524	623,378
Net managed foreign currency exposure	27,766	6,852	9,410	(51,827)	(893)	10,922	(13,697)	(11,467)
Other net foreign currency exposure	1	—	141	(699)	(1,374)	—	33,867	31,936
Total net foreign currency exposure	\$ 27,767	\$ 6,852	\$ 9,551	\$ (52,526)	\$ (2,267)	\$ 10,922	\$ 20,170	\$ 20,469
Net foreign currency exposure as a percentage of total shareholders' equity	0.5%	0.1%	0.2%	(1.0%)	—%	0.2%	0.4%	0.4%
Pre-tax impact of net foreign currency exposure on shareholders' equity given a hypothetical 10% rate movement ⁽¹⁾	\$ 2,777	\$ 685	\$ 955	\$ (5,253)	\$ (227)	\$ 1,092	\$ 2,017	\$ 2,047
At December 31, 2020								
Net managed assets (liabilities), excluding derivatives	\$ 7,100	\$ 2,067	\$ 231,382	\$ (527,046)	\$ (412,049)	\$ (125,523)	\$ 70,496	\$ (753,573)
Foreign currency derivatives, net	(769)	5,752	(205,005)	466,006	329,055	122,459	9,097	726,595
Net managed foreign currency exposure	6,331	7,819	26,377	(61,040)	(82,994)	(3,064)	79,593	(26,978)
Other net foreign currency exposure	1	—	118	(2,369)	(1,245)	—	38,631	35,136
Total net foreign currency exposure	\$ 6,332	\$ 7,819	\$ 26,495	\$ (63,409)	\$ (84,239)	\$ (3,064)	\$ 118,224	\$ 8,158
Net foreign currency exposure as a percentage of total shareholders' equity	0.1%	0.1%	0.5%	(1.2%)	(1.6%)	(0.1%)	2.2%	0.2%
Pre-tax impact of net foreign currency exposure on shareholders' equity given a hypothetical 10% rate movement ⁽¹⁾	\$ 633	\$ 782	\$ 2,650	\$ (6,341)	\$ (8,424)	\$ (306)	\$ 11,822	\$ 816

(1) Assumes 10% appreciation in underlying currencies relative to the U.S. dollar.

Net Managed Foreign Currency Exposure

Our net managed foreign currency exposure is subject to internal risk tolerance standards. For significant foreign currency exposures, defined as those where net asset/liability position exceeds the greater of 1% of total shareholders' equity or \$54 million the value of assets denominated in those currencies should fall within a range of 90 - 110% of liabilities denominated in the same currency. In addition, aggregate foreign currency exposure is subject to the same tolerance range. We may use derivative instruments to maintain net managed foreign currency exposures within our risk tolerance levels.

Other Net Foreign Currency Exposure

Other net foreign currency exposure includes those assets managed by specific investment managers who have the discretion to hold foreign currency exposures as part of their total return strategy. At December 31, 2021, other net foreign currency exposure primarily consisted of our emerging market debt securities portfolio.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of AXIS Capital Holdings Limited

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of AXIS Capital Holdings Limited and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income, changes in shareholders' equity, and cash flows, for each of the three years in the period ended December 31, 2021, and the related notes and the schedules listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 25, 2022 expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Reserve for losses and loss expenses - Refer to Notes 2 and 8 to the consolidated financial statements

Critical Audit Matter Description

The Company's estimate of loss and loss expense reserves is derived using expected trends in claim severity and frequency and other factors that may vary significantly as claims are settled. The estimate is sensitive to significant assumptions, including the initial expected loss ratio and loss development factors. The estimate is also sensitive to the selection of actuarial methods and weighting of these methods applied to project the ultimate losses, the estimation of ultimate reserves associated with catastrophic events, and other factors. Further, not all catastrophic events can be modeled using traditional actuarial methodologies, which increases the degree of judgment needed in estimating loss reserves for such events.

Auditing the Company's methods, assumptions and best estimate of the cost of the ultimate settlement and administration of claims represented by the incurred but not reported ("IBNR") claims included in recorded loss and loss adjustment reserves involved especially subjective auditor judgment and an increased extent of effort, including the involvement of our actuarial specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to reserves for losses and loss expenses included the following, among others:

- We tested the effectiveness of controls over the valuation of the recorded loss and loss expense reserves, including the review and approval process that management has in place for significant actuarial methods and assumptions used and the approval of management's best estimate of loss and loss expense reserves.
- We tested the completeness and accuracy of the underlying data that served as the basis for the Company's actuarial analysis, including historical claims data, to test the reasonableness of key inputs to the actuarial estimate.
- With the assistance of our actuarial specialists:
 - We independently developed an estimate of the reserves for selected classes of business, compared our estimates to those booked by the Company, and evaluated the differences.
 - We evaluated the Company's methodologies against recognized actuarial practices for the remaining classes. We also evaluated the assumptions used by the Company using our industry knowledge and experience and other analytical procedures.
 - We compared the results of the reserve study prepared by third party actuaries to management's best estimate and evaluated the differences.

/s/ Deloitte Ltd.

Hamilton, Bermuda

February 25, 2022

We have served as the Company's auditor since 2001.

AXIS CAPITAL HOLDINGS LIMITED
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2021 AND 2020

	2021	2020
	(in thousands)	
Assets		
Investments:		
Fixed maturities, available for sale, at fair value (Amortized cost 2021: \$12,241,782; 2020: \$11,566,930 Allowance for expected credit losses 2021: \$313; 2020: \$323)	\$ 12,313,200	\$ 12,041,799
Fixed maturities, held to maturity, at amortized cost (Fair value 2021: \$445,033 Allowance for expected credit losses 2021: \$nil)	446,016	—
Equity securities, at fair value (Cost 2021: \$528,864; 2020: \$421,744)	655,675	518,445
Mortgage loans, held for investment, at fair value (Allowance for expected credit losses 2021: \$nil; 2020: \$nil)	594,088	593,290
Other investments, at fair value	947,982	829,156
Equity method investments	146,293	114,209
Short-term investments, at fair value	31,063	161,897
Total investments	15,134,317	14,258,796
Cash and cash equivalents	844,592	902,831
Restricted cash and cash equivalents	473,098	600,401
Accrued interest receivable	64,350	65,020
Insurance and reinsurance premium balances receivable (Allowance for expected credit losses 2021: \$7,567; 2020: \$8,836)	2,622,676	2,738,342
Reinsurance recoverable on unpaid losses and loss expenses (Allowance for expected credit losses 2021: \$29,554; 2020: \$23,711)	5,017,611	4,496,641
Reinsurance recoverable on paid losses and loss expenses	642,215	434,201
Deferred acquisition costs	465,593	431,439
Prepaid reinsurance premiums	1,377,358	1,194,455
Receivable for investments sold	4,555	2,150
Goodwill	100,801	100,801
Intangible assets	208,717	219,633
Value of business acquired	—	3,854
Operating lease right-of-use assets	103,295	123,579
Other assets	309,792	305,544
Total assets	\$ 27,368,970	\$ 25,877,687
Liabilities		
Reserve for losses and loss expenses	\$ 14,653,094	\$ 13,926,766
Unearned premiums	4,090,676	3,685,886
Insurance and reinsurance balances payable	1,324,620	1,092,042
Debt	1,310,975	1,309,695
Payable for investments purchased	31,543	104,777
Operating lease liabilities	119,512	140,263
Other liabilities	427,894	322,564
Total liabilities	\$ 21,958,314	20,581,993
Commitments and Contingencies		
Shareholders' equity		
Preferred shares	\$ 550,000	\$ 550,000
Common shares (shares issued 2021: 176,580; 2020: 176,580 shares outstanding 2021: 84,774; 2020: 84,353)	2,206	2,206
Additional paid-in capital	2,346,179	2,330,054
Accumulated other comprehensive income	56,536	414,395
Retained earnings	6,204,745	5,763,607
Treasury shares, at cost (2021: 91,806; 2020: 92,227)	(3,749,010)	(3,764,568)
Total shareholders' equity	\$ 5,410,656	\$ 5,295,694
Total liabilities and shareholders' equity	\$ 27,368,970	\$ 25,877,687

See accompanying notes to Consolidated Financial Statements.

AXIS CAPITAL HOLDINGS LIMITED
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2021, 2020, AND 2019

	2021	2020	2019
	(in thousands, except for per share amounts)		
Revenues			
Net premiums earned	\$ 4,709,850	\$ 4,371,309	\$ 4,587,178
Net investment income	454,301	349,601	478,572
Other insurance related income (loss)	23,295	(8,089)	16,444
Net investment gains:			
Allowance for expected credit losses	11	(323)	—
Impairment losses	(22)	(1,486)	—
Other-than-temporary impairment ("OTTI") losses	—	—	(6,984)
Other realized and unrealized investment gains	134,290	130,942	98,217
Total net investment gains	134,279	129,133	91,233
Total revenues	5,321,725	4,841,954	5,173,427
Expenses			
Net losses and loss expenses	3,008,783	3,281,252	3,044,798
Acquisition costs	921,834	929,517	1,024,582
General and administrative expenses	663,304	579,790	634,831
Foreign exchange losses (gains)	315	81,069	(12,041)
Interest expense and financing costs	62,302	75,049	68,107
Reorganization expenses	—	7,881	37,384
Amortization of value of business acquired	3,854	5,139	26,722
Amortization of intangible assets	12,424	11,390	11,597
Total expenses	4,672,816	4,971,087	4,835,980
Income (loss) before income taxes and interest in income (loss) of equity method investments			
Income tax (expense) benefit	(62,384)	12,321	(23,692)
Interest in income (loss) of equity method investments	32,084	(3,612)	9,718
Net income (loss)	618,609	(120,424)	323,473
Preferred share dividends	30,250	30,250	41,112
Net income (loss) available (attributable) to common shareholders	\$ 588,359	\$ (150,674)	\$ 282,361
Per share data			
Earnings (loss) per common share:			
Earnings (loss) per common share	\$ 6.95	\$ (1.79)	\$ 3.37
Earnings (loss) per diluted common share	\$ 6.90	\$ (1.79)	\$ 3.34
Weighted average common shares outstanding	84,707	84,262	83,894
Weighted average diluted common shares outstanding	85,291	84,262	84,473

See accompanying notes to Consolidated Financial Statements.

AXIS CAPITAL HOLDINGS LIMITED
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
FOR THE YEARS ENDED DECEMBER 31, 2021, 2020, AND 2019

	2021	2020	2019
	(in thousands)		
Net income (loss)	\$ 618,609	\$ (120,424)	\$ 323,473
Other comprehensive income (loss), net of tax:			
Available for sale investments:			
Unrealized gains (losses) arising during the year for which an allowance for expected credit losses has not been recognized	(271,447)	317,166	374,615
Unrealized gains (losses) arising during the year for which an allowance for expected credit losses has been recognized	81	(40)	—
Adjustment for reclassification of net realized (gains) losses, impairment losses and OTTI losses recognized in net income (loss)	(87,114)	(78,012)	(24,729)
Unrealized gains (losses) arising during the year, net of reclassification adjustment	(358,480)	239,114	349,886
Foreign currency translation adjustment	621	3,571	(1,066)
Total other comprehensive income (loss), net of tax	(357,859)	242,685	348,820
Comprehensive income	\$ 260,750	\$ 122,261	\$ 672,293

See accompanying notes to Consolidated Financial Statements.

AXIS CAPITAL HOLDINGS LIMITED
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2021, 2020, AND 2019

	2021	2020 (in thousands)	2019
Preferred shares			
Balance at beginning of year	\$ 550,000	\$ 775,000	\$ 775,000
Shares repurchased	—	(225,000)	—
Balance at end of year	550,000	550,000	775,000
Common shares (par value)			
Balance at beginning and end of year	2,206	2,206	2,206
Additional paid-in capital			
Balance at beginning of year	2,330,054	2,317,212	2,308,583
Treasury shares reissued	(24,655)	(22,732)	(21,046)
Share-based compensation expense	40,780	35,574	29,675
Balance at end of year	2,346,179	2,330,054	2,317,212
Accumulated other comprehensive income (loss)			
Balance at beginning of year	414,395	171,710	(177,110)
Unrealized gains (losses) on available for sale investments, net of tax:			
Balance at beginning of year	420,635	181,521	(168,365)
Unrealized gains (losses) arising during the year, net of reclassification adjustment	(358,480)	239,114	349,886
Balance at end of year	62,155	420,635	181,521
Cumulative foreign currency translation adjustments, net of tax:			
Balance at beginning of year	(6,240)	(9,811)	(8,745)
Foreign currency translation adjustment	621	3,571	(1,066)
Balance at end of year	(5,619)	(6,240)	(9,811)
Balance at end of year	56,536	414,395	171,710
Retained earnings			
Balance at beginning of year	5,763,607	6,056,686	5,912,812
Net income (loss)	618,609	(120,424)	323,473
Preferred share dividends ⁽¹⁾	(30,250)	(30,250)	(41,112)
Common share dividends ⁽¹⁾	(147,221)	(142,405)	(138,487)
Balance at end of year	6,204,745	5,763,607	6,056,686
Treasury shares, at cost			
Balance at beginning of year	(3,764,568)	(3,778,806)	(3,791,420)
Shares repurchased	(10,242)	(10,382)	(10,165)
Shares reissued	25,800	24,620	22,779
Balance at end of year	(3,749,010)	(3,764,568)	(3,778,806)
Total shareholders' equity	\$ 5,410,656	\$ 5,295,694	\$ 5,544,008

(1) Refer to Note 14 'Shareholders' Equity' for details on dividends declared and paid related to the Company's common and preferred shares.

AXIS CAPITAL HOLDINGS LIMITED
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2021, 2020, AND 2019

	2021	2020 (in thousands)	2019
Cash flows from operating activities:			
Net income (loss)	\$ 618,609	\$ (120,424)	\$ 323,473
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Net investment gains	(134,279)	(129,133)	(91,233)
Net realized and unrealized gains on other investments	(180,329)	(16,059)	(60,038)
Amortization of fixed maturities	35,839	32,893	18,499
Interest in (income) loss of equity method investments	(32,084)	3,612	(9,718)
Amortization of value of business acquired	3,854	5,139	26,722
Other amortization and depreciation	66,977	65,797	75,229
Share-based compensation expense, net of cash payments	37,744	29,005	32,491
Non-cash foreign exchange gains	—	—	(6,043)
<i>Changes in:</i>			
Accrued interest receivable	633	13,097	2,140
Reinsurance recoverable on unpaid losses and loss expenses	(527,362)	(618,040)	(359,543)
Reinsurance recoverable on paid losses and loss expenses	(207,429)	(105,820)	(52,533)
Deferred acquisition costs	(34,386)	60,828	74,331
Prepaid reinsurance premiums	(185,646)	(94,122)	(88,789)
Reserve for losses and loss expenses	737,342	1,178,292	467,428
Unearned premiums	409,858	62,999	(7,958)
Insurance and reinsurance balances, net	349,502	72,503	(51,075)
Other items	155,979	(97,064)	(94,379)
Net cash provided by operating activities	1,114,822	343,503	199,004
Cash flows from investing activities:			
Purchases of:			
Fixed maturities, available for sale	(12,133,755)	(10,494,198)	(9,994,025)
Fixed maturities, held to maturity	(196,775)	—	—
Equity securities	(137,247)	(117,883)	(58,022)
Mortgage loans	(145,832)	(199,259)	(194,020)
Other investments	(263,712)	(166,602)	(218,178)
Short-term investments	(159,056)	(365,170)	(179,230)
Proceeds from the sale of:			
Fixed maturities, available for sale	9,203,241	9,784,137	8,018,658
Equity securities	24,862	119,381	36,016
Other investments	324,810	166,976	249,129
Short-term investments	177,672	171,976	266,057
Proceeds from redemption of fixed maturities, available for sale	1,817,482	1,526,396	1,282,796
Proceeds from redemption of fixed maturities, held to maturity	155,809	—	—
Proceeds from redemption of short-term investments	111,417	69,707	19,366
Proceeds from the repayment of mortgage loans	145,621	39,121	60,244
Purchase of other assets	(38,732)	(44,661)	(63,106)
Net cash provided by (used in) investing activities	(1,114,195)	489,921	(774,315)
Cash flows from financing activities:			
Net proceeds from issuance of senior notes	—	—	717,509
Redemption of senior notes	—	(500,000)	(250,000)
Repurchase of preferred shares	—	(225,000)	—
Taxes paid on withholding shares	(10,242)	(10,382)	(10,165)
Dividends paid - common shares	(145,603)	(141,590)	(137,209)
Dividends paid - preferred shares	(30,250)	(31,831)	(42,625)
Net cash provided by (used in) financing activities	(186,095)	(908,803)	277,510
Effect of exchange rate changes on foreign currency cash, cash equivalents and restricted cash	(74)	2,154	44,238
Decrease in cash, cash equivalents and restricted cash	(185,542)	(73,225)	(253,563)
Cash, cash equivalents and restricted cash - beginning of year	1,503,232	1,576,457	1,830,020
Cash, cash equivalents and restricted cash - end of year	\$ 1,317,690	\$ 1,503,232	\$ 1,576,457

See accompanying notes to Consolidated Financial Statements.

AXIS CAPITAL HOLDINGS LIMITED
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)
FOR THE YEARS ENDED DECEMBER 31, 2021, 2020, AND 2019

Supplemental disclosures of cash flow information:

Income taxes paid	\$ 45,083	\$ 4,414	\$ 39,949
Interest paid	\$ 59,400	\$ 54,108	\$ 59,563

Supplemental disclosures of cash flow information:

In 2021, the transfer of securities with a fair value of \$405 million from fixed maturities, available for sale to fixed maturities, held to maturity was treated as a non-cash activity in the consolidated statement of cash flows (refer to Note 3 '*Investments*').

In 2019, non-cash foreign exchange gains were attributable to the reclassification of the cumulative translation adjustment balance related to Aviabel Re S.A. from accumulated other comprehensive income in the consolidated balance sheet to foreign exchange losses (gains) in the consolidated statement of operations due to the liquidation of that entity (refer to Note 8 '*Reserve for Losses and Loss Expenses*' and Note 20 '*Other Comprehensive Income (Loss)*').

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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1. ORGANIZATION

AXIS Capital Holdings Limited ("AXIS Capital" and together with its wholly owned subsidiaries the "Company"), was incorporated on December 9, 2002, under the laws of Bermuda. The Company provides a broad range of insurance and reinsurance products on a worldwide basis. The Company's principal operating subsidiaries, located in Bermuda, the United States ("U.S."), Europe, Singapore and Canada are described below:

- AXIS Specialty Limited ("AXIS Specialty Bermuda"), a Bermuda domiciled company is licensed to provide specialty insurance and treaty reinsurance products on a worldwide basis. In addition, AXIS Specialty Bermuda conducts insurance and reinsurance business through its branch in Singapore, AXIS Specialty Limited (Singapore Branch).
- AXIS Insurance Company, domiciled in Illinois and AXIS Reinsurance Company, domiciled in New York, together with AXIS Reinsurance Company (Canadian Branch) are licensed to offer a range of specialty insurance and treaty reinsurance products to a variety of niche markets on a worldwide basis. AXIS Surplus Insurance Company, domiciled in Illinois, is eligible to write insurance on a surplus lines basis.
- AXIS Specialty Europe SE ("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 registered in accordance with company law of the E.U. AXIS Specialty Europe also conducts insurance business through its branch in the United Kingdom ("U.K."), AXIS Specialty Europe SE ("UK Branch").

Pursuant to the U.K.'s withdrawal from the European Union on January 31, 2020, AXIS Specialty Europe expects to be fully regulated by the Prudential Regulation Authority ("PRA") as a third-country branch in the U.K. Until AXIS Specialty Europe's application to the PRA for authorization of a third-country branch in the U.K. is approved, AXIS Specialty Europe trades in the U.K. under the PRA and the U.K. Financial Conduct Authority ("FCA") Temporary Permissions Regime.

Effective January 1, 2019, Compagnie Belge d'Assurances Aviation NV/SA ("Aviabel") 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 new branches in Belgium and the Netherlands, AXIS Specialty Europe SE (Belgium Branch) and AXIS Specialty Europe SE (Netherlands Branch), respectively. Effective January 1, 2019, AXIS Specialty Europe conducts insurance business through its new branches in Belgium and the Netherlands. Effective December 31, 2021, AXIS Specialty Europe SE (Netherlands Branch) closed and was deregistered from the local commercial register.

- 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). AXIS Re SE also conducts reinsurance business through its branch in Switzerland, AXIS Re SE, Dublin (Zurich Branch).
- The Company operates in the Lloyd's of London ("Lloyd's") market through its corporate members AXIS Corporate Capital UK Limited and AXIS Corporate Capital UK II Limited, which provide 70% and 30%, respectively of AXIS Syndicate 1686's ("Syndicate 1686") capital support. AXIS Syndicate 1686 is managed by AXIS Managing Agency Ltd. ("AXIS Managing Agency").
- On October 2, 2017, AXIS Specialty UK Holdings Limited, a wholly owned subsidiary of the Company, acquired a 100% ownership interest in Novae Group plc ("Novae"). AXIS Corporate Capital UK II Limited was the sole corporate member of Novae Syndicate 2007 ("Syndicate 2007"). Effective January 1, 2018, AXIS Managing Agency commenced management and oversight of Syndicate 2007. Effective January 1, 2019, Syndicate 2007 ceased accepting new business and was placed into run-off. Effective January 1, 2021, the Reinsurance to Close of the 2018 year of account of Syndicate 2007 was completed.
- AXIS Ventures Limited ("AXIS Ventures") and AXIS Reinsurance Managers Limited ("AXIS Reinsurance Managers"), regulated by the BMA as insurance managers, generate fee income from services provided to strategic capital partners. Effective September 23, 2020, AXIS Ventures deregistered as an insurance manager with the BMA.

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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

These consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and the rules and regulations of the U.S. Securities and Exchange Commission ("SEC") and include AXIS Capital Holdings Limited and its wholly-owned subsidiaries.

All inter-company accounts and transactions have been eliminated.

To facilitate comparison of information across periods, certain reclassifications have been made to prior year amounts to conform to the current year's presentation.

Tabular dollar and share amounts are in thousands, with the exception of per share amounts. All amounts are reported in U.S. dollars.

Use of Estimates

The preparation of these consolidated financial statements requires management to make estimates and assumptions that affect the reported amount of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. While management believes that the amounts included in the consolidated financial statements reflect its best estimates and assumptions, actual results could differ from those estimates. The Company's principal estimates include:

- reserve for losses and loss expenses;
- reinsurance recoverable on unpaid losses and loss expenses, including the allowance for expected credit losses;
- gross premiums written and net premiums earned;
- fair value measurements of financial assets and liabilities; and
- the allowance for credit losses associated with fixed maturities, available for sale.

The Company's significant accounting policies are as follows:

a) Investments

Fixed Maturities, Available for Sale, at Fair Value and Fixed Maturities, Held to Maturity, at Amortized Cost

Fixed maturities classified as available for sale are reported at fair value (refer to Note 6 'Fair Value Measurements') and are presented net of an allowance for expected credit losses. The change in fair values of fixed maturities, net of tax is recognized in accumulated other comprehensive income (loss) ("AOCI") in the consolidated statement of changes in shareholders' equity.

Fixed maturities are classified as held to maturity when the Company has the positive intent and ability to hold the securities to maturity or redemption. Fixed maturities classified as held to maturity are reported at amortized cost and are presented net of an allowance for expected credit losses.

Net investment income includes interest income and the amortization of market premiums and discounts and is presented net of investment expenses. Investment income is recognized when earned. Purchases and sales of fixed maturities are recorded on a trade-date basis and realized gains (losses) on sales of fixed maturities are determined based on the specific identification method. Realized gains (losses) on fixed maturities are included in net investment gains (losses) in the consolidated statements of operations.

The Company recognizes investment income from fixed maturities based on the constant effective yield method, which includes an adjustment for estimated principal repayments, if applicable. The effective yield used to determine the

AXIS CAPITAL HOLDINGS LIMITED
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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

amortization of fixed maturities subject to prepayment risk (e.g. asset-backed, mortgage-backed and other structured securities) is recalculated and adjusted periodically based on historical and/or projected future cash flows. Adjustments to the yield for highly rated prepayable fixed maturities are accounted for using the retrospective method. Adjustments to the yield for other prepayable fixed maturities are accounted for using the prospective method.

Credit Losses - Fixed Maturities, Available for Sale

Fixed maturities, available for sale are impaired if the fair value of the investment is below amortized cost. On a quarterly basis, the Company evaluates all fixed maturities, available for sale securities for impairment losses.

Following the adoption of Accounting Standard Update ("ASU") 2016-13, "Financial Instruments - Credit Losses (Topic 326) - *Measurement of Credit Losses on Financial Instruments*," on January 1, 2020, if a fixed maturity, available for sale security is impaired and the Company intends to sell the security or it is more likely than not that the Company will be required to sell the security before its anticipated recovery, the full amount of the impairment loss is charged to net income (loss) and is included in net investment gains (losses).

In instances where the Company intends to hold the impaired fixed maturity, available for sale security the Company determines whether the decline in fair value below the amortized cost basis has resulted from a credit loss or other factors. If the Company does not anticipate to fully recover the amortized cost, an allowance for expected credit losses is established. The allowance for expected credit losses is limited to the difference between a security's amortized cost basis and its fair value. The allowance for expected credit losses is charged to net income (loss) and is included in net investment gains (losses).

On a quarterly basis, the Company assesses whether unrealized losses on fixed maturities, available for sale represent credit impairments by considering the following factors:

- a. the extent to which the fair value is less than amortized cost;
- b. adverse conditions related to the security, industry, or geographical area;
- c. downgrades in the security's credit rating by a credit rating agency; and
- d. failure of the issuer to make scheduled principal or interest payments.

The length of time a security has been in an unrealized loss position no longer impacts the determination of whether a credit loss exists.

If a security is assessed to be credit impaired, it is subject to a discounted cash flow analysis by comparing the present value of expected future cash flows with the amortized cost basis. If the present value of expected cash flows is less than the amortized cost, a credit loss exists and an allowance for expected credit losses is recognized. If the present value of expected future cash flows is equal to or greater than the amortized cost basis, an expected credit loss does not exist.

The non-credit impairment amount of the loss (i.e. related to interest rates, market conditions, etc.) is recognized in other comprehensive income.

The Company reports accrued interest receivable related to available for sale debt securities separately and has elected not to measure an allowance for expected credit losses for accrued interest receivable. Write-offs of accrued interest receivable balances are recognized in net investment gains (losses) in the period in which they are deemed uncollectible.

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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Prior to the adoption of ASU 2016-13

On a quarterly basis, the Company assessed whether unrealized losses on fixed maturities, available for sale represented impairments that were other-than-temporary.

If a fixed maturity, available for sale security was impaired and the Company intended to sell the security or it was more likely than not that the Company would be required to sell the security before its anticipated recovery, the impairment was considered other-than-temporary. In these instances, the full amount of the impairment was charged to net income (loss) and was included in net investment gains (losses) in the consolidated statements of operations.

In instances where the Company intended to hold the impaired fixed maturity, available for sale security the Company estimated the anticipated credit loss on the security and this component of the impairment was charged to net income (loss) and was included in net investment gains (losses) in the consolidated statements of operations. The non-credit component of the impairment was recognized in other comprehensive income.

Credit Losses - Fixed Maturities, Held to Maturity

A fixed maturity, held to maturity security is impaired if the fair value of the investment is below amortized cost. On a quarterly basis, the Company evaluates all fixed maturity, held to maturity securities for impairment losses.

The Company's fixed maturity, held to maturity securities portfolio consists of asset-backed securities ("ABS") and corporate debt securities.

The Company's ABS, held to maturity consists of CLO debt tranches. The Company uses a scenario-based approach to review its CLO debt portfolio and reviews subordination levels of these securities to determine their ability to absorb credit losses of the underlying collateral. If losses are forecast to be below the subordination level for a tranche held by the Company, the security is determined not to have a credit loss.

To estimate expected credit losses for corporate debt securities, held to maturity, the Company's projected cash flows are primarily driven by assumptions regarding the severity of loss, which is a function of the probability of default and projected recovery rates. The Company's default and recovery rates are based on credit ratings, credit analysis and macroeconomic forecasts.

The allowance for expected credit losses is estimated based on the Company's analysis of projected lifetime losses. The allowance for expected credit losses is recognized in net investment gains (losses) in the consolidated statements of operations. Any adjustment to the allowance for expected credit losses is recognized in the period in which it is determined.

Equity Securities, at Fair Value

Equity securities are reported at fair value. The change in the fair values of equity securities, net of tax is recognized in net investment gains (losses) in the consolidated statements of operations.

Net investment income includes dividend income and is presented net of investment expenses. Investment income is recognized when earned. Purchases and sales of equity securities are recorded on a trade-date basis and realized gains (losses) on sales of equity securities are determined based on the specific identification method. Realized gains (losses) on equity securities are included in net investment gains (losses) in the consolidated statements of operations.

Mortgage Loans, Held for Investment, at Fair Value

Mortgage loans, held for investment are reported at amortized cost which is calculated as the unpaid principal balance, adjusted for any unamortized premium or discount, deferred fees or expenses.

Interest income and prepayment fees are recognized when earned. Interest income is recognized based on an effective yield method which gives effect to the amortization of premiums and accretion of discounts.

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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Following the adoption of Accounting Standard Update ("ASU") 2016-13, "Financial Instruments - Credit Losses (Topic 326) - *Measurement of Credit Losses on Financial Instruments*," on January 1, 2020, mortgage loans, held for investment are presented net of an allowance for expected credit losses. The allowance for expected credit losses is estimated based on the Company's analysis of projected lifetime losses. These projections take into account the Company's experience with credit quality indicators, loan losses, defaults, loss severity, and loss expectations for loans with similar risk characteristics. These evaluations are revised as conditions change and new information becomes available. The allowance for expected credit losses is recognized in net investment gains (losses). Any adjustment to the allowance for expected credit losses is recognized in the period in which it is determined.

Other Investments

Other investments are recorded at fair value (refer to Note 6 '*Fair Value Measurements*'). Changes in fair value and realized gains (losses) are reported in net investment income in the consolidated statements of operations.

Equity Method Investments

Investments in which the Company has significant influence over the operating and financial policies of the investee are classified as equity method investments and are accounted for using the equity method of accounting. In applying the equity method of accounting, investments are initially recorded at cost and are subsequently adjusted based on the Company's proportionate share of net income (loss) or loss of the investee. Adjustments are based on the most recently available financial information from the investee. Changes in the carrying value of these investments are recorded in net income as interest in income (loss) of equity method investments.

Short-term Investments

Short-term investments primarily comprise highly liquid debt securities with maturities greater than three months but less than one year from the date of purchase. These investments are carried at amortized cost, which approximates fair value.

b) Cash and Cash Equivalents

Cash equivalents include money-market funds, fixed interest deposits and reverse repurchase agreements with a maturity of under 90 days when purchased. Cash and cash equivalents are recorded at amortized cost, which approximates fair value due to the short-term, liquid nature of these securities. Restricted cash primarily relates to funds held in trust to support obligations in regulatory jurisdictions where the Company operates as a non-admitted carrier and to support the underwriting activities at Lloyd's.

c) Premiums and Acquisition Costs

Premiums

Insurance premiums written are recorded in accordance with the terms of the underlying policies.

Reinsurance premiums are recorded at the inception of the contract based on estimates received from ceding companies. For multi-year contracts insurance and reinsurance premiums are recorded at the inception of the contract based on management's best estimate of total premiums to be received. Premiums are recognized on an annual basis for multi-year contracts where the cedant has the ability to unilaterally commute or cancel coverage within the term of the contract.

Any adjustments to insurance and reinsurance premium estimates are recognized in the period in which they are determined.

Insurance and reinsurance premiums are earned evenly over the period during which the Company is exposed to the underlying risk, which is generally one to two years with the exception of multi-year contracts. Unearned premiums represent the portion of premiums which relate to the unexpired risks under contracts in force.

Reinstatement premiums are recognized and earned at the time a loss event occurs and losses are recorded, where the coverage limits for the remaining life of the contract are reinstated under pre-defined contract terms. The recognition of

AXIS CAPITAL HOLDINGS LIMITED
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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

reinstatement premiums is based on estimates of losses and loss expenses, which reflects management's judgment, as described in Note 2(d) '*Losses and Loss Expenses*' below.

Following the adoption of Accounting Standard Update ("ASU") 2016-13, "Financial Instruments - Credit Losses (Topic 326) - *Measurement of Credit Losses on Financial Instruments*," on January 1, 2020, insurance and reinsurance premium balances receivable are reviewed for impairment at least quarterly and are presented net of an allowance for expected credit losses.

The allowance for expected credit losses is estimated based on the Company's analysis of amounts due, historical delinquencies and write-offs, and current economic conditions, together with reasonable and supportable forecasts of short-term economic conditions. The allowance for expected credit losses is recognized in net income (loss). Any adjustment to the allowance for expected credit losses is recognized in the period in which it is determined. Write-offs of premium balances receivable, together with associated allowances for expected credit losses, are recognized in the period in which balances are deemed uncollectible. The Company does not have a history of significant write-offs.

Prior to the adoption of ASU 2016-13

Insurance and reinsurance premium balances receivable were reviewed in detail at least quarterly and a provision was established for amounts considered uncollectible.

Acquisition Costs

Acquisition costs vary with and are directly related to the successful acquisition efforts of acquiring new or renewing existing insurance and reinsurance contracts and consist primarily of fees and commissions paid to brokers and premium taxes. In addition, certain of our contracts include profit commission provisions or other adjustable features that are estimated based on expected losses and loss expenses for those contracts. Acquisition costs are shown net of commissions on reinsurance purchased. Net acquisition costs are deferred and charged to net income (loss) as the related premium is earned. Insurance and reinsurance premium balances receivable is presented net of acquisition costs when contract terms provide for the right of offset.

Anticipated losses and loss expenses, other costs and investment income related to these premiums are considered in assessing the recoverability of deferred acquisition costs. Deferred acquisition cost amounts that are assessed to be irrecoverable are recognized in net income (loss) in the period in which the determination is made. Compensation expenses for personnel involved in contract acquisition, and advertising costs, are charged to net income (loss) when incurred.

d) Losses and Loss Expenses

Reserve for losses and loss expenses represents an estimate of the unpaid portion of the ultimate liability for losses and loss expenses for insured and reinsured events that have occurred at or before the balance sheet date. These amounts reflect claims that have been reported ("case reserves") and claims that have been incurred but have not yet been reported ("IBNR") and are reduced for estimated amounts of salvage and subrogation recoveries.

The Company reviews its reserve for losses and loss expenses on a quarterly basis. Case reserves are primarily established based on amounts reported by clients and/or their brokers. Management estimates IBNR after reviewing detailed actuarial analyses and applying informed judgment regarding qualitative factors that may not be fully captured in the actuarial estimates. A variety of actuarial methods are utilized in this process, including the Expected Loss Ratio, Chain Ladder and Bornhuetter-Ferguson methods. The estimate is highly dependent on management's judgment as to which method(s) are most appropriate for a particular accident/underwriting year and line of business. Historical claims data may be supplemented with industry benchmarks when applying these methodologies.

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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Any adjustments to estimates of reserve for losses and loss expenses are recognized in the period in which they are determined. While the Company believes that its reserves for losses and loss expenses are adequate, this estimate requires significant judgment and new information, events or circumstances may result in ultimate losses that are materially greater or less than provided for in the consolidated balance sheets.

e) Reinsurance

In the normal course of business, the Company purchases treaty and facultative reinsurance protection to limit its ultimate losses from catastrophic events and to reduce its loss aggregation risk. The premiums paid to reinsurers (i.e. ceded premiums written) are recognized over the coverage period. Prepaid reinsurance premiums represent the portion of premiums ceded which relate to the unexpired term of the contracts in force. Reinstatement premiums are recognized and earned at the time a loss event occurs and losses are recorded, where the coverage limits for the remaining life of the contract are reinstated under pre-defined contract terms.

Reinsurance recoverable on unpaid losses and loss expenses ("reinsurance recoverables") related to case reserves is estimated on a case-by-case basis by applying the terms of applicable reinsurance cover to individual case reserve estimates. Reinsurance recoverables related to IBNR is generally developed as part of the Company's loss reserving process, therefore, its estimation is subject to similar risks and uncertainties as the estimation of IBNR. Estimates of amounts to be ceded under excess of loss reinsurance contracts also take into account pricing information for those contracts and require greater judgment than estimates for proportional contracts.

Following the adoption of Accounting Standard Update ("ASU") 2016-13, "Financial Instruments - Credit Losses (Topic 326) - *Measurement of Credit Losses on Financial Instruments*," on January 1, 2020, reinsurance recoverable balances are reviewed for impairment at least quarterly and are presented net of an allowance for expected credit losses.

A case-specific allowance for expected credit losses against reinsurance recoverables that we deem are unlikely to be collected in full, is estimated based on the Company's analysis of amounts due, historical delinquencies and write-offs. In addition, a default analysis is used to estimate an allowance for expected credit losses on the remainder of the reinsurance recoverable balance. The principal components of the default analysis are reinsurance recoverable balances by reinsurer and default factors applied to estimate uncollectible amounts based on reinsurers' credit ratings and the length of collection periods. The default factors are based on a model developed by a major rating agency. The default analysis considers current and forecasted economic conditions.

The allowance for expected credit losses is recognized in net income (loss). Any adjustment to the allowance for expected credit losses is recognized in the period in which it is determined. Write-offs of reinsurance recoverable balances, together with associated allowances for expected credit losses, are recognized in the period in which balances are deemed uncollectible. The Company does not have a history of significant write-offs.

Prior to the adoption of ASU 2016-13

Reinsurance recoverable balances were reviewed in detail on a quarterly basis and a provision was established for amounts considered uncollectible.

Retroactive Reinsurance

Retroactive reinsurance reimburses a ceding company for liabilities incurred as a result of past insurable events covered under contracts subject to the reinsurance. In certain instances, reinsurance contracts cover losses both on a prospective basis and on a retroactive basis and where practical the Company bifurcates the prospective and retroactive elements of these reinsurance contracts and accounts for each element separately. Initial gains in connection with retroactive reinsurance contracts are deferred and amortized into income over the settlement period while losses are recognized immediately. When changes in the estimated amount recoverable from the reinsurer or in the timing of receipts related to that amount occur, a cumulative amortization adjustment is recognized in net income in the period in which the change is determined so that the deferred gain reflects the balance that would have existed had the revised estimate been available at the inception of the reinsurance transaction.

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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

f) Foreign Exchange

The functional currency of the Company and the majority of its subsidiaries is the U.S. dollar. All foreign currency transactions are initially measured and recorded in functional currency using the rates of exchange prevailing at the transaction date.

Monetary assets and liabilities denominated in foreign currency are remeasured to functional currency at the rates of exchange in effect at the balance sheet date with the resulting foreign exchange losses (gains) generally being recognized in the consolidated statements of operations. Foreign exchange losses (gains) related to available for sale investments denominated in foreign currency represent an unrealized appreciation (depreciation) in the market value of the securities and are included in AOCI. Non-monetary assets and liabilities denominated in foreign currency are not subsequently remeasured.

The Company's reporting currency is the U.S. dollar. Assets and liabilities of the Company's subsidiaries and branches where the functional currency is not the U.S. dollar, are translated into U.S. dollars using the rates of exchange in effect at the balance sheet date, and revenue and expenses are translated using the weighted average foreign exchange rates for the period. The effect of translation adjustments is reported as a separate component of AOCI in the consolidated statements of change shareholders' equity.

g) Share-based Compensation

The Company is authorized to issue restricted shares, restricted stock units, performance restricted stock units, stock options, stock appreciation rights and other equity-based awards to its employees and directors. The Company's plan includes share-settled and cash-settled service and performance awards.

Restricted Stock Units - Share-Settled and Cash-Settled

The fair value of share-settled and cash-settled service awards is based on market value of the Company's common shares measured at the grant date and is expensed over the requisite service period. The fair value of the cash-settled service awards is recognized as a liability in the consolidated balance sheets and is remeasured at the end of each reporting period. The Company recognizes forfeitures when they occur.

Performance Restricted Stock Units - Share-Settled and Cash-Settled

The fair value of share-settled performance awards which include a market condition is measured on the grant date using a Monte Carlo simulation model which requires inputs including share price, expected volatility, expected term, expected dividend yield and risk-free interest rates. The fair value of share-settled and cash-settled performance awards which include a performance condition is based on market value of the Company's common shares measured at the grant date. The fair value of share-settled and cash-settled performance awards is recognized on a straight-line basis over the requisite service period. The fair value of the cash-settled performance awards is recognized as a liability in the consolidated balance sheets and is remeasured at the end of each reporting period. The Company recognizes forfeitures when they occur.

h) Derivative Instruments

The Company may enter into derivative instruments such as futures, options, interest rate swaps and foreign currency forward contracts as part of its overall foreign currency risk management strategy, to obtain exposure to a particular financial market or for yield enhancement.

From time to time the Company may also enter into insurance and reinsurance contracts that meet the Financial Accounting Standards Board's ("FASB") definition of a derivative contract.

The Company measures all derivative instruments at fair value (refer to Note 6 '*Fair Value Measurements*') and recognizes these instruments as either assets or liabilities in the consolidated balance sheets. Subsequent changes in fair value and any realized gains or losses are recognized in the consolidated statements of operations.

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

i) Goodwill and Intangible Assets

The Company recognizes goodwill and other intangible assets in connection with certain acquisitions. Goodwill represents the excess of the purchase price paid over the fair value of the net assets acquired in these acquisitions and is not amortized. Other intangible assets with a finite life are amortized over the estimated useful live of the intangible asset. Other intangible assets with an indefinite life are not amortized.

The Company tests goodwill and indefinite intangible assets for potential impairment during the fourth quarter each year and between annual tests if an event occurs or changes in circumstances indicate that the asset is impaired. Such events or circumstances may include an economic downturn in a geographic market or a change in the assessment of future operations.

For the purpose of evaluating goodwill for impairment, the Company may first perform a qualitative assessment to determine whether it is necessary to perform a quantitative goodwill impairment test. If determined to be necessary, the quantitative test compares the fair value of a reporting unit with its carrying amount, including goodwill. If the fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is considered not impaired. If the carrying amount of the reporting unit exceeds the fair value, an impairment loss is recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit.

For the purpose of evaluating indefinite lived intangibles for impairment, the Company may first perform a qualitative assessment to determine whether it is necessary to perform the quantitative impairment test. If the Company elects to perform a qualitative assessment, it first assesses qualitative factors to determine whether it is more likely than not that an indefinite lived intangible asset is impaired. If the Company determines that it is more likely than not that the indefinite lived intangible asset is impaired, the Company performs the quantitative impairment test.

For the purposes of evaluating goodwill and indefinite lived intangible assets for impairment, the Company has an unconditional option to bypass the qualitative assessment in any period and proceed directly to performing the quantitative impairment test. The Company may resume performing the qualitative assessment in any subsequent period.

For other definite lived intangible assets the Company tests for recoverability whenever events or changes in circumstances indicate its carrying amount may not be recoverable. The Company recognizes an impairment loss if the carrying amount of the asset is not recoverable and exceeds its fair value. The carrying amount of a definite lived intangible asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset.

If goodwill or an intangible asset is impaired, the carrying value of the asset is reduced to fair value and a corresponding expense is recorded in the consolidated statements of operations.

j) Income Taxes

Certain subsidiaries and branches of the Company operate in jurisdictions where they are subject to taxation. Current and deferred income taxes are charged or credited to net income, or in certain cases to AOCI, based on enacted tax laws and rates applicable in the relevant jurisdiction in the period in which the tax becomes accrued or realizable. Deferred income taxes are provided for all temporary differences between the bases of assets and liabilities used in the consolidated balance sheets and those used in the various jurisdictional tax returns. When the assessment indicates that it is more likely than not that a portion of a deferred tax asset will not be realized in the foreseeable future, a valuation allowance against deferred tax assets is recorded. The Company recognizes the tax benefits of uncertain tax positions only when the position is more-likely-than-not to be sustained on audit by the relevant taxing authorities.

k) Treasury Shares

Common shares repurchased by the Company and not subsequently canceled are classified as treasury shares and are recorded at cost. This results in a reduction of shareholders' equity in the consolidated balance sheets. The Company uses the average cost method to determine the cost of shares reissued from treasury.

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

I) Leases

The Company recognizes a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term related to office property and equipment leases.

The Company accounts for non-lease components separately from lease components. As a result, the non-lease components associated with the Company's leases are not included in the lease liabilities and right-of-use assets in the Company's consolidated balance sheets.

The Company does not record office property and equipment leases with an initial term of 12 months or less (short-term) in the Company's consolidated balance sheets.

3. SEGMENT INFORMATION

AXIS Capital's underwriting operations are organized around its global underwriting platforms, AXIS Insurance and AXIS Re. The Company has determined that it has two reportable segments, insurance and reinsurance. The Company does not allocate its assets by segment, with the exception of goodwill and intangible assets.

Insurance

The Company's insurance segment offers specialty insurance products to a variety of niche markets on a worldwide basis. The product lines in this segment are property, marine, terrorism, aviation, credit and political risk, professional lines, liability, accident and health, and discontinued lines - Novae.

Reinsurance

The Company's reinsurance segment provides treaty reinsurance to insurance companies on a worldwide basis. The product lines in this segment are catastrophe, property, credit and surety, professional lines, motor, liability, engineering, agriculture, marine and aviation, accident and health, and discontinued lines - Novae.

The following tables present the underwriting results of the Company's reportable segments, as well as the carrying amounts of allocated goodwill and intangible assets:

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3. SEGMENT INFORMATION (CONTINUED)

At and year ended December 31, 2021	Insurance	Reinsurance	Total
Gross premiums written	\$ 4,863,232	\$ 2,822,752	\$ 7,685,984
Net premiums written	2,894,885	2,031,739	4,926,624
Net premiums earned	2,651,339	2,058,511	4,709,850
Other insurance related income	1,662	21,633	23,295
Net losses and loss expenses	(1,514,998)	(1,493,785)	(3,008,783)
Acquisition costs	(484,344)	(437,490)	(921,834)
Underwriting-related general and administrative expenses	(429,282)	(107,552)	(536,834)
Underwriting income	\$ 224,377	\$ 41,317	265,694
Net investment income			454,301
Net investment gains			134,279
Corporate expenses			(126,470)
Foreign exchange losses			(315)
Interest expense and financing costs			(62,302)
Reorganization expenses			—
Amortization of value of business acquired			(3,854)
Amortization of intangible assets			(12,424)
Income before income taxes and interest in income of equity method investments			648,909
Income tax expense			(62,384)
Interest in income of equity method investments			32,084
Net income			618,609
Preferred share dividends			30,250
Net income available to common shareholders			\$ 588,359
Net losses and loss expenses ratio	57.1 %	72.6 %	63.9 %
Acquisition cost ratio	18.3 %	21.3 %	19.6 %
General and administrative expense ratio	16.2 %	5.1 %	14.0 %
Combined ratio	91.6 %	99.0 %	97.5 %
Goodwill and intangible assets	\$ 309,518	\$ —	\$ 309,518

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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3. SEGMENT INFORMATION (CONTINUED)

At and year ended December 31, 2020	Insurance	Reinsurance	Total
Gross premiums written	\$ 4,018,399	\$ 2,808,539	\$ 6,826,938
Net premiums written	2,357,501	1,978,908	4,336,409
Net premiums earned	2,299,038	2,072,271	4,371,309
Other insurance related income (loss)	2,647	(10,736)	(8,089)
Net losses and loss expenses	(1,697,014)	(1,584,238)	(3,281,252)
Acquisition costs	(461,533)	(467,984)	(929,517)
Underwriting-related general and administrative expenses	(378,839)	(99,129)	(477,968)
Underwriting income (loss)	\$ (235,701)	\$ (89,816)	(325,517)
Net investment income			349,601
Net investment gains			129,133
Corporate expenses			(101,822)
Foreign exchange losses			(81,069)
Interest expense and financing costs			(75,049)
Reorganization expenses			(7,881)
Amortization of value of business acquired			(5,139)
Amortization of intangible assets			(11,390)
Income (loss) before income taxes and interest in income (loss) of equity method investments			(129,133)
Income tax benefit			12,321
Interest in income (loss) of equity method investments			(3,612)
Net income (loss)			(120,424)
Preferred share dividends			30,250
Net income (loss) available (attributable) to common shareholders			\$ (150,674)
Net losses and loss expenses ratio	73.8 %	76.4 %	75.1 %
Acquisition cost ratio	20.1 %	22.6 %	21.3 %
General and administrative expense ratio	16.5 %	4.8 %	13.2 %
Combined ratio	110.4 %	103.8 %	109.6 %
Goodwill and intangible assets	\$ 320,434	\$ —	\$ 320,434

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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3. SEGMENT INFORMATION (CONTINUED)

At and year ended December 31, 2019	Insurance	Reinsurance	Total
Gross premiums written	\$ 3,675,931	\$ 3,222,927	\$ 6,898,858
Net premiums written	2,209,155	2,280,460	4,489,615
Net premiums earned	2,190,084	2,397,094	4,587,178
Other insurance related income	2,858	13,586	16,444
Net losses and loss expenses	(1,278,679)	(1,766,119)	(3,044,798)
Acquisition costs	(468,281)	(556,301)	(1,024,582)
Underwriting-related general and administrative expenses	(401,963)	(103,772)	(505,735)
Underwriting income (loss)	\$ 44,019	\$ (15,512)	28,507
Net investment income			478,572
Net investment gains			91,233
Corporate expenses			(129,096)
Foreign exchange gains			12,041
Interest expense and financing costs			(68,107)
Reorganization expenses			(37,384)
Amortization of value of business acquired			(26,722)
Amortization of intangible assets			(11,597)
Income before income taxes and interest in income of equity method investments			337,447
Income tax expense			(23,692)
Interest in income of equity method investments			9,718
Net income			323,473
Preferred share dividends			41,112
Net income available to common shareholders			\$ 282,361
Net losses and loss expenses ratio	58.4 %	73.7 %	66.4 %
Acquisition cost ratio	21.4 %	23.2 %	22.3 %
General and administrative expense ratio	18.3 %	4.3 %	13.9 %
Combined ratio	98.1 %	101.2 %	102.6 %
Goodwill and intangible assets	\$ 332,553	\$ —	\$ 332,553

The following table presents gross premiums written by the geographical location of the Company's subsidiaries:

Years ended December 31,	2021	2020	2019
Bermuda	\$ 542,693	\$ 602,432	\$ 738,258
Ireland	1,667,496	1,516,596	1,679,646
U.S.	4,002,748	3,398,108	3,090,547
Lloyd's of London	1,473,047	1,309,802	1,390,407
Gross premiums written	\$ 7,685,984	\$ 6,826,938	\$ 6,898,858

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2021, 2020 AND 2019

3. SEGMENT INFORMATION (CONTINUED)

The following table presents net premiums earned by segment and line of business:

Years ended December 31,	2021	2020	2019
<u>Insurance</u>			
Property	\$ 662,977	\$ 605,650	\$ 633,550
Marine	354,193	293,746	281,764
Terrorism	47,995	47,378	47,345
Aviation	84,882	70,910	55,028
Credit and political risk	96,604	105,869	91,698
Professional lines	898,307	715,276	661,250
Liability	354,518	313,291	264,667
Accident and health	151,134	143,723	144,499
Discontinued lines - Novae	729	3,195	10,283
Total Insurance	2,651,339	2,299,038	2,190,084
<u>Reinsurance</u>			
Catastrophe	238,775	244,934	267,591
Property	231,080	256,244	311,625
Credit and surety	158,549	187,721	208,717
Professional lines	220,448	207,605	206,328
Motor	247,092	255,916	398,565
Liability	431,012	396,906	373,664
Engineering	28,238	60,521	63,899
Agriculture	82,744	73,696	188,925
Marine and aviation	58,678	53,516	59,209
Accident and health	361,197	333,996	319,619
Discontinued lines - Novae	698	1,216	(1,048)
Total Reinsurance	2,058,511	2,072,271	2,397,094
Total	\$ 4,709,850	\$ 4,371,309	\$ 4,587,178

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4. GOODWILL AND INTANGIBLE ASSETS

The table below provides details of goodwill and intangible assets related to the Company's insurance segment:

	Goodwill	Intangible assets with an indefinite life	Intangible assets with a finite life	Total
At December 31, 2019				
Gross amount	\$ 97,092	\$ 120,784	\$ 404,304	\$ 622,180
Accumulated amortization	n/a	n/a	(247,804)	(247,804)
Accumulated translation adjustment	4,911	—	—	4,911
	<u>102,003</u>	<u>120,784</u>	<u>156,500</u>	<u>379,287</u>
Amortization	n/a	n/a	(37,742)	(37,742)
Impairment charges	—	—	—	—
At December 31, 2020				
Gross amount	97,092	120,784	394,604	612,480
Accumulated amortization	n/a	n/a	(275,846)	(275,846)
Accumulated translation adjustment	4,911	—	—	4,911
	<u>102,003</u>	<u>120,784</u>	<u>118,758</u>	<u>341,545</u>
Amortization	n/a	n/a	(16,055)	(16,055)
Impairment charges	(1,202)	—	—	(1,202)
At December 31, 2021				
Gross amount	95,890	120,784	394,604	611,278
Accumulated amortization	n/a	n/a	(291,901)	(291,901)
Accumulated translation adjustment	4,911	—	—	4,911
	<u>100,801</u>	<u>120,784</u>	<u>102,703</u>	<u>324,288</u>
Amortization	n/a	n/a	(14,770)	(14,770)
Impairment charges	—	—	—	—
	<u>\$ 100,801</u>	<u>\$ 120,784</u>	<u>\$ 87,933</u>	<u>\$ 309,518</u>

n/a – not applicable

Intangible Assets with an Indefinite Life

Intangible assets with an indefinite life include U.S. state licenses that provide a legal right to transact business indefinitely and the value of Lloyd's syndicate capacity, which represents the right to underwrite a certain allocated limit of premium in the Lloyd's market.

Impairment Review

For the year ended December 31, 2021, the Company's impairment review of goodwill and indefinite lived intangibles did not result in the recognition of an impairment loss. For the year ended December 31, 2020, an impairment loss of \$1 million was recognized related to the exit from certain program business. For the year ended December 31, 2019, the Company's impairment review of goodwill and indefinite lived intangibles did not result in the recognition of an impairment loss.

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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4. GOODWILL AND INTANGIBLE ASSETS (CONTINUED)

The tables below provide details of the gross amount and accumulated amortization by category of VOBA and intangible assets:

At December 31, 2021	VOBA and intangible assets		
	Gross amount	Accumulated amortization	Total
U.S. state licenses	\$ 26,036	n/a	\$ 26,036
Syndicate capacity ⁽²⁾	94,748	n/a	94,748
Customer relationships and customers lists - Ternian ⁽¹⁾	13,330	(8,997)	4,333
VOBA - Novae ⁽²⁾	256,942	(256,942)	—
Coverholders ⁽²⁾	63,565	(22,514)	41,051
Large brokers ⁽²⁾	46,641	(13,215)	33,426
SME brokers ⁽²⁾	14,126	(5,003)	9,123
	\$ 515,388	\$ (306,671)	\$ 208,717

n/a – not applicable

- (1) On April 1, 2015, the Company completed its acquisition of Ternian Insurance Group LLC and recognized the definite life intangible assets detailed above.
- (2) On October 2, 2017, the Company acquired Novae and recognized finite lived intangible assets, including Value of Business Acquired ("VOBA"), distribution networks, and indefinite lived intangible assets related to Lloyd's syndicate capacity, all detailed above.

At December 31, 2020	VOBA and intangible assets		
	Gross amount	Accumulated amortization	Total
U.S. state licenses	\$ 26,036	n/a	\$ 26,036
Customer relationships and customers lists - Ternian ⁽¹⁾	13,330	(7,665)	5,665
VOBA - Novae ⁽²⁾	256,942	(253,088)	3,854
Syndicate capacity ⁽²⁾	94,748	n/a	94,748
Coverholders ⁽²⁾	63,565	(17,216)	46,349
Large brokers ⁽²⁾	46,641	(10,106)	36,535
SME brokers ⁽²⁾	14,126	(3,826)	10,300
	\$ 515,388	\$ (291,901)	\$ 223,487

n/a – not applicable

- (1) On April 1, 2015, the Company completed its acquisition of Ternian Insurance Group LLC and recognized the definite life intangible assets detailed above.
- (2) On October 2, 2017, the Company acquired Novae and recognized finite lived intangible assets, including Value of Business Acquired ("VOBA"), distribution networks, and indefinite lived intangible assets related to Lloyd's syndicate capacity, all detailed above.

AXIS CAPITAL HOLDINGS LIMITED
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4. GOODWILL AND INTANGIBLE ASSETS (CONTINUED)

The table below provides details of estimated amortization expense of intangible assets with a finite life:

	Total
2022	\$ 10,916
2023	10,916
2024	10,916
2025	9,921
2026	9,583
After 2026	35,681
Total remaining amortization expense	87,933
Indefinite lived intangible assets	120,784
Total intangible assets	\$ 208,717

The estimated remaining average useful life of finite lived intangible assets is 9 years.

AXIS CAPITAL HOLDINGS LIMITED
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5. INVESTMENTS

a) Fixed Maturities and Equity Securities

Fixed Maturities

The following table provides the amortized cost and fair values of the Company's fixed maturities classified as available for sale:

	Amortized cost	Allowance for expected credit losses	Gross unrealized gains	Gross unrealized losses	Fair value
At December 31, 2021					
Available for sale					
U.S. government and agency	\$ 2,693,319	\$ —	\$ 9,776	\$ (20,647)	\$ 2,682,448
Non-U.S. government	794,705	—	10,158	(9,685)	795,178
Corporate debt	4,446,585	(236)	87,075	(38,112)	4,495,312
Agency RMBS ⁽¹⁾	1,065,973	—	17,397	(8,781)	1,074,589
CMBS ⁽²⁾	1,223,051	—	29,827	(4,687)	1,248,191
Non-agency RMBS	185,854	(77)	2,410	(2,023)	186,164
ABS ⁽³⁾	1,628,739	—	3,406	(9,665)	1,622,480
Municipals ⁽⁴⁾	203,556	—	5,928	(646)	208,838
Total fixed maturities, available for sale	\$ 12,241,782	\$ (313)	\$ 165,977	\$ (94,246)	\$ 12,313,200
At December 31, 2020					
Available for sale					
U.S. government and agency	\$ 1,881,489	\$ —	\$ 38,969	\$ (1,759)	\$ 1,918,699
Non-U.S. government	632,875	—	38,826	(428)	671,273
Corporate debt	4,408,351	(303)	254,261	(6,358)	4,655,951
Agency RMBS ⁽¹⁾	1,244,727	—	42,170	(688)	1,286,209
CMBS ⁽²⁾	1,268,273	—	87,598	(2,284)	1,353,587
Non-agency RMBS	136,198	(20)	4,604	(678)	140,104
ABS ⁽³⁾	1,712,236	—	14,527	(6,685)	1,720,078
Municipals ⁽⁴⁾	282,781	—	13,148	(31)	295,898
Total fixed maturities, available for sale	\$ 11,566,930	\$ (323)	\$ 494,103	\$ (18,911)	\$ 12,041,799

(1) Residential mortgage-backed securities ("RMBS") originated by U.S. government-sponsored agencies.

(2) Commercial mortgage-backed securities ("CMBS").

(3) Asset-backed securities ("ABS") include debt tranches securities collateralized primarily by auto loans, student loans, credit card receivables and collateralized loan obligations ("CLOs").

(4) Municipal bonds include bonds issued by states, municipalities and political subdivisions.

AXIS CAPITAL HOLDINGS LIMITED
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5. INVESTMENTS (CONTINUED)

The following table provides the amortized cost and fair values of the Company's fixed maturities classified as held to maturity:

	Amortized cost	Allowance for expected credit losses	Net carrying value	Gross unrealized gains	Gross unrealized losses	Fair value
<u>At December 31, 2021</u>						
Held to maturity						
Corporate debt	\$ 37,700	\$ —	\$ 37,700	\$ 18	\$ (146)	\$ 37,572
ABS ⁽¹⁾	<u>408,316</u>	<u>—</u>	<u>408,316</u>	<u>81</u>	<u>(936)</u>	<u>407,461</u>
Total fixed maturities, held to maturity	<u>\$ 446,016</u>	<u>\$ —</u>	<u>\$ 446,016</u>	<u>\$ 99</u>	<u>\$ (1,082)</u>	<u>\$ 445,033</u>

(1) Asset-backed securities ("ABS") include debt tranches securities collateralized primarily by collateralized loan obligations ("CLOs").

On March 1, 2021, the Company transferred ABS securities with total fair value of \$405 million from fixed maturities, available for sale to fixed maturities, held to maturity. These securities, which the Company has the intent and ability to hold to maturity, were transferred in order to better align the accounting classification with their management strategy. The net unrealized gain at the date of the transfer, March 1, 2021, continues to be reported in the carrying value of the transferred securities and is amortized over the remaining life of the securities using the effective yield method.

Fixed maturities, held to maturity of \$446 million at December 31, 2021 were presented net of an allowance for expected credit losses of \$nil.

The Company's ABS, held to maturity consist of CLO debt tranches securities. The Company uses a scenario-based approach to review its CLO debt portfolio and reviews subordination levels of these securities to determine their ability to absorb credit losses of the underlying collateral. If losses are forecast to be below the subordination level for a tranche held by the Company, the security is determined not to have a credit loss. At December 31, 2021, the allowance for credit losses expected to be recognized over the life of the Company's ABS, held to maturity was \$nil.

To estimate expected credit losses for corporate debt securities, held to maturity, the Company's projected cash flows are primarily driven by assumptions regarding the severity of loss, which is a function of the probability of default and projected recovery rates. The Company's default and recovery rates are based on credit ratings, credit analysis and macroeconomic forecasts. At December 31, 2021, the allowance for credit losses expected to be recognized over the life of the Company's corporate debt, held to maturity was \$nil.

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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5. INVESTMENTS (CONTINUED)

Equity Securities

The following table provides the cost and fair values of the Company's equity securities:

	Cost	Gross unrealized gains	Gross unrealized losses	Fair value
<u>At December 31, 2021</u>				
Equity securities				
Common stocks	\$ 1,264	\$ 585	\$ (485)	\$ 1,364
Preferred stocks	115	64	—	179
Exchange-traded funds	203,455	134,037	(677)	336,815
Bond mutual funds	324,030	544	(7,257)	317,317
Total equity securities	\$ 528,864	\$ 135,230	\$ (8,419)	\$ 655,675
<u>At December 31, 2020</u>				
Equity securities				
Common stocks	\$ 10,810	\$ 689	\$ (557)	\$ 10,942
Preferred stocks	6,301	1,767	—	8,068
Exchange-traded funds	147,794	74,314	(390)	221,718
Bond mutual funds	256,839	20,878	—	277,717
Total equity securities	\$ 421,744	\$ 97,648	\$ (947)	\$ 518,445

In the normal course of investing activities, the Company actively manages allocations to non-controlling tranches of structured securities which are variable interests issued by Variable Interest Entities ("VIEs"). These structured securities include RMBS, CMBS and ABS.

The Company also invests in limited partnerships which represent 71% of the Company's other investments. The investments in limited partnerships include hedge funds, direct lending funds, private equity funds, real estate funds and CLO equity tranches, which are variable interests issued by VIEs (refer to Note 5(c) '*Other Investments*'). The Company does not have the power to direct the activities that are most significant to the economic performance of these VIEs therefore the Company is not the primary beneficiary of these VIEs.

The maximum exposure to loss on these interests is limited to the amount of commitment made by the Company. The Company has not provided financial or other support to these structured securities other than the original investment.

AXIS CAPITAL HOLDINGS LIMITED
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5. INVESTMENTS (CONTINUED)

Contractual Maturities of Fixed Maturities

Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

The table below provides the contractual maturities of fixed maturities classified as available for sale:

	Amortized cost	Fair value	% of Total fair value
<u>At December 31, 2021</u>			
Maturity			
Due in one year or less	\$ 503,716	\$ 505,602	4.1 %
Due after one year through five years	4,878,151	4,908,640	39.9 %
Due after five years through ten years	2,478,542	2,488,478	20.2 %
Due after ten years	277,756	279,056	2.3 %
	<u>8,138,165</u>	<u>8,181,776</u>	<u>66.5 %</u>
Agency RMBS	1,065,973	1,074,589	8.7 %
CMBS	1,223,051	1,248,191	10.1 %
Non-agency RMBS	185,854	186,164	1.5 %
ABS	1,628,739	1,622,480	13.2 %
Total	<u>\$ 12,241,782</u>	<u>\$ 12,313,200</u>	<u>100.0 %</u>
<u>At December 31, 2020</u>			
Maturity			
Due in one year or less	\$ 436,287	\$ 444,527	3.6 %
Due after one year through five years	4,165,696	4,335,219	36.0 %
Due after five years through ten years	2,344,859	2,489,050	20.7 %
Due after ten years	258,654	273,025	2.3 %
	<u>7,205,496</u>	<u>7,541,821</u>	<u>62.6 %</u>
Agency RMBS	1,244,727	1,286,209	10.7 %
CMBS	1,268,273	1,353,587	11.2 %
Non-agency RMBS	136,198	140,104	1.2 %
ABS	1,712,236	1,720,078	14.3 %
Total	<u>\$ 11,566,930</u>	<u>\$ 12,041,799</u>	<u>100.0 %</u>

ABS classified as held to maturity with a net carrying value of \$408 million (2020: \$nil) do not have a single maturity date and cannot be allocated over several maturity groupings.

Corporate debt classified as held to maturity with a net carrying value of \$34 million (2020: \$nil) is due between five years and ten years and Corporate debt classified as held to maturity with a net carrying value of \$4 million ((2020: \$nil) is due after ten years.

AXIS CAPITAL HOLDINGS LIMITED
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5. INVESTMENTS (CONTINUED)

Gross Unrealized Losses

The following table summarizes fixed maturities, available for sale in an unrealized loss position and the aggregate fair value and gross unrealized loss by length of time the security has continuously been in an unrealized loss position:

	12 months or greater		Less than 12 months		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
<u>At December 31, 2021</u>						
Fixed maturities, available for sale						
U.S. government and agency	\$ 101,776	\$ (4,852)	\$ 2,014,880	\$ (15,795)	\$ 2,116,656	\$ (20,647)
Non-U.S. government	11,011	(1,830)	463,498	(7,855)	474,509	(9,685)
Corporate debt	152,962	(6,542)	1,681,859	(31,570)	1,834,821	(38,112)
Agency RMBS	41,024	(1,678)	503,988	(7,103)	545,012	(8,781)
CMBS	30,128	(1,001)	347,515	(3,686)	377,643	(4,687)
Non-agency RMBS	4,481	(523)	109,937	(1,500)	114,418	(2,023)
ABS	43,466	(1,152)	1,040,363	(8,513)	1,083,829	(9,665)
Municipals	5,293	(137)	35,649	(509)	40,942	(646)
Total fixed maturities, available for sale	\$ 390,141	\$ (17,715)	\$ 6,197,689	\$ (76,531)	\$ 6,587,830	\$ (94,246)
<u>At December 31, 2020</u>						
Fixed maturities, available for sale						
U.S. government and agency	\$ —	\$ —	\$ 251,606	\$ (1,759)	\$ 251,606	\$ (1,759)
Non-U.S. government	16,115	(262)	3,652	(166)	19,767	(428)
Corporate debt	63,640	(2,244)	233,970	(4,114)	297,610	(6,358)
Agency RMBS	6,580	(20)	78,672	(668)	85,252	(688)
CMBS	19,736	(1,012)	70,656	(1,272)	90,392	(2,284)
Non-agency RMBS	5,109	(598)	9,558	(80)	14,667	(678)
ABS	325,436	(4,011)	360,402	(2,674)	685,838	(6,685)
Municipals	—	—	11,881	(31)	11,881	(31)
Total fixed maturities, available for sale	\$ 436,616	\$ (8,147)	\$ 1,020,397	\$ (10,764)	\$ 1,457,013	\$ (18,911)

Fixed Maturities

At December 31, 2021, 2,333 fixed maturities (2020: 719) were in an unrealized loss position of \$94 million (2020: \$19 million) of which \$8 million (2020: \$7 million) was related to securities below investment grade or not rated.

At December 31, 2021, 344 fixed maturities (2020: 249) had been in a continuous unrealized loss position for twelve months or greater and had a fair value of \$390 million (2020: \$437 million).

The unrealized losses of \$94 million (2020: \$19 million) were due to non-credit factors and were expected to be recovered as the related securities approach maturity.

At December 31, 2021, the Company did not intend to sell the securities in an unrealized loss position and it is more likely than not that the Company will not be required to sell these securities before the anticipated recovery of their amortized costs.

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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5. INVESTMENTS (CONTINUED)

b) Mortgage Loans

The following table provides details of the Company's mortgage loans held for investment:

	December 31, 2021		December 31, 2020	
	Carrying value	% of Total	Carrying value	% of Total
Mortgage loans held for investment:				
Commercial	\$ 594,088	100 %	\$ 593,290	100 %
Total mortgage loans held for investment	\$ 594,088	100 %	\$ 593,290	100 %

The primary credit quality indicators for commercial mortgage loans are the debt service coverage ratio which compares a property's net operating income to amounts needed to service the principal and interest due under the loan, (generally, the lower the debt service coverage ratio, the higher the risk of experiencing a credit loss) and the loan-to-value ratio which compares the unpaid principal balance of the loan to the estimated fair value of the underlying collateral (generally, the higher the loan-to-value ratio, the higher the risk of experiencing a credit loss). The debt service coverage ratio and loan-to-value ratio, as well as the values utilized in calculating these ratios, are updated annually, on a rolling basis.

The Company has a high quality mortgage loan portfolio with a weighted average debt service coverage ratio of 2.5x (2020: 2.4x) and a weighted average loan-to-value ratio of 60% (2020: 60%). At December 31, 2021 and 2020, there were no credit losses or past due amounts associated with the commercial mortgage loans held by the Company.

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5. INVESTMENTS (CONTINUED)

c) Other Investments

The following table provides a summary of the Company's other investments, together with additional information relating to the liquidity of each category:

	Fair value		Redemption frequency (if currently eligible)	Redemption notice period
<u>At December 31, 2021</u>				
Long/short equity funds	\$ 3,476	— %	Annually	60 days
Multi-strategy funds	56,012	6 %	Quarterly	60-90 days
Direct lending funds	289,867	31 %	Quarterly ⁽¹⁾	90 days
Private equity funds	249,974	26 %	n/a	n/a
Real estate funds	238,222	25 %	Quarterly ⁽²⁾	45 days
CLO-Equities	5,910	1 %	n/a	n/a
Other privately held investments	104,521	11 %	n/a	n/a
Overseas deposits	—	— %	n/a	n/a
Total other investments	<u>\$ 947,982</u>	<u>100 %</u>		
<u>At December 31, 2020</u>				
Long/short equity funds	\$ 25,300	3 %	Annually	60 days
Multi-strategy funds	121,420	15 %	Quarterly, Semi-annually	60-95 days
Direct lending funds	272,131	33 %	Quarterly ⁽¹⁾	90 days
Private equity funds	124,706	15 %	n/a	n/a
Real estate funds	164,250	20 %	Quarterly ⁽²⁾	45 days
CLO-Equities	6,173	1 %	n/a	n/a
Other privately held investments	70,011	8 %	n/a	n/a
Overseas deposits	45,165	5 %	n/a	n/a
Total other investments	<u>\$ 829,156</u>	<u>100 %</u>		

n/a – not applicable

(1) Applies to one fund with a fair value of \$47 million (2020: \$38 million).

(2) Applies to one fund with a fair value of \$73 million (2020: \$61 million).

The investment strategies for the above funds are as follows:

- *Long/short equity funds*: Seek to achieve attractive returns primarily by executing an equity trading strategy involving long and short investments in publicly-traded equity securities.
- *Multi-strategy funds*: Seek to achieve above-market returns by pursuing multiple investment strategies to diversify risks and reduce volatility. This category includes funds of hedge funds which invest in a large pool of hedge funds across a diversified range of hedge fund strategies.
- *Direct lending funds*: Seek to achieve attractive risk-adjusted returns, including current income generation, by investing in funds which provide financing directly to borrowers.
- *Private equity funds*: Seek to achieve attractive risk-adjusted returns by investing in private transactions over the course of several years.
- *Real estate funds*: Seek to achieve attractive risk-adjusted returns by making and managing investments in real estate and real estate securities and businesses.

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5. INVESTMENTS (CONTINUED)

Two common redemption restrictions which may impact the Company's ability to redeem hedge funds are gates and lockups. A gate is a suspension of redemptions which may be implemented by the general partner or investment manager of the fund in order to defer, in whole or in part, the redemption request in the event the aggregate amount of redemption requests exceeds a predetermined percentage of the fund's net assets which may otherwise hinder the general partner or investment manager's ability to liquidate holdings in an orderly fashion in order to generate the cash necessary to fund extraordinarily large redemption payouts. A lockup period is the initial amount of time an investor is contractually required to hold the security before having the ability to redeem. During 2021 and 2020, neither of these restrictions impacted the Company's redemption requests. At December 31, 2021, \$3 million (2020: \$25 million), representing 6% (2020: 17%) of total hedge funds, relate to holdings where the Company is still within the lockup period. The expiration of this lockup period is March 2022.

At December 31, 2021, the Company had \$224 million (2020: \$151 million) of unfunded commitments as a limited partner in direct lending funds. Once the full amount of committed capital has been called by the General Partner of each of these funds, the assets will not be fully returned until the completion of the fund's investment term. These funds have investment terms ranging from four to ten years and the General Partners of certain funds have the option to extend the term by up to three years.

At December 31, 2021, the Company had \$23 million (2020: \$20 million) of unfunded commitments as a limited partner in multi-strategy hedge funds. Once the full amount of committed capital has been called by the General Partner of each of these funds, the assets will not be fully returned until after the completion of the funds' investment term. These funds have investment terms ranging from two years to the dissolution of the underlying fund.

At December 31, 2021, the Company had \$173 million (2020: \$201 million) of unfunded commitments as a limited partner in funds which invest in real estate and real estate securities and businesses. These funds include an open-ended fund and funds with investment terms ranging from two years to the dissolution of the underlying fund.

At December 31, 2021, the Company had \$178 million (2020: \$166 million) of unfunded commitments as a limited partner in private equity funds. The life of the funds is subject to the dissolution of the underlying funds. The Company expects the overall holding period to be over five years.

During 2015, the Company made a \$50 million commitment as a limited partner of a bank revolver opportunity fund. The fund has an investment term of seven years and the General Partners have the option to extend the term by up to two years. At December 31, 2021, this commitment remains unfunded. It is not anticipated that the full amount of this fund will be drawn.

d) Equity Method Investments

During 2016, the Company paid \$108 million including direct transaction costs to acquire 19% of the common equity of Harrington Reinsurance Holdings Limited ("Harrington"), the parent company of Harrington Re Ltd. ("Harrington Re"), an independent reinsurance company jointly sponsored by the Company and The Blackstone Group L.P. ("Blackstone"). Through long-term service agreements, the Company will serve as Harrington Re's reinsurance underwriting manager and Blackstone will serve as exclusive investment management service provider. As an investor, the Company expects to benefit from underwriting profit generated by Harrington Re and the income and capital appreciation Blackstone seeks to deliver through its investment management services. In addition, the Company has entered into an arrangement with Blackstone under which underwriting and investment related fees will be shared equally. Harrington is not a VIE that is required to be included in the Company's consolidated financial statements. The Company accounts for its ownership interest in Harrington under the equity method of accounting. The Company's proportionate share of the underlying equity in net assets resulted in a basis difference of \$5 million which represents initial transactions costs.

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5. INVESTMENTS (CONTINUED)

e) Net Investment Income

Net investment income was derived from the following sources:

Year ended December 31,	2021	2020	2019
Fixed maturities	\$ 262,049	\$ 317,121	\$ 384,053
Other investments	181,906	16,059	60,038
Equity securities	12,752	9,328	10,434
Mortgage loans	17,427	15,432	14,712
Cash and cash equivalents	4,454	13,582	26,882
Short-term investments	664	2,749	7,053
Gross investment income	479,252	374,271	503,172
Investment expenses	(24,951)	(24,670)	(24,600)
Net investment income	\$ 454,301	\$ 349,601	\$ 478,572

f) Net Investment Gains (Losses)

The following table provides an analysis of net investment gains (losses):

Year ended December 31,	2021	2020	2019
Gross realized investment gains			
Fixed maturities and short-term investments	\$ 137,729	\$ 186,726	\$ 93,160
Equity securities	5,413	25,648	3,449
Gross realized investment gains	143,142	212,374	96,609
Gross realized investment losses			
Fixed maturities and short-term investments	(42,613)	(94,607)	(56,515)
Equity securities	(696)	(5,840)	(323)
Gross realized investment losses	(43,309)	(100,447)	(56,838)
Change in allowance for expected credit losses	11	(323)	—
Impairment losses ⁽¹⁾	(22)	(1,486)	—
OTTI losses	—	—	(6,984)
Change in fair value of investment derivatives ⁽²⁾	4,346	(2,434)	(1,823)
Net unrealized gains (losses) on equity securities	30,111	21,449	60,269
Net investment gains	\$ 134,279	\$ 129,133	\$ 91,233

(1) Related to instances where the Company intends to sell securities or it is more likely than not that the Company will be required to sell securities before their anticipated recovery.

(2) Refer to Note 7 'Derivative Instruments'.

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5. INVESTMENTS (CONTINUED)

The following table provides a reconciliation of the beginning and ending balances of the allowance for expected credit losses on fixed maturities classified as available for sale:

Year ended December 31,	2021	2020	2019
Balance at beginning of period	\$ 323	\$ —	\$ —
Expected credit losses on securities where credit losses were not previously recognized	95	22,570	—
Additions (reductions) for expected credit losses on securities where credit losses were previously recognized	50	(11,542)	—
Impairments of securities which the Company intends to sell or more likely than not will be required to sell	—	—	—
Securities sold/redeemed/matured	(155)	(10,705)	—
Balance at end of period	\$ 313	\$ 323	\$ —

The following table summarizes the OTTI charge recognized in net income by asset class:

Year ended December 31,	2021	2020	2019
Fixed maturities:			
Non-U.S. government	\$ —	\$ —	\$ 90
Corporate debt	—	—	6,894
Non-agency CMBS	—	—	—
Total OTTI recognized in net income	\$ —	\$ —	\$ 6,984

Fixed Maturities

The Company evaluates available for sale securities for expected credit losses when fair value is below amortized cost. If the Company intends to sell or will be required to sell the security before its anticipated recovery, the full amount of the impairment loss is charged to net income. If the Company does not intend to sell or will not be required to sell the security before its anticipated recovery, an allowance for expected credit losses is established and the portion of the loss that relates to credit losses is recorded in net income.

Effective January 1, 2020, the Company adopted the targeted changes to the impairment model for available for sale securities. The updated guidance amends the previous OTTI impairment model by requiring the recognition of impairments related to credit losses through an allowance account and limits the amount of credit loss to the difference between a security's amortized cost basis and its fair value. In addition, the length of time a security has been in an unrealized loss position no longer impacts the determination of whether a credit loss exists.

A summary of credit loss activity by asset class, the significant inputs and the methodology used to estimate credit losses are described below.

U.S. Government, U.S. Agency and U.S. Agency RMBS

Unrealized losses on securities issued or backed, either explicitly or implicitly by the U.S. government are not analyzed for credit losses. The Company has concluded that the possibility of a credit loss on these securities is highly unlikely due to the explicit U.S. government guarantee related to certain securities (e.g. Government National Mortgage Association issuances) and the implicit guarantee related to other securities that has been validated by past actions (e.g. U.S. government bailout of Federal National Mortgage Association and Federal Home Loan Mortgage Corporation during the 2008 credit crisis).

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5. INVESTMENTS (CONTINUED)

Although these securities are not analyzed for credit losses, they are evaluated for intention to sell and likely requirement to sell.

Non-U.S. Government

Non-U.S. government securities are evaluated for expected credit losses primarily through qualitative assessments of the likelihood of credit losses using information such as severity of unrealized losses, credit ratings and price volatility. At December 31, 2021, the gross unrealized losses of \$10 million were mainly due to foreign exchange losses. At December 31, 2021, the Company does not anticipate any credit losses on its non-U.S. government fixed maturities.

At December 31, 2020, the gross unrealized losses were less than \$1 million and were mainly due to foreign exchange losses. At December 31, 2020, the Company did not anticipate any credit losses on its non-U.S. government fixed maturities.

Corporate Debt

To estimate expected credit losses for corporate debt securities, the Company's projected cash flows are primarily driven by assumptions regarding the severity of loss, probability of default and projected recovery rates. The Company's default and loss severity rates are based on credit rating, credit analysis and macroeconomic forecasts. In 2021 and 2020, the allowance for expected credit losses on corporate debt securities mainly related to loss severity where the forecasted recovery to amortized cost was uncertain.

CMBS

The Company's investments in CMBS are diversified and primarily rated AA or better. At December 31, 2021, CMBS had a weighted average estimated subordination percentage of 37% (2020: 29%). Based on discounted cash flows at December 31, 2021 and 2020, the current level of subordination is sufficient to cover the estimated loan losses on the underlying collateral of the CMBS.

Non-agency RMBS

To estimate expected credit losses for non-agency RMBS, the Company's projected cash flows incorporated underlying data from widely accepted third-party data sources along with certain internal assumptions and judgments regarding the future performance of the security. These assumptions included default, delinquency, loss severity and prepayment rates. The assumptions used to calculate credit losses in 2021 have not changed significantly since December 31, 2020.

At December 31, 2021, the fair value of the Company's non-agency RMBS was \$186 million (2020: \$140 million), consisting primarily of \$87 million (2020: \$85 million) of Prime and \$74 million (2020: \$23 million) of Alt-A MBS. At December 31, 2021, the allowance for expected credit losses on non-agency RMBS related to loss severity where the forecasted recovery to amortized cost is uncertain.

ABS

The Company's investments in ABS consist mainly of CLO debt trashed securities ("CLO Debt") purchased primarily as new issues between 2018 and 2021. Substantially all of these new issues had credit ratings of AA or better. The Company utilizes a scenario-based approach to review its CLO Debt portfolio based on the current asset market price. The Company also reviews subordination levels of these securities to determine their ability to absorb credit losses of underlying collateral. If losses are forecast to be below the subordination level for a tranche held by the Company, the security is determined not to have a credit loss. At December 31, 2021 and 2020, the Company does not anticipate any credit losses on its CLO Debt.

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5. INVESTMENTS (CONTINUED)

g) Restricted Assets

In order to support the Company's obligations in regulatory jurisdictions where it operates as a non-admitted carrier, the Company provides collateral in the form of assets held in trust and, to a lesser extent, letters of credit (refer to Note 10(b) '*Debt and Financing Arrangements*').

In addition, the Company operates in the Lloyd's market through its corporate members, AXIS Corporate Capital UK Limited and AXIS Corporate Capital UK II Limited, which provide 70% and 30%, respectively of Syndicate 1686's capital support. Lloyd's sets capital requirements for corporate members annually through the application of a capital model that is based on regulatory rules pursuant to Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking up and pursuit of business of Insurance and Reinsurance (Solvency II) ("Solvency II").

The capital provided to support underwriting, or Funds at Lloyd's ("FAL"), may be satisfied by cash, certain investments and letters of credit provided by approved banks (refer to Note 11 '*Commitments and Contingencies*' and Note 21 '*Statutory Financial Information*').

At December 31, 2021 collateral held in trust for third-party agreements of \$2,413 million (2020: \$1,903 million) included \$507 million (2020: \$297 million) of fixed maturities and equity securities, and cash of \$326 million (2020: \$178 million) held on deposit to support the underwriting activities of Syndicate 1686.

The Company's restricted investments and cash primarily consist of high-quality fixed maturity and short-term investment securities.

The table below provides the fair values of the Company's restricted investments and cash:

At December 31,	2021	2020
Collateral in Trust for inter-company agreements	\$ 886,903	\$ 1,153,157
Collateral for secured letter of credit facility	402,478	434,845
Funds at Lloyd's	936,862	1,155,832
Collateral in Trust for third-party agreements	2,412,882	1,903,274
Securities on deposit or in trust with regulatory authorities	729,072	265,959
Total restricted investments and cash	\$ 5,368,197	\$ 4,913,067

h) Reverse Repurchase Agreements

At December 31, 2021, the Company held no (2020: \$91 million) reverse repurchase agreements. These loans are fully collateralized, are generally outstanding for a short period of time and are presented on a gross basis as part of cash and cash equivalents in the Company's consolidated balance sheets. The required collateral for these loans is either cash or U.S. Treasuries at a minimum rate of 102% of the loan principal. At maturity, the Company receives principal and interest income. The Company monitors the estimated fair value of the securities loaned and borrowed on a daily basis with additional collateral obtained as necessary throughout the duration of the transaction.

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6. FAIR VALUE MEASUREMENTS

Fair Value Hierarchy

Fair value is defined as the price to sell an asset or transfer a liability (i.e. the "exit price") in an orderly transaction between market participants. U.S. GAAP prescribes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to quoted prices in active markets and the lowest priority to unobservable data. The level in the hierarchy within which a given fair value measurement falls is determined based on the lowest level input that is significant to the measurement. The hierarchy is broken down into three levels as follows:

- Level 1 - Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access.
- Level 2 - Valuations based on quoted prices in active markets for similar assets or liabilities, quoted prices for identical assets or liabilities in inactive markets, or for which significant inputs are observable (e.g. interest rates, yield curves, prepayment speeds, default rates, loss severities, etc.) or can be corroborated by observable market data.
- Level 3 - Valuations based on inputs that are unobservable and significant to the overall fair value measurement. The unobservable inputs reflect the Company's judgments about assumptions that market participants might use.

The availability of observable inputs can vary from financial instrument to financial instrument and is affected by a wide variety of factors including, for example, the type of financial instrument, whether the financial instrument is new and not yet established in the marketplace, and other characteristics particular to the transaction. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires significantly more judgment.

Accordingly, the degree of judgment exercised by management in determining fair value is greatest for financial instruments categorized as Level 3. In periods of market dislocation, the observability of prices and inputs may be reduced for many financial instruments. This may lead the Company to change the selection of valuation technique (from market to cash flow approach) or may cause the Company to use multiple valuation techniques to estimate the fair value of a financial instrument. This circumstance could cause an instrument to be reclassified between levels within the fair value hierarchy.

Valuation Techniques

The valuation techniques, including significant inputs and assumptions generally used to determine the fair values of the Company's financial instruments as well as the classification of the fair values of its financial instruments in the fair value hierarchy are described in detail below.

Fixed Maturities

At each valuation date, the Company uses the market approach valuation technique to estimate the fair value of its fixed maturities portfolio, where possible. The market approach includes, but is not limited to, prices obtained from third-party pricing services for identical or comparable securities and the use of "pricing matrix models" using observable market inputs such as yield curves, credit risks and spreads, measures of volatility, and prepayment speeds. Pricing from third-party pricing services is sourced from multiple vendors, where available, and the Company maintains a vendor hierarchy by asset type based on historical pricing experience and vendor expertise. Where prices are unavailable from pricing services, the Company obtains non-binding quotes from broker-dealers who are active in the corresponding markets. The valuation techniques including significant inputs and assumptions generally used to determine the fair values of the Company's fixed maturities by asset class as well as the classifications of the fair values of these securities in the fair value hierarchy are described in detail below.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

U.S. Government and Agency

U.S. government and agency securities consist primarily of bonds issued by the U.S. Treasury and mortgage pass-through agencies such as the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation and the Government National Mortgage Association. As the fair values of U.S. Treasury securities are based on unadjusted quoted market prices in active markets, the fair values of these securities are classified as Level 1. The fair values of U.S. government agency securities are determined using the spread above the risk-free yield curve. As the yields for the risk-free yield curve and the spreads are observable market inputs, the fair values of U.S. government agency securities are classified as Level 2.

Non-U.S. Government

Non-U.S. government securities include bonds issued by non-U.S. governments and their agencies along with supranational organizations (collectively also known as sovereign debt securities). The fair values of these securities are based on prices obtained from international indices or valuation models that include inputs such as interest rate yield curves, cross-currency basis index spreads and country credit spreads for structures similar to the sovereign bond in terms of issuer, maturity and seniority. As the significant inputs used to price these securities are observable market inputs, the fair values of non-U.S. government securities are classified as Level 2.

Corporate Debt

Corporate debt securities consist primarily of investment grade debt of a wide variety of corporate issuers and industries. The fair values of these securities are generally determined using the spread above the risk-free yield curve. These spreads are generally obtained from the new issue market, secondary trading and broker-dealer quotes. As the yields for the risk-free yield curve and the spreads are observable market inputs, the fair values of corporate debt securities are generally classified as Level 2. Where pricing is unavailable from pricing services, the Company obtains non-binding quotes from broker-dealers to estimate fair value. This is generally the case when there is a low volume of trading activity and current transactions are not orderly. In this event, the fair values of these securities are classified as Level 3.

Agency RMBS

Agency RMBS consist of bonds issued by the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation and the Government National Mortgage Association. The fair values of these securities are priced using a mortgage pool specific model which uses daily inputs from the active to be announced market and the spread associated with each mortgage pool based on vintage. As the significant inputs used to price these securities are observable market inputs, the fair values of Agency RMBS are classified as Level 2.

CMBS

CMBS mainly include investment grade bonds originated by non-agencies. The fair values of these securities are determined using a pricing model which uses dealer quotes and other available trade information along with security level characteristics to determine deal specific spreads. As the significant inputs used to price these securities are observable market inputs, the fair values of CMBS are generally classified as Level 2. Where pricing is unavailable from pricing services, the Company obtains non-binding quotes from broker-dealers to estimate fair value. This is generally the case when there is a low volume of trading activity and current transactions are not orderly. In this event, the fair values of these securities are classified as Level 3.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

Non-agency RMBS

Non-agency RMBS mainly include investment grade bonds originated by non-agencies. The fair values of these securities are determined using an option adjusted spread model or other relevant models, which use inputs including available trade information or broker quotes, prepayment and default projections based on historical statistics of the underlying collateral and current market data. As the significant inputs used to price these securities are observable market inputs, the fair values of non-agency RMBS are generally classified as Level 2. Where pricing is unavailable from pricing services, the Company obtains non-binding quotes from broker-dealers to estimate fair value. This is generally the case when there is a low volume of trading activity and current transactions are not orderly. In this event, the fair values of these securities are classified as Level 3.

ABS

ABS mainly include investment grade bonds backed by pools of loans with a variety of underlying collateral, including auto loans, student loans, credit card receivables and collateralized loan obligations ("CLOs"), originated by a variety of financial institutions. The fair values of these securities are determined using a model which uses prepayment speeds and spreads sourced primarily from the new issue market. As the significant inputs used to price these securities are observable market inputs, the fair values of ABS are generally classified as Level 2. Where pricing is unavailable from pricing services, the Company obtains non-binding quotes from broker-dealers to estimate fair value. This is generally the case when there is a low volume of trading activity and current transactions are not orderly. In this event, the fair values of these securities are classified as Level 3.

Municipals

Municipals comprise revenue bonds and general obligation bonds issued by U.S. domiciled state and municipal entities. The fair values of these securities are determined using spreads obtained from the new issue market, trade prices and broker-dealers quotes. As the significant inputs used to price these securities are observable market inputs, the fair values of municipals are classified as Level 2.

Equity Securities

Equity securities include common stocks, preferred stocks, exchange-traded funds and bond mutual funds. As the fair values of common stocks, preferred stocks and exchange-traded funds are based on unadjusted quoted market prices in active markets, the fair values of these securities are classified as Level 1. As bond mutual funds have daily liquidity, the fair values of these securities are classified as Level 2.

Other Investments

The fair value of an indirect investment in CLO-Equities is estimated using an income approach valuation technique, specifically an externally developed discounted cash flow model due to the lack of observable and relevant trades in secondary markets. As the significant inputs used to price this security are unobservable, the fair value of the indirect investment in CLO-Equities is classified as Level 3.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

Other privately held investments include convertible preferred shares, common shares, convertible notes, investments in limited partnerships and a variable yield security. These investments are initially valued at cost, which approximates fair value. In subsequent measurement periods, the fair value of these investments is derived from one or a combination of valuation methodologies which consider factors including recent capital raises by the investee companies, comparable precedent transaction multiples, comparable publicly traded multiples, third-party valuations, discounted cash-flow models, and other techniques that account for the industry and development stage for each investee company. The fair value of the variable yield security is determined using an externally developed discounted cash flow model. In order to assess the reasonableness of the information received from investee companies, the Company maintains an understanding of current market conditions, historical results, and emerging trends that may impact the results of operations, financial condition or liquidity of these companies. In addition, the Company engages in regular communication with management at investee companies. As the significant inputs used to price these investments are unobservable, the fair values of other privately held investments are classified as Level 3.

At December 31 2020, overseas deposits included investments in private funds held by Syndicate 2007 where the underlying investments were primarily U.S. government, non-U.S. government and corporate debt securities. The funds did not trade on an exchange, therefore, they were not included in available for sale investments. As the significant inputs used to price the underlying investments were observable market inputs, the fair values of overseas deposits were classified as Level 2.

Short-term Investments

Short-term investments primarily comprise highly liquid securities with maturities greater than three months but less than one year from the date of purchase. These securities are typically not actively traded due to their approaching maturity, therefore their amortized cost approximates fair value. The fair values of short-term investments are classified as Level 2.

Derivative Instruments

Derivative instruments include foreign exchange forward contracts that are customized to the Company's economic hedging strategies and trade in the over-the-counter derivative market. The fair values of these derivatives are determined using a market approach valuation technique based on significant observable market inputs from third-party pricing vendors, non-binding broker-dealer quotes and/or recent trading activity. As the significant inputs used to price these derivatives are observable market inputs, the fair values of these derivatives are classified as Level 2.

Other underwriting-related derivatives include insurance and reinsurance contracts that are accounted for as derivatives. These derivative contracts are initially valued at cost which approximates fair value. In subsequent measurement periods, the fair values of these derivatives are determined using internally developed discounted cash flow models. As the significant inputs used to price these derivatives are unobservable, the fair values of these contracts are classified as Level 3.

Cash-settled Awards

Cash-settled awards comprise restricted stock units that form part of the Company's compensation program. Although the fair values of these awards are determined using observable quoted market prices in active markets, the restricted stock units are not actively traded. As the significant inputs used to price these securities are observable market inputs, the fair values of these liabilities are classified as Level 2.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

The tables below present the financial instruments measured at fair value on a recurring basis for the periods indicated:

	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Fair value based on NAV practical expedient	Total fair value
<u>At December 31, 2021</u>					
Assets					
Fixed maturities, available for sale					
U.S. government and agency	\$ 2,632,541	\$ 49,907	\$ —	\$ —	\$ 2,682,448
Non-U.S. government	—	795,178	—	—	795,178
Corporate debt	—	4,452,418	42,894	—	4,495,312
Agency RMBS	—	1,074,589	—	—	1,074,589
CMBS	—	1,248,191	—	—	1,248,191
Non-agency RMBS	—	186,164	—	—	186,164
ABS	—	1,622,480	—	—	1,622,480
Municipals	—	208,838	—	—	208,838
	2,632,541	9,637,765	42,894	—	12,313,200
Equity securities					
Common stocks	1,364	—	—	—	1,364
Preferred stocks	179	—	—	—	179
Exchange-traded funds	336,815	—	—	—	336,815
Bond mutual funds	—	317,317	—	—	317,317
	338,358	317,317	—	—	655,675
Other investments					
Hedge funds ⁽¹⁾	—	—	—	59,488	59,488
Direct lending funds	—	—	—	289,867	289,867
Private equity funds	—	—	—	249,974	249,974
Real estate funds	—	—	—	238,222	238,222
CLO-Equities	—	—	5,910	—	5,910
Other privately held investments	—	—	104,521	—	104,521
Overseas deposits	—	—	—	—	—
	—	—	110,431	837,551	947,982
Short-term investments	—	31,063	—	—	31,063
Other assets					
Derivative instruments (refer to Note 7)	—	3,116	—	—	3,116
Total Assets	\$ 2,970,899	\$ 9,989,261	\$ 153,325	\$ 837,551	\$ 13,951,036
Liabilities					
Derivative instruments (refer to Note 7)	\$ —	\$ 14,987	\$ 5,630	\$ —	\$ 20,617
Cash-settled awards (refer to Note 16)	—	9,091	—	—	9,091
Total Liabilities	\$ —	\$ 24,078	\$ 5,630	\$ —	\$ 29,708

(1) Includes Long/short equity and Multi-strategy funds.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Fair value based on NAV practical expedient	Total fair value
<u>At December 31, 2020</u>					
Assets					
Fixed maturities, available for sale					
U.S. government and agency	\$ 1,861,240	\$ 57,459	\$ —	\$ —	\$ 1,918,699
Non-U.S. government	—	671,273	—	—	671,273
Corporate debt	—	4,653,447	2,504	—	4,655,951
Agency RMBS	—	1,286,209	—	—	1,286,209
CMBS	—	1,351,847	1,740	—	1,353,587
Non-agency RMBS	—	140,104	—	—	140,104
ABS	—	1,709,413	10,665	—	1,720,078
Municipals	—	295,898	—	—	295,898
	1,861,240	10,165,650	14,909	—	12,041,799
Equity securities					
Common stocks	10,942	—	—	—	10,942
Preferred stocks	8,068	—	—	—	8,068
Exchange-traded funds	221,718	—	—	—	221,718
Bond mutual funds	—	277,717	—	—	277,717
	240,728	277,717	—	—	518,445
Other investments					
Hedge funds ⁽¹⁾	—	—	—	146,720	146,720
Direct lending funds	—	—	—	272,131	272,131
Private equity funds	—	—	—	124,706	124,706
Real estate funds	—	—	—	164,250	164,250
CLO-Equities	—	—	6,173	—	6,173
Other privately held investments	—	—	70,011	—	70,011
Overseas deposits	—	45,165	—	—	45,165
	—	45,165	76,184	707,807	829,156
Short-term investments	—	161,897	—	—	161,897
Other assets					
Derivative instruments (refer to Note 7)	—	18,875	—	—	18,875
Total Assets	\$ 2,101,968	\$ 10,669,304	\$ 91,093	\$ 707,807	\$ 13,570,172
Liabilities					
Derivative instruments (refer to Note 7)	\$ —	\$ 2,364	\$ 9,122	\$ —	\$ 11,486
Cash-settled awards (refer to Note 16)	—	13,273	—	—	13,273
Total Liabilities	\$ —	\$ 15,637	\$ 9,122	\$ —	\$ 24,759

(1) Includes Long/short equity and Multi-strategy funds.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

The following table quantifies the significant unobservable inputs used in estimating fair values at December 31, 2021 of investments classified as Level 3 in the fair value hierarchy:

	Fair value	Valuation technique	Unobservable input	Amount / Range	Weighted average
Other investments - CLO-Equities	\$ 5,910	Discounted cash flow	Default rate	4.5%	4.5%
			Loss severity rate	50.0%	50.0%
			Collateral spread	3.0%	3.0%
			Estimated maturity date	6 years	6 years
Other investments - Other privately held investments	\$ 20,867	Discounted cash flow	Discount rate	2.5%	2.5%
			Default rate	0.5%	0.5%
			Loss absorption yield	1.0%	1.0%
			Estimated maturity date	2 - 4 years	3 years
Derivatives - Other underwriting-related derivatives	\$ (5,630)	Discounted cash flow	Discount rate	1.3%	1.3%

Note: Fixed maturities of \$43 million that are classified as Level 3 are excluded from the above table as these securities are priced using broker-dealer quotes. In addition, other privately held investments of \$84 million that are classified as Level 3 are excluded from the above table as these investments are priced using capital statements received from investee companies.

Other Investments - CLO-Equities

The CLO-Equities market continues to be relatively inactive with only a small number of transactions being observed, particularly related to transactions involving CLO-Equities held by the Company. Accordingly, the fair value of the Company's indirect investment in CLO-Equities is determined using a discounted cash flow model prepared by an external investment manager.

The default and loss severity rates are the most judgmental unobservable market inputs to the discounted cash flow model to which the valuation of the Company's indirect investment in CLO-Equities is most sensitive. A significant increase (decrease) in either of these significant inputs in isolation would result in a lower (higher) fair value estimate for the investment in CLO-Equities and, in general, a change in default rate assumptions would be accompanied by a directionally similar change in loss severity rate assumptions. Collateral spreads and estimated maturity dates are less judgmental inputs as they are based on the historical average of actual spreads and the weighted average life of the current underlying portfolios, respectively. A significant increase (decrease) in either of these significant inputs in isolation would result in a higher (lower) fair value estimate for the investment in CLO-Equities. In general, these inputs have no significant interrelationship with each other or with default and loss severity rates.

On a quarterly basis, the Company's valuation process for its indirect investment in CLO-Equities includes a review of the underlying cash flows and key assumptions used in the discounted cash flow model. The above significant unobservable inputs are reviewed and updated based on information obtained from secondary markets, including information received from the managers of the Company's CLO-Equities investment. In order to assess the reasonableness of the inputs the Company uses in the discounted cash flow model, the Company maintains an understanding of current market conditions, historical results, and emerging trends that may impact future cash flows. In addition, the assumptions the Company uses in its models are updated through regular communication with industry participants and ongoing monitoring of the deals in which the Company participates.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

Other Investments - Other Privately Held Securities

Other privately held securities are initially valued at cost which approximates fair value. In subsequent measurement periods, the fair value of the variable yield security was determined using an externally developed discounted cash flow model. This model includes inputs that are specific to that investment. The inputs used in the fair value measurement include an appropriate discount rate, default rate, loss absorption rate and estimated maturity date. The selection of an appropriate discount rate is judgmental and is the most significant unobservable input used in the valuation of this investment. A significant increase (decrease) in this input in isolation could result in significantly lower (higher) fair value measurement for this investment. In order to assess the reasonableness of the inputs the Company uses in the discounted cash flow model, the Company maintains an understanding of current market conditions, historical results, as well as investee specific information that may impact future cash flows.

Derivatives - Other Underwriting-related Derivatives

Other underwriting-related derivatives are initially valued at cost which approximates fair value. In subsequent measurement periods, the fair values of these derivatives are determined using internally developed discounted cash flow models which use appropriate discount rates. The selection of an appropriate discount rate is judgmental and is the most significant unobservable input used in the valuation of these derivatives. A significant increase (decrease) in this input in isolation could result in a significantly lower (higher) fair value measurement for the derivative contracts. In order to assess the reasonableness of the inputs the Company uses in the discounted cash flow model, the Company maintains an understanding of current market conditions, historical results, as well as contract specific information that may impact future cash flows.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

The following table presents changes in Level 3 for financial instruments measured at fair value on a recurring basis:

	Opening balance	Transfers into Level 3	Transfers out of Level 3	Included in net income ⁽¹⁾	Included in OCI ⁽²⁾	Purchases	Sales	Settlements/distributions	Closing balance	Change in unrealized gains/(losses) ⁽³⁾
Year ended December 31, 2021										
Fixed maturities, available for sale										
Corporate debt	\$ 2,504	\$ —	\$ —	\$ —	\$ (642)	\$ 41,800	\$ —	\$ (768)	\$ 42,894	\$ —
CMBS	1,740	—	—	—	13	—	—	(1,753)	—	—
ABS	10,665	—	(10,200)	—	35	—	—	(500)	—	—
	14,909	—	(10,200)	—	(594)	41,800	—	(3,021)	42,894	—
Other investments										
CLO-Equities	6,173	—	—	2,819	—	—	—	(3,082)	5,910	2,819
Other privately held investments	70,011	—	—	42,653	—	21,760	(26,980)	(2,923)	104,521	25,273
	76,184	—	—	45,472	—	21,760	(26,980)	(6,005)	110,431	28,092
Total assets	\$ 91,093	\$ —	\$ (10,200)	\$ 45,472	\$ (594)	\$ 63,560	\$ (26,980)	\$ (9,026)	\$ 153,325	\$ 28,092
Other liabilities										
Derivative instruments	\$ 9,122	\$ —	\$ —	\$ (2,742)	\$ —	\$ —	\$ —	\$ (750)	\$ 5,630	\$ (1,769)
Total liabilities	\$ 9,122	\$ —	\$ —	\$ (2,742)	\$ —	\$ —	\$ —	\$ (750)	\$ 5,630	\$ (1,769)
Year ended December 31, 2020										
Fixed maturities, available for sale										
Corporate debt	\$ 2,297	\$ —	\$ —	\$ —	\$ 207	\$ —	\$ —	\$ —	\$ 2,504	\$ —
CMBS	5,235	—	—	—	(11)	—	—	(3,484)	1,740	—
ABS	489	9,091	—	—	116	969	—	—	10,665	—
	8,021	9,091	—	—	312	969	—	(3,484)	14,909	—
Other investments										
CLO-Equities	14,328	—	—	(6,017)	—	—	—	(2,138)	6,173	(5,319)
Other privately held investments	36,934	—	—	6,040	—	27,037	—	—	70,011	6,040
	51,262	—	—	23	—	27,037	—	(2,138)	76,184	721
Total assets	\$ 59,283	\$ 9,091	\$ —	\$ 23	\$ 312	\$ 28,006	\$ —	\$ (5,622)	\$ 91,093	\$ 721
Other liabilities										
Derivative instruments	\$ 9,672	\$ —	\$ —	\$ 9,421	\$ —	\$ —	\$ —	\$ (9,971)	\$ 9,122	\$ (550)
Total liabilities	\$ 9,672	\$ —	\$ —	\$ 9,421	\$ —	\$ —	\$ —	\$ (9,971)	\$ 9,122	\$ (550)

(1) Realized gains (losses) on fixed maturities and realized and unrealized gains (losses) on other assets and other liabilities included in net income are included in net investment gains (losses). Realized and unrealized gains (losses) on other investments included in net income are included in net investment income.

(2) Unrealized gains (losses) on fixed maturities are included in other comprehensive income ("OCI").

(3) Change in unrealized gains (losses) relating to assets and liabilities held at the reporting date.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

Transfers into Level 3 from Level 2

There were no transfers into Level 3 from Level 2 during 2021. The transfers into Level 3 from Level 2 during 2020 were primarily due to the lack of observable market inputs and multiple quotes from pricing vendors and broker-dealers for certain fixed maturities.

Transfers out of Level 3 into Level 2

The transfers out of Level 3 into Level 2 during 2021 were primarily due to the availability of observable market inputs and multiple quotes from pricing vendors for certain fixed maturities. There were no transfers out of Level 3 into Level 2 during 2020.

Measuring the Fair Value of Other Investments Using Net Asset Valuations

The fair values of hedge funds, direct lending funds, private equity funds and real estate funds are estimated using net asset valuations ("NAVs") as advised by external fund managers or third-party administrators. For these funds, NAVs are based on the manager's or administrator's valuation of the underlying holdings in accordance with the fund's governing documents and in accordance with U.S. GAAP.

For hedge funds, direct lending funds, private equity funds and real estate funds, valuation statements are typically released on a reporting lag, therefore, the Company estimates the fair value of these funds by starting with the most recent fund valuations and adjusting for capital calls, redemptions, drawdowns and distributions. Return estimates are not available from the relevant fund managers for these funds, therefore the Company typically has a reporting lag in its fair value measurements of these funds. At December 31, 2021 and 2020, all funds measured at fair value using NAVs are reported on a lag.

The Company often does not have access to financial information relating to the underlying securities held within the funds. Therefore, management is unable to corroborate the fair values placed on the securities underlying the asset valuations provided by fund managers or fund administrators. In order to assess the reasonableness of the NAVs, the Company performs a number of monitoring procedures on a quarterly basis, to assess the quality of the information provided by fund managers and fund administrators. These procedures include, but are not limited to, regular review and discussion of each fund's performance with its manager, regular evaluation of fund performance against applicable benchmarks and the backtesting of the Company's fair value estimates against subsequently received NAVs. Backtesting involves comparing the Company's previously reported fair values for each fund against NAVs per audited financial statements (for year-end values) and final NAVs from fund managers and fund administrators (for interim values).

The fair values of hedge funds, direct lending funds, private equity funds and real estate funds are measured using the NAV practical expedient, therefore the fair values of these funds have not been categorized within the fair value hierarchy.

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6. FAIR VALUE MEASUREMENTS (CONTINUED)

Financial Instruments Disclosed, But Not Carried, at Fair Value

The fair value of financial instruments accounting guidance also applies to financial instruments disclosed, but not carried, at fair value, except for certain financial instruments, including insurance contracts.

At December 31, 2021, the carrying values of cash and cash equivalents including restricted amounts, accrued investment income, receivable for investments sold, certain other assets, payable for investments purchased and certain other liabilities approximated fair values due to their short maturities. As these financial instruments are not actively traded, their fair values are classified as Level 2.

At December 31, 2021, the Company's fixed maturities held to maturity, were recorded at amortized cost with a carrying value of \$446 million (2020: \$nil) and a fair value of \$445 million (2020: \$nil). The fair values of these securities are determined using a model which uses prepayment speeds and spreads sourced primarily from the new issue market. As the significant inputs used to price these securities are observable market inputs, their fair values are classified as Level 2.

At December 31, 2021, the carrying value of mortgage loans, held for investment approximated fair value. The fair values of mortgage loans are primarily determined by estimating expected future cash flows and discounting them using current interest rates for similar mortgage loans with similar credit risk or are determined from pricing for similar loans. As mortgage loans are not actively traded, their fair values are classified as Level 3.

At December 31, 2021, the Company's debt was recorded at amortized cost with a carrying value of \$1,311 million (2020: \$1,310 million) and a fair value of \$1,453 million (2020: \$1,485 million). The fair value of the Company's debt is based on prices obtained from a third-party pricing service and is determined using the spread above the risk-free yield curve. These spreads are generally obtained from the new issue market, secondary trading and broker-dealer quotes. As the yields for the risk-free yield curve and the spreads are observable market inputs, the fair value of the Company's debt is classified as Level 2.

7. DERIVATIVE INSTRUMENTS

The following table provides the balance sheet classifications of derivatives recorded at fair value:

	December 31, 2021			December 31, 2020		
	Derivative notional amount	Derivative asset fair value ⁽¹⁾	Derivative liability fair value ⁽¹⁾	Derivative notional amount	Derivative asset fair value ⁽¹⁾	Derivative liability fair value ⁽¹⁾
<i>Relating to investment portfolio:</i>						
Foreign exchange forward contracts	\$ 184,187	\$ 13	\$ 1,463	\$ 105,781	\$ 2	\$ 2,364
<i>Relating to underwriting portfolio:</i>						
Foreign exchange forward contracts	1,258,836	3,103	13,524	1,197,012	18,873	—
Other underwriting-related contracts	50,000	—	5,630	75,000	—	9,122
Total derivatives	\$ 3,116	\$ 20,617		\$ 18,875	\$ 11,486	

(1) Derivative assets and derivative liabilities are classified within other assets and other liabilities in the consolidated balance sheets.

The notional amounts of derivative contracts represent the basis on which amounts paid or received are calculated and are presented in the above table to quantify the volume of the Company's derivative activities. Notional amounts are not reflective of credit risk.

None of the Company's derivative instruments are designated as hedges under current accounting guidance.

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7. DERIVATIVE INSTRUMENTS (CONTINUED)

Offsetting Assets and Liabilities

The Company's derivative instruments are generally traded under International Swaps and Derivatives Association master netting agreements which establish terms that apply to all transactions. In the event of a bankruptcy or other stipulated event, master netting agreements provide that individual positions be replaced with a new amount, usually referred to as the termination amount, determined by taking into account market prices and converting into a single currency. Effectively, this contractual close-out netting reduces credit exposure from gross to net exposure.

The following table provides a reconciliation of gross derivative assets and liabilities to the net amounts presented in the consolidated balance sheets, with the difference being attributable to the impact of master netting agreements:

	December 31, 2021			December 31, 2020		
	Gross amounts	Gross amounts offset	Net amounts ⁽¹⁾	Gross amounts	Gross amounts offset	Net amounts ⁽¹⁾
Derivative assets	\$ 9,047	\$ (5,931)	\$ 3,116	\$ 27,765	\$ (8,890)	\$ 18,875
Derivative liabilities	\$ 26,548	\$ (5,931)	\$ 20,617	\$ 20,376	\$ (8,890)	\$ 11,486

(1) Net asset and liability derivatives are classified within other assets and other liabilities in the consolidated balance sheets.

Refer to Note 5 '*Investments*' for information on reverse repurchase agreements.

a) Relating to Investment Portfolio

Foreign Currency Risk

The Company's investment portfolio is exposed to foreign currency risk therefore the fair values of its investments are partially influenced by changes in foreign exchange rates. The Company may enter into foreign exchange forward contracts to manage the effect of this foreign currency risk. These foreign currency hedging activities are not designated as specific hedges for financial reporting purposes.

Interest Rate Risk

The Company's investment portfolio includes a large percentage of fixed maturities which exposes it to significant interest rate risk. As part of overall management of this risk, the Company may use interest rate swaps.

b) Relating to Underwriting Portfolio

Foreign Currency Risk

The Company's insurance and reinsurance subsidiaries and branches operate in various countries. Some of its business is written in currencies other than the U.S. dollar, therefore the underwriting portfolio is exposed to significant foreign currency risk. The Company manages foreign currency risk by seeking to match its foreign-denominated net liabilities under insurance and reinsurance contracts with cash and investments that are denominated in the same currencies. The Company uses derivative instruments, specifically, forward contracts to economically hedge foreign currency exposures

Other Underwriting-related Risks

The Company enters into insurance and reinsurance contracts that are accounted for as derivatives. These insurance or reinsurance contracts provide indemnification to an insured or cedant as a result of a change in a variable as opposed to an identifiable insurable event. The Company considers these contracts to be part of its underwriting operations.

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7. DERIVATIVE INSTRUMENTS (CONTINUED)

The following table provides the total unrealized and realized gains (losses) recognized in net income for derivatives not designated as hedges:

	Consolidated statement of operations line item that includes gain (loss) recognized in net income	Amount of gain (loss) recognized in net income		
		2021	2020	2019
<i>Relating to investment portfolio:</i>				
Foreign exchange forward contracts	Net investment gains (losses)	\$ 4,346	\$ (2,434)	\$ 1,854
Interest rate swaps	Net investment gains (losses)	—	—	(3,677)
<i>Relating to underwriting portfolio:</i>				
Foreign exchange forward contracts	Foreign exchange gains (losses)	(50,738)	44,166	(10,678)
Other underwriting-related contracts	Other insurance related income (loss)	2,742	(9,035)	1,789
Total		\$ (43,650)	\$ 32,697	\$ (10,712)

8. RESERVE FOR LOSSES AND LOSS EXPENSES

Reserving Methodology

Sources of Information

The Company's loss reserving process begins with the collection and analysis of paid and incurred claim data for each of the Company's segments. The segmental data is disaggregated by reserve class and further disaggregated by underwriting year and accident year. Underwriting year or accident year information is used to analyze the Company's business and to estimate reserves for losses and loss expenses. Reserve classes are selected to ensure that the underlying contracts have homogeneous loss development characteristics, while remaining large enough to make the estimation of trends credible. The Company's reserve classes are reviewed on a regular basis and adjusted over time as the Company's business evolves. The paid and incurred claim data serves as a key input to many of the methods employed by the Company's actuaries.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

The following tables map the Company's 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	X				X	X

Reinsurance segment	Reserve class and tail				
	Property and other	Credit and surety	Professional lines	Motor	Liability
	Short	Medium	Medium	Long	Long
Reported lines of business					
Catastrophe	X				
Property	X				
Credit and surety		X			
Professional lines			X		
Motor				X	
Liability					X
Engineering	X				
Agriculture	X				
Marine and aviation	X				
Accident and health	X				
Discontinued lines - Novae	X			X	X

Actuarial Analysis

Multiple actuarial methods are available to estimate ultimate losses. Each method has its own assumptions and its own advantages and disadvantages, with no single estimation method being better than the others in all situations and no one set of assumption variables being meaningful for all reserve classes. The relative strengths and weaknesses of the particular estimation methods when applied to a particular group of claims can also change over time.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

The following is a brief description of the reserve estimation methods commonly employed by the Company's actuaries including a discussion of their particular strengths and weaknesses:

- *Expected Loss Ratio Method ("ELR Method")*: This method estimates ultimate losses for an accident year or underwriting year by applying an expected loss ratio ("ELR") to the earned or written premium for that year. Generally, expected loss ratios are based on one or more of (a) an analysis of historical loss experience to date, (b) pricing information and (c) industry data, adjusted as appropriate, to reflect changes in rates, loss and exposure trends, and terms and conditions. This method is insensitive to actual incurred losses for the accident year or underwriting year in question and is, therefore, often useful in the early stages of development when very few losses have been incurred. Conversely, the lack of sensitivity to incurred/paid losses for the accident year or underwriting year in question means that this method is usually inappropriate in later stages of an accident year or underwriting year's development.
- *Loss Development Method (also referred to as the "Chain Ladder Method" or "Link Ratio Method")*: This method assumes that the losses incurred/paid for each accident year or underwriting year at a particular development stage follow a relatively similar pattern. It assumes that on average, every accident year or underwriting year will display the same percentage of ultimate losses incurred/paid at the same point in time after the inception of that year. The percentages incurred/paid are established for each development stage (e.g. 12 months, 24 months, etc.) after examining averages from historical loss development data and/or external industry benchmark information. Ultimate losses are then estimated by multiplying the actual incurred/paid losses by the reciprocal of the established incurred/paid percentage. The strengths of this method are that it reacts to loss emergence/payments and that it makes full use of historical claim emergence/payment experience. However, this method has weaknesses when the underlying assumption of stable loss development/payment patterns is not valid. This could be the consequence of changes in business mix, claim inflation trends or claim reporting practices and/or the presence of large claims, among other things. Furthermore, this method tends to produce volatile estimates of ultimate losses where there is volatility in the underlying incurred/paid patterns. In particular, where the expected percentage of incurred/paid losses is low, small deviations between actual and expected claims can lead to very volatile estimates of ultimate losses. As a result, this method is often unsuitable at early development stages for an accident year or underwriting year.
- *Bornhuetter-Ferguson Method ("BF Method")*: This method can be seen as a combination of the ELR and Loss Development Methods, under which the Loss Development Method is given progressively more weight as an accident year or underwriting year matures. The main advantage of the BF Method is that it provides a more stable estimate of ultimate losses than the Loss Development Method at earlier stages of development, while remaining more responsive to emerging loss development than the ELR Method. In addition, the BF Method allows for the incorporation of external market information through the use of expected loss ratios, whereas the Loss Development Method does not incorporate such information.

As part of the loss reserving process, the Company's actuaries employ the estimation method(s) that they believe will produce the most reliable estimate of ultimate losses, at that particular evaluation date, for each reserve class and accident year or underwriting year combination. Often, this is a blend (i.e. weighted average) of the results of two or more appropriate actuarial methods. These ultimate loss estimates are generally utilized to evaluate the adequacy of ultimate loss estimates for previous accident or underwriting years, established in the prior reporting period. For the initial estimate of the current accident or underwriting year, the available claim data is typically insufficient to produce a reliable estimate of ultimate losses. As a result, initial estimates for an accident or underwriting year are generally based on the ELR Method for longer tailed lines and a BF Method for shorter tailed lines. The initial ELR for each reserve class is established by the Company's actuaries at the start of the year as part of the planning process, taking into consideration prior accident years' or underwriting years' experience and industry benchmarks, adjusted after considering factors such as loss and exposure trends, rate differences, changes in contract terms and conditions, business mix changes and other known differences between the current year and prior accident or underwriting years. The initial expected loss ratios for a given accident or underwriting year may be modified over time if the underlying assumptions, such as loss development or premium rate changes, differ from the original assumptions.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Key Actuarial Assumptions

The use of the above actuarial methods requires the Company to make certain explicit assumptions, the most significant of which are: (1) expected loss ratios and (2) loss development patterns.

The Company relies on historical loss experience in establishing expected loss ratios and selecting loss development patterns. In establishing expected loss ratios for the insurance segment, consideration is given to a number of other factors, including exposure trends, rate adequacy on new and renewal business, ceded reinsurance costs, changes in claims emergence and the Company's underwriters' view of terms and conditions in the market environment. For the reinsurance segment, expected loss ratios are based on a contract-by-contract review, which considers information provided by clients together with estimates provided by the Company's underwriters and actuaries about the impact of changes in pricing, terms and conditions and coverage. Market experience for some lines of business as compiled and analyzed by an independent actuarial firm is also considered, as appropriate.

Claim Tail Analysis

Short-tail Business

Short-tail business generally includes exposures for which losses are usually known and paid within a relatively short period of time after the underlying loss event has occurred. Short-tail business includes the underlying exposures in the property and other, marine, and aviation (hull and war business) reserve classes in the insurance segment, and the underlying exposures in the property and other reserve class in the reinsurance segment.

The key actuarial assumptions for short-tail business are primarily developed with reference to the Company's historical loss experience for expected loss ratios and loss development patterns utilized to establish estimates of ultimate losses for an accident year. Due to the relatively short reporting and settlement patterns for short-tail business, more weight is generally placed on experience-based methods and other qualitative considerations in establishing reserves for recent and more mature accident years.

The majority of development for an accident year or underwriting year is expected to be recognized in the subsequent one to three years.

Medium-tail Business

Medium-tail business generally has claim reporting and settlement periods that are longer than those of short-tail reserve classes. Medium-tail business includes the underlying exposures in the professional lines, credit and political risk and aviation (liability business) reserve classes in the insurance segment, and the credit and surety reserve class in the reinsurance segment. The Company considers credit and political risk business to have a medium-tail, due to the complex nature of claims and the potential additional time that may be required to realize subrogation assets.

Refer to '*Net incurred and Paid Claims Development Tables by Accident Year – Insurance segment – Insurance Professional Lines*', '*Net incurred and Paid Claims Development Tables by Accident Year – Reinsurance segment – Reinsurance Professional Lines*', '*Net incurred and Paid Claims Development Tables by Accident Year – Insurance segment – Insurance Credit and Political Risk*' and '*Net incurred and Paid Claims Development Tables by Accident Year – Reinsurance segment – Reinsurance Credit and Surety*' for further details on key actuarial assumptions associated with these reserve classes.

Long-tail Business

In contrast to short and medium-tail business, the claim tail for long-tail business is expected to be notably longer, as claims are often reported and ultimately paid or settled years, or even decades, after the related loss events occur. Long-tail business includes the underlying exposures in the liability reserve class in the insurance segment and the liability and motor reserve classes in the reinsurance segment.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

As a general rule, estimates of accident year or underwriting year ultimate losses for long-tail business are notably more uncertain than those for short and medium-tail business. To date, key actuarial assumptions for long-tail business have been derived from a combination of industry benchmarks supplemented with Company historical loss experience. While industry benchmarks that the Company believes reflect the nature and coverage of its business are considered, actual loss experience may differ from the benchmarks based on industry averages. Due to the length of the development tail for this business, reserve estimates for most accident years and underwriting years are predominantly based on the BF Method or ELR Method and the consideration of qualitative factors.

Reserving for Significant Catastrophic Events

The Company cannot estimate losses from widespread catastrophic events, such as hurricanes and earthquakes, using the traditional actuarial methods described above. The magnitude and complexity of losses associated with certain of these events inherently increase the level of uncertainty and, therefore, the level of management judgment involved in arriving at estimated net reserves for losses and loss expenses. As a result, actual losses for these events may ultimately differ materially from current estimates.

Net reserves for losses and loss expenses related to the COVID-19 pandemic represents the Company's best estimate of losses and loss expenses that have been incurred at December 31, 2021. The determination of these net reserves for losses and loss expenses was based on the Company's ground-up assessment of coverage from individual contracts and treaties across all lines of business, and included a review of modeling analyses and market information, where appropriate. In addition, the Company considered information received from clients, brokers and loss adjusters together with global shelter-in-place orders and the outcomes of recent court judgments, including the UK Supreme Court ruling on January 15, 2021.

The estimate of net reserves for losses and loss expenses related to the COVID-19 pandemic is subject to significant uncertainty. This uncertainty is driven by the inherent difficulty in making assumptions around the impact of the COVID-19 pandemic due to the lack of comparable events, the ongoing nature of the event, and its far-reaching impacts on world-wide economies and the health of the population. These assumptions include:

- the nature and the duration of the pandemic;
- the effects on health, the economy and the Company's customers;
- the response of government bodies including legislative, regulatory or judicial actions and social influences that could alter the interpretation of the Company's contracts;
- the coverage provided under the Company's contracts;
- the coverage provided by the Company's ceded reinsurance; and
- the evaluation of the loss and impact of loss mitigation actions.

While the Company believes its estimate of net reserves for losses and loss expenses is adequate for losses and loss expenses that have been incurred at December 31, 2021 based on current facts and circumstances, the Company continues to monitor the appropriateness of these assumptions as new information comes to light, and adjustments are made to the estimate of ultimate losses related to the COVID-19 pandemic if there are developments that are different from previous expectations. Adjustments are recorded in the period in which they are identified. Actual losses for this event may ultimately differ materially from the Company's current estimates.

Net reserves for losses and loss expenses related to catastrophes other than the COVID-19 pandemic represent the Company's best estimate of losses and loss expenses that have been incurred at December 31, 2021. The determination of these net reserves for losses and loss expenses is estimated by management after a catastrophe occurs by completing an in-depth analysis of individual contracts which may potentially have been impacted by the catastrophic event. This in-depth analysis may rely on several sources of information including:

- estimates of the size of insured industry losses from the catastrophic event and the Company's corresponding market share;

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

- a review of the Company's portfolio of contracts to identify those contracts which may be exposed to the catastrophic event;
- a review of modeled loss estimates based on information previously reported by customers and brokers, including exposure data obtained during the underwriting process;
- discussions of the impact of the event with customers and brokers; and
- catastrophe bulletins published by various independent statistical reporting agencies.

A blend of these information sources is generally used to arrive at aggregate estimates of the ultimate losses arising from these catastrophic events.

While the Company believes its estimate of net reserves for losses and loss expenses is adequate for losses and loss expenses that have been incurred at December 31, 2021 based on current facts and circumstances, the Company monitors changes in paid and incurred losses in relation to each significant catastrophe in subsequent reporting periods and adjustments are made to estimates of ultimate losses for each event if there are developments that are different from previous expectations. Adjustments are recorded in the period in which they are identified. Actual losses for these events may ultimately differ materially from the Company's current estimates.

Selection of Reported Reserves – Management's Best Estimate

The Company's loss reserving process involves the collaboration of its underwriting, claims, actuarial, legal, ceded reinsurance and finance departments, including various segmental committee meetings and culminates with the approval of a single point best estimate by the Company's Group Reserving Committee, which comprises senior management. In selecting this best estimate, management considers actuarial estimates and applies informed judgment regarding qualitative factors that may not be fully captured in these actuarial estimates. Such factors include, but are 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 Company historical loss data versus industry information. While these qualitative factors are considered in arriving at the point estimate, no specific provisions for qualitative factors are established.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reserve for Losses and Loss Expenses

Reserve for losses and loss expenses comprise the following:

At December 31,	2021	2020
Reserve for reported losses and loss expenses	\$ 5,539,971	\$ 5,331,900
Reserve for losses incurred but not reported	9,113,123	8,594,866
Reserve for losses and loss expenses	\$ 14,653,094	\$ 13,926,766

Reserve Roll-forward

The following table presents a reconciliation of the Company's beginning and ending gross reserves for losses and loss expenses and net reserves for unpaid losses and loss expenses:

Year ended December 31,	2021	2020	2019
Gross reserve for losses and loss expenses, beginning of year	\$ 13,926,766	\$ 12,752,081	\$ 12,280,769
Less reinsurance recoverable on unpaid losses, beginning of year	(4,496,641)	(3,877,756)	(3,501,669)
Net reserve for unpaid losses and loss expenses, beginning of year	<u>9,430,125</u>	<u>8,874,325</u>	<u>8,779,100</u>
Net incurred losses and loss expenses related to:			
Current year	3,041,193	3,297,161	3,123,698
Prior years	(32,410)	(15,909)	(78,900)
	<u>3,008,783</u>	<u>3,281,252</u>	<u>3,044,798</u>
Net paid losses and loss expenses related to:			
Current year	(490,011)	(571,442)	(598,988)
Prior years	(2,274,240)	(2,365,959)	(2,371,637)
	<u>(2,764,251)</u>	<u>(2,937,401)</u>	<u>(2,970,625)</u>
Foreign exchange and other	(39,174)	211,949	21,052
Net reserve for unpaid losses and loss expenses, end of year	9,635,483	9,430,125	8,874,325
Reinsurance recoverable on unpaid losses, end of year	5,017,611	4,496,641	3,877,756
Gross reserve for losses and loss expenses, end of year	\$ 14,653,094	\$ 13,926,766	\$ 12,752,081

The Company writes business with loss experience generally characterized as low frequency and high severity in nature, which can result in volatility in its financial results. During 2021, 2020 and 2019, the Company recognized catastrophe and weather-related losses, net of reinstatement premiums, of \$443 million, \$774 million and \$336 million.

At December 31, 2021, foreign exchange and other included a reduction in reinsurance recoverable on unpaid losses of \$49 million related to the Reinsurance to Close of the 2018 year of account of Syndicate 2007.

On December 15, 2019, the Company entered into a quota share retrocessional agreement with Harrington Re, a related party, which was deemed to have met the established criteria for retroactive reinsurance accounting. The Company recognized reinsurance recoverable on unpaid losses of \$59 million related to this reinsurance agreement. This transaction was conducted at market rates consistent with negotiated arms-length contracts.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Estimates for Significant Catastrophe Events

At December 31, 2021, net reserve for losses and loss expenses included estimated amounts for numerous catastrophe events. The magnitude and complexity of losses arising from certain of these events inherently increase the level of uncertainty and, therefore, the level of management judgment involved in arriving at estimated net reserves for losses and loss expenses. These events include Hurricane Ida, U.S. Winter Storms Uri and Viola, and July European Floods in 2021, the COVID-19 pandemic, Hurricanes Laura, Sally, Zeta and Delta, Midwest derecho and wildfires across the West Coast of the United States in 2020, Japanese Typhoons Hagibis, Faxai and Tapah, Hurricane Dorian and Australia Wildfires in 2019 and Hurricanes Michael and Florence, California Wildfires and Typhoon Jebi in 2018. As a result, actual losses for these events may ultimately differ materially from current estimates.

Prior Year Reserve Development

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

	Favorable (Adverse)			Total
	Insurance	Reinsurance		
Year ended December 31, 2021	\$ 18,360	\$ 14,049	\$ 32,410	
Year ended December 31, 2020	8,937	6,972	15,909	
Year ended December 31, 2019	53,302	25,598	78,900	

The following sections provide further details on net prior year reserve development by segment, reserving class and accident year.

Insurance Segment:

Years ended December 31,	Favorable (Adverse)		
	2021	2020	2019
Property and other	\$ 86,876	\$ 46,791	\$ 11,042
Marine	28,430	16,780	33,260
Aviation	14,106	6,416	3,741
Credit and political risk	10,363	(745)	18,810
Professional lines	(78,588)	(35,661)	11,721
Liability	(42,827)	(24,644)	(25,272)
Total	\$ 18,360	\$ 8,937	\$ 53,302

In 2021, we recognized \$18 million of net favorable prior year reserve development, the principal components of which were:

- \$87 million of net favorable prior year reserve development on property and other business primarily due to decreases in loss estimates attributable to specific large claims related to the 2011 and 2012 accident years, and better than expected loss emergence attributable to the 2018 to 2020 catastrophe events, the global property book of business related to 2017 to 2019 accident years, and the accident and health book of business related to the 2019 and 2020 accident years.
- \$28 million of net favorable prior year reserve development on marine business primarily due to better than expected loss emergence attributable to cargo, offshore energy and specie books of business mainly related to the 2017, 2018 and 2020 accident years and decreases in loss estimates attributable to specific large claims related to 2012 accident year.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

- \$14 million of net favorable prior year reserve development on aviation business primarily due to better than expected loss emergence mainly related to the 2020 accident year.
- \$10 million of net favorable prior year reserve development on credit and political risk business primarily due to better than expected loss emergence mainly related to the 2018 and 2019 accident years.
- \$79 million of net adverse prior year reserve development on professional lines business primarily due to reserve strengthening within runoff lines of business mainly related to the 2016 to 2019 accident years, the U.S. commercial management solutions book of business mainly related to the 2017 and 2019 accident years and the global cyber and technology book of business mainly related to the 2019 accident year.
- \$43 million of net adverse prior year reserve development on liability business primarily due to reserve strengthening within the program book of business mainly related to the 2018 and 2019 accident years.

In 2020, we recognized \$9 million of net favorable prior year reserve development, the principal components of which were:

- \$47 million of net favorable prior year reserve development on property and other business primarily due to better than expected loss emergence mainly related to the 2018 and 2019 accident years, and better than expected loss emergence attributable to the 2017 to 2019 catastrophe events.
- \$17 million of net favorable prior year reserve development on marine business primarily due to better than expected loss emergence mainly related to the 2018 accident year.
- \$36 million of net adverse prior year reserve development on professional lines business primarily due to reserve strengthening within the European professional indemnity and financial institutions books of business and the U.S. commercial management solutions book of business mainly related to the 2018 and 2019 accident years and an increase in the loss estimate attributable to a specific large claim related to the 2009 accident year.
- \$25 million of net adverse prior year reserve development on liability business primarily due to reserve strengthening within the primary casualty, U.S. excess casualty and program books of business mainly related to the 2017 and 2018 accident years.

In 2019, we recognized \$53 million of net favorable prior year reserve development, the principal components of which were:

- \$33 million of net favorable prior year reserve development on marine business primarily due to better than expected loss emergence mainly related to the 2015 to 2017 accident years.
- \$19 million of net favorable prior year reserve development on credit and political risk business primarily due to better than expected loss emergence mainly related to recent accident years.
- \$12 million of net favorable prior year reserve development on professional lines business reflecting generally favorable experience on older accident years as the Company continued to transition to more experience based actuarial methods.
- \$11 million of net favorable prior year reserve development on property and other business primarily due to better than expected loss emergence related to the 2017 catastrophe events and SuperStorm Sandy, partially offset by reserve strengthening within the International book of business mainly related to the 2018 accident year.
- \$25 million of net adverse prior year reserve development on liability business primarily due to reserve strengthening within the U.S. excess casualty and U.S. primary casualty books of business mainly driven by the higher frequency and severity of auto claims and the higher frequency of general liability claims mainly related to the 2015 and 2017 accident years.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance Segment:

Years ended December 31,	Favorable (Adverse)		
	2021	2020	2019
Property and other	\$ 8,282	\$ (5,935)	\$ (133,448)
Credit and surety	3,436	36,829	53,223
Professional lines	(23,718)	(15,352)	3,668
Motor	43,968	21,086	70,872
Liability	(17,919)	(29,656)	31,283
Total	\$ 14,049	\$ 6,972	\$ 25,598

In 2021, we recognized \$14 million of net favorable prior year reserve development, the principal components of which were:

- \$44 million of net favorable prior year reserve development on motor business primarily due to proportional and non-proportional treaty business mainly related to 2016 and older accident years.
- \$8 million of net favorable prior year reserve development on property and other business primarily due to decreases in loss estimates attributable to specific large claims within the property and engineering lines of business related to the 2018 accident year, decreases in the loss estimates attributable to specific large claims within the property line of business related to the 2009, 2017 and 2019 accident years, better than expected loss emergence attributable to the 2017 to 2019 catastrophe events, and to the accident and health book of business mainly related to the 2019 and 2020 accident years, partially offset by reserve strengthening attributable to the 2020 catastrophe events and within the engineering line of business mainly related to the 2016, 2017 and 2019 accident years.
- \$24 million of net adverse prior year reserve development on professional lines business primarily due to reserve strengthening within the U.S. and European books of business related to the 2015 to 2018 accident years and increases in the loss estimates attributable to specific large claims related to the 2015 to 2017 accident years.
- \$18 million of net adverse prior year reserve development on liability business primarily due to increases in loss estimates attributable to specific large claims related to the 2017 and 2018 accident years and reserve strengthening within the commercial auto liability and U.S. multiline/regional books of business related to the 2018 accident year.

In 2020, we recognized \$7 million of net favorable prior year reserve development, the principal components of which were:

- \$37 million of net favorable prior year reserve development on credit and surety business primarily due to better than expected loss emergence related to several accident years.
- \$21 million of net favorable prior year reserve development on motor business primarily due to non-proportional treaty business mainly related to older accident years, partially offset by increases in loss estimates for proportional treaty business mainly related to the 2018 accident year.
- \$30 million of net adverse prior year reserve development on liability business due to reserve strengthening within the U.S. casualty, the U.S. multiline/regional and the European books of business mainly related to the 2016 to 2019 accident years and an increase in the loss estimate attributable to a specific large claim related to the 2009 accident year.
- \$15 million of net adverse prior year reserve development on professional lines business due to an increase in the loss estimate attributable to a specific large claim related to the 2016 accident year and reserve strengthening within the European book of business mainly related to the 2016 to 2018 accident years.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

- \$6 million of net adverse prior year reserve development on property and other business primarily due to an increase in the loss estimate attributable to a specific large claim within the marine and aviation line of business related to the 2019 accident year, reserve strengthening within the engineering line of business mainly related to the 2016 to 2018 accident years, partially offset by net favorable prior year reserve development within the property line of business due to better than expected loss emergence attributable to the 2019 catastrophe events.

In 2019, we recognized \$26 million of net favorable prior year reserve development, the principal components of which were:

- \$71 million of net favorable prior year reserve development on motor business primarily due to the impact of the increase in the Ogden Rate and changes in related actuarial assumptions on several accident years.
- \$53 million of net favorable prior year reserve development on credit and surety business primarily due to better than expected loss emergence mainly related to accident years 2015 to 2017.
- \$31 million of net favorable prior year reserve development on liability business primarily due to increased weight given by management to experience based indications on older accident years.
- \$133 million of net adverse prior year reserve development on property and other business primarily due to an increase in loss estimates attributable to Hurricanes Irma and Michael consistent with industry trends, an increase in the loss estimate attributable to Typhoon Jebi consistent with updated industry insured loss estimates, and reserve strengthening within the U.S. regional and commercial proportional property books of business and the European proportional property book of business.

Net Incurred and Paid Claims Development Tables by Accident Year

The following tables present net incurred and paid claims development by accident year, total incurred-but-not-reported liabilities plus expected development on reported claims, cumulative reported claims frequency and average annual percentage payout of incurred claims by age for each reserve class. The loss development tables are presented on an accident year basis for each reserve class in the insurance and reinsurance segments. The Company does not discount reserves for losses and loss expenses.

Non-U.S. dollar denominated loss data is converted to U.S. dollar at the rates of exchange in effect at the balance sheet date for material underlying currencies. Fluctuations in foreign currency exchange rates may cause material shifts in loss development. Reserves for losses and loss expenses disclosed in the consolidated balance sheets are also remeasured using the rates of exchange in effect at the balance sheet date.

There are many considerations in establishing net reserves for losses and loss expenses. An attempt to evaluate net reserves for losses and loss expenses using solely the paid losses and claim counts presented in these tables could be misleading. When projecting net reserves for losses and loss expenses, the Company relies on several inputs in addition to the information presented in this disclosure including case incurred loss projections, changes in mix of business, external trends, and additional qualitative information. The Company cautions against mechanical application of standard actuarial methodologies to project ultimate losses using data presented in this disclosure.

Insurance Segment

The reporting of cumulative claims frequency for the reserve classes within the insurance segment has been measured by counting the number of unique claim references including claim references assigned to nil and nominal case reserves. Claim references are grouped by claimant by loss event for each reserve class. For certain insurance facilities and business produced by managing general agents where underlying data is reported to the Company in an aggregated format, the information necessary to provide cumulative claims frequency is not available therefore reporting of claims frequency is deemed to be impracticable.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance Property and Other

This reserve class includes property, terrorism, accident and health, and discontinued lines - Novae.

The property line of business 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 renewable energy installations. This line of business includes primary and excess risks, some of which are catastrophe-exposed.

The terrorism line of business 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.

The accident and health line of business includes accidental death, travel insurance and specialty health products for employer and affinity groups. An increase in limited benefits medical business written in 2017 resulted in a significant increase in reported claims observed in that year.

The discontinued lines - Novae includes the international direct and facultative property line of business that Novae exited or placed into run-off in the fourth quarter of 2016.

In general, reporting and payment patterns are relatively short-tailed although they can be volatile due to the incidence of catastrophe events.

Insurance property and other												At December 31, 2021	
Accident year	For the years ended December 31,											Total of incurred-but-not-reported liabilities plus expected development on reported claims	Cumulative number of reported claims
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021			
2012	\$ 392,832	\$ 402,013	\$ 383,920	\$ 363,521	\$ 359,326	\$ 353,602	\$ 352,761	\$ 342,723	\$ 342,406	\$ 335,903	\$ 8	29,793	
2013	310,545	300,371	273,448	269,504	269,153	279,588	275,919	275,403	276,632		1,069	53,020	
2014		362,013	356,814	346,144	330,094	329,003	327,406	322,723	319,317		2,739	62,221	
2015			279,805	272,498	261,501	257,068	254,221	256,252	245,590		988	48,317	
2016				353,241	380,615	371,911	358,721	352,464	355,523		3,631	93,582	
2017					905,430	830,525	822,660	811,219	807,759		3,783	698,013	
2018						725,996	784,554	764,189	754,009		17,643	740,146	
2019							451,522	446,574	437,227		17,971	674,310	
2020								741,881	711,366		97,496	699,571	
2021									452,055		121,860	293,463	
										Total		\$4,695,381	

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance property and other											
Accident year	Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance										
	For the years ended December 31,										
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 77,684	\$ 214,440	\$ 278,538	\$ 301,512	\$ 309,042	\$ 314,210	\$ 314,282	\$ 316,388	\$ 316,614	\$ 316,722	
2013		76,142	199,585	238,483	249,534	260,576	263,605	265,442	269,290	273,752	
2014			133,186	260,405	307,040	314,197	318,414	319,601	316,305	316,319	
2015				100,169	204,138	228,910	243,213	243,895	250,620	242,516	
2016					125,806	292,009	332,043	340,568	341,693	348,739	
2017						256,234	629,722	745,770	775,507	773,007	
2018							288,200	585,855	685,681	699,094	
2019								197,452	328,183	382,521	
2020									220,838	486,815	
2021										174,401	
										Total	4,013,886
											All outstanding liabilities before 2012, net of reinsurance 7,291
											Liabilities for claims and claim adjustment expenses, net of reinsurance \$ 688,786

Insurance property and other									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
35.3%	40.8%	13.7%	3.8%	1.3%	1.5%	(0.9%)	0.7%	0.9%	—%

Insurance Marine

This reserve class includes the marine line of business which provides cover for traditional marine classes, including offshore energy, renewable offshore energy, cargo, liability, recreational marine, fine art, specie, and hull 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. The complex nature of claims arising under marine policies tends to result in reporting and payment patterns that are longer than those of the property and other reserve class. Exposure to natural perils such as windstorm and earthquake can result in volatility.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance marine													At December 31, 2021		
Accident year	Incurred claims and allocated claim adjustment expenses, net of reinsurance												<u>Total of incurred-but-not-reported liabilities plus expected development on reported claims</u>	Cumulative number of reported claims	
	For the years ended December 31,														
2012	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021					
2012	\$ 89,643	\$ 83,026	\$ 68,936	\$ 71,000	\$ 72,020	\$ 74,541	\$ 72,698	\$ 62,100	\$ 65,122	\$ 64,686	\$ 2,932				4,135
2013		79,514	100,613	95,940	97,010	82,261	81,822	80,781	79,950	80,797	1,218				2,356
2014			59,719	44,469	48,205	44,152	45,634	46,932	40,617	38,112	2,693				2,169
2015				159,499	140,502	135,999	128,687	116,686	121,677	122,084	1,057				2,232
2016					86,403	78,726	76,441	71,066	69,814	68,897	2,105				2,867
2017						206,441	169,508	167,118	163,222	154,218	12,183				4,038
2018							182,358	203,260	191,806	185,628	27,926				4,426
2019								169,706	167,184	171,244	29,024				4,668
2020									171,330	155,167	55,833				4,491
2021										199,007	130,108				3,447
										Total	\$ 1,239,840				

Insurance marine													Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance	
Accident year	For the years ended December 31,												<u>Total</u>	<u>2021</u>
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021				
2012	\$ 10,706	\$ 38,466	\$ 44,734	\$ 49,474	\$ 50,284	\$ 52,631	\$ 54,621	\$ 55,654	\$ 55,830	\$ 58,122				
2013		18,873	43,866	54,648	62,825	65,493	76,517	76,660	77,937	79,163				
2014			6,362	15,154	26,542	26,682	35,631	40,256	41,344	35,155				
2015				21,446	54,640	107,512	110,367	111,761	113,293	120,216				
2016					12,490	31,822	57,267	63,245	64,019	65,143				
2017						14,634	67,622	91,342	115,634	122,148				
2018							26,752	85,409	115,600	126,986				
2019								36,293	75,653	116,160				
2020									38,554	72,095				
2021										20,043				
									Total	815,231				
									All outstanding liabilities before 2012, net of reinsurance	5,859				
									Liabilities for claims and claim adjustment expenses, net of reinsurance	\$ 430,468				

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance marine									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
17.2%	29.2%	23.6%	7.2%	5.8%	6.4%	3.0%	(4.3%)	0.9%	3.5%

Insurance Aviation

This reserve class includes the aviation line of business which provides cover for 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. The claims reporting pattern varies by insurance coverage provided. Losses arising from war or terrorism and damage to hulls of aircraft are generally reported quickly compared with liability claims which involve passengers and third parties and generally exhibit longer reporting and payment patterns. To date, the claims reported to the Company have predominantly related to damage to hulls, therefore, reporting and payment patterns have typically exhibited a relatively short-tail.

Insurance aviation											At December 31, 2021	
Accident year	Incurred claims and allocated claim adjustment expenses, net of reinsurance										Total of incurred-but-not-reported liabilities plus expected development on reported claims	Cumulative number of reported claims
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021		
2012	\$ 12,782	\$ 10,670	\$ 10,795	\$ 8,709	\$ 7,760	\$ 7,703	\$ 7,590	\$ 7,383	\$ 7,302	\$ 7,205	\$ 36	886
2013		15,654	16,334	15,207	15,249	15,586	15,471	16,763	16,670	16,451	260	1,043
2014			20,437	23,038	24,357	21,798	21,857	19,097	17,350	16,716	121	1,374
2015				29,786	28,512	29,845	29,579	27,522	28,001	27,517	179	2,053
2016					29,180	33,517	33,679	31,745	32,473	32,545	325	1,945
2017						55,401	61,524	66,263	68,549	69,799	(458)	4,466
2018							57,877	63,348	61,678	61,338	2,610	4,214
2019								44,106	41,658	41,123	2,003	2,778
2020									37,391	25,380	6,355	1,584
2021										43,585	22,283	1,268
									Total	\$ 341,659		

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance aviation											
<u>Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance</u>											
For the years ended December 31,											
Accident year	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 956	\$ 2,863	\$ 4,153	\$ 5,950	\$ 6,823	\$ 7,044	\$ 7,157	\$ 7,093	\$ 7,091	\$ 7,098	
2013		4,401	7,330	9,748	11,450	13,561	14,170	14,487	15,948	15,974	
2014			3,989	8,028	11,698	13,856	14,493	14,856	15,027	15,086	
2015				8,086	16,166	20,968	23,227	24,686	25,993	26,107	
2016					10,416	19,289	26,274	27,838	29,074	29,926	
2017						21,176	40,035	50,585	58,920	61,312	
2018							21,235	40,068	47,287	50,347	
2019								18,052	28,771	31,628	
2020									6,324	12,954	
2021										7,532	
										Total	257,964
											All outstanding liabilities before 2012, net of reinsurance 4,508
											Liabilities for claims and claim adjustment expenses, net of reinsurance \$ 88,203

Insurance aviation									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
27.6%	26.1%	15.9%	11.1%	6.9%	3.3%	1.2%	2.8%	0.1%	0.1%

Insurance Credit and Political Risk

This reserve class includes the credit and political risk line of business which 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 and corporate credit default, political violence, currency inconvertibility and non-transfer, expropriation, aircraft non-repossession and contract frustration due to political events.

The credit insurance coverage is primarily for lenders seeking to mitigate the risk of non-payment from their borrowers. In order to claim compensation under a credit insurance contract, the insured (most often a bank) cannot assign, without the Company's prior agreement, the insured contract (most often a loan) to any third party and is normally obliged to hold a material portion of insured asset on their books, unhedged and uninsured. Claims for this business tend to be characterized by their severity risk, as opposed to their frequency risk.

Claim reporting and payment patterns are anticipated to be volatile and are generally medium-tailed. Under the notification provisions of credit insurance policies issued by the Company, it anticipates being advised of an insured event within a relatively short time period. Consequently, the Company generally estimates ultimate losses based on a contract-by-contract analysis which considers the contracts' terms, the facts and circumstances of underlying loss events and qualitative input from claims managers.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance credit and political risk													At December 31, 2021		
Accident year	Incurred claims and allocated claim adjustment expenses, net of reinsurance												<u>Total of incurred-but-not-reported liabilities plus expected development on reported claims</u>	Cumulative number of reported claims	
	For the years ended December 31,														
2012	\$ 32,602	\$ 15,672	\$ 12,435	\$ 12,447	\$ 10,322	\$ 47	\$ 199	\$ 199	\$ 199	\$ 49	\$ 5		4		
2013		26,439	25,684	9,759	9,880	14,942	14,067	12,377	12,739	12,614		462		2	
2014		38,825	70,713	67,109	68,324	69,589	71,275	70,747	69,113		—		6		
2015			30,329	30,368	27,524	26,012	25,930	24,851	24,189		880		2		
2016				45,760	44,711	42,221	42,792	26,577	25,597		1,081		1		
2017					48,555	33,148	27,634	19,804	17,592		8,590		3		
2018						43,738	36,562	35,546	27,656		13,354		2		
2019							51,407	79,778	73,471		16,248		19		
2020								60,927	69,263		31,314		37		
2021									42,600		39,624		8		
									Total	\$ 362,144					

Insurance credit and political risk													Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance	
Accident year	For the years ended December 31,												Total	2021
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021				
2012	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 40	\$ 42	\$ 44	\$ 44	\$ 44	\$ 44	\$ 44		44
2013		745	2,235	3,726	5,216	11,769	13,828	13,828	13,828		13,828		12,151	
2014			1,924	39,952	61,108	57,858	57,858	64,051	70,224		70,224		70,224	
2015				—	23,309	23,309	23,309	23,309	23,309		23,309		23,309	
2016					—	24,516	24,516	24,516	24,516		24,516		24,516	
2017						421	4,173	9,529	12,034		11,252			
2018							5,552	13,897	15,971		12,432			
2019								16,431	46,924		54,239			
2020									10,013		91,352			
2021											2,769			
								Total			302,288			
								All outstanding liabilities before 2012, net of reinsurance			(874)			
								Liabilities for claims and claim adjustment expenses, net of reinsurance	\$		58,982			

AXIS CAPITAL HOLDINGS LIMITED
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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance credit and political risk									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
7.5%	52.2%	11.3%	1.2%	21.5%	5.9%	3.3%	—%	(6.7%)	—%

Insurance Professional Lines

This reserve class includes the professional lines line of business which 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 public and private commercial enterprises, financial institutions, not-for-profit organizations and other professional service providers. This reserve class also includes discontinued lines - Novae specifically the financial institutions and professional indemnity lines of business that Novae exited or placed into run-off in the first quarter of 2017. This business is predominantly written on a claims-made basis. Typically, this reserve class is anticipated to exhibit medium to long-tail claim reporting and payment patterns.

With respect to key actuarial assumptions, the Company relies on its loss experience when establishing expected loss ratios and selecting loss development patterns. Loss reporting patterns for professional lines business tend to be volatile, causing instability in actuarial indications based on incurred loss data until an accident year or underwriting year matures. Consequently, initial reserves for losses and loss expenses for an accident year or underwriting year are generally based on an ELR Method and the consideration of relevant qualitative factors. As accident years and underwriting years mature, the Company increasingly gives more weight to methods that reflect its experience until its selections are based almost exclusively on experience-based methods. The Company evaluates the appropriateness of the transition to experience-based methods at the reserve class level, commencing this transition when it believes that its incurred loss development is sufficient to produce meaningful actuarial indications. The rate at which the Company transitions fully to sole reliance on experience-based methods can vary by reserve class and by year, depending on its assessment of the stability and relevance of such indications. For some professional lines in the insurance segment, the Company also relies on the evaluation of the open claim inventory in addition to the commonly employed actuarial methods when establishing reserves.

AXIS CAPITAL HOLDINGS LIMITED
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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance professional lines											
	<u>Incurred claims and allocated claim adjustment expenses, net of reinsurance</u>										At December 31, 2021
Accident year	For the years ended December 31,										Cumulative number of reported claims
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 329,064	\$ 376,334	\$ 377,681	\$ 376,619	\$ 363,769	\$ 365,781	\$ 354,414	\$ 352,476	\$ 334,321	\$ 337,000	\$ 20,571 8,348
2013	384,382	398,008	399,307	366,094	355,419	357,807	335,888	339,108	335,453	36,146	9,473
2014	413,511	412,262	422,079	392,916	372,390	354,972	348,326	351,729	51,739	9,858	
2015	378,217	377,970	383,614	358,613	345,416	328,723	329,377	47,302	10,532		
2016	350,015	352,753	359,176	360,698	370,847	374,148	58,192	11,909			
2017	394,239	398,881	440,090	436,589	453,259	103,291	13,870				
2018	363,496	379,463	433,040	460,903	130,876	16,765					
2019	406,170	428,019	467,030	206,644	16,954						
2020	440,967	432,895	283,686	11,622							
2021	509,463	448,897	8,271								
Total											\$4,051,257

Insurance professional lines											
	<u>Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance</u>										
Accident year	For the years ended December 31,										
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 7,825	\$ 41,505	\$ 100,434	\$ 184,776	\$ 231,582	\$ 254,682	\$ 274,150	\$ 282,494	\$ 298,902	\$ 304,095	
2013	17,718	73,251	130,081	176,433	213,979	243,890	264,537	277,239	291,767		
2014	23,579	70,688	130,348	192,845	224,461	243,586	253,387	277,463			
2015	20,291	67,886	138,136	170,009	204,121	243,082	258,963				
2016	15,913	71,229	147,678	192,832	234,825	261,321					
2017	21,052	71,877	139,143	206,193	240,455						
2018	20,945	82,982	155,101	222,374							
2019	28,206	99,158	169,088								
2020	26,640	95,558									
2021		34,035									
Total											2,155,119
All outstanding liabilities before 2012, net of reinsurance											113,232
Liabilities for claims and claim adjustment expenses, net of reinsurance											\$ 2,009,370

AXIS CAPITAL HOLDINGS LIMITED
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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance professional lines									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
5.3%	13.9%	17.3%	15.4%	10.6%	8.0%	4.9%	4.4%	4.6%	1.5%

Insurance Liability

This reserve class includes the liability line of business which primarily targets primary and low to 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 business predominately in the U.K. This reserve class also includes discontinued lines - Novae specifically the international liability line of business that Novae exited or placed into run-off in the fourth quarter of 2016. Target industry sectors include construction, manufacturing, transportation and trucking and other services. The delay between the writing of a contract, notification and subsequent settlement of a claim in respect of that contract results in claim reporting and payment patterns that are typically long-tail in nature. A consequence of the claim development tail is that this line of business is particularly exposed, among a number of uncertainties, to the potential for unanticipated levels of claim inflation relative to that assumed when the contracts were written. Factors influencing claim inflation on this class can include, but are not limited to, underlying economic and medical inflation, judicial inflation, mass tort and changing social trends.

Insurance liability											At December 31, 2021	
Accident year	Incurred claims and allocated claim adjustment expenses, net of reinsurance										Total of incurred-but- not-reported liabilities plus expected development on reported claims	Cumulative number of reported claims
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021 unaudited		
2012	\$ 70,859	\$ 71,690	\$ 74,135	\$ 71,474	\$ 68,658	\$ 75,698	\$ 72,727	\$ 67,238	\$ 64,542	\$ 61,993	\$ 10,249	3,355
2013	93,234	95,309	95,175	88,243	93,682	95,983	91,943	89,902	94,201	13,218	13,218	3,690
2014	107,136	124,313	129,774	130,674	132,021	131,477	132,585	132,064	14,321	14,321	14,321	5,265
2015	128,437	127,424	137,652	165,160	182,891	188,218	187,146	187,146	26,055	26,055	26,055	6,390
2016		124,322	130,209	128,940	127,572	120,333	120,309	120,309	27,993	27,993	27,993	7,208
2017			167,803	165,661	185,998	202,508	206,833	206,833	36,274	36,274	36,274	8,471
2018				168,202	169,241	192,289	205,961	205,961	51,462	51,462	51,462	8,292
2019					192,358	193,526	222,820	222,820	83,628	83,628	83,628	7,567
2020						225,407	225,866	225,866	171,715	171,715	171,715	5,285
2021							233,055	233,055	198,167	198,167	198,167	4,171
							Total	\$ 1,690,248				

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Insurance liability											
<u>Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance</u>											
For the years ended December 31,											
<u>Accident year</u>	<u>2012 unaudited</u>	<u>2013 unaudited</u>	<u>2014 unaudited</u>	<u>2015 unaudited</u>	<u>2016 unaudited</u>	<u>2017 unaudited</u>	<u>2018 unaudited</u>	<u>2019 unaudited</u>	<u>2020 unaudited</u>	<u>2021</u>	
2012	\$ 1,631	\$ 5,514	\$ 15,411	\$ 30,145	\$ 37,139	\$ 42,740	\$ 46,541	\$ 48,034	\$ 48,316	\$ 48,505	
2013		2,360	23,281	33,320	42,051	60,005	66,964	71,983	73,314	78,023	
2014			1,414	18,643	49,839	71,596	84,376	93,576	103,050	106,215	
2015				5,438	22,444	39,702	92,744	120,313	141,002	150,848	
2016					6,323	23,289	36,382	56,455	66,371	79,594	
2017						5,561	29,610	59,306	116,157	144,267	
2018							9,460	34,931	72,398	119,446	
2019								7,887	39,986	83,943	
2020									8,163	25,245	
2021										13,413	
										Total	849,499
											All outstanding liabilities before 2012, net of reinsurance 61,635
											Liabilities for claims and claim adjustment expenses, net of reinsurance \$ 902,384

Insurance liability									
<u>Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)</u>									
<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
3.5%	12.3%	15.3%	20.7%	12.8%	9.1%	6.0%	2.1%	2.8%	0.3%

Reinsurance Segment

The presentation of net incurred and paid claims development tables by accident year for the reinsurance segment is challenging due to the need to allocate loss information related to proportional treaties to the appropriate accident years. Information related to proportional treaty reinsurance contracts is generally submitted to the Company via quarterly bordereaux reporting by underwriting year, with a supplemental listing of large losses. Large losses can be allocated to the corresponding accident years accurately. The remaining losses can generally only be allocated to accident years based on estimated premiums earned and loss reporting patterns. To the extent management's assumptions and allocation procedures differ from the actual loss development patterns, the actual loss development may differ materially from the net incurred and paid claims development presented in the tables below.

The reporting of cumulative claims frequency for the reserve classes within the reinsurance segment is deemed to be impracticable as the information necessary to provide cumulative claims frequency for these reserve classes is not available to the Company.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance Property and Other

This reserve class includes catastrophe, property, agriculture, engineering, marine and aviation, accident and health, and discontinued lines - Novae.

The catastrophe line of business provides protection for most catastrophic losses that are covered in the underlying insurance policies written by the Company's 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 an excess of loss basis.

The property line of business provides protection for property damage and related losses resulting from natural and man-made perils that are covered in underlying personal and commercial lines insurance policies written by the Company's cedants. The predominant exposure is to 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 freezes, riots, floods, industrial explosions, fires, hail and a number of other loss events are also included. This business is written on a proportional and excess of loss basis.

The agriculture line of business 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.

The engineering line of business 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 coverage for losses arising from operational failures of machinery, plant and equipment, and electronic equipment as well as business interruption. The Company exited this line of business in 2020.

The marine and aviation line of business includes specialty marine classes such as cargo, hull, pleasure craft, marine liability, inland marine and offshore energy. The principal perils covered by policies in this portfolio include physical loss, damage and/or liability arising from natural perils of the seas or land, man-made events including fire and explosion, stranding/sinking/salvage, pollution, shipowners and maritime employers liability. This business is written on a non-proportional and proportional basis. Aviation provides cover for airline, aerospace and general aviation exposures. This business is written on a proportional and non-proportional basis.

The accident and health line of business includes personal accident, specialty health, accidental death, travel, life and disability reinsurance products which are offered on a proportional and catastrophic or per life excess of loss basis.

The discontinued lines - Novae includes the international facultative property line of business that Novae exited or placed into run-off in the fourth quarter of 2016.

In general, reporting and payment patterns are relatively short-tailed although they can be volatile due to the incidence of catastrophe events.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance property and other												At December 31, 2021	
Incurred claims and allocated claim adjustment expenses, net of reinsurance													
Accident year	For the years ended December 31,												
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	Total		
2012	\$ 555,785	\$ 523,613	\$ 508,032	\$ 477,396	\$ 461,542	\$ 456,536	\$ 457,952	\$ 454,701	\$ 454,280	\$ 451,567	\$ 81		
2013		580,230	562,186	531,304	510,944	504,945	504,433	501,123	500,490	497,825		585	
2014			542,903	525,809	499,636	487,065	485,213	484,443	481,582	481,788		3,587	
2015				478,050	465,733	460,576	455,252	451,295	456,549	453,142		1,568	
2016					618,765	637,746	624,507	620,858	622,706	623,977		8,053	
2017						1,099,195	1,080,897	1,103,419	1,110,521	1,105,803		40,302	
2018							884,369	1,010,076	1,014,311	1,019,138		44,435	
2019								951,665	949,822	924,338		78,420	
2020									859,634	893,869		163,285	
2021										783,134		425,137	
										Total		\$7,234,581	

Reinsurance property and other												Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance	
For the years ended December 31,													
Accident year	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	Total		
2012	\$ 122,945	\$ 294,809	\$ 367,575	\$ 390,051	\$ 404,621	\$ 414,306	\$ 416,360	\$ 428,889	\$ 430,468	\$ 434,420			
2013		107,774	325,596	442,216	472,619	482,360	483,785	484,429	484,128	487,971			
2014			102,421	353,313	435,322	452,832	458,981	463,976	461,202	468,080			
2015				71,550	266,150	369,339	401,731	414,291	420,783	436,720			
2016					128,812	378,387	522,648	565,778	584,602	592,193			
2017						252,454	723,271	866,481	938,025	965,116			
2018							196,679	646,904	793,481	859,649			
2019								162,093	590,010	708,467			
2020									209,072	483,680			
2021										165,582			
									Total			5,601,878	
											All outstanding liabilities before 2012, net of reinsurance	20,247	
											Liabilities for claims and claim adjustment expenses, net of reinsurance	\$ 1,652,950	

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance property and other									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
21.1%	42.3%	17.8%	6.0%	2.5%	1.2%	0.9%	1.4%	0.6%	0.9%

Reinsurance Credit and Surety

This reserve class includes the credit and surety line of business which 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. Surety reinsurance provides protection 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. The Company also provides mortgage reinsurance to mortgage guaranty insurers and U.S. government sponsored entities for losses related to credit risk transfer into the private sector.

Initial and most recent underwriting year loss projections are generally based on the ELR Method, with consideration given to qualitative factors. Given that there is a quicker and more stable reporting pattern for trade credit and mortgage business, the Company generally commences the transition to experience-based methods sooner for these lines of business than for surety business.

Reinsurance credit and surety											At December 31, 2021
Accident year	Incurred claims and allocated claim adjustment expenses, net of reinsurance										Total of incurred- but-not-reported liabilities plus expected development on reported claims
	For the years ended December 31,										
Accident year	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 158,822	\$ 148,841	\$ 151,401	\$ 148,622	\$ 140,246	\$ 132,213	\$ 128,662	\$ 125,625	\$ 123,383	\$ 122,058	\$ 1,642
2013		165,106	153,538	144,733	140,863	136,675	125,376	125,497	128,319	127,065	2,445
2014			137,007	136,403	143,576	139,862	128,434	127,133	123,430	122,149	990
2015				160,874	166,772	161,575	157,491	138,575	139,565	140,788	3,998
2016					142,299	141,963	149,807	124,115	116,440	114,123	2,592
2017						139,346	133,506	127,691	118,941	116,204	6,021
2018							112,256	121,246	115,905	112,859	13,156
2019								75,066	69,366	69,399	10,705
2020									77,354	84,115	40,625
2021										52,278	36,571
									Total	\$1,061,038	

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance credit and surety											
Accident year	Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance										
	For the years ended December 31,										
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 49,736	\$ 85,902	\$ 99,969	\$ 105,808	\$ 109,335	\$ 111,111	\$ 112,430	\$ 114,392	\$ 114,809	\$ 113,870	
2013		32,474	77,279	92,165	98,755	106,422	108,318	113,284	115,494	113,741	
2014			35,632	61,490	86,580	95,711	103,309	107,724	108,232	108,039	
2015				32,944	82,167	100,347	117,426	119,333	123,042	123,907	
2016					42,110	73,643	92,792	102,465	103,591	102,153	
2017						37,387	74,473	91,162	102,901	101,047	
2018							39,079	69,040	73,748	85,470	
2019								19,382	31,841	46,028	
2020									25,386	34,330	
2021										4,477	
										Total	833,062
											All outstanding liabilities before 2012, net of reinsurance
											21,326
											Liabilities for claims and claim adjustment expenses, net of reinsurance \$ 249,302

Reinsurance credit and surety									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
28.9%	26.2%	14.1%	8.4%	2.7%	1.6%	1.5%	1.0%	(0.6%)	(0.8%)

Reinsurance Professional Lines

This reserve class includes the professional line of business which provides protection for directors' and officers' liability, employment practices liability, medical malpractice, professional indemnity, environmental liability, cyber, 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. Typically, this reserve class is anticipated to exhibit medium to long-tail claim reporting and payment patterns.

With respect to key actuarial assumptions, the Company relies on its loss experience when establishing expected loss ratios and selecting loss development patterns. Loss reporting patterns for professional lines business tend to be volatile, causing instability in actuarial indications based on incurred loss data until an underwriting year matures. Consequently, initial reserves for losses and loss expenses for an underwriting year are generally based on the ELR Method and the consideration of relevant qualitative factors. As underwriting years mature, the Company increasingly gives more weight to methods that reflect its experience until its selections are based almost exclusively on experience-based methods. The Company evaluates the appropriateness of the transition to experience-based methods at the reserve class level, commencing this transition when it believes that its incurred loss development is sufficient to produce meaningful actuarial indications. The rate at which the Company transitions fully to sole reliance on experience-based methods can vary by reserve class and by year, depending on its assessment of the stability and relevance of such indications.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance professional lines												At December 31, 2021
Incurred claims and allocated claim adjustment expenses, net of reinsurance												
Accident year	For the years ended December 31,										Total of incurred- but-not-reported liabilities plus expected development on reported claims	
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021		
2012	\$ 209,815	\$ 216,364	\$ 221,821	\$ 224,214	\$ 222,937	\$ 212,941	\$ 214,341	\$ 207,151	\$ 203,653	\$ 205,581	\$ 8,110	
2013		209,516	214,662	215,862	214,075	213,590	206,226	182,005	169,783	165,978	8,416	
2014			219,544	219,610	219,552	219,509	233,896	230,376	229,236	227,369	5,971	
2015				212,183	212,226	214,606	225,365	232,164	229,418	236,208	19,277	
2016					195,328	196,480	200,309	228,398	256,207	256,242	32,832	
2017						155,335	156,019	162,447	179,072	189,356	35,316	
2018							146,729	149,373	156,429	167,128	47,916	
2019								139,177	139,131	143,214	68,827	
2020									141,974	143,135	105,608	
2021										149,925	131,625	
									Total	\$ 1,884,136		

Reinsurance professional lines												Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance
For the years ended December 31,												
Accident year	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021		
	\$ 778	\$ 10,404	\$ 29,657	\$ 53,696	\$ 86,064	\$ 107,351	\$ 132,030	\$ 146,093	\$ 155,739	\$ 165,580		
2012	\$ 778	\$ 10,404	\$ 29,657	\$ 53,696	\$ 86,064	\$ 107,351	\$ 132,030	\$ 146,093	\$ 155,739	\$ 165,580		
2013		1,066	12,089	30,544	65,027	81,721	105,054	123,498	128,867	133,276		
2014			2,019	13,079	48,891	74,640	109,356	147,361	159,081	178,781		
2015				3,134	13,506	41,565	79,285	112,030	132,153	152,907		
2016					1,771	20,566	52,689	95,450	125,448	154,200		
2017						2,814	14,961	39,960	62,975	89,223		
2018							271	2,616	31,352	57,170		
2019								371	13,696	33,902		
2020									3,825	14,109		
2021										4,337		
								Total	\$ 983,485			
								All outstanding liabilities before 2012, net of reinsurance		68,013		
								Liabilities for claims and claim adjustment expenses, net of reinsurance	\$ 968,664			

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance professional lines									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1.2%	5.8%	13.2%	14.9%	13.4%	12.2%	9.3%	6.2%	3.7%	4.8%

Reinsurance Motor

This reserve class includes the motor line of business which provides protection to insurers for motor liability and motor property damage losses arising from any one occurrence. A loss occurrence can involve one or many claimants where the ceding insurer aggregates the claims from the occurrence. This reserve class also includes discontinued lines - Novae specifically the motor reinsurance line of business that Novae exited or placed into run-off in the first quarter of 2017. The Company offers traditional proportional and non-proportional reinsurance as well as structured solutions predominantly relating to European exposures.

The business written on a proportional basis has expanded significantly since 2010 and now represents the majority of the premium in this line of business. Most of the premium relates to a relatively small number of large United Kingdom ("U.K.") quota share reinsurance treaty contracts. The motor proportional business generally has a significantly shorter reported and payment pattern, relative to the motor non-proportional business.

The motor non-proportional business consists of standard excess of loss contracts written for cedants in several European countries with most of the premium related to two major markets, U.K. and France. Since 2009/2010, an increasing number of large bodily injury settlements in the U.K. market were settled using indexed annuities (Periodical Payment Orders "PPOs"). This led to a materially longer development tail on the older accident years for the U.K. non-proportional motor book. This also resulted in the inclusion of capitalization clauses on a number of U.K. motor treaties which allow reinsurers to settle claims arising under PPOs with a lump sum payment, to help mitigate the lengthening of the development tail on more recent accident years.

In 2017, the U.K. Ministry of Justice announced a decrease in the discount rate to be used to calculate lump sum awards in U.K. bodily injury cases, known as the Ogden Rate. Effective March 20, 2017, the Ogden rate changed from plus 2.5% to minus 0.75%. This resulted in a trend toward a lower number of claims settlements using PPOs and an increase in projected ultimate losses, particularly related to recent accident years.

Effective August 5, 2019, the Ogden rate changed from minus 0.75% to minus 0.25%. This resulted in a decrease in projected ultimate losses, particularly related to recent accident years.

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance motor											
Incurred claims and allocated claim adjustment expenses, net of reinsurance											At December 31, 2021
Accident year	For the years ended December 31,										Total of incurred- but-not-reported liabilities plus expected development on reported claims
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 182,633	\$ 173,749	\$ 162,106	\$ 154,440	\$ 149,527	\$ 139,917	\$ 136,989	\$ 128,719	\$ 129,001	\$ 125,068	\$ 9,380
2013		167,165	165,656	153,715	144,202	140,724	137,925	128,823	125,709	121,852	5,645
2014			187,744	190,577	185,889	183,176	178,705	175,289	171,880	171,540	4,531
2015				228,839	226,222	230,494	232,237	220,530	219,179	216,102	8,044
2016					252,697	273,424	275,311	264,703	256,311	253,527	7,507
2017						375,025	388,304	377,357	377,101	377,449	26,571
2018							368,844	372,104	384,410	380,446	42,305
2019								349,016	348,877	349,747	51,861
2020									225,728	229,582	71,686
2021										188,428	111,017
									Total	<u>\$2,413,741</u>	

Reinsurance motor											
Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance											
Accident year	For the years ended December 31,										
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 29,565	\$ 54,803	\$ 70,098	\$ 80,217	\$ 86,965	\$ 91,200	\$ 93,594	\$ 94,827	\$ 86,130	\$ 97,432	
2013		34,395	55,392	70,078	80,600	86,524	92,307	95,445	86,532	99,978	
2014			43,918	76,923	97,479	106,072	116,724	126,849	122,682	143,954	
2015				58,581	96,745	118,018	135,958	152,558	154,002	177,260	
2016					61,686	108,670	133,970	152,721	166,826	191,945	
2017						73,425	139,560	171,933	208,687	232,316	
2018							85,158	148,084	215,555	227,804	
2019								90,829	186,943	206,602	
2020									44,268	100,288	
2021										42,173	
								Total	<u>1,519,752</u>		
								All outstanding liabilities before 2012, net of reinsurance		230,586	
								Liabilities for claims and claim adjustment expenses, net of reinsurance	\$ 1,124,575		

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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance motor									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
23.8%	19.9%	11.0%	7.2%	6.0%	4.9%	3.2%	2.0%	2.0%	9.0%

Reinsurance Liability

This reserve class includes the liability line of business which provides protection to insurers of admitted casualty business, excess and surplus lines casualty business and specialty casualty programs. The primary focus of the underlying business is general liability, workers' compensation, auto liability and excess casualty. This reserve class includes discontinued lines - Novae specifically the general liability reinsurance line of business that Novae exited or placed into run-off in the first quarter of 2017.

Claim reporting and payment patterns are typically long-tail in nature and, therefore, subject to increased uncertainty surrounding future loss development. In particular, claims can be subject to inflation from a number of sources including, but not limited to, economic and medical inflation, judicial inflation, mass tort and changing social trends.

Reinsurance liability												At December 31, 2021
Incurred claims and allocated claim adjustment expenses, net of reinsurance												Total of incurred-but-not-reported liabilities plus expected development on reported claims
Accident year	For the years ended December 31,											Total of incurred-but-not-reported liabilities plus expected development on reported claims
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021		
2012	\$ 166,836	\$ 163,315	\$ 167,715	\$ 172,661	\$ 173,827	\$ 171,269	\$ 164,524	\$ 158,528	\$ 160,665	\$ 163,062	\$ 11,222	
2013		171,714	175,587	182,564	184,591	184,252	177,391	157,366	156,069	154,459	12,187	
2014			199,798	203,282	205,011	200,935	199,736	197,580	188,082	183,909	19,068	
2015				215,061	215,460	216,437	216,257	214,011	214,132	203,913	28,578	
2016					240,882	246,322	251,424	254,716	264,749	268,888	50,187	
2017						275,897	271,104	280,632	290,024	299,740	73,074	
2018							265,519	270,527	275,980	288,528	90,968	
2019								263,805	273,309	275,176	135,114	
2020									284,232	285,083	189,324	
2021										304,922	265,558	
										Total	\$2,427,680	

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reinsurance liability											
Accident year	Cumulative paid claims and allocated claim adjustment expenses, net of reinsurance										
	For the years ended December 31,										
	2012 unaudited	2013 unaudited	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020 unaudited	2021	
2012	\$ 3,541	\$ 12,803	\$ 28,392	\$ 58,815	\$ 78,291	\$ 101,234	\$ 115,695	\$ 126,071	\$ 134,357	\$ 136,365	
2013		5,974	22,242	52,338	69,069	88,280	102,617	113,154	123,710	128,124	
2014			7,094	28,672	48,445	70,214	89,502	110,095	130,304	137,659	
2015				7,271	27,460	54,556	80,911	109,056	131,010	141,808	
2016					11,884	37,742	69,655	112,028	143,293	167,276	
2017						12,477	42,227	78,771	121,223	159,265	
2018							19,361	50,121	85,510	128,405	
2019								19,326	45,415	80,066	
2020									16,950	49,233	
2021										10,998	
										Total	1,139,199
											All outstanding liabilities before 2012, net of reinsurance 114,137
											Liabilities for claims and claim adjustment expenses, net of reinsurance \$ 1,402,618

Reinsurance liability									
Average annual percentage payout of incurred claims by age, net of reinsurance (unaudited)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
4.5%	9.9%	12.8%	14.2%	12.2%	10.9%	8.0%	5.7%	4.0%	1.2%

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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8. RESERVE FOR LOSSES AND LOSS EXPENSES (CONTINUED)

Reconciliation of Loss Development Tables to Consolidated Balance Sheet

The following table reconciles the reserve for losses and loss expenses at December 31, 2021, included in the loss development tables to the reserve for losses and loss expenses reported in the consolidated balance sheet:

Reconciliation of the disclosure of incurred and paid claims development to the liability for unpaid claims and claim adjustment expenses				At December 31, 2021	
	Net outstanding liabilities	Reinsurance recoverable on unpaid claims	Gross outstanding liabilities		
Insurance segment					
Property and other	\$ 688,786	\$ 417,814	\$ 1,106,600		
Marine	430,468	182,584	613,052		
Aviation	88,203	58,067	146,270		
Credit and political risk	58,982	(23,381)	35,601		
Professional lines	2,009,370	1,494,488	3,503,858		
Liability	902,384	1,321,469	2,223,853		
Total insurance segment	4,178,193	3,451,041	7,629,234		
Reinsurance segment					
Property and other	1,652,950	584,201	2,237,151		
Credit and surety	249,302	66,965	316,267		
Professional lines	968,664	251,341	1,220,005		
Motor	1,124,575	229,195	1,353,770		
Liability	1,402,618	434,868	1,837,486		
Total reinsurance segment	5,398,109	1,566,570	6,964,679		
Total	\$ 9,576,302	\$ 5,017,611	\$ 14,593,913		
Unallocated claims adjustment expenses				159,676	
Foreign exchange and other ⁽¹⁾				48,373	
Ceded reserves related to retroactive transactions				(148,868)	
Total liability for unpaid claims and claims adjustment expense				\$ 14,653,094	

(1) Non-U.S. dollar denominated loss data is converted to U.S. dollar at the rates of exchange in effect at the balance sheet date for material underlying currencies. Fluctuations in currency exchange rates may cause material shifts in loss development. Reserves for losses and loss expenses disclosed in the consolidated balance sheets are also remeasured using rates of exchange in effect at the balance sheet date.

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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9. REINSURANCE

In the normal course of business, the Company purchases treaty and facultative reinsurance protection to limit ultimate losses from catastrophic events and reduce loss aggregation risk.

Facultative reinsurance provides cover for all or a portion of the losses incurred for a single policy and the Company separately negotiates each facultative contract.

Treaty reinsurance provides cover for a specified type or category of risks. The Company's treaty reinsurance agreements provide this cover on either an excess of loss or a proportional basis. Excess of loss covers provide a contractually set amount of coverage after a specified loss amount has been reached. These treaties can provide cover for a number of lines of business within one contract. Under proportional reinsurance, the Company cedes an agreed percentage of the premiums and the losses and loss expenses on the policies it underwrites. These treaties provide the Company with a specified percentage of coverage from the first dollar of loss.

All of these reinsurance contracts provide the Company with the right to recover a specified amount of losses and loss expenses from reinsurers. To the extent that reinsurers do not meet their obligations under these agreements due to solvency issues, contractual disputes over contract language or coverage and/or other reasons, the Company remains liable. The Company predominantly cedes its business to reinsurers rated A- or better by A.M. Best.

The following table presents gross and net premiums written and earned:

Year ended December 31,	2021		2020		2019	
	Premiums written	Premiums earned	Premiums written	Premiums earned	Premiums written	Premiums earned
Gross	\$ 7,685,984	\$ 7,281,709	\$ 6,826,938	\$ 6,768,733	\$ 6,898,858	\$ 6,910,677
Ceded	(2,759,360)	(2,571,859)	(2,490,529)	(2,397,424)	(2,409,243)	(2,323,499)
Net	\$ 4,926,624	\$ 4,709,850	\$ 4,336,409	\$ 4,371,309	\$ 4,489,615	\$ 4,587,178

For the year ended December 31, 2021, the Company recognized ceded losses and loss expenses of \$1,782 million (2020: \$1,914 million; 2019: \$1,602 million).

At December 31, 2021, the Company's allowance for expected credit losses was \$30 million (2020: \$24 million; 2019: \$18 million).

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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10. DEBT AND FINANCING ARRANGEMENTS

a) Debt

The following table summarizes the Company's debt:

Year ended December 31,	2021	2020
5.150% Senior Notes	\$ 246,632	\$ 246,559
4.000% Senior Notes	347,665	347,324
3.900% Senior Notes	296,172	295,748
Junior Subordinated Notes	420,506	420,064
Total Debt	\$ 1,310,975	\$ 1,309,695

The tables below provide the key terms of the Company's debt:

Description	Issuance Date	Aggregate Principal	Issue Price	Net Proceeds	Maturity Date
5.150% Senior Notes	March 13, 2014	\$ 250,000	99.474 %	\$ 246,000	April 1, 2045
4.000% Senior Notes	December 6, 2017	\$ 350,000	99.780 %	\$ 347,000	December 6, 2027
3.900% Senior Notes	June 19, 2019	\$ 300,000	99.360 %	\$ 296,000	July 15, 2029
Junior Subordinated Notes	December 10, 2019	\$ 425,000	99.000 %	\$ 420,750	January 15, 2040

Description	Interest Rate	Interest Payments Due
5.150% Senior Notes	5.150 %	Semi-annually in arrears on April 1 and October 1 of each year
4.000% Senior Notes	4.000 %	Semi-annually in arrears on June 6 and December 6 of each year
3.900% Senior Notes	3.900 %	Semi-annually in arrears on January 15 and July 15 of each year
Junior Subordinated Notes ⁽¹⁾	4.900 %	Semi-annually on January 15 and July 15 of each year

- (1) The Junior Subordinated Notes accrue interest from the date of issuance to, but excluding, January 15, 2030 (the "Par Call Date") at the fixed rate of 4.900% and from, and including, the Par Call Date, at a rate equal to the Five-Year Treasury Rate as of the Reset Interest Determination Date, plus 3.186%. Interest of the Junior Notes is payable semi-annually on January 15 and July 15 of each year, beginning on July 15, 2020.

5.150% Senior Notes

The 5.150% Senior Notes are ranked as unsecured senior obligations of AXIS Specialty Finance PLC, a 100% owned finance subsidiary. AXIS Capital has fully and unconditionally guaranteed all obligations of AXIS Specialty Finance PLC under the 5.150% Senior Notes. AXIS Capital's obligations under this guarantee are unsecured senior obligations and rank equally with all other senior obligations of AXIS Capital.

On April 3, 2019, AXIS Capital and AXIS Specialty Finance PLC entered into a first supplemental indenture (the "First Supplemental Indenture") among AXIS Specialty Finance PLC, as issuer, AXIS Capital, as guarantor, and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee"), to the senior indenture (the "Indenture") relating to the 5.150% Senior Notes.

The changes were made to permit the 5.150% Senior Notes to qualify as Tier 3 ancillary capital under eligible capital requirements of the Bermuda Monetary Authority. Because this amendment does not materially adversely affect the interests of the holders of the 5.150% Senior Notes, the First Supplemental Indenture was entered into without consent of any holders of the 5.150% Senior Notes. The First Supplemental Indenture relates to the 5.150% Senior Notes only and does not affect any other series of securities issued under the Indenture.

AXIS CAPITAL HOLDINGS LIMITED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2021, 2020 AND 2019

10. DEBT AND FINANCING ARRANGEMENTS (CONTINUED)

4.000% Senior Notes

The 4.000% Senior Notes are ranked as unsecured senior obligations of AXIS Specialty Finance PLC, a 100% owned finance subsidiary. AXIS Capital has fully and unconditionally guaranteed all obligations of AXIS Specialty Finance PLC under the 4.000% Senior Notes. AXIS Capital's obligations under this guarantee are unsecured senior obligations and rank equally with all other senior obligations of AXIS Capital.

3.900% Senior Notes

The 3.900% Senior Notes are ranked as unsecured senior obligations of AXIS Specialty Finance LLC, a 100% owned finance subsidiary. AXIS Capital has fully and unconditionally guaranteed all obligations of AXIS Specialty Finance LLC under the 3.900% Senior Notes. AXIS Capital's obligations under this guarantee are unsecured senior obligations and rank equally with all other senior obligations of AXIS Capital.

The Company has the option to redeem the Senior Notes at any time and from time to time, in whole or in part, at a "make-whole" redemption price, which is equal to the greater of the aggregate principal amount or the sum of the present values of the remaining scheduled payments of principal and interest. The related indentures contain various covenants, including limitations on liens on the stock of restricted subsidiaries, restrictions as to the disposition of the stock of restricted subsidiaries and limitations on mergers and consolidations. The Company was in compliance with all the covenants contained in the indentures at December 31, 2021.

Interest expense recognized in relation to the Senior Notes includes interest payable, amortization of the offering discounts and amortization of debt offering expenses. The offering discounts and debt offering expenses are amortized over the period of time during which the Senior Notes are outstanding. For the year ended December 31, 2021, the Company incurred interest expense of \$40 million (2020: \$52 million, 2019: \$67 million).

Junior Subordinated Notes

The 4.900% Fixed-Rate Reset Junior Notes are ranked as unsecured junior subordinated obligations of AXIS Specialty Finance LLC, a 100% owned finance subsidiary. AXIS Capital has fully and unconditionally guaranteed all obligations of AXIS Specialty Finance LLC under the Junior Notes. AXIS Capital's obligation under this guarantee is an unsecured junior subordinated obligation and ranks equally with all future unsecured junior subordinated obligations of AXIS Capital, and junior in right of payment to all outstanding and future senior obligations of AXIS Capital.

Interest expense recognized in relation to the Junior Notes includes interest payable and amortization of debt offering expenses. The debt offering expenses are amortized over the period of time during which the Junior Notes are outstanding. For the year ended December 31, 2021, the Company incurred interest expense of \$21 million (2020: \$21 million).

Scheduled Debt Maturity

The following table provides the scheduled maturity of the Company's debt obligations at December 31, 2021:

Year ended December 31,	
2022	\$ —
2023	—
2024	—
2025	—
2026	—
After 2026	1,325,000
Unamortized discount and debt issuance expenses	(14,025)
Total senior notes and notes payable	\$ 1,310,975

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10. DEBT AND FINANCING ARRANGEMENTS (CONTINUED)

b) Letter of Credit Facility

On November 20, 2013, certain of AXIS Capital's operating subsidiaries (the "Participating Subsidiaries") entered into an amendment to extend the term of the Company's secured \$750 million letter of credit facility with Citibank Europe plc ("Citibank") (the "\$750 million Facility") pursuant to a Master Reimbursement Agreement and other ancillary documents (together, the "LOC Facility Documents"). Under the terms of the \$750 million Facility, letters of credit to a maximum aggregate amount of \$750 million are available for issuance on behalf of the Participating Subsidiaries. These letters of credit are principally used to support the reinsurance obligations of the Participating Subsidiaries. The \$750 million Facility is subject to certain covenants, including the requirement to maintain sufficient collateral, as defined in the LOC Facility Documents to cover all of the obligations under the \$750 million Facility. Such obligations include contingent reimbursement obligations for outstanding letters of credit and fees payable to Citibank. In the event of default, Citibank may exercise certain remedies, including the exercise of control over pledged collateral and the termination of the availability of the \$750 million Facility to any or all of the Participating Subsidiaries.

On March 31, 2015, the Participating Subsidiaries entered into an amendment to reduce the maximum aggregate utilization capacity of the \$750 million Facility to \$500 million (the "\$500 million Facility"). All other material terms and conditions remained unchanged.

On March 27, 2017, the Participating Subsidiaries amended their existing \$500 million Facility to include an additional \$250 million of secured letter of credit capacity (the "\$250 million Facility") pursuant to a Committed Facility Letter and an amendment to the Master Reimbursement Agreement. Under the terms of the amended \$750 million Facility, letters of credit to a maximum aggregate amount of \$250 million are available for issuance on behalf of the Participating Subsidiaries once the \$500 million Facility has been fully utilized.

On December 24, 2019, the expiration date of the \$500 million Facility was extended to December 31, 2023.

On March 28, 2020, the expiration date of the \$250 million Facility was extended to March 31, 2021.

On March 31, 2021, the Participating Subsidiaries amended their existing secured \$750 million Facility to extend the expiration date of the \$250 million Facility to March 31, 2022, with each letter of credit provided pursuant to such credit facility having a tenor not to extend beyond March 31, 2023, to reduce the utilization capacity available under the \$250 million Facility to \$150 million, reducing the maximum aggregate utilization capacity of the credit facility from \$750 million to \$650 million, and to make administrative changes to the remaining \$500 million Facility.

At December 31, 2021, letters of credit outstanding under the LOC Facility were \$356 million (2020: \$339 million). At December 31, 2021, the Participating Subsidiaries were in compliance with all LOC Facility covenants.

11. COMMITMENTS AND CONTINGENCIES

a) Concentrations of Credit Risk

Credit Risk Aggregation

The Company monitors and manages the aggregation of credit risk on a group-wide basis allowing it to consider exposure management strategies for individual companies, countries, regions, sectors and any other relevant inter-dependencies. The Company's credit exposures are aggregated based on the origin of risk. Credit risk aggregation is also managed through minimizing overlaps in underwriting, financing and investing activities. As part of its credit aggregation framework, the Company also assigns aggregate credit limits by country and by single counterparty (or parent of affiliated counterparties). These limits are based on and adjusted for a variety of factors including the prevailing economic environment and the nature of the underlying credit exposures.

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11. COMMITMENTS AND CONTINGENCIES (CONTINUED)

The Company's credit aggregation measurement and reporting process is facilitated by its credit risk exposure database, which contains relevant information on counterparty details and credit risk exposures. The database is accessible by management throughout the Company, therefore providing transparency to allow for the implementation of active exposure management strategies. The Company also licenses third-party tools to provide credit risk assessments. The Company monitors all its credit aggregations and, where appropriate, adjusts its internal risk limits and/or takes specific actions to reduce our risk exposures.

The assets that potentially subject the Company to concentrations of credit risk consist principally of cash and investments, reinsurance recoverable on unpaid and paid claims, and insurance and reinsurance premiums balances receivable, as described below:

(i) Cash and Investments

In order to mitigate concentration and operational risks related to cash and cash equivalents, the Company limits the maximum amount of cash that can be deposited with a single counterparty and limits acceptable counterparties based on current rating, outlook and other relevant factors.

The Company's fixed maturity investment portfolio, which represents approximately \$12.8 billion or 47% of its total assets, is exposed to potential losses arising from the diminished creditworthiness of issuers of bonds. The Company's investment portfolio is managed by external investment managers in accordance with its investment guidelines. The Company limits credit risk through diversification and issuer exposure limits graded by ratings and, with respect to custodians, through contractual and other legal remedies. Excluding U.S. government and agency securities, the Company limits its concentration of credit risk to any single corporate issuer to less than 2% of its investment grade fixed maturities portfolio for securities rated A- or above and less than 1% of its investment grade fixed maturities portfolio for securities rated below A-.

At December 31, 2021, the Company was in compliance with these limits.

(ii) Reinsurance Recoverable on Unpaid and Paid Losses and Loss Expenses

The Company is exposed to the credit risk associated with reinsurance recoverable on unpaid and paid losses and loss expenses to the extent that any of its reinsurers fail to meet their obligations under reinsurance contracts. To help mitigate this risk, the Company's purchase of reinsurance is subject to financial security requirements specified by its Reinsurance Security Committee. This Committee maintains a list of approved reinsurers, performs 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 tolerance levels 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. Generally, the Committee requires that reinsurers who do not meet specified requirements provide collateral.

At December 31, 2021, the three largest balances by reinsurer accounted for 13%, 10% and 5% (2020: 13%, 10% and 7%) of reinsurance recoverable on unpaid and paid losses and loss expenses.

At December 31, 2021, 85.7% (December 31, 2020: 87.6%) of the Company's reinsurance recoverable on unpaid and paid losses and loss expenses were collectible from reinsurers rated the equivalent of A- or better by A.M. Best.

(iii) Insurance and Reinsurance Premium Balances Receivable

The diversity of the Company's client base limits credit risk associated with its insurance and reinsurance premium balances receivable. In addition, for insurance contracts the Company has contractual rights to cancel coverage for non-payment of premiums and for reinsurance contracts the Company has contractual rights to offset premium balances receivable against corresponding payments for losses and loss expenses.

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11. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Brokers and other intermediaries collect premiums from customers on behalf of the Company. The Company has procedures in place to manage and monitor credit risk from intermediaries with a focus on day-to-day monitoring of the largest positions.

These contractual rights contribute to the mitigation of credit risk, together with the monitoring of aged premium balances receivable. In light of these mitigating factors and considering that a significant portion of premium balances receivable are not currently due based on the terms of the underlying contracts, the Company does not utilize specific credit quality indicators to monitor its premium balances receivable.

At December 31, 2021, the Company recorded an allowance for credit losses expected to be recognized over the life of the premium balances receivable of \$8 million (2020: \$9 million).

For the year ended December 31, 2021, bad debt expense was \$nil (2020: \$nil; 2019: \$nil).

b) Brokers

The Company produces its business through brokers and direct relationships with insurance companies. For the year ended December 31, 2021, three brokers accounted for 45% (2020: 47%; 2019: 47%) of gross premiums written.

Marsh & McLennan Companies Inc. accounted for 18% (2020: 19%; 2019: 18%), Aon plc accounted for 17% (2020: 17%; 2019: 19%), and Willis Tower Watson PLC accounted for 10% (2020: 11%; 2019: 10%).

No other broker and no single insured or reinsured accounted for more than 10% of gross premiums written in any of the last three years.

c) Reinsurance Purchase Commitment

In the normal course of business, the Company purchases reinsurance and retrocessional (collectively referred to as "reinsurance") protection for its insurance and reinsurance business. Minimum reinsurance premiums are contractually due in advance on a quarterly basis. At December 31, 2021, the Company had outstanding reinsurance purchase commitments of \$10 million (2020: \$13 million), all of which is due before January 1, 2024. Actual payments under the reinsurance contracts will depend on the underlying subject premium and may exceed the minimum reinsurance premiums.

d) 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 its insurance or reinsurance operations. Estimated amounts payable related to these proceedings are included in 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.

e) Investments

At December 31, 2021 the Company has \$649 million (2020: \$588 million) of unfunded investment commitments related to its other investment portfolio, which are callable by investment managers (refer to Note 5(c) '*Investments*'). At December 31, 2021 the Company has \$33 million (2020: \$46 million) of unfunded investment commitments to purchase commercial mortgage loans and \$19 million (2020: \$nil) of unfunded investment commitments to purchase corporate debt.

f) Funds at Lloyd's

The Company operates in the Lloyd's market through its corporate members, AXIS Corporate Capital UK Limited and AXIS Corporate Capital UK II Limited, which provide 70% and 30%, respectively of Syndicate 1686's capital support. Lloyd's sets

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11. COMMITMENTS AND CONTINGENCIES (CONTINUED)

capital requirements for corporate members annually through the application of a capital model that is based on regulatory rules pursuant to Solvency II.

The capital provided to support underwriting or FAL may be satisfied by cash, certain investments and letters of credit provided by approved banks.

At December 31, 2021, investments and cash of \$0.9 billion (2020: \$1.2 billion) were restricted to satisfy the Company's FAL requirements (refer to Note 5 '*Investments*' and Note 21 '*Statutory Financial Information*').

12. LEASES

In the ordinary course of business, the Company renews and enters into new leases for office property and equipment, which expire at various dates.

At the lease inception date, the Company assesses whether a contract is or contains a lease. At the commencement date, the Company determines the classification of each separate lease component as either a finance lease or an operating lease. The Company's leases are all currently classified as operating leases. For operating leases that have a lease term of more than 12 months, the Company recognizes a lease liability and a right-of-use asset in the Company's consolidated balance sheets at the present value of the lease payments at the lease commencement date.

At the commencement date, the Company determines lease terms by assuming the exercise of those renewal options that are deemed to be reasonably certain. The exercise of lease renewal options is at the sole discretion of the Company.

As the lease contracts generally do not provide an implicit discount rate, the Company uses its incremental borrowing rate based on information available at the commencement date to determine the present value of lease payments. The incremental borrowing rate is based on a borrowing with a term that is similar to the term of the associated lease. The Company has made an accounting policy election not to include renewal, termination, or purchase options that are not reasonably certain of exercise when determining the term of the borrowing.

The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

Operating lease rentals are expensed on a straight-line basis over the life of the lease beginning on the commencement date.

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12. LEASES (CONTINUED)

The following table presents the Company's total lease expense and the cash flows arising from lease transactions:

Year ended December 31,	2021	2020	2019
Lease cost:			
Operating lease expense	\$ 21,864	\$ 24,726	\$ 27,549
Short-term lease expense ⁽¹⁾	1,127	299	1,132
Sublease income ⁽²⁾	(3,116)	(3,578)	(1,144)
Total lease expense	\$ 19,875	\$ 21,447	\$ 27,537
Other information:			
Operating cash outflows from operating leases	\$ 22,726	\$ 20,452	\$ 25,004
Right-of-use assets obtained in exchange for new operating lease liabilities ⁽³⁾	\$ (1,739)	\$ 36,742	—
Weighted-average remaining lease term - operating leases ⁽⁴⁾	10.0 years	10.2 years	9.0 years
Weighted-average discount rate - operating lease ⁽⁵⁾	4.1%	4.2 %	4.7 %

- (1) Short-term lease expense is recognized on a straight-line basis over the lease term.
- (2) Sublease income largely relates to office properties in New York and London.
- (3) In 2021, the Company modified a lease agreement to reflect a reduction in the floor space it occupies in its office property in Zurich.
- (4) Weighted-average remaining lease term was calculated on the basis of the remaining lease term and the lease liability balance for each lease at the reporting date.
- (5) Weighted-average discount was calculated on the basis of the discount rate that was used to calculate the lease liability balance for each lease at the reporting date and the remaining balance of the lease payments for each lease at the reporting date.

The following table presents the scheduled maturity of the Company's operating lease liabilities at December 31, 2021:

Year ended December 31,	Expected cash flows
2022	\$ 23,262
2023	19,725
2024	13,556
2025	12,924
2026	10,770
Later years	66,705
Discount	(27,430)
Total discounted operating lease liabilities	\$ 119,512

The following table presents the scheduled maturity of the Company's operating lease liabilities at December 31, 2020:

Year ended December 31,	Expected cash flows
2021	\$ 22,817
2022	23,598
2023	20,190
2024	14,478
2025	13,849
Later years	78,987
Discount	(33,656)
Total discounted operating lease liabilities	\$ 140,263

On February 1, 2020, the commencement date, the Company reflected a 15 year lease for a new office property in Alpharetta, Georgia in the Company's consolidated balance sheet. Consequently, this lease is also reflected in the maturity table above. The total contractual lease costs over the 15 year lease is \$40 million.

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13. EARNINGS PER COMMON SHARE

The following table presents a comparison of earnings (loss) per common share and earnings (loss) per diluted common share:

At and year ended December 31,	2021	2020	2019
Earnings (loss) per common share			
Net income (loss)	\$ 618,609	\$ (120,424)	\$ 323,473
Less: Preferred share dividends	<u>30,250</u>	<u>30,250</u>	<u>41,112</u>
Net income (loss) available (attributable) to common shareholders	<u>\$ 588,359</u>	<u>\$ (150,674)</u>	<u>\$ 282,361</u>
Weighted average common shares outstanding	<u>84,707</u>	<u>84,262</u>	<u>83,894</u>
Earnings (loss) per common share	<u>\$ 6.95</u>	<u>\$ (1.79)</u>	<u>\$ 3.37</u>
Earnings (loss) per diluted common share			
Net income (loss) available (attributable) to common shareholders	<u>\$ 588,359</u>	<u>\$ (150,674)</u>	<u>\$ 282,361</u>
Weighted average common shares outstanding	<u>84,707</u>	<u>84,262</u>	<u>83,894</u>
Share-based compensation plans ⁽¹⁾	<u>584</u>	<u>—</u>	<u>579</u>
Weighted average diluted common shares outstanding	<u>85,291</u>	<u>84,262</u>	<u>84,473</u>
Earnings (loss) per diluted common share	<u>\$ 6.90</u>	<u>\$ (1.79)</u>	<u>\$ 3.34</u>
Weighted average anti-dilutive shares excluded from the dilutive computation	<u>656</u>	<u>922</u>	<u>154</u>

(1) Due to the net loss recognized for the year ended December 31, 2020, the share equivalents were anti-dilutive.

14. SHAREHOLDERS' EQUITY

a) Common Shares

The Company's authorized share capital is 800,000,000 common shares, par value of \$0.0125 per share.

The following table presents changes in common shares issued and outstanding:

Year ended December 31,	2021	2020	2019
Shares issued, balance at beginning of year	176,580	176,580	176,580
Shares issued	<u>—</u>	<u>—</u>	<u>—</u>
Total shares issued at end of year	<u>176,580</u>	<u>176,580</u>	<u>176,580</u>
Treasury shares, balance at beginning of year	(92,227)	(92,621)	(92,994)
Shares repurchased	(205)	(194)	(176)
Shares reissued	626	588	549
Total treasury shares at end of year	<u>(91,806)</u>	<u>(92,227)</u>	<u>(92,621)</u>
Total shares outstanding	<u>84,774</u>	<u>84,353</u>	<u>83,959</u>

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14. SHAREHOLDERS' EQUITY (CONTINUED)

Treasury Shares

On December 2, 2021, the Company's Board of Directors authorized a new share repurchase plan for up to \$100 million of the Company's common shares through December 31, 2022. The new plan is effective January 1, 2022.

The following table presents common shares repurchased from shares held in Treasury:

Year ended December 31,	2021	2020	2019
In the open market:			
Total shares	—	—	—
Total cost	\$ —	\$ —	\$ —
Average price per share ⁽¹⁾	\$ —	\$ —	\$ —
From employees: ⁽²⁾			
Total shares	205	194	176
Total cost	\$ 10,242	\$ 10,382	\$ 10,165
Average price per share ⁽¹⁾	\$ 49.93	\$ 53.43	\$ 57.66
Total shares repurchased:			
Total shares	205	194	176
Total cost	\$ 10,242	\$ 10,382	\$ 10,165
Average price per share ⁽¹⁾	\$ 49.93	\$ 53.43	\$ 57.66

(1) Calculated using whole numbers.

(2) Shares are repurchased from employees to facilitate the satisfaction of their personal withholding tax liabilities that arise on the vesting of share-settled restricted stock units.

b) Preferred Shares

Series D Preferred Shares

On May 20, 2013, the Company issued \$225 million of 5.50% Series D preferred shares, par value \$0.0125 per share, with a liquidation preference of \$25.00 per share. The Company could redeem the Series D preferred shares on or after June 1, 2018 at a redemption price of \$25.00 per share. Dividends on the Series D preferred shares were non-cumulative. Holders of the Series D preferred shares are entitled to receive, only when, as and if declared by the Board of Directors, non-cumulative cash dividends from the original issue date, quarterly in arrears on the first day of March, June, September and December of each year, commencing on September 1, 2013. To the extent declared, dividends accumulate, with respect to each dividend period, in an amount per share equal to 5.50% of the liquidation preference per annum.

On January 17, 2020, the Company redeemed all 9,000,000 Series D preferred shares, for an aggregate liquidation preference of \$225 million.

Series E Preferred Shares

On November 7, 2016, the Company issued \$550 million of 5.50% Series E preferred shares, par value \$0.0125 per share, with a liquidation preference of \$2,500 per share. The Company could redeem the Series E preferred shares on or after November 7, 2021 at a redemption price of \$2,500 per share. Dividends on the Series E preferred shares are non-cumulative. Holders of the Series E preferred shares are entitled to receive, only when, as and if declared by the Board of Directors, non-cumulative cash dividends from the original issue date, quarterly in arrears on the fifteenth day of January, April, July and October of each year, commencing on January 15, 2017. To the extent declared, dividends accumulate, with respect to each dividend period, in an amount per share equal to 5.50% of the liquidation preference per annum.

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14. SHAREHOLDERS' EQUITY (CONTINUED)

Dividends

The following table presents dividends declared and paid related to the Company's common and preferred shares:

	Per share data		
	Dividends declared	Dividends paid in year of declaration	Dividends paid in year following declaration
Year ended December 31, 2021			
Common shares	\$ 1.69	\$ 1.26	\$ 0.43
Series E preferred shares	\$ 137.50	\$ 103.13	\$ 34.38
Year ended December 31, 2020			
Common shares	\$ 1.65	\$ 1.23	\$ 0.42
Series E preferred shares	\$ 137.50	\$ 103.13	\$ 34.38
Year ended December 31, 2019			
Common shares	\$ 1.61	\$ 1.20	\$ 0.41
Series D preferred shares ⁽¹⁾	\$ 1.21	\$ 1.03	\$ 0.18
Series E preferred shares	\$ 137.50	\$ 103.13	\$ 34.38

(1) On January 17, 2020, the Company redeemed all 9,000,000 Series D preferred shares, for an aggregate liquidation preference of \$225 million. The final dividend related to the Series D preferred shares was declared in 2019.

15. RETIREMENT PLANS

The Company maintains defined contribution plans to provide retirement benefits to eligible employees. Contributions to the plans, which are managed externally, are based on eligible compensation.

For eligible U.S. employees, the Company provides a non-qualified deferred compensation plan that enables employees to make contributions to the plan that are in excess of those permitted under the Company's 401(k) Plan. In addition, employees are permitted to make additional contributions from any bonus received and to benefit from discretionary employer contribution to the Plan.

For the year ended December 31, 2021, total pension expenses were \$34 million (2020: \$29 million and 2019: \$28 million) for the above retirement benefits.

16. SHARE-BASED COMPENSATION

In May 2017, shareholders approved the establishment of the AXIS Capital Holdings Limited 2017 Long-Term Equity Compensation Plan (the "2017 Plan"). The 2017 Plan provides for, among other things, the issuance of restricted shares, restricted stock units (share-settled awards and cash-settled awards), performance units (share-settled awards and cash-settled awards), stock options, stock appreciation rights and other equity-based awards to the Company's employees and directors. The 2017 Plan authorizes the issuance of a total of 3,400,000 common shares. On May 7, 2021, at the Annual General Meeting of Shareholders of the Company, the Company's shareholders approved an amendment to the Company's 2017 Plan to increase by 1,600,000 the number of common shares authorized for issuance under the Plan. The Company's 2017 Plan replaced its 2007 Long-Term Equity Compensation Plan ("2007 Plan") when it expired in May 2017. All remaining shares available for grant pursuant to the 2007 Plan have been canceled. Awards made pursuant to the 2007 Plan prior to its expiration remain in effect in accordance with the terms of the 2007 Plan. At December 31, 2021, 2,507,634 equity-based awards remained available for grant pursuant to the 2017 Plan.

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16. SHARE-BASED COMPENSATION (CONTINUED)

Restricted Stock Units - Share-Settled

The grant date fair value of share-settled restricted stock units granted pursuant to the 2017 Plan is established at the fair market value of the Company's common shares at the date of grant. These awards either cliff vest at the end of a three year period, vest in accordance with a three year graded vesting schedule in three annual installments beginning on the grant date, or vest in accordance with a four year graded vesting schedule in four annual installments beginning on the grant date.

Restricted Stock Units - Cash-Settled

The grant date fair value of cash-settled restricted stock units granted pursuant to the 2017 Plan is established at the fair market value of the Company's common shares at the date of grant. These awards are liability awards and generally cliff vest at the end of a three year period, or vest in accordance with a four year graded vesting schedule in four annual installments beginning on the grant date.

Performance Restricted Stock Units - Share-Settled and Cash-Settled

Performance restricted stock units granted pursuant to the 2017 Plan represent the right to receive a specified number of common shares in the future, based on the achievement of established performance criteria and continued service during the applicable performance period. The grant date fair value of performance restricted stock units granted in 2021 was measured on the grant date using a Monte Carlo simulation model. The grant date fair value of performance restricted stock units granted prior to 2021 was established at the fair market value of the Company's common shares at the date of grant. Awards granted pursuant to the 2017 Plan generally cliff vest at the end of a three year period. Compensation expense is recognized on a straight-line basis over the applicable requisite service period and awards granted prior to 2021 are subject to periodic adjustment based on the achievement of established performance criteria during the applicable performance period. Effective 2017, performance restricted stock units granted are share-settled awards.

Acceleration Provisions

Grants provided under the 2017 Plan generally allow for accelerated vesting provisions on the employee's death, permanent disability, or certain terminations following a change in control of the Company occurring within two years of the change in control event. Notwithstanding these vesting provisions, the Compensation Committee of the Company's Board of Directors has broad authority to accelerate vesting at its discretion.

Retirement Plan

In 2016, the Company established the AXIS Executive Restricted Stock Unit Retirement Plan (the "Plan") to reward certain eligible long-term employees of the Company for their dedicated service. The Plan was implemented in 2017. Subject to certain conditions being met, eligible employees do not forfeit all of their outstanding share-settled restricted stock units or cash-settled restricted stock units on or following their retirement. Absent the Plan, outstanding restricted stock units are generally forfeited on termination of employment.

a) Performance Restricted Stock Units

Performance Restricted Stock Units granted in 2021

Performance restricted stock units granted in 2021 include a market condition which is the Company's total shareholder return relative to its peer group ("Relative TSR") over the performance period. Relative TSR is calculated in accordance with the terms of the applicable award agreement. If performance goals are achieved, these awards will cliff vest at the end of a three-year performance period within a range of 0% to 200% of target. Performance restricted stock units granted in 2021 were share-settled awards.

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16. SHARE-BASED COMPENSATION (CONTINUED)

Valuation assumptions

The grant date fair value of performance restricted stock units granted in 2021 was measured on the grant date using a Monte Carlo simulation model.

The following table provides details of the significant inputs used in the Monte Carlo simulation model:

Year ended December 31,	2021
Expected volatility	32.99%
Expected term (in years)	3.0
Expected dividend yield	n/a
Risk-free interest rate	0.17%

Beginning share price: The beginning share price was based on the average closing share price over the 10 trading days preceding and including the start of the performance period.

Ending share price: The ending share price was based on the average closing share price over the 10 trading days preceding and including the end of the performance period.

Expected volatility: The expected volatility was estimated based on the Company's historical share price volatility.

Expected term: Performance is measured from January 1, 2021 to December 31, 2023.

Expected dividend yield: The expected dividend yield is not applicable to the performance restricted stock units as dividends are paid at the end of the vesting period and do not affect the value of the performance restricted stock units.

Risk-free interest rate: The risk free rate was estimated based on the yield on a U.S. treasury zero-coupon bond issued with a remaining term equal to the vesting period of the performance restricted stock units.

Compensation expense associated with performance restricted stock units granted in 2021 is determined on the grant date based on the fair value calculated by the Monte Carlo simulation model. The fair value of these awards is recognized on a straight-line basis over the requisite service period.

Performance Restricted Stock Units granted in 2020 and 2019

Performance restricted stock units granted in 2020 and 2019 include a market condition which is the Company's total shareholder return relative to its peer group ("Relative TSR") over the performance period. Relative TSR is calculated in accordance with the terms of the applicable award agreement. If performance goals are achieved, these awards will cliff vest at the end of a three-year performance period within a range of 75% to 125% of target. Performance restricted stock units granted in 2020 and 2019 were share-settled awards.

Compensation expense associated with performance restricted stock units granted in 2020 and 2019 is determined based on market value of the Company's common shares measured at the grant date. The fair value of these awards is recognized on a straight-line basis over the requisite service period and is subject to periodic adjustment based on the achievement of established performance criteria during the performance period.

Performance Restricted Stock Units granted in 2018

Performance restricted stock units granted in 2018 included a performance condition which was growth in the Company's book value per diluted common share adjusted for dividends over three years compared to its peer group. Growth in book

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16. SHARE-BASED COMPENSATION (CONTINUED)

value per diluted common share adjusted for dividends was calculated in accordance with the terms of the applicable award agreements. Where performance goals were achieved, these awards cliff vested at the end of the three-year performance period within a range of 0% to 200% of target. Performance restricted stock units granted in 2018 were share-settled awards.

Compensation expense associated with performance restricted stock units granted in 2018 was determined based on market value of the Company's common shares measured at the grant date. The fair value of these awards was recognized on a straight-line basis over the requisite service period and was subject to periodic adjustment based on the achievement of established performance criteria during the performance period.

b) Share-Settled Awards

The following table provides an activity summary of the Company's share-settled restricted stock units:

	Share-Settled Performance Restricted Stock Units		Share-Settled Service Restricted Stock Units	
	Number of restricted stock units	Weighted average grant date fair value	Number of restricted stock units	Weighted average grant date fair value
Nonvested restricted stock units - December 31, 2019	258	\$ 53.31	1,273	\$ 54.32
Granted	97	62.26	894	58.98
Vested	(27)	64.01	(561)	55.29
Forfeited	(39)	48.89	(105)	57.54
Nonvested restricted stock units - December 31, 2020	289	55.92	1,501	56.50
Granted	122	49.04	1,250	48.04
Vested	(66)	48.89	(561)	56.42
Forfeited	(34)	55.68	(128)	53.37
Nonvested restricted stock units - December 31, 2021	311	\$ 54.75	2,062	\$ 51.59

c) Cash-Settled Awards

The following table provides an activity summary of the Company's cash-settled restricted stock units:

	Cash-Settled Performance Restricted Stock Units		Cash-Settled Service Restricted Stock Units	
	Number of restricted stock units	Number of restricted stock units	Number of restricted stock units	Number of restricted stock units
Nonvested restricted stock units - December 31, 2019		6		853
Granted		—		1
Vested		(6)		(332)
Forfeited		—		(51)
Nonvested restricted stock units - December 31, 2020		—		471
Granted		—		—
Vested		—		(233)
Forfeited		—		(23)
Nonvested restricted stock units - December 31, 2021		—		215

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16. SHARE-BASED COMPENSATION (CONTINUED)

The following table provides additional information related to share-based compensation:

Year ended December 31,	2021	2020	2019
Share-based compensation expense ⁽¹⁾	\$ 49,415	\$ 47,789	\$ 52,218
Tax benefits associated with share-based compensation expense	\$ 7,613	\$ 8,061	\$ 8,913
Liability for cash-settled restricted stock units ⁽²⁾	\$ 9,091	\$ 13,273	\$ 21,731
Fair value of restricted stock units vested ⁽³⁾	\$ 42,967	\$ 50,757	\$ 51,206
Unrecognized share-based compensation expense	\$ 80,805	\$ 74,014	\$ 75,770
Expected weighted average period associated with the recognition of unrecognized share-based compensation expense	2.4 years	2.4 years	2.3 years

(1) Related to share-settled restricted stock units and cash-settled restricted stock units.

(2) Included in other liabilities in the consolidated balance sheets.

(3) Fair value is based on the closing price of the Company's common shares on the vest date.

17. RELATED PARTY TRANSACTIONS

A member of the Company's Board of Directors, Mr. Charles Davis, is the Chief Executive Officer of Stone Point Capital, LLC ("Stone Point"). In the ordinary course of business, the Company engages SKY Harbor Capital Management, LLC, an affiliate of Stone Point, to provide asset management services for certain high yield debt portfolios. For the year ended December 31, 2021, total fees paid to SKY Harbor Capital Management, LLC, were \$2 million (2020: \$3 million; 2019: \$3 million).

In addition, the Company has an investment of \$47 million in the Freedom Consumer Credit Fund, LLC - Series B. The manager of this fund is Freedom Financial Asset Management, LLC ("Freedom") which is an indirect subsidiary of Pantheon Partners, LLC ("Pantheon"). Investment funds managed by Stone Point own approximately 14.5% of Pantheon. For the year ended December 31, 2021, fees paid to Freedom were \$3 million (2020: \$2 million; 2019: \$3 million).

The Company has an investment of \$79 million in Stone Point's private equity fund, Trident VIII L.P. ("Trident VIII") and co-investments of \$25 million with Trident VIII. For the year ended December 31, 2021, fees paid to Stone Point in relation to Trident VIII were \$4 million (2020: \$1 million; 2019: \$nil).

The Company has an investment of \$20 million with Rialto Real Estate IV-Property and co-investments of \$16 million with Rialto Real Estate Fund IV-Property, a fund managed by a portfolio company of Stone Point's private equity fund, Trident VII L.P. For the year ended December 31, 2021, fees paid to Rialto were \$1 million (2020: \$nil; 2019: \$nil).

The Company has an investment of \$12 million in Stone Point Credit Corporation. For the year ended December 31, 2021, the Company has not paid any fees to Stone Point in relation to Stone Point Credit Corporation.

During his tenure as the Company's Chair, Mr. Butt received consulting fees for the year ended December 31, 2020 of \$0.4 million (2019: \$0.4 million) pursuant to the terms of a consulting agreement between Mr. Butt and the Company which terminated on December 31, 2020.

The Company's investment portfolio includes certain investments where it is considered to have the ability to exercise significant influence over the operating and financial policies of the investee. Significant influence is generally deemed to exist where the Company has an investment of 20% or more in the common stock of a corporation or an investment greater than 3% to 5% in closed end funds, limited partnerships, LLCs or similar investment vehicles. At December 31, 2021, the Company has \$555 million (2020: \$404 million) of investments where it is deemed to have the ability to exercise such significant influence. The Company generally pays management and performance fees to the investment managers of these investments. The Company considers all fees paid to the investment managers to be at market rates consistent with negotiated arms-length contracts.

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17. RELATED PARTY TRANSACTIONS (CONTINUED)

Harrington and Harrington Re commenced operations in 2016 (refer to Note 5 '*Investments*'). The Company has the ability to exercise significant influence over the operating and financial policies of Harrington and Harrington Re. In the normal course of business, the Company enters into certain reinsurance transactions with Harrington Re. For the year ended December 31, 2021, the Company ceded reinsurance premiums of \$283 million (2020: \$256 million; 2019: \$247 million) and ceded losses of \$188 million (2020: \$187 million; 2019: \$157 million) to Harrington Re. In addition, Harrington Re paid certain acquisition costs and administrative fees to the Company. At December 31, 2021, the amount of reinsurance recoverable on unpaid and paid losses was \$717 million (2020: \$641 million) and the amount of ceded reinsurance payable included in insurance and reinsurance balances payable was \$189 million (2020: \$188 million) in the consolidated balance sheets. All transactions were conducted at market rates consistent with negotiated arms-length contracts.

On June 29, 2021, the Company invested \$10 million in 7.25% fixed to floating rate, senior unsecured notes due 2031, issued by Harrington.

On November 5, 2013, the Company formed AXIS Ventures Reinsurance Limited ("Ventures Re"), a Bermuda domiciled insurer. All of Ventures Re's directors were employees of the Company. Effective January 1, 2015, Ventures Re was no longer included in the consolidated financial statements of the Company. In the normal course of business, the Company entered into certain reinsurance contracts with Ventures Re. Effective, January 1, 2020, Ventures Re entered into a novation reinsurance contract with various reinsurers. For the year ended December 31, 2019, the Company ceded premiums of \$192 million and ceded losses of \$140 million to Ventures Re. In addition, Ventures Re paid certain acquisition costs and administrative fees to the Company.

18. REORGANIZATION EXPENSES

For the year ended December 31, 2021, reorganization expenses were \$nil (2020: \$8 million and 2019: \$37 million), respectively, related to the Company's transformation program which was launched in 2017. This program encompasses the integration of Novae, which commenced in the fourth quarter of 2017, the realignment of the Company's accident and health business, together with other initiatives designed to increase efficiency and enhance profitability while delivering a customer-centric operating model.

19. INCOME TAXES

Under current Bermuda law, AXIS Capital's Bermuda domiciled subsidiaries are not required to pay any taxes in Bermuda on income or capital gains. The Company has received an assurance from the Minister of Finance in Bermuda that, in the event of any taxes being imposed, it will be exempt from taxation in Bermuda until March 2035. The Company's primary Bermuda subsidiary has an operating branch in Singapore, which is subject to the relevant taxes in that jurisdiction. The Singapore branch is not under examination in that tax jurisdiction but remains subject to examination for tax years 2018 through 2021.

AXIS Capital's U.S. subsidiaries are subject to federal, state and local corporate income taxes, and other taxes applicable to U.S. corporations. The provision for federal income taxes has been determined under the principles of the consolidated tax provisions of the U.S. Internal Revenue Code and regulations. Should the U.S. subsidiaries pay a dividend outside the U.S. group, withholding taxes will apply. The Company's U.S. subsidiaries are not under examination but remain subject to examination for tax years 2018 through 2021.

In Canada, AXIS Capital's U.S. reinsurance company operates through a branch and its U.S. service company has an unlimited liability company subsidiary based in Canada. The Canadian operations are subject to the relevant taxes in that jurisdiction and remain subject to examination for tax years 2017 through 2021.

AXIS Capital had subsidiaries in Ireland, the U.K., and Brazil in 2021. The Company ceased operations in Luxembourg in December 2019 and in Dubai in March 2021. Effective January 1, 2021, AXIS Capital's Irish operations had branches in the U.K., Switzerland, Belgium and the Netherlands. The Company ceased operations in the Netherlands in December 31, 2021. There are ongoing audits in Ireland, with respect to 2016, 2017 and 2019 tax years, and Belgium, with respect to 2018 and

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19. INCOME TAXES (CONTINUED)

2019 tax years. There are no other ongoing audits of AXIS Capital's subsidiaries or branches, but they remain subject to examination in all applicable jurisdictions for tax years 2017 through 2021.

In the U.K., the Company operates through Lloyd's syndicates whose income is subject to tax in the U.K., payable by its corporate members. The income from operations at Lloyd's is also subject to taxes in other jurisdictions in which Lloyd's operates, including the U.S. Under a Closing Agreement between Lloyd's and the IRS, Lloyd's corporate members pay U.S. income tax on U.S. connected income written by Lloyd's syndicates. To the extent that the Lloyd's syndicates incur taxes outside the U.K., they may claim a credit for foreign taxes incurred, limited to the U.K. equivalent tax on the same income.

The following table provides an analysis of income tax expense (benefit) and net tax assets:

Year ended December 31,	2021	2020	2019
Current income tax expense (benefit)			
U.S.	\$ 35,229	\$ (1,122)	\$ 12,601
Europe	(6,082)	365	22,425
Other	—	—	469
Deferred income tax expense (benefit)			
U.S.	(3,369)	(3,098)	17,665
Europe	36,606	(8,466)	(29,468)
Total income tax expense (benefit)	\$ 62,384	\$ (12,321)	\$ 23,692
Net current tax receivables	\$ 27,883	\$ 12,205	\$ 13,130
Net deferred tax assets (liabilities)	12,860	(1,625)	18,621
Net tax assets	\$ 40,743	\$ 10,580	\$ 31,751

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19. INCOME TAXES (CONTINUED)

Deferred income taxes reflect the tax impact of temporary differences between the carrying amounts of assets and liabilities for financial reporting and income tax purposes. The following table provides details of the significant components of deferred tax assets and liabilities:

At December 31,	2021	2020
Deferred tax assets:		
Discounting of net reserves for losses and loss expenses	\$ 53,415	\$ 47,912
Unearned premiums	53,342	46,049
Operating and capital loss carryforwards ⁽¹⁾	85,358	80,008
Accruals not currently deductible	38,294	28,096
Tax credits	2,709	11,142
Other deferred tax assets	5,040	4,352
Deferred tax assets before valuation allowance	238,158	217,559
Valuation allowance	(16,918)	(20,778)
Deferred tax assets net of valuation allowance	221,240	196,781
Deferred tax liabilities:		
Deferred acquisition costs	(34,845)	(37,098)
Net unrealized investments gains	(23,866)	(39,459)
Intangible assets	(52,722)	(46,132)
Equalization reserves	(2,365)	(2,825)
Acquisition adjustments	(79,464)	(60,261)
Other deferred tax liabilities	(15,118)	(12,631)
Deferred tax liabilities	(208,380)	(198,406)
Net deferred tax assets (liabilities)	\$ 12,860	\$ (1,625)

(1) At December 31, 2021 and 2020, the total operating loss carryforwards includes Lloyd's deferred year of account losses of \$nil and \$39 million, respectively.

The following table summarizes total operating and capital loss carryforwards and tax credits:

At December 31,	2021	2020
Operating and Capital Loss Carryforwards⁽¹⁾		
Singapore (branch) operating loss carryforward	\$ 76,287	\$ 110,504
U.K. operating loss carryforward ⁽²⁾	308,491	357,226
Ireland operating loss carryforward	11,850	404
Ireland capital loss carryforward	716	716
Switzerland operating loss carryforward	15,989	—
Belgian operating loss carryforward	—	1,850
Tax Credits⁽¹⁾		
Ireland foreign tax credit	\$ 338	\$ 2,386
U.K. foreign tax credit	2,372	8,756

(1) At December 31, 2021, all remaining operating and capital loss carryforwards and tax credits can be carried forward indefinitely.

(2) At December 31, 2021 and 2020, the U.K. operating loss carryforward includes Lloyd's deferred year of account losses of \$nil and \$206 million, respectively.

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19. INCOME TAXES (CONTINUED)

The following table shows an analysis of the movement in the Company's valuation allowance:

At December 31,	2021	2020
Income tax expense:		
Valuation allowance - beginning of year	\$ 20,778	\$ 18,560
Operating loss carryforwards	(3,422)	661
Foreign tax credit	(2,048)	293
U.K. branch assets and other foreign rate differentials	1,610	1,264
Valuation allowance - end of year	\$ 16,918	\$ 20,778

At December 31, 2021 and 2020, the Company had a full valuation allowance on operating loss carryforwards relating to operations in Singapore, un-utilized foreign tax credits available in Ireland and certain other deferred tax assets related to branch operations.

Although realization is not assured, management believes it is more likely than not that the tax benefit of the recorded net deferred tax assets will be realized. In evaluating the Company's ability to recover these tax assets within the jurisdiction from which they arise, it considered all available positive and negative evidence, including historical results, operating loss carry-back potential and scheduled reversals of deferred tax liabilities. The Company believes its U.S. and U.K. operations will produce significant taxable income in future periods and have deferred tax liabilities that will reverse in future periods, such that the Company believes sufficient ordinary taxable income is available to utilize all remaining ordinary deferred tax assets.

A deferred tax liability has not been recorded on undistributed earnings as the U.S. group satisfies the indefinite reversal criteria.

At December 31, 2021 and 2020, there were no unrecognized tax benefits.

The following table presents the distribution of income before income taxes between domestic and foreign jurisdictions as well as a reconciliation of the actual income tax rate to the amount computed by applying the effective tax rate of 0% under Bermuda law to income before income taxes:

Year ended December 31,	2021	2020	2019
Income (loss) before income taxes			
Bermuda (domestic)	\$ 431,310	\$ (45,951)	\$ 179,418
Foreign	<u>249,686</u>	<u>(86,794)</u>	<u>167,747</u>
Total income (loss) before income taxes	\$ 680,996	\$ (132,745)	\$ 347,165
Reconciliation of effective tax rate (% of income before income taxes)			
Expected tax rate	0.0%	0.0%	0.0%
Foreign taxes at local expected rates:			
U.S.	4.8%	5.6%	8.1%
Europe	<u>2.0%</u>	<u>9.2%</u>	<u>0.4%</u>
Valuation allowance	(0.5%)	(1.7%)	1.3%
Change in enacted tax rate ⁽¹⁾	<u>1.5%</u>	<u>(1.7%)</u>	<u>0.0%</u>
Other	<u>1.4%</u>	<u>(2.1%)</u>	<u>(3.0%)</u>
Actual tax rate	9.2%	9.3%	6.8%

(1) At December 31, 2021, the change in enacted tax rate included a change in the UK tax rate from 19% to 25% and in Belgium from 29.58% to 25%. At December 31, 2020, the change in enacted tax rate included a change in UK tax rate from 17% to 19%.

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20. OTHER COMPREHENSIVE INCOME (LOSS)

The following table presents the tax effects allocated to each component of other comprehensive income (loss):

	Before tax amount	Income tax (expense) benefit	Net of tax amount
Year ended December 31, 2021			
Available for sale investments:			
Unrealized gains (losses) arising during the year for which an allowance for expected credit losses has not been recognized	\$ (310,710)	\$ 39,263	\$ (271,447)
Unrealized gains (losses) arising during the year for which an allowance for expected credit losses has been recognized	81	—	81
Adjustment for reclassification of net realized (gains) losses and impairment losses recognized in net income (loss)	<u>(94,749)</u>	<u>7,635</u>	<u>(87,114)</u>
Unrealized gains (losses) arising during the year, net of reclassification adjustment	(405,378)	46,898	(358,480)
Foreign currency translation adjustment	621	—	621
Total other comprehensive income (loss), net of tax	<u>\$ (404,757)</u>	<u>\$ 46,898</u>	<u>\$ (357,859)</u>
Year ended December 31, 2020			
Available for sale investments:			
Unrealized gains (losses) arising during the year for which an allowance for expected credit losses has not been recognized	\$ 360,357	\$ (43,191)	\$ 317,166
Unrealized gains (losses) arising during the year for which an allowance for expected credit losses has been recognized	(40)	—	(40)
Adjustment for reclassification of net realized (gains) losses and impairment losses recognized in net income (loss)	<u>(90,380)</u>	<u>12,368</u>	<u>(78,012)</u>
Unrealized gains (losses) arising during the year, net of reclassification adjustment	269,937	(30,823)	239,114
Foreign currency translation adjustment	3,571	—	3,571
Total other comprehensive income (loss), net of tax	<u>\$ 273,508</u>	<u>\$ (30,823)</u>	<u>\$ 242,685</u>
Year ended December 31, 2019			
Available for sale investments:			
Unrealized gains (losses) arising during the year	\$ 414,982	\$ (40,367)	\$ 374,615
Adjustment for reclassification of net realized (gains) losses and OTTI losses recognized in net income (loss)	<u>(29,618)</u>	<u>4,889</u>	<u>(24,729)</u>
Unrealized gains (losses) arising during the year, net of reclassification adjustment	385,364	(35,478)	349,886
Foreign currency translation adjustment	(1,066)	—	(1,066)
Total other comprehensive income (loss), net of tax	<u>\$ 384,298</u>	<u>\$ (35,478)</u>	<u>\$ 348,820</u>

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20. OTHER COMPREHENSIVE INCOME (LOSS) (CONTINUED)

The following table presents details of amounts reclassified from accumulated other comprehensive income ("AOCI") to net income (loss):

AOCI components	Consolidated statement of operations line item that includes reclassification adjustment	Amounts reclassified from AOCI ⁽¹⁾		
		Years ended December 31,	2021	2020
Unrealized gains (losses) on available for sale investments				
	Other realized gains (losses)	\$ 94,771	\$ 91,866	\$ 36,602
	Impairment losses	(22)	(1,486)	—
	OTTI losses	—	—	(6,984)
	Total before tax	94,749	90,380	29,618
	Income tax (expense) benefit	(7,635)	(12,368)	(4,889)
	Net of tax	<u>\$ 87,114</u>	<u>\$ 78,012</u>	<u>\$ 24,729</u>
Foreign currency translation adjustments ⁽²⁾				
	Foreign exchange gains (losses)	\$ —	\$ —	\$ 6,043
	Income tax (expense) benefit	—	—	—
	Net of tax	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 6,043</u>

(1) Amounts in parentheses are charges to net income (loss).

(2) The Company released the cumulative translation adjustment related to Aviabel Re S.A. of \$6 million from AOCI in the consolidation balance sheet to foreign exchange losses (gains) in the consolidated statement of operations associated with the liquidation of that entity on December 18, 2019.

21. STATUTORY FINANCIAL INFORMATION

The Company's insurance and reinsurance operations are subject to insurance and reinsurance laws and regulations in the jurisdictions in which they operate, the most significant of which include Bermuda, Ireland, and the U.S. In addition, the Company is regulated by Lloyd's. These regulations include certain restrictions on the amount of dividends or other distributions, such as loans or cash advances, available to shareholders without prior approval from insurance regulatory authorities.

The statutory capital and surplus in each of the Company's most significant regulatory jurisdictions is shown in the following table:

At December 31,	Bermuda		Ireland		U.S.	
	2021	2020	2021	2020	2021	2020
Required statutory capital and surplus	\$ 1,517,485	\$ 1,584,854	\$ 755,270	\$ 778,493	\$ 626,973	\$ 542,824
Available statutory capital and surplus	\$ 3,067,879	\$ 3,004,077	\$ 1,147,194	\$ 1,085,317	\$ 1,885,383	\$ 1,685,684

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21. STATUTORY FINANCIAL INFORMATION (CONTINUED)

Bermuda

Under the Insurance Act 1978, amendments thereto and related regulations of Bermuda (the "Act"), the Company's Bermuda subsidiary, AXIS Specialty Bermuda is required to maintain minimum statutory capital and surplus equal to the greater of a minimum solvency margin ("MSM") and the Enhanced Capital Requirement ("ECR"). The MSM is the greater of \$100 million, 50% of net premiums written, 15% of net reserve for losses and loss expenses, and 25% of the ECR. The Company's ECR is calculated based on a standard risk-based capital model developed by the Bermuda Monetary Authority ("BMA"). In 2016, the BMA implemented an Economic Balance Sheet ("EBS") framework which is used as the basis to determine the ECR. At December 31, 2021 and 2020, the required and available statutory capital and surplus were based on this EBS framework.

Under the Act, AXIS Specialty Bermuda is restricted as to the payment of dividends for amounts greater than 25% of the prior year's statutory capital and surplus, whereby an affidavit signed by at least two members of the Board of Directors is required, attesting that any dividend in excess of this amount would not cause the Company to fail to meet its relevant margins. At December 31, 2021, the maximum dividend AXIS Specialty Bermuda could pay, without a signed affidavit, having met minimum levels of statutory capital and surplus requirements, was approximately \$782 million (2020: \$792 million).

Ireland

Effective January 1, 2016, the Company's Irish subsidiaries, AXIS Specialty Europe and AXIS Re SE, are required to maintain the Minimum Capital Requirement ("MCR") and the Solvency Capital Requirement ("SCR") at all times. The capital requirements are calculated by reference to Solvency II definitions. If an entity falls below the MCR or SCR, the Central Bank of Ireland is authorized to take action to restore the financial position of the Company's Irish subsidiaries. During 2021 and 2020, the Company's Irish subsidiaries were in compliance with these requirements.

The Company's Irish subsidiaries may declare dividends subject to meeting their solvency and capital requirements. The maximum dividend is limited to "excess eligible own funds" which is defined as excess Solvency II capital over the SCR and may also be limited to "profits available for distribution", which is defined as accumulated realized profits less accumulated realized losses and statutory reserves. In response to the ongoing COVID-19 pandemic, the Central Bank of Ireland requires the Company's Irish subsidiaries to notify the regulator prior to any distribution being made. The Central Bank of Ireland then has 30 days to request further information from the Company's Irish subsidiaries and where no further communication is received from the regulator the Company's Irish subsidiaries are free to proceed with the dividend distribution. At December 31, 2021, the maximum dividend the Company's Irish subsidiaries could pay, having met their solvency and capital requirements was approximately \$25 million (2020: \$11 million).

United States

The Company's U.S. operations required statutory capital and surplus is determined using the risk-based capital formula ("RBC"), which is the National Association of Insurance Commissioners' (the "Commissioner") method of measuring the minimum capital appropriate for U.S. reporting entities to support its overall business operations in consideration of its size and risk profile. If a company falls below the authorized control level as determined under the RBC, the Commissioner is authorized to take whatever regulatory actions may be considered necessary to protect policyholders and creditors. The maximum dividend that may be paid by the Company's U.S. insurance subsidiaries is restricted by the regulatory requirements of the domiciliary states. Generally, the maximum dividend that may be paid by each of the Company's U.S. insurance subsidiaries is limited to unassigned surplus (statutory equivalent of retained earnings) and may also be limited to statutory net income, net investment income or 10% of total statutory capital and surplus. At December 31, 2021, the maximum dividend that the Company's U.S. insurance operations could pay without regulatory approval was approximately \$120 million (2020: \$110 million).

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21. STATUTORY FINANCIAL INFORMATION (CONTINUED)

Lloyd's of London

The Company operates in the Lloyd's market through its corporate members, AXIS Corporate Capital UK Limited and AXIS Corporate Capital UK II Limited, which provide 70% and 30%, respectively, of Syndicate 1686's capital support. Effective August 4, 2017, AXIS Managing Agency assumed management of Syndicate 1686.

Corporate members of Lloyd's and Lloyd's syndicates are bound by the rules of Lloyd's, which are prescribed by Bye-laws and Requirements made by the Council of Lloyd's under powers conferred by the Lloyd's Act 1982. These rules prescribe members' membership subscription, the level of their contribution to the Lloyd's Central Fund and the assets they must deposit with Lloyd's in support of their underwriting. The Council of Lloyd's has broad powers to sanction breaches of its rules, including the power to restrict or prohibit a member's participation on Lloyd's syndicates.

The capital provided to support underwriting, or FAL, is not available for distribution for the payment of dividends or for working capital requirements. Corporate members may also be required to maintain funds under the control of Lloyd's in excess of their capital requirements and such funds also may not be available for distribution for the payment of dividends. Lloyd's sets the corporate members' required capital annually and reviews funds held compared to latest capital requirements on a quarterly basis. This process is supported by the application of a capital model that is based on regulatory rules pursuant to Solvency II.

FAL may be satisfied by cash, certain investments and letters of credit provided by approved banks. At December 31, 2021, fixed maturities and short-term investments with a fair value of \$658 million (2020: \$746 million) and cash of \$19 million (2020: \$12 million), respectively, were restricted to satisfy AXIS Corporate Capital UK Limited FAL requirements. At December 31, 2021, fixed maturities and short-term investments with a fair value of \$225 million (2020: \$361 million), equity securities with a fair value of \$28 million (2020: \$23 million), and cash of \$6 million (2020: \$14 million) were restricted to satisfy AXIS Corporate Capital UK II Limited FAL requirements (refer to Note 5 '*Investments*').

Corporate members can apply to Lloyd's to release accumulated funds, whether syndicate profits or interest on FAL, which are in excess of the agreed FAL requirements on a quarterly basis. At December 31, 2021 and 2020, actual capital and assets exceeded the FAL requirements for Syndicates 1686 and 2007. During 2021, net funds of \$60 million (2020: \$32 million) were released from FAL. Both AXIS Corporate Capital UK Limited and AXIS Corporate Capital UK II Limited continue to support the FAL requirements of Syndicates 1686.

Branch Offices

The Company's operating subsidiaries in Bermuda and the U.S. maintain branch offices in Singapore and Canada, respectively. The Company's Irish operating subsidiaries maintain branch offices in Switzerland, the U.K. and Belgium. The Company's Irish operating subsidiaries also maintained a branch office in the Netherlands until December 31, 2021. As branch offices are not considered separate entities for regulatory purposes, the required and actual statutory capital and surplus amounts for each jurisdiction in the table above, include amounts related to the applicable branch offices. The Company's branch offices in Singapore and Canada are subject to additional minimum capital or asset requirements in their countries of domicile. At December 31, 2021 and 2020, the actual capital/assets for each of these branches exceeded the relevant local regulatory requirements.

Total statutory net income (loss) of the Company's operating subsidiaries was \$569 million, \$85 million, and \$364 million for 2021, 2020 and 2019, respectively. The differences between statutory financial statements and statements prepared in accordance with U.S. GAAP vary by jurisdiction, however, the primary differences are that statutory financial statements may not reflect deferred acquisition costs, certain net deferred tax assets, goodwill and intangible assets, unrealized gains (losses) on fixed maturities or certain unauthorized reinsurance recoverable balances.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company's management has performed an evaluation, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 (the "Exchange Act")) at December 31, 2021. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that, at December 31, 2021, the Company's disclosure controls and procedures are effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and is accumulated and communicated to management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosures.

Management's Annual Report on Internal Control Over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act). The Company's management has performed an assessment, with the participation of the Company's Chief Executive Officer and the Company's Chief Financial Officer, of the Company's internal control over financial reporting at December 31, 2021. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework (2013).

Based on that assessment, the Company's management believes that, at December 31, 2021, the Company's internal control over financial reporting is effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

The Company's independent registered public accounting firm has issued an audit report on management's assessment of the Company's internal control over financial reporting at December 31, 2021. This report appears below.

All internal control systems, no matter how well designed, have inherent limitations. As a result, even those internal control systems determined to be effective can provide only reasonable assurance with respect to financial reporting and the preparation of financial statements.

Changes in Internal Control Over Financial Reporting

The Company's management has performed an evaluation, with the participation of the Company's Chief Executive Officer and the Company's Chief Financial Officer, of changes in the Company's internal control over financial reporting that occurred during the quarter ended December 31, 2021. Based on that evaluation, there were no changes in the Company's internal control over financial reporting that occurred during the quarter ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. The Company has not experienced any material impact to its internal control over financial reporting resulting from the introduction of a remote work model due to the COVID-19 pandemic.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of AXIS Capital Holdings Limited

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of AXIS Capital Holdings Limited and subsidiaries (the “Company”) as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2021, of the Company and our report dated February 25, 2022 expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Annual Report on Internal Controls Over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ Deloitte Ltd.

Hamilton, Bermuda
February 25, 2022

ITEM 9B. OTHER INFORMATION

Disclosure of Certain Activities Under Section 13(r) of the Securities Exchange Act of 1934

Section 13(r) of the Securities Exchange Act of 1934, as amended, requires issuers to disclose in their annual and quarterly reports whether they or any of their affiliates knowingly engaged in certain activities with Iran or with individuals or entities that are subject to certain sanctions under U.S. law. Issuers are required to provide this disclosure even where the activities, transactions or dealings are conducted outside of the U.S. in compliance with applicable law.

As and when allowed by the applicable law and regulations, certain of our non-U.S. subsidiaries provide treaty reinsurance coverage to non-U.S. insurers on a worldwide basis, including insurers of liability, marine, aviation and energy risks, and as a result, these underlying insurance and reinsurance portfolios may have some exposure to Iran. In addition, we provide insurance and facultative reinsurance on a global basis to non-U.S. insureds and insurers, including for liability, marine, aviation and energy risks. Coverage provided to non-Iranian business may indirectly cover an exposure in Iran. For example, certain of our operations underwrite global marine hull war and cargo policies that provide coverage for vessels navigating into and out of ports worldwide, including Iran. For the quarter ended December 31, 2021, there has been no material amount of premium allocated or apportioned to activities relating to Iran. We intend for our non-U.S. subsidiaries to continue to provide such coverage only to the extent permitted by applicable law.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not Applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item is incorporated by reference from the sections captioned "*Proposal No. 1 – Election of Directors*", "*Corporate Governance*", and "*Executive Officers*" in the definitive proxy statement that will be filed with the Securities and Exchange Commission not later than 120 days after the close of the fiscal year ended December 31, 2021 pursuant to Regulation 14A.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference from the sections captioned "*Executive Compensation*", "*Compensation Discussion and Analysis*", "*Director Compensation*", "*Compensation Committee Report*" and "*Compensation Committee Interlocks and Insider Participation*" in the definitive proxy statement that will be filed with the Securities and Exchange Commission not later than 120 days after the close of the fiscal year ended December 31, 2021 pursuant to Regulation 14A.

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

The information required by this item is incorporated by reference from the sections captioned "*Principal Shareholders*", "*Delinquent Section 16(a) Reports*" and "*Equity Compensation Plan Information*" in the definitive proxy statement that will be filed with the Securities and Exchange Commission not later than 120 days after the close of the fiscal year ended December 31, 2021 pursuant to Regulation 14A.

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

The information required by this item is incorporated by reference from the sections captioned "*Certain Relationships and Related Transactions*", and "*Corporate Governance*" in the definitive proxy statement that will be filed with the Securities and Exchange Commission not later than 120 days after the close of the fiscal year ended December 31, 2021 pursuant to Regulation 14A.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference from the section captioned "*Principal Accounting Fees and Services*" in the definitive proxy statement that will be filed with the Securities and Exchange Commission not later than 120 days after the close of the fiscal year ended December 31, 2021 pursuant to Regulation 14A.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Financial Statements, Financial Statement Schedules and Exhibits**1. Financial Statements**

Included in Part II –Refer to Item 8 of this report.

2. Financial Statement Schedules

Report of Independent Registered Public Accounting Firm

Schedule I – Summary of Investments - Other than Investments in Related Parties

Schedule II – Condensed Financial Information of Registrant

Schedule III – Supplementary Insurance Information

Schedule IV – Supplementary Reinsurance Information

Schedules V and VI have been omitted as the information is provided in Item 8, Consolidated Financial Statements, or in the above schedules.

3. Exhibits

Exhibit Number	Description of Document
2.1	Rule 2.7 Announcement dated July 5, 2017 in connection with acquisition of Novae Group plc (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on July 6, 2017).
2.2	Rule 2.7 Announcement dated August 24, 2017 in connection with acquisition of Novae Group plc (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on August 25, 2017).
3.1	Certificate of Incorporation and Memorandum of Association of AXIS Capital Holdings Limited (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-1 (Amendment No. 1) (No. 333-103620) filed on April 16, 2003).
3.2	Amended and Restated Bye-laws of AXIS Capital Holdings Limited (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-8 filed on May 15, 2009).
4.1	Specimen Common Share Certificate (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1 (Amendment No. 3) (No. 333-103620) filed on June 10, 2003).

- 4.2 Senior Indenture among AXIS Specialty Finance LLC, AXIS Capital Holdings Limited and The Bank of New York Mellon Trust Company, N.A., as trustee, dated as of March 23, 2010 (incorporated by reference to Exhibit 4.4 to the Company's Quarterly Report on Form 10-Q filed on April 27, 2010).
- 4.3 Senior Indenture among AXIS Specialty Finance PLC, as issuer, the Company, as guarantor, and The Bank of New York Mellon Trust Company, N.A., as trustee, dated as of March 13, 2014 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on March 13, 2014).
- 4.4 First Supplemental Indenture, dated as of April 3, 2019, among AXIS Specialty Finance PLC, AXIS Capital Holdings Limited and The Bank of New York Mellon Trust Company, N.A., relating to the 5.150% Senior Notes due 2045 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on April 4, 2019).
- 4.5 Junior Subordinated Indenture dated as of December 10, 2019, among AXIS Specialty Finance LLC, AXIS Capital Holdings Limited and The Bank of New York Mellon Trust Company, N.A. (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on December 11, 2019).
- 4.6 First Supplemental Indenture dated as of December 10, 2019, among AXIS Specialty Finance LLC, AXIS Capital Holdings Limited and The Bank of New York Mellon Trust Company, N.A., relating to the 4.900% Junior Subordinated Notes due 2040 (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on December 11, 2019).
- 4.7 Form of 5.150% Senior Notes due 2045 (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on March 13, 2014).
- 4.8 Form of 4.000% Senior Notes due 2027 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on December 6, 2017).
- 4.9 Form of 3.900% Senior Notes due 2029 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 19, 2019).
- 4.10 Form of 4.900% Junior Subordinated Notes due 2040 (incorporated by reference to Exhibit 4.2 (included as Exhibit A to Exhibit 4.2) to the Company's Current Report on Form 8-K filed on December 11, 2019).
- 4.11 Certificate of Designations setting forth the specific rights, preferences, limitations and other terms of the 5.50% Series E Preferred Shares (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on November 7, 2016).
- [†]4.12 Description of AXIS Capital Holdings Limited's Securities Registered under Section 12 of the Exchange Act.
- 10.1 Amended and Restated Shareholders Agreement dated December 31, 2002, among AXIS Capital Holdings Limited and each of the persons listed on Schedule A thereto (incorporated by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-1 (Amendment No. 3) (No. 333-103620) filed on June 10, 2003).
- *10.2 Consulting Agreement by and between Michael A. Butt and AXIS Specialty Limited dated May 3, 2012 (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K/A filed on May 9, 2012).
- *10.3 Amendment No. 1 to Consulting Agreement by and between Michael A. Butt and AXIS Specialty Limited dated December 5, 2013 (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on December 9, 2013).
- *10.4 Amendment No. 2 to Consulting Agreement by and between Michael A. Butt and AXIS Specialty Limited dated December 5, 2014 (incorporated by reference to Exhibit 10.4 to the Company's Annual Report on Form 10-K filed on February 23, 2015).
- *10.5 Amendment No. 3 to Consulting Agreement by and between Michael A. Butt and AXIS Specialty Limited dated January 15, 2016 (incorporated by reference to Exhibit 10.5 to the Company's Annual Report on Form 10-K filed on February 25, 2016).
- *10.6 Amendment No. 4 to Consulting Agreement by and between Michael A. Butt and AXIS Specialty Limited dated December 8, 2016 (incorporated by reference to Exhibit 10.6 to the Company's Annual Report on Form 10-K filed on February 27, 2017).
- *10.7 Amendment No. 5 to Consulting Agreement by and between Michael A. Butt and AXIS Specialty Limited dated December 7, 2017 (incorporated by reference to Exhibit 10.7 to the Company's Annual Report on Form 10-K filed on February 28, 2018).

- *[10.8](#) Amendment No. 6 to Consulting Agreement by and between Michael A. Butt and AXIS Specialty Limited dated December 5, 2018 (incorporated by reference to Exhibit 10.8 to the Company's Annual Report on Form 10-K filed on February 26, 2019).
- *[10.9](#) Amendment No. 7 to Consulting Agreement by and between Michael A. Butt and AXIS Specialty Limited dated July 18, 2019 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on August 7, 2019).
- *[10.10](#) Employment Agreement by and among Albert Benchimol, AXIS Capital Holdings Limited and AXIS Specialty U.S. Services, Inc. dated May 3, 2012 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K/A filed on May 9, 2012).
- *[10.11](#) Amendment No. 1 to Employment Agreement by and among Albert Benchimol, AXIS Capital Holdings Limited and AXIS Specialty U.S. Services, Inc. dated March 9, 2015 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 11, 2015).
- *[10.12](#) Amendment No. 2 to Employment Agreement by and among Albert Benchimol, AXIS Capital Holdings Limited and AXIS Specialty U.S. Services, Inc. dated January 19, 2016 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 25, 2016).
- *[10.13](#) Amendment No. 3 to Employment Agreement by and among Albert Benchimol, AXIS Capital Holdings Limited, AXIS Specialty U.S. Services, Inc. and AXIS Specialty Limited dated January 1, 2017 (incorporated by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K filed on February 27, 2017).
- *[10.14](#) Amendment No. 4 to Employment Agreement by and among Albert Benchimol, AXIS Capital Holdings Limited and AXIS Specialty Limited dated December 6, 2018 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 11, 2018).
- *[10.15](#) Employment Agreement by and between Peter W. Wilson and AXIS Specialty U.S. Services, Inc. dated June 23, 2014 (incorporated by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-K filed on February 23, 2015).
- *[10.16](#) Amendment No. 1 to Employment Agreement by and between Peter W. Wilson and AXIS Specialty U.S. Services, Inc. dated September 21, 2016 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 27, 2016).
- *[10.17](#) Amendment No. 2 to Employment Agreement by and between Peter W. Wilson and AXIS Specialty U.S. Services, Inc. dated September 19, 2019 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 24, 2019).
- *[10.18](#) Employment Agreement by and between Peter Vogt and AXIS Specialty U.S. Services, Inc. dated December 11, 2017 (incorporated by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K filed on February 28, 2018).
- *[10.19](#) Amendment No. 1 to Employment Agreement by and between Peter Vogt and AXIS Specialty U.S. Services, Inc. dated October 2, 2020 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on October 7, 2020).
- *[10.20](#) Amendment No. 2 to Employment Agreement by and between Peter Vogt and AXIS Specialty U.S. Services, Inc. dated June 17, 2021 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 21, 2021).
- *[10.21](#) Employment Agreement by and between Steve K. Arora and AXIS Re SE, Dublin (Zurich Branch) dated May 21, 2021 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 26, 2021).
- *[10.22](#) Letter Agreement by and between Steve K. Arora and AXIS Re SE, Dublin (Zurich Branch) dated May 21, 2021 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on May 26, 2021).
- *[10.23](#) Employment Agreement by and between David Phillips and AXIS Specialty U.S. Services, Inc. dated March 21, 2014 (incorporated by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K filed on February 26, 2019).
- *[10.24](#) Amendment No. 1 to Employment Agreement by and between David Phillips and AXIS Specialty U.S. Services, Inc. dated June 17, 2021 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on June 21, 2021).

- *[10.25](#) 2007 Long-Term Equity Compensation Plan, as amended (incorporated by reference to Exhibit 4.4 to the Company's Registration Statement on Form S-8 filed on May 15, 2012).
- *[10.26](#) Amended and Restated 2017 Long-Term Equity Compensation Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 11, 2021).
- *[10.27](#) Executive Long-Term Equity Compensation Program (incorporated by reference to Exhibit 10.27 to the Company's Annual Report on Form 10-K filed on February 26, 2021).
- *[10.28](#) Executive Annual Incentive Plan (incorporated by reference to Exhibit 10.29 to the Company's Annual Report on Form 10-K filed on February 26, 2021).
- *[10.29](#) AXIS Executive RSU Retirement Plan (incorporated by reference to Exhibit 10.26 to the Company's Annual Report on Form 10-K filed on February 27, 2017).
- *[10.30](#) Form of Employee Restricted Stock Unit Award Agreement (Performance Vesting) (incorporated by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K filed on February 27, 2017).
- *[10.31](#) Form of Employee Restricted Stock Unit Award Agreement (Retirement Eligible/Performance Vesting) (incorporated by reference to Exhibit 10.27 to the Company's Annual Report on Form 10-K filed on February 27, 2017).
- *[10.32](#) Form of Employee Restricted Stock Unit Award Agreement (Retirement Eligible) (incorporated by reference to Exhibit 10.28 to the Company's Annual Report on Form 10-K filed on February 27, 2017).
- *[10.33](#) Form of Employee Restricted Stock Unit Award Agreement (Performance Vesting) (incorporated by reference to Exhibit 10.37 to the Company's Annual Report on Form 10-K filed on February 28, 2018).
- *[10.34](#) Form of Employee Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.38 to the Company's Annual Report on Form 10-K filed on February 28, 2018).
- *[10.35](#) Form of Employee Restricted Stock Unit Award Agreement (Performance Vesting) (incorporated by reference to Exhibit 10.36 to the Company's Annual Report on Form 10-K filed on February 26, 2019).
- *[10.36](#) Form of Employee Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.37 to the Company's Annual Report on Form 10-K filed on February 26, 2019).
- *[10.37](#) Form of Employee Restricted Stock Unit Award Agreement (Performance Vesting) (incorporated by reference to Exhibit 10.39 to the Company's Annual Report on Form 10-K filed on February 27, 2020).
- *[10.38](#) Form of Employee Restricted Stock Unit Award Agreement (Performance Vesting) (incorporated by reference to Exhibit 10.40 to the Company's Annual Report on Form 10-K filed on February 26, 2021).
- *[10.39](#) Form of Employee Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.41 to the Company's Annual Report on Form 10-K filed on February 26, 2021).
- *[10.40](#) AXIS Specialty U.S. Services, Inc. Supplemental Retirement Plan (incorporated by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K filed on February 26, 2008).
- *[10.41](#) Directors Annual Compensation Program (incorporated by reference to Exhibit 10.42 to the Company's Annual Report on Form 10-K filed on February 27, 2020).
- [10.42](#) Master Reimbursement Agreement, dated as of May 14, 2010, by and among AXIS Specialty Limited, AXIS Re Limited, AXIS Specialty Europe Limited, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Specialty Insurance Company, AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 19, 2010).
- [10.43](#) Amendment to Master Reimbursement Agreement dated January 27, 2012 by and among AXIS Specialty Limited, AXIS Re Limited, AXIS Specialty Europe Limited, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Specialty Insurance Company and AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 30, 2012).

- 10.44 Amendment to Committed Facility Letter dated November 20, 2013 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company and AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 21, 2013).
- 10.45 Amendment to Committed Facility Letter dated March 31, 2015 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Reinsurance Company, AXIS Surplus Insurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 1, 2015).
- 10.46 Amendment to Facility Fee Letter dated March 31, 2015 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Reinsurance Company, AXIS Surplus Insurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on April 1, 2015).
- 10.47 Committed Facility Letter dated December 18, 2015 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company and AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 22, 2015).
- 10.48 Committed Facility Letter dated March 27, 2017 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company and AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 31, 2017).
- 10.49 Amendment to Master Reimbursement Agreement dated March 27, 2017 by and among AXIS Specialty Limited, AXIS Re Limited, AXIS Specialty Europe Limited, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 31, 2017).
- 10.50 Amendment to Committed Facility Letter dated March 28, 2018 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 3, 2018).
- 10.51 Deed of Amendment to \$250 million secured letter of credit facility dated March 28, 2019 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 3, 2019).
- 10.52 Deed of Amendment to \$500 million secured letter of credit facility dated December 24, 2019 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 30, 2019).
- 10.53 Deed of Amendment to \$250 million secured letter of credit facility dated March 28, 2020 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 1, 2020).
- 10.54 Deed of Amendment to \$500 million secured letter of credit facility dated April 1, 2021 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 6, 2021).
- 10.55 Deed of Amendment to \$250 million secured letter of credit facility dated April 1, 2021 by and among AXIS Specialty Limited, AXIS Re SE, AXIS Specialty Europe SE, AXIS Insurance Company, AXIS Surplus Insurance Company, AXIS Reinsurance Company and Citibank Europe plc (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on April 6, 2021).
- †21.1 Subsidiaries of the registrant.
- †22.1 Subsidiary Guarantors and Issuers of Guaranteed Securities.
- †23.1 Consent of Deloitte Ltd.
- †24.1 Power of Attorney (included as part of signature pages hereto).

- †[31.1](#) Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- †[31.2](#) Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- †[32.1](#) Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- †[32.2](#) Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- †101 The following financial information from AXIS Capital Holdings Limited's Annual Report on Form 10-K for the year ended December 31, 2021 formatted in Inline XBRL: (i) Consolidated Balance Sheets at December 31, 2021 and 2020; (ii) Consolidated Statements of Operations for the years ended December 31, 2021, 2020 and 2019; (iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2021, 2020 and 2019; (iv) Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2021, 2020 and 2019; (v) Consolidated Statements of Cash Flows for the years ended December 31, 2021, 2020 and 2019; and (vi) Notes to Consolidated Financial Statements, tagged as blocks of text and in detail.
- †104 Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Exhibits 10.2 through 10.41 represent a management contract, compensatory plan or arrangement in which directors and/or executive officers are eligible to participate.

† Filed herewith.

The agreements and other documents filed as exhibits to this report are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by us in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on February 25, 2022

AXIS CAPITAL HOLDINGS LIMITED

By: /s/ ALBERT BENCHIMOL
Albert Benchimol
President and Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned directors and executive officers of AXIS Capital Holdings Limited, hereby appoint Peter Vogt and Conrad D. Brooks, and each of them singly, as our true and lawful attorneys with full power to them and each of them to sign for us, and in our names in the capacities indicated below, any and all amendments to the Annual Report on Form 10-K filed with the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys to any and all amendments to said Annual Report on Form 10-K.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 25, 2022.

<u>Signature</u>	<u>Title</u>
<u>/s/ ALBERT BENCHIMOL</u> Albert Benchimol	Chief Executive Officer, President and Director (Principal Executive Officer)
<u>/s/ PETER VOGT</u> Peter Vogt	Chief Financial Officer (Principal Financial Officer)
<u>/s/ KENT ZIEGLER</u> Kent Ziegler	Global Corporate Controller (Principal Accounting Officer)
<u>/s/ W. MARSTON BECKER</u> W. Marston Becker	Director
<u>/s/ CHARLES A. DAVIS</u> Charles A. Davis	Director
<u>/s/ ANNE MELISSA DOWLING</u> Anne Melissa Dowling	Director

<u>Signature</u>	<u>Title</u>
/s/ ELANOR R. HARDWICK Elanor R. Hardwick	Director
/s/ MICHAEL MILLEGAN Michael Millegan	Director
/s/ THOMAS C. RAMEY Thomas C. Ramey	Director
/s/ HENRY B. SMITH Henry B. Smith	Director
/s/ AXEL THEIS Axel Theis	Director
/s/ BARBARA A. YASTINE Barbara A. Yastine	Director
/s/ LIZABETH H. ZLATKUS Elizabeth H. Zlatkus	Director

SCHEDULE I

AXIS CAPITAL HOLDINGS LIMITED
SUMMARY OF INVESTMENTS - OTHER THAN INVESTMENTS IN RELATED PARTIES

At December 31, 2021

	Amortized cost	Fair value	Amount shown on the balance sheet
(in thousands)			
Type of investment:			
Fixed maturities, available for sale, at fair value			
U.S. government and agency	\$ 2,693,319	\$ 2,682,448	\$ 2,682,448
Non-U.S. government	794,705	795,178	795,178
Corporate debt	4,446,585	4,495,312	4,495,312
Agency RMBS	1,065,973	1,074,589	1,074,589
CMBS	1,223,051	1,248,191	1,248,191
Non-agency RMBS	185,854	186,164	186,164
ABS	1,628,739	1,622,480	1,622,480
Municipals	203,556	208,838	208,838
Total fixed maturities, available for sale	\$ 12,241,782	12,313,200	12,313,200
Fixed maturities, held to maturity, at amortized cost			
Corporate debt	\$ 37,700	37,572	37,700
ABS	408,316	407,461	408,316
Total fixed maturities, held to maturity	\$ 446,016	445,033	446,016
Mortgage loans, held for investment, at fair value		594,088	594,088
Short-term investments, at fair value		31,063	31,063
Equity securities, at fair value		655,675	655,675
Other investments, at fair value ⁽¹⁾		539,299	947,982
Equity method investments ⁽²⁾		—	146,293
Total investments	\$ 14,578,358	\$ 15,134,317	

(1) Other investments exclude investments where the Company is considered to have the ability to exercise significant influence over the operating and financial policies of the investees.

(2) Equity method investments are excluded as the Company has the ability to exercise significant influence over the operating and financial policies of the investees.

SCHEDULE II

AXIS CAPITAL HOLDINGS LIMITED
CONDENSED BALANCE SHEETS – PARENT COMPANY
DECEMBER 31, 2021 AND 2020

	2021	2020
	(in thousands)	
Assets		
Investments in subsidiaries	\$ 5,676,653	\$ 5,633,176
Cash and cash equivalents	1,531	1,711
Other assets	6,525	5,832
Total assets	\$ 5,684,709	\$ 5,640,719
Liabilities		
Intercompany payable	\$ 192,618	\$ 289,486
Dividends payable	51,775	50,153
Other liabilities	29,660	5,386
Total liabilities	274,053	345,025
Shareholders' equity		
Preferred shares	550,000	550,000
Common shares (<i>shares issued 2021: 176,580; 2020: 176,580 shares outstanding 2021: 84,774; 2020: 84,353</i>)	2,206	2,206
Additional paid-in capital	2,346,179	2,330,054
Accumulated other comprehensive income	56,536	414,395
Retained earnings	6,204,745	5,763,607
Treasury shares, at cost (<i>2021: 91,806; 2020: 92,227</i>)	(3,749,010)	(3,764,568)
Total shareholders' equity	5,410,656	5,295,694
Total liabilities and shareholders' equity	\$ 5,684,709	\$ 5,640,719

- (1) AXIS Capital has fully and unconditionally guaranteed all obligations of AXIS Specialty Finance PLC, a 100% owned finance subsidiary, related to the issuance of \$250 million aggregate principal amount of 5.15% senior unsecured notes. AXIS Capital's obligations under this guarantee are unsecured senior obligations and rank equally with all other senior obligations of AXIS Capital.
- (2) AXIS Capital has fully and unconditionally guaranteed all obligations of AXIS Specialty Finance PLC, a 100% owned finance subsidiary, related to the issuance of \$350 million aggregate principal amount of 4.0% senior unsecured notes. AXIS Capital's obligations under this guarantee are unsecured senior obligations and rank equally with all other senior obligations of AXIS Capital.
- (3) AXIS Capital has fully and unconditionally guaranteed all obligations of AXIS Specialty Finance LLC, a 100% owned finance subsidiary, related to the issuance of \$300 million aggregate principal amount of 3.9% senior unsecured notes. AXIS Capital's obligations under this guarantee are unsecured senior obligations and rank equally with all other senior obligations of AXIS Capital.
- (4) AXIS Capital has fully and unconditionally guaranteed all obligations of AXIS Specialty Finance LLC, a 100% owned finance subsidiary, related to the issuance of \$425 million aggregate principal amount of 4.9% fixed-rate reset junior unsecured notes. AXIS Capital's obligation under this guarantee is an unsecured junior subordinated obligation and ranks equally with all future unsecured and junior subordinated obligations of AXIS Capital, and junior in right of payment to all outstanding and future senior obligations of AXIS Capital.

SCHEDULE II

AXIS CAPITAL HOLDINGS LIMITED
CONDENSED STATEMENTS OF OPERATIONS – PARENT COMPANY
YEARS ENDED DECEMBER 31, 2021, 2020 AND 2019

	2021	2020	2019
	(in thousands)		
Revenues			
Net investment income	\$ —	\$ 750	\$ 1,800
Total revenues	<hr/> <hr/>	750	1,800
Expenses			
General and administrative expenses	62,843	37,629	53,335
Total expenses	<hr/> <hr/>	37,629	53,335
Income (loss) before equity in net income (loss) of subsidiaries	(62,843)	(36,879)	(51,535)
Equity in net income (loss) of subsidiaries	681,452	(83,545)	375,008
Net income (loss)	618,609	(120,424)	323,473
Preferred share dividends	30,250	30,250	41,112
Net income (loss) available (attributable) to common shareholders	\$ 588,359	\$ (150,674)	\$ 282,361
Comprehensive income	\$ 260,750	\$ 122,261	\$ 672,293

SCHEDULE II

AXIS CAPITAL HOLDINGS LIMITED
CONDENSED STATEMENTS OF CASH FLOWS – PARENT COMPANY
YEARS ENDED DECEMBER 31, 2021, 2020 AND 2019

	2021	2020	2019
	(in thousands)		
Cash flows from operating activities:			
Net income (loss)	\$ 618,609	\$ (120,424)	\$ 323,473
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Equity in net (income) loss of subsidiaries	(681,452)	83,545	(375,008)
Change in intercompany payable	(96,868)	73,575	(32,081)
Dividends received from subsidiaries	300,000	350,000	250,000
Other items	45,626	20,715	23,619
Net cash provided by operating activities	185,915	407,411	190,003
Cash flows from financing activities:			
Taxes paid on withholding shares	(10,242)	(10,382)	(10,165)
Dividends paid - common shares	(145,603)	(141,590)	(137,209)
Repurchase of preferred shares	—	(225,000)	—
Dividends paid - preferred shares	(30,250)	(31,831)	(42,625)
Net cash used in financing activities	(186,095)	(408,803)	(189,999)
Increase (decrease) in cash, cash equivalents and restricted cash	(180)	(1,392)	4
Cash, cash equivalents and restricted cash - beginning of year	1,711	3,103	3,099
Cash, cash equivalents and restricted cash - end of year	\$ 1,531	\$ 1,711	\$ 3,103

SCHEDULE III

**AXIS CAPITAL HOLDINGS LIMITED
SUPPLEMENTARY INSURANCE INFORMATION**

At and year ended December 31, 2021

(in thousands)	Deferred acquisition costs	Reserve for losses and loss expenses	Unearned premiums	Net premiums earned	Net investment income ⁽¹⁾	Net losses and loss expenses	Acquisition costs	Other operating expenses ⁽²⁾	Net premiums written
Insurance	\$ 212,681	\$ 7,803,529	\$ 2,716,240	\$ 2,651,339	\$ —	\$ 1,514,998	\$ 484,344	\$ 429,282	\$ 2,894,885
Reinsurance	252,912	6,849,565	1,374,436	2,058,511	—	1,493,785	437,490	107,552	2,031,739
Corporate	—	—	—	—	454,301	—	—	126,470	—
Total	<u>\$ 465,593</u>	<u>\$ 14,653,094</u>	<u>\$ 4,090,676</u>	<u>\$ 4,709,850</u>	<u>\$ 454,301</u>	<u>\$ 3,008,783</u>	<u>\$ 921,834</u>	<u>\$ 663,304</u>	<u>\$ 4,926,624</u>

At and year ended December 31, 2020

(in thousands)	Deferred acquisition costs	Reserve for losses and loss expenses	Unearned premiums	Net premiums earned	Net investment income ⁽¹⁾	Net losses and loss expenses	Acquisition costs	Other operating expenses ⁽²⁾	Net premiums written
Insurance	\$ 176,749	\$ 7,310,498	\$ 2,295,763	\$ 2,299,038	\$ —	\$ 1,697,014	\$ 461,533	\$ 378,839	\$ 2,357,501
Reinsurance	254,690	6,616,268	1,390,123	2,072,271	—	1,584,238	467,984	99,129	1,978,908
Corporate	—	—	—	—	349,601	—	—	101,822	—
Total	<u>\$ 431,439</u>	<u>\$ 13,926,766</u>	<u>\$ 3,685,886</u>	<u>\$ 4,371,309</u>	<u>\$ 349,601</u>	<u>\$ 3,281,252</u>	<u>\$ 929,517</u>	<u>\$ 579,790</u>	<u>\$ 4,336,409</u>

At and year ended December 31, 2019

(in thousands)	Deferred acquisition costs	Reserve for losses and loss expenses	Unearned premiums	Net premiums earned	Net investment income ⁽¹⁾	Net losses and loss expenses	Acquisition costs	Other operating expenses ⁽²⁾	Net premiums written
Insurance	\$ 191,925	\$ 6,496,568	\$ 2,115,664	\$ 2,190,084	\$ —	\$ 1,278,679	\$ 468,281	\$ 401,963	\$ 2,209,155
Reinsurance	300,194	6,255,513	1,510,582	2,397,094	—	1,766,119	556,301	103,772	2,280,460
Corporate	—	—	—	—	478,572	—	—	129,096	—
Total	<u>\$ 492,119</u>	<u>\$ 12,752,081</u>	<u>\$ 3,626,246</u>	<u>\$ 4,587,178</u>	<u>\$ 478,572</u>	<u>\$ 3,044,798</u>	<u>\$ 1,024,582</u>	<u>\$ 634,831</u>	<u>\$ 4,489,615</u>

- (1) The Company evaluates underwriting results of its reportable segments separately from the performance of its investment portfolio therefore, the Company believes it is appropriate to exclude net investment income from its underwriting profitability measure.
- (2) Amounts related to the Company's reportable segments reflect underwriting-related general and administrative expenses, which includes those general and administrative expenses that are incremental and/or directly attributable to the Company's underwriting operations. Underwriting-related general and administrative expenses is a non-GAAP financial measure as defined in Item 10(e) of SEC Regulation S-K. The reconciliation to general and administrative expenses, the most comparable GAAP financial measure, presented in the table above, also includes corporate expenses of \$126 million, \$102 million, and \$129 million for the years ended December 31, 2021, 2020 and 2019, respectively. 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 the Company's underwriting operations, these expenses are excluded from underwriting-related general and administrative expenses.

SCHEDULE IV

AXIS CAPITAL HOLDINGS LIMITED
SUPPLEMENTARY REINSURANCE INFORMATION
YEARS ENDED DECEMBER 31, 2021, 2020 AND 2019

(in thousands)	GROSS AMOUNT	CEDED TO OTHER COMPANIES	ASSUMED FROM OTHER COMPANIES	NET AMOUNT	PERCENTAGE OF AMOUNT ASSUMED TO NET
2021					
Property and Casualty	\$ 4,233,758	\$ 2,700,693	\$ 2,874,687	\$ 4,407,752	65.2 %
Accident and Health	171,694	58,667	405,845	518,872	78.2 %
Total	\$ 4,405,452	\$ 2,759,360	\$ 3,280,532	\$ 4,926,624	66.6 %
2020					
Property and Casualty	\$ 3,455,690	\$ 2,446,890	\$ 2,840,834	\$ 3,849,634	73.8 %
Accident and Health	154,511	43,639	375,903	486,775	77.2 %
Total	\$ 3,610,201	\$ 2,490,529	\$ 3,216,737	\$ 4,336,409	74.2 %
2019					
Property and Casualty	\$ 3,134,462	\$ 2,311,001	\$ 3,187,623	\$ 4,011,084	79.5 %
Accident and Health	141,535	98,242	435,238	478,531	91.0 %
Total	\$ 3,275,997	\$ 2,409,243	\$ 3,622,861	\$ 4,489,615	80.7 %