

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

Form 10-K

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

For the fiscal year ended December 31, 2018

OR

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

Commission file number 001-38731

SIRIUS INTERNATIONAL INSURANCE GROUP, LTD.

(Exact name of registrant as specified in its charter)

Bermuda

(State or other jurisdiction of incorporation or organization)

98-0529995

(I.R.S. Employer Identification No.)

14 Wesley Street, Hamilton HM 11, Bermuda

(Address of principal executive offices)

(441) 278-3140

(Registrant's telephone number, including area code)

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

Title of each class

Name of each exchange on which registered

Common shares, par value \$0.01 per share

Nasdaq Global Select Market

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

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

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

As of June 29, 2018, the last business day of the registrant's most recently completed second fiscal quarter, the registrant was a privately-held company and there was no established public market for the registrant's common shares. The registrant's common shares began trading on The Nasdaq Global Select Market on November 6, 2018.

At February 28, 2019, the number of outstanding common shares of the registrant was 115,231,992.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for the 2019 Annual Meeting of Shareholders are incorporated by reference into Part III of this Annual Report on Form 10-K. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year ended December 31, 2018.

SIRIUS INTERNATIONAL INSURANCE GROUP, LTD.
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As used in this Annual Report on Form 10-K, references to “we,” “us,” “our,” “Sirius Group” or “the Company” refer to the consolidated operations of Sirius International Insurance Group, Ltd. and, unless the context requires otherwise, its consolidated subsidiaries. Tabular amounts are in U.S. Dollars in thousands, except share amounts, unless otherwise noted.

Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the federal securities laws, including the Private Securities Litigation Reform Act of 1995. These forward looking statements reflect the future financial condition, results of operations and operating activities of Sirius Group. Forward-looking statements are typically identified by forward-looking terminology such as “plan,” “believe,” “expect,” “anticipate,” “intend,” “outlook,” “estimate,” “forecast,” “project,” “target,” “continue,” “could,” “may,” “might,” “will,” “possible,” “potential,” “predict,” “should,” “would,” “seeks,” “likely,” and other similar words and expressions, but the absence of these words does not mean that a statement is not forward-looking. The forward-looking statements are based on the current expectations of the management of the Company and speak only as of the date of this Annual Report on Form 10-K. There can be no assurance that future developments will be those that have been anticipated. These forward-looking statements involve a number of risks, uncertainties or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, those risks identified in “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this Annual Report on Form 10-K and in the Company’s other filings with the Securities and Exchange Commission.

While forward-looking statements reflect our good-faith beliefs, they are not guarantees of future performance. Should one or more of these risks or uncertainties materialize, or should any of the assumptions made by the management of the Company prove incorrect, actual results or performance may vary in material respects from that projected in these forward-looking statements. Except to the extent required by applicable law or regulation, Sirius Group undertakes no obligation to update these forward-looking statements to reflect changes in underlying assumptions or factors, new information, data or methods, or future events or other changes after the date of this Annual Report on Form 10-K.

PART I

Item 1. Business

Overview

Sirius Group is a Bermuda exempted company organized in 2006 whose principal businesses are conducted through its wholly-owned insurance and reinsurance subsidiaries and other affiliates. Sirius Group’s primary operating subsidiaries, including Sirius Bermuda Insurance Company Ltd. (“Sirius Bermuda”), Sirius International Insurance Corporation (“Sirius International”), Sirius America Insurance Company (“Sirius America”), Sirius International Corporate Member Limited, a Lloyd’s of London (“Lloyd’s”) Corporate Member, International Medical Group Acquisition, Inc. (“IMG”), ArmadaCorp Capital, LLC (“Armada”), and Sirius Global Solutions Holding Company (“Sirius Global Solutions”) provide insurance, reinsurance and insurance services on a worldwide basis. The Company’s registered office is located at 14 Wesley Street, Hamilton, Bermuda.

As of December 31, 2018, Sirius Group had \$6.0 billion of total assets and \$1.7 billion of common shareholders’ equity. Sirius Group wrote \$1.8 billion and \$1.4 billion in gross written premiums and \$1.4 billion and \$1.1 billion in net written premiums in 2018 and 2017, respectively.

Sirius Bermuda is a Class 4 licensed Bermuda-based reinsurance company, that was established to facilitate the long-term growth of Sirius Group’s capital base and business and is licensed to assume all classes of property and casualty business. Sirius Bermuda is the top operating company in Sirius Group and is classified as the designated insurer of Sirius Group by the Bermuda Monetary Authority (“BMA”) for group solvency purposes. Sirius Bermuda had \$2.6 billion of consolidated shareholder’s equity as of December 31, 2018.

Sirius International is an insurance and reinsurance company domiciled in Sweden with its home office in Stockholm, Sweden and branch offices or subsidiaries in London, United Kingdom; Zurich, Switzerland; Singapore; Labuan, Malaysia; Liege, Belgium; Hamburg, Germany; Shanghai, China; and Hamilton, Bermuda. Sirius International, was established in 1945 and owns Sirius America and sponsors Lloyd's Syndicate 1945 ("Syndicate 1945"). Sirius International wrote \$1,063 million and \$848 million in gross written premiums and \$771 million and \$600 million in net written premiums in 2018 and 2017, respectively.

Sirius America is an insurance and reinsurance company domiciled in the state of New York with offices in New York, New York; Norwalk, Connecticut; Miami, Florida; San Francisco, California; Berwyn, Pennsylvania; Glastonbury, Connecticut; and Toronto, Ontario. Sirius America wrote \$291 million and \$303 million in gross written premiums and \$182 million and \$101 million in net written premiums in 2018 and 2017, respectively.

Sirius International Corporate Member participates in the Lloyd's market, which in turn provides underwriting capacity to Syndicate 1945. The Lloyd's market is known for its ability to provide innovative, tailored coverage and capacity for unique, complex, large and hard-to-place global risks. Syndicate 1945 began writing business in 2011. Initially, Syndicate 1945 was authorized by Lloyd's to write primarily Accident and Health. In 2013, this was extended to include other lines written by London of Property and Marine business. In 2014, Sirius Group established its own Lloyd's managing agent, Sirius International Managing Agency, to manage Syndicate 1945. For the 2019 underwriting year, Syndicate 1945 was authorized by Lloyd's to write a stamp capacity of £81 million or approximately \$103 million (based on the December 31, 2018 GBP to USD exchange rate). By exiting certain lines, reshaping existing business such as Upstream Energy insurance and adding new lines like U.S. Casualty Treaty, the Syndicate has reduced volatility to strive for increased profitability.

IMG is a full service managing general underwriter ("MGU") that has been an award-winning provider of global health and travel insurance benefits and assistance service for over 25 years and a business partner of Sirius Group since 1997. IMG has been Sirius Group's largest insurance producer over the past several years before its acquisition in 2017. IMG offers a full, innovative line of international medical insurance products, trip cancellation programs, medical management services and 24/7 emergency medical and travel assistance. IMG is based in Indianapolis, Indiana and also has offices in the United Kingdom and Hong Kong. For 2018 and 2017, IMG produced \$175 million and \$165 million of gross written premiums, respectively, the vast majority of which are written on Sirius Group paper. The acquisition of IMG offers Sirius Group additional access to accident and health products that are complementary to its global product offerings, as well as growth opportunities in Europe and Asia.

Armada is a specialty health services business based in Hunt Valley, Maryland that strengthens health care coverage through ArmadaCare and ArmadaHealth. ArmadaCare is a supplemental medical insurance MGU that markets and underwrites its signature UltimateHealth supplemental health product designed for C-Suite executives, as well as PlenaHealth and ComplaMed, which are targeted towards broader segments of the workforce. These products make the health care process easier and more efficient for employees and affinity constituent groups, and differentiate themselves with "white glove" service. The ArmadaCare products are written on both Transamerica and Sirius America paper, with the majority of business transitioning to Sirius Group commensurate with Sirius America's policy filing and a transition agreement between Transamerica and Sirius Group. ArmadaHealth is a health care data science business that focuses on addressing one of the biggest problems, and opportunities, of the United States health care system, the physician referral process. This transformation of access to specialty care aims to improve patient satisfaction and health outcomes, while at the same time reduce costs. The ArmadaHealth product is one of the services embedded in the aforementioned ArmadaCare products. For 2018 and 2017, Armada produced \$120 million and \$107 million of gross written premiums, respectively.

Sirius Global Solutions is a Connecticut-based division of Sirius Group specializing in the acquisition and management of runoff liabilities for insurance and reinsurance companies both in the United States and internationally. The Sirius Global Solutions team is comprised of a dedicated group of financial, actuarial and claims professionals experienced in the management and resolution of complex insurance liabilities as well as the structuring of transactions designed to enable owners to exit an insurance business and extract trapped capital. Acquisitions typically involve transactions at a significant discount to book value and/or retrospective reinsurance agreements, including loss portfolio transfers, and undergo an extensive due diligence process. Sirius Group can derive value from these transactions not only from the discounted purchase price, but also from the investment income on insurance float, the potential settlement of claims below the carried level of reserves and the harvesting of other embedded assets, including the value of shell companies and licenses. Since its formation in 2000, Sirius Global Solutions has executed 16 transactions, involving 21 companies, which have resulted in approximately \$192 million of cumulative after-tax income through December 31, 2018. Most recently, in 2018, Sirius Global Solutions completed the acquisition of WRM America Indemnity Company, Inc. (“WRM America”) from WRM America Indemnity Holding Company, LLC for \$17 million in cash. WRM America is a New York-domiciled insurer with a run-off book of business mainly comprised of general liability, educator’s legal liability, automobile liability and physical damage, property and excess catastrophe liability.

Our History

On April 18, 2016, CMIG International Pte. Ltd. (“CMIG International”), through its Bermuda holding company CM Bermuda Ltd., purchased Sirius Group and its subsidiaries from White Mountains Insurance Group Ltd. (“White Mountains”) for approximately \$2.6 billion at the time of close. On November 5, 2018, Sirius Group merged (the “Merger”) with Easterly Acquisition Corp. (“Easterly”) pursuant to a definitive agreement and plan of merger, which resulted in Sirius Group becoming a publicly listed company. Following the Merger, the Company’s common shares are traded on the Nasdaq Global Select Market under the symbol “SG.”

Sirius Group writes treaty and facultative reinsurance, as well as primary insurance business. Sirius Group’s primary insurance business has historically been predominantly accident and health insurance. In recent years, Sirius Group expanded its accident and health primary business capabilities in the U.S. via the acquisitions of IMG and Armada in 2017. In addition to growing in accident and health insurance, Sirius Group further expanded its primary insurance platform launching its primary Surety and Environmental insurance platforms in the U.S. in late 2017. In mid-2018, we began writing primary Casualty insurance through Pie Insurance Holdings, Inc. (“Pie Insurance”), a start-up specializing in a data driven approach to workers compensation insurance, where we also have a minority investment and carrier relationship. In addition to these primary insurance platforms, Sirius Group re-entered the U.S. Casualty reinsurance market in early 2017.

Competitive Strengths

Sirius Group’s management believes that the following competitive strengths position Sirius Group to capitalize on the opportunities presented in the insurance and reinsurance marketplace:

Global Multi-Line Reinsurer with Proven Track Record and Diversified Book of Business

Sirius Group is a global multi-line insurance and reinsurance company with a long operating history. Sirius Group writes a diversified book of insurance and reinsurance business across different risk types and geographic locations. As of December 31, 2018, Sirius Group had over 2,000 clients in over 140 countries with over 7,000 different reinsurance treaties. The majority of Sirius Group’s business is relatively short-tailed though its Specialty & Casualty segment started to underwrite longer-tailed lines of business in 2017. Sirius Group’s management believes diversification is a competitive advantage, which increases return per unit of risk, provides access to risk worldwide and reduces the overall volatility of results. Diversification is also the cornerstone of managing the cyclicity of insurance and reinsurance markets.

History of Long-Term Customer Relationships

Sirius Group’s global branch network, managed by a long-tenured and experienced team, has allowed Sirius Group to develop long-standing, local customer relationships. These strong relationships have allowed Sirius Group’s operating team to profitably navigate through both favorable and unfavorable market conditions. Sirius Group’s profit center managers have an average of 18 years of employment with Sirius Group and 29 years in the insurance industry.

Over the years, Sirius Group has developed into a leading reinsurer primarily in Europe but also in the United States and in other parts of the world. Of Sirius Group's 2018 underwriting year written premiums, 30% are from clients of 20 or more years and 54% are from clients of 10 or more years. Sirius Group's long-standing relationships have contributed to its position in its markets that enables it to lead or co-lead or have influence on prices in over 58% of its business (as measured on December 31, 2018), which influences terms and conditions.

Prudent, Disciplined Approach to Risk Management

Sirius Group is guided by its core operating principles and believes that a long-term commitment to disciplined underwriting and prudent pricing is firmly ingrained in its corporate culture. Sirius Group focuses risk management efforts on ensuring that exposure to potential loss in any business area remains at an acceptable level. Although these efforts include extensive modeling, Sirius Group also evaluates its total limit loss in a particular region to ensure that not only is the probable maximum loss ("PML") within its tolerance, but the maximum foreseeable loss is as well.

Efficient Capital Deployment and Financial Strength

Sirius Group's management believes that its long-standing presence in multiple markets, including North America and Europe, has allowed Sirius Group to deploy its capital in an efficient manner throughout the world. Sirius Group seeks to maintain capital and leverage at levels that support its ratings, and deploys its capital opportunistically across the entire organization. Another important benefit of Sirius Group's capital structure is the \$261 million deferred tax liability on retained earnings in Sirius Group's Swedish "safety reserve" position as of December 31, 2018. Pursuant to Swedish regulations, all the retained earnings in the safety reserve, including the deferred tax liability, are available to pay claims and deemed to be capital supporting underwriting.

Management's Extensive Experience

Sirius Group's executive management team has extensive experience in the insurance industry across operations, strategy and mergers and acquisitions. On average, each team member has been with Sirius Group for 14 years. Sirius Group strives to continue to attract and retain exceptional talent by encouraging individual personal development of all its employees and rewarding them for outstanding performance.

Growth Strategy

Sirius Group's corporate objective is to grow intrinsic value per share by maximizing underwriting profits through market cycles while preserving and achieving long-term growth. Sirius Group intends to pursue this objective with the following strategies:

Maintain Broad Geographic Coverage Across Multiple Lines

Sirius Group intends to leverage its multi-line offerings across a broad geographic scope to grow its business when appropriate. Sirius Group has had a long-standing presence in multiple markets and across multiple product categories and has developed long-term relationships with brokers and ceding companies. Sirius Group seeks to use management's expertise, experience and market relationships to identify and underwrite well-priced risks while delivering innovative risk transfer solutions to customers. Sirius Group believes that its flexibility and expertise in diverse insurance and reinsurance markets will allow it to create a well-balanced and profitable portfolio of risks across market cycles.

Manage Capital Prudently

Sirius Group actively manages its capital and business profile. Sirius Group strives to underwrite business only when the price and other terms and conditions are attractive. If Sirius Group needs to reduce its business volumes due to overly aggressive competition, it intends to do so, as it has done in the past. The "Reportable Segments" table under "Products and Services" later in this section demonstrates Sirius Group's opportunistic underwriting approach, whereby Sirius Group has increased and decreased writings in various lines of business commensurate with prevailing market conditions. When appropriate, Sirius Group will consider dedicated pools of outside capital and use of retrocessional coverage.

Continue to Identify Opportunistic Acquisitions

Sirius Group has the in-house mergers and acquisitions capability and experience to source and successfully execute upon attractive opportunities. Sirius Group will continue to evaluate acquisition opportunities and pursue those that meet its strict criteria to generate attractive financial returns. Acquisitions can be in the form of active operations, such as the recent acquisitions of IMG and Armada, or in the form of run-off opportunities, which are led by the dedicated team at Sirius Global Solutions. While Sirius Group has an active and ongoing effort to pursue acquisitions, management believes that Sirius Group's opportunistic and disciplined approach and experience ensures that it will be selective in pursuing transactions. In a given year, Sirius Group may complete several transactions or may not complete any, depending on the quality of opportunities that become available. Sirius Group is optimistic that there will continue to be attractive opportunities in the future.

Maintain a Disciplined Investment Approach

Sirius Group's investment philosophy is to maximize long-term total returns (after-tax) while taking prudent levels of risk and maintaining a diversified portfolio, subject to its investment guidelines and various regulatory restrictions. Under this total return investment approach, gains in market prices of securities are valued equally with yield income.

Insurance and Reinsurance Overview

Products and Services

Sirius Group writes primary insurance and reinsurance business. Sirius Group's primary insurance business is written predominantly by several MGUs in the accident and health space. Sirius Group employs a detailed selection process for these MGU partners, and has narrowly defined underwriting standards in place that are closely monitored by Sirius Group staff. In addition to the day-to-day interactions that Sirius Group has with the MGUs, audits are performed on a regular basis.

Reinsurance is an arrangement in which a reinsurance company (the "reinsurer") agrees to indemnify an insurance company (the "ceding company") for insurance risks underwritten by the ceding company. Reinsurance can benefit a ceding company in a number of ways, including reducing exposure on individual risks, providing catastrophe protections from large or multiple losses, and assisting in maintaining acceptable capital levels as well as financial and operating leverage ratios. Reinsurance can also provide a ceding company with additional underwriting capacity by permitting it to accept larger risks and underwrite a greater number of risks without a corresponding increase in its capital. Reinsurers may also purchase reinsurance, known as retrocessional reinsurance, to cover risks assumed from ceding companies. Reinsurance companies often enter into retrocessional agreements for many of the same reasons that ceding companies enter into reinsurance agreements.

Reinsurance is generally written on a treaty or facultative basis. Treaty reinsurance is an agreement whereby the reinsurer assumes a specified portion or category of risk under all qualifying policies issued by the ceding company during the term of the agreement, usually one year. When underwriting treaty reinsurance, the reinsurer does not evaluate each individual risk and generally accepts the original underwriting decisions made by the ceding company. Facultative reinsurance, on the other hand, is underwritten on a risk-by-risk basis, which allows the reinsurer to determine pricing for each exposure.

Treaty reinsurance is typically written on either a proportional or excess of loss basis. A proportional reinsurance treaty is an arrangement whereby a reinsurer assumes a predetermined proportional share of the premiums and losses generated on specified business. An excess of loss treaty is an arrangement whereby a reinsurer assumes losses that exceed a specific retention of loss by the ceding company.

A significant period of time normally elapses between the receipt of insurance premiums for MGUs and reinsurance premiums from ceding companies and the payment of the claims. While premiums are generally paid to the insurer or reinsurer following inception of the underlying coverage, the claims process is delayed and generally begins upon the occurrence of an event causing an insured loss followed by: (i) the reporting of the loss by the insured to its broker or agent; (ii) the reporting by the broker or agent to the MGU or ceding company; (iii) the reporting by the ceding company to its reinsurance intermediary or agent; (iv) the reporting by the reinsurance intermediary or agent to the reinsurer; (v) the MGUs or ceding company's adjustment and payment of the loss; and (vi) the payment to the MGU or ceding company by the reinsurer. During this time, the insurer or reinsurer invests the premiums, earns investment income and generates net realized and unrealized investment gains and losses on investments.

Reportable Segments

We classify our business into four reportable segments: Global Property, Global A&H, Specialty & Casualty and Runoff & Other. The following discussion summarizes the business written by each of Sirius Group's segments.

Global Property

Global Property consists of Sirius Group's underwriting lines of business which offer other property insurance and reinsurance, property catastrophe excess reinsurance, and agriculture reinsurance on a worldwide basis. The following provides details of Global Property by product line:

Other Property Insurance and Reinsurance—Sirius Group participates in the broker market for property reinsurance treaties written on a proportional and excess of loss basis. For Sirius Group's international business, the book consists of treaty, written on both a proportional and excess of loss basis, facultative, and primary business, primarily in Europe, Asia and Latin America. In the United States, the book predominantly centers on significant participations on proportional and excess of loss treaties mostly in the excess and surplus lines of the market.

Property Catastrophe Excess Reinsurance—Property catastrophe excess of loss reinsurance treaties covers losses from catastrophic events. Sirius Group writes a worldwide book with the largest concentration of exposure in Europe and the United States. The U.S. book written in Bermuda has a national account focus supporting principally the lower and/or middle layers of large capacity programs. Additionally, the Stockholm branch writes a U.S. book mainly consisting of select small regional and standard lines carriers. The exposures written in the international book are diversified across many countries, regions, perils and layers.

Agriculture—Sirius Group provides stop-loss reinsurance coverage to companies writing U.S. government-sponsored multi-peril crop insurance ("MPCI"). Sirius Group's participation is net of the government's stop-loss reinsurance protection. Sirius Group also provides coverage for crop-hail and certain named perils when bundled with MPCI business. Sirius Group also writes agriculture business outside of the United States.

Global A&H

The Global A&H operating segment consists of Sirius Group's insurance, reinsurance, and MGUs units (which include Armada and IMG) that offer accident and health products on a worldwide basis:

Accident and Health insurance and reinsurance—Sirius Group is an insurer of accident and health insurance business in the United States, either on an admitted or surplus lines basis, as well as international business written through wholly-owned IMG. Armada business is written on an admitted basis. Sirius Group also writes proportional and excess reinsurance treaties covering employer medical stop-loss for per person (specific) and per employer (aggregate) exposures. In addition, Sirius Group writes some medical, health, travel and personal accident coverages written on a treaty, facultative and primary basis.

Specialty & Casualty

Specialty & Casualty consists of Sirius Group's insurance and reinsurance underwriting units which offer specialty & casualty product lines on a worldwide basis. Specialty lines represent unique risks where the more difficult and unusual risks are underwritten, and much of the market is characterized by a high degree of specialization. The following provides details of Specialty & Casualty by product line:

Aviation & Space provides aviation insurance that covers loss of or damage to an aircraft and the aircraft operations' liability to passengers, cargo and hull as well as to third parties. Additionally, liability arising out of non-aircraft operations such as hangars, airports and aircraft products can be covered. Space insurance primarily covers loss of or damage to a satellite during launch and in orbit. The book consists of treaty, written on both a proportional and excess of loss basis, facultative and primary business.

Marine provides marine reinsurance, primarily written on an excess of loss and proportional basis. Coverage offered includes damage to ships and goods in transit, marine liability lines, and offshore energy industry insurance. Sirius Group also writes yacht business, both on reinsurance and a primary basis. The marine portfolio is diversified across many countries and regions. Starting in 2018, Sirius Group decided not to renew the book written in Sirius International's London office due to underwriting performance.

Trade credit writes credit and bond reinsurance worldwide. The bulk of the business is traditional short-term commercial credit insurance, covering pre-agreed domestic and export sales of goods and services with typical coverage periods of 60 to 120 days. Losses under these policies are correlated to adverse changes in a respective country's gross national product.

Contingency writes insurance for event cancellation and non-appearance, primarily on a primary policy and facultative reinsurance basis. Additionally, coverage for liabilities arising from contractual bonus, prize redemption and over-redemption is also offered. The contingency portfolio is diversified across many countries and regions. In August 2018, Sirius Group decided not to renew the book written in Sirius International's London office due to underwriting performance.

Casualty represents a cross section of all casualty lines, including general liability, umbrella, auto, workers compensation, professional liability, and other specialty classes, written on a proportional, excess of loss, and primary basis. Sirius Group re-entered the broker market for U.S. casualty reinsurance treaties written on a proportional and excess of loss basis in 2017. In addition, Sirius Group began writing primary Casualty insurance in the U.S. in mid-2018.

Surety underwrites commercial surety bonds, including non-construction contract bonds, in a broad range of business segments in the U.S.

Environmental underwrites a pure environmental insurance book in the U.S. consisting of four core products that revolve around pollution coverage, which are premises pollution liability, contractor's pollution liability, contractor's pollution and professional liability.

Runoff & Other

Runoff & Other consists of asbestos risks, environmental risks and other long-tailed liability exposures, and results from Sirius Global Solutions including the acquisition and management of runoff liabilities for insurance and reinsurance companies, both in the United States and internationally.

Gross and Net Written Premiums – Reportable Segments

The following table sets forth Sirius Group's gross written premiums for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018	2017	2016
Other Property	\$ 623.0	\$ 405.2	\$ 364.4
Property Catastrophe Excess	275.3	255.3	233.2
Agriculture	64.1	71.6	37.3
Global Property	962.4	732.1	634.9
Global Accident & Health	500.6	494.6	436.1
Casualty	136.4	38.2	0.6
Aviation & Space	72.5	65.7	61.6
Trade Credit	48.1	39.7	31.6
Marine	34.7	56.1	57.7
Contingency	16.6	18.4	19.2
Environmental	10.1	-	-
Surety	6.7	-	-
Specialty & Casualty	325.1	218.1	170.7
Runoff & Other	32.9	(5.5)	27.3
Total	\$ 1,821.0	\$ 1,439.3	\$ 1,269.0

The following table sets forth Sirius Group's net written premiums for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018	2017	2016
Other Property	\$ 414.9	\$ 323.2	\$ 337.9
Property Catastrophe Excess	177.8	163.9	139.8
Agriculture	62.3	69.1	36.5
Global Property	655.0	556.2	514.2
Global Accident & Health	379.8	341.5	277.6
Casualty	136.4	38.2	0.6
Aviation & Space	61.9	55.0	45.9
Trade Credit	45.4	37.3	26.1
Marine	26.4	47.9	49.6
Contingency	12.1	14.6	15.2
Environmental	5.1	-	-
Surety	5.4	-	-
Specialty & Casualty	292.7	193.0	137.4
Runoff & Other	29.6	(0.5)	8.9
Total	\$ 1,357.1	\$ 1,090.2	\$ 938.1

For the years ended December 31, 2018, 2017, and 2016, 76%, 74% and 79%, respectively, of Sirius Group's net written premiums were for reinsurance products, with the remainder being insurance products. Sirius Group expanded its primary business capabilities in the United States for Global A&H, which has resulted in increased primary insurance business.

Diversification by Geography

Sirius Group's net written premiums are geographically diversified across the world. The following table shows Sirius Group's net written premiums by geographic region based on the client location for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018	2017	2016
United States	\$ 794.7	\$ 563.1	\$ 463.0
Europe	276.5	262.3	258.9
Canada, the Caribbean, Bermuda and Latin America	103.6	111.4	88.3
Asia and Other	182.3	153.4	127.9
Total	\$ 1,357.1	\$ 1,090.2	\$ 938.1

Marketing and Distribution

For reinsurance business, Sirius Group obtains most of its submissions from reinsurance intermediaries that represent the ceding company. The process of placing an intermediary reinsurance program typically begins when a ceding company enlists the aid of a reinsurance intermediary in structuring a reinsurance program. The ceding company and the reinsurance intermediary will often consult with one or more lead reinsurers as to the pricing and contract terms for the reinsurance protection being sought. Once the ceding company has approved the terms quoted by the lead reinsurer, the reinsurance intermediary will offer participation to qualified reinsurers until the program is fully subscribed. Sirius Group considers both the reinsurance intermediary and the ceding company to be its clients. Sirius Group believes it has developed strong business relationships over a long period of time with the management of many of its ceding companies and reinsurance intermediaries.

Sirius Group pays ceding companies a ceding commission under most proportional reinsurance treaties and some excess of loss reinsurance treaties. The ceding commission is generally based on the ceding company's cost of acquiring and administering the business being reinsured (e.g., agent commissions, premium taxes and certain miscellaneous expenses). The ceding commissions paid to ceding companies constitute the majority of Sirius Group's total acquisition costs. Additionally, Sirius Group pays reinsurance intermediaries commissions based on negotiated percentages of the premium they produce on a per treaty or certificate basis.

For primary insurance business, mostly Global A&H, Sirius Group enters into agreements with select MGUs, who then market Sirius Group's insurance products to the general public and have underwriting authority on its behalf. Sirius Group has narrowly defined underwriting standards in place for these MGUs that are closely monitored by Sirius Group staff. Sirius Group pays certain MGUs profit commissions based upon the underwriting profit business produced. In addition to the day-to-day interactions that Sirius Group has with its MGUs, audits are performed on a regular basis. These high-retention, long-term partnerships generate significant premium, and create alignment with the MGUs as they retain a share of underwriting results. Sirius Group has also acquired two MGUs, IMG and Armada, in recent years.

During the years ended December 31, 2018, 2017, and 2016, Sirius Group received gross reinsurance premiums written from three major, third-party reinsurance intermediaries as detailed in the following table:

Gross written premium by intermediary	2018	2017	2016
AON Corporation and subsidiaries	26%	22%	22%
Guy Carpenter & Company and subsidiaries	18%	18%	18%
WT Butler and Co. Ltd.	10%	10%	8%
Total	54%	50%	48%

Policies with Respect to Certain Activities

The following is a discussion of our underwriting and pricing, claims management, catastrophe risk management, and reinsurance protection policies.

Underwriting and Pricing

Sirius Group seeks to maintain a disciplined underwriting strategy which, while considering overall exposure, focuses on writing more business when market terms and conditions are favorable and reducing business volume during soft markets when terms and conditions become less favorable. Sirius Group offers clients a wide range of insurance and reinsurance products across multiple lines of business to satisfy risk management needs.

Sirius Group derives its reinsurance business from a broad spectrum of ceding companies, including national, regional, specialty, and excess and surplus lines writers, both internationally and in the United States. Sirius Group derives its primary insurance business mostly for Global A&H through several MGUs, which source business internationally and in the United States. Sirius Group prices its products by assessing the desired return on the expected capital needed to write a given contract and on the expected underwriting results of the contract. Sirius Group's pricing indications are based on a number of underwriting factors including historical results, analysis of exposure and estimates of future loss costs, a review of other programs displaying similar exposure characteristics and the MGUs or ceding company's underwriting and claims experience. Additionally, in the United States, Sirius Group's underwriters, actuaries and claims personnel perform audits of all MGUs and certain ceding companies. Generally, ceding company audits are not customary outside the United States.

Reinsurers do not have the stringent regulations with respect to contract terms and policy exclusions that are generally imposed on primary insurers. For example, the Terrorism Risk Insurance Act in the United States is not applicable to reinsurers. As a result, terrorism exclusions on reinsurance contracts are dictated by the marketplace. Sirius Group evaluates terrorism exposure from its ceding companies and applies exclusions as it deems appropriate and as permitted by market conditions. Reinsurance on U.S. commercial risks written by Sirius Group subsequent to the terrorist acts of September 11, 2001 generally contains clauses that exclude acts of terrorism certified under the Terrorism Risk Insurance Act. Reinsurance on personal risks written by Sirius Group subsequent to the terrorist acts of September 11, 2001 generally contains exclusions related to nuclear, biological, radiological and chemical attacks.

Claims Management

Sirius Group maintains a staff of experienced insurance and reinsurance claim specialists. Sirius Group's claims specialists work closely with reinsurance intermediaries, MGUs and insureds to obtain specific claims information on reported matters to properly adjust and resolve each matter. Where customary or appropriate, Sirius Group's claims staff performs selective on-site claim reviews to assess an MGUs claim handling abilities and, where customary or appropriate, a ceding company's claim handling abilities and reserve techniques. In addition, Sirius Group's claims specialists review loss information provided by ceding companies and MGUs for adequacy and accuracy. The results of these claim reviews are shared with the underwriters and actuaries to assist them in pricing products and establishing loss reserves.

Sirius Group also uses third-party administrators ("TPAs") for certain claims, including claims arising from certain Runoff & Other claims related to certain acquired companies. Sirius Group's claims staff performs on-site claim audits of certain TPAs to ensure the propriety of the controls and processes over claims serviced by the TPAs.

Catastrophe Risk Management

Sirius Group has exposure to catastrophe losses, mostly for Global Property, caused by hurricanes, earthquakes, tornadoes, winter storms, windstorms, floods, tsunamis, terrorist acts and other catastrophic events. In the normal course of business, Sirius Group regularly manages its concentration of exposures to catastrophic events, primarily by limiting concentrations of exposure to what it deems acceptable levels and, if necessary, purchasing reinsurance. In addition, Sirius Group seeks to limit losses that might arise from other extreme events such as terrorism, cyber or nuclear incidents, in its insurance and reinsurance contracts by exclusionary provisions where available. Sirius Group has significant exposure to windstorm, earthquake, wildfire, and flood events across the globe, primarily in North America, Europe, Asia (including Japan), Oceania, and Latin America.

Sirius Group licenses third-party global property catastrophe models from two of the leading vendors of industry-standard catastrophe modeling software, and also utilizes its own proprietary models to calculate expected PML estimates from various property natural catastrophe scenarios. Sirius Group prices its property catastrophe contracts using the aforementioned third-party software and internal models and other methods. Sirius Group also uses a proprietary property underwriting and pricing tool, referred to as ("GPI"), which consolidates and reports on all its worldwide property exposures. GPI is used to calculate individual and aggregate PMLs by combining multiple third-party and proprietary models, actuarial methods and underwriting judgement. For business that Sirius Group determines to have exposure to natural catastrophic perils, it models and assesses the exposure to quantify the appropriate premium for the exposure as part of its underwriting process. This includes property, accident and health, marine and casualty exposures.

The following table provides an estimate of Sirius Group's three largest PML zones on a per occurrence basis for 1-in-100 and 1-in-250 year events at January 1, 2019 as measured by net after-tax exposure.

(Millions)	Modelled Industry Loss	Sirius Group Gross Loss	Net After Reinsurance and Reinstatements	Sirius Group Net After-Tax Loss		
				Net After-Tax	Net After-Tax as % of Capital ⁽¹⁾	Net After-Tax as % of Common Shareholders' Equity ⁽¹⁾
1-in-100 year event						
Southeast U.S.	\$ 118,243.0	\$ 333.8	\$ 275.9	\$ 244.4	9.3%	14.3%
Europe	40,235.1	459.3	262.6	228.7	8.7%	13.4%
West Coast U.S.	38,952.9	317.4	219.4	194.1	7.4%	11.4%
1-in-250 year event						
Southeast U.S.	\$ 201,635.4	\$ 528.1	\$ 440.0	\$ 390.5	14.8%	22.9%
West Coast U.S.	68,487.3	521.1	371.4	329.0	12.5%	19.3%
Europe	62,227.0	629.1	360.0	315.0	12.0%	18.5%

⁽¹⁾Total Capital and Common Shareholders' Equity as of December 31, 2018. Total Capital represents total debt, Series B preference shares, and Common Shareholders' Equity.

The proprietary GPI platform allows Sirius Group to choose either a third-party catastrophe modeling software or an internally developed model for PML reporting within each area and peril. The choice is based on a scientific, actuarial and underwriting assessment of the quality of the model by territory. If a third-party model is deemed to be qualitative overall but less strong in certain regards, Sirius Group may impose modifications on the model to mitigate any weaknesses. The third-party catastrophe modeling software provides new versions of their models on a periodic basis, usually annually for peak exposure zones. Sirius Group may implement these new versions for use in the underwriting and risk management process after having engaged in appropriate testing and achieving comfort with the model enhancements.

With GPI, the view of risk for each treaty can be further adjusted based on underwriting judgment regarding the specific exposures underlying each cedent's portfolio. This yields a final view of risk for each cedent. This view of risk is aggregated across Sirius Group's portfolio to an aggregated, simulated dataset from which PML estimates and any other portfolio metrics can be extracted.

Catastrophe modeling is dependent upon several broad scientific and economic assumptions. This includes fundamental assumptions on hazard frequency and intensity, assumptions on the vulnerability of different risks depending on their occupancy and building characteristics, assumptions on replacement values as well as assumptions on economic factors such as demand surge (the localized increase in prices of goods and services that often follows a catastrophe). Catastrophe modeling is inherently uncertain due to the significant uncertainties involved in estimating and quantifying these assumptions. Third-party modeling software does not provide information for all territories or perils for which Sirius Group writes business. Sirius Group uses its own proprietary models in these situations.

Sirius Group does not believe that it can rely solely upon catastrophe modeling to measure its exposure to natural catastrophe risk. For example, the losses arising from Hurricane Katrina for both Sirius Group and the industry were substantially in excess of losses previously predicted by third-party models from such an event. This was due to issues such as inadequate storm surge and demand surge assumptions in the models, as well as flooding from levees breaking, which was not fully contemplated in these models. Sirius Group monitors gross and net property catastrophe occurrence limits by country and region globally. Further, losses to a number of deterministic scenarios involving both natural and man-made catastrophes are estimated and tracked.

Reinsurance Protection

In the normal course of business, Sirius Group seeks to protect its business from losses due to concentration of risk and loss arising from catastrophic events by reinsuring with third-party reinsurers. Sirius Group remains liable for risks reinsured in the event that the reinsurer does not honor its obligations under reinsurance contracts. The effects of reinsurance on Sirius Group's written and earned premiums and on losses and loss adjustment expenses ("LAE") for the years ended December 31, 2018, 2017 and 2016 were as follows:

<i>(Millions)</i>	2018	2017	2016
Written premiums:			
Direct	\$ 454.5	\$ 450.2	\$ 368.5
Assumed	1,366.5	989.1	900.5
Gross written premiums	1,821.0	1,439.3	1,269.0
Ceded	(463.9)	(349.1)	(330.9)
Net written premiums	\$ 1,357.1	\$ 1,090.2	\$ 938.1
Earned premiums:			
Direct	\$ 432.6	\$ 405.7	\$ 351.6
Assumed	1,236.2	942.2	877.7
Gross earned premiums	1,668.8	1,347.9	1,229.3
Ceded	(406.5)	(312.6)	(339.2)
Net earned premiums	\$ 1,262.3	\$ 1,035.3	\$ 890.1
Losses and LAE:			
Direct	\$ 260.5	\$ 294.9	\$ 216.9
Assumed	819.1	701.3	463.8
Gross losses and LAE	1,079.6	996.2	680.7
Ceded	(179.6)	(185.0)	(161.4)
Net losses and LAE	\$ 900.0	\$ 811.2	\$ 519.3

Sirius Group's reinsurance protection primarily consists of pro-rata and excess of loss protections that protect all of its reportable segments. Attachment points and coverage limits vary by region around the world.

Sirius Group's core proportional property reinsurance programs provide protection for parts of the non proportional treaty accounts written in Europe, the Americas, Caribbean, Asia, the Middle East and Australia. These reinsurance protections are designed to increase underwriting capacity where appropriate, and to reduce exposure both to large catastrophe losses and to a frequency of smaller loss events.

Sirius Group has in place excess of loss retrocessional coverage for its worldwide earthquake related exposures. This coverage was renewed for one year at May 1, 2018, providing \$40.0 million of reinsurance protection in excess of Sirius Group's retention of \$35.0 million and a further \$35.0 million of coverage in excess of \$75.0 million.

Sirius Group periodically purchases industry loss warranties ("ILW") contracts to augment its overall retrocessional program. The following ILW contracts are currently in force:

Scope	Limit	Trigger	Expiration Date
United States excluding North East, all natural perils	\$5.0 million	\$40.0 billion	July 5, 2019
Europe, wind	\$5.0 million	\$7.5 billion	April 30, 2019

Sirius Group purchases excess of loss reinsurance protection for its facultative and primary insurance property books. The protection was renewed at January 1, 2019 for business written in Stockholm, Hamburg and Singapore, providing \$32.5 million of protection in excess of \$2.5 million. For the business written by Syndicate 1945, an excess of loss reinsurance protection of \$10.0 million in excess of retention of \$5.0 million on a per risk basis was placed for 12 months at June 30, 2018. Due to reduced exposures, this was cancelled December 31, 2018 and not replaced. For catastrophe losses from business written by Syndicate 1945, Sirius Group has 50% of a \$12.0 million protection in excess of retention of \$3.0 million placed for 12 months at January 1, 2019.

Almost all of Sirius Group's excess of loss reinsurance protections, excluding ILWs which tend to only cover one loss event, include provisions that reinstate coverage at a cost of 100% or more of the original reinsurance premium.

Reinsurance Recoverables by Rating

At December 31, 2018, Sirius Group had reinsurance recoverables on paid losses of \$55 million and reinsurance recoverables of \$350 million on unpaid losses. At December 31, 2017, Sirius Group had reinsurance recoverables on paid losses of \$18 million and reinsurance recoverables of \$320 million on paid unpaid losses. Because retrocessional reinsurance contracts do not relieve Sirius Group of its obligation to its insureds, the ability to collect balances due from Sirius Group's reinsurers is important to its financial strength. Sirius Group monitors the financial strength and ratings of retrocessionaires on an ongoing basis. Uncollectible amounts historically have not been significant.

The following table provides a listing of Sirius Group's gross and net recoverable amounts by the reinsurer's Standard & Poor's Financial Services LLC ("Standard & Poor's") rating and the percentage of total recoverables at December 31, 2018.

December 31, 2018				
Rating⁽¹⁾	Gross	Collateral	Net	% of Net Total
AA	\$ 115.1	\$ 1.5	\$ 113.6	35%
A	212.9	45.4	167.5	52%
BBB or lower	19.5	13.3	6.2	2%
Not rated	57.7	23.2	34.5	11%
Total	\$ 405.2	\$ 83.4	\$ 321.8	100%

⁽¹⁾Standard & Poor's ratings as detailed above are: "AA" (Very strong), "A" (Strong), and "BBB+" and "BBB" (Adequate).

Loss and LAE Reserves

Sirius Group establishes loss and LAE reserves that are estimates of future amounts needed to pay claims and related expenses for events that have already occurred. The process of estimating reserves involves a considerable degree of judgment by management and, as of any given date, is inherently uncertain. See Note 2 "Summary of Significant Accounting Policies—Significant Accounting Policies" in Sirius Group's audited financial statements and "Summary of Critical Accounting Estimates" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report on Form 10-K for a further discussion of loss and LAE reserves.

Sirius Group's net incurred losses from asbestos and environmental ("A&E") claims have totaled \$183 million over the past ten years. Sirius Group's A&E exposure is primarily from reinsurance contracts written between 1974 through 1985 by acquired companies. The exposures are mostly higher layer excess of loss treaty and facultative coverages with relatively low limits exposed for each claim. The acquisition of companies having modest portfolios of A&E exposure has been typical of several prior Sirius Global Solutions transactions and is likely to be an element of at least some future acquisitions. However, the acquisition of new A&E liabilities is undertaken only after careful due diligence and utilizing conservative reserving assumptions in relation to industry benchmarks. In the case of portfolios acquired previously, the exposures arise almost entirely from old assumed reinsurance contracts having small limits of liability. See Note 5 "Reserves for Unpaid Losses and Loss Adjustment Expenses—Asbestos and Environmental Loss and Loss Adjustment Expense Reserve Activity" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K.

Investments

Overview

Sirius Group's investment objective is to maximize the total return, including yield income and gains and losses, over the long term, without assuming risk to a degree which could jeopardize the vitality of Sirius Group's insurance franchise. This objective and associated policies and guidelines ("Investment Policy") are established by the Sirius Group Board of Directors. Certain relevant subsidiaries also approve policies and guidelines substantially similar to, and consistent with, the Sirius Group Investment Policy. The Investment Policy also provides that the Finance Committee of the Board of Directors ("Finance Committee") establishes and maintains a "statement of risk tolerance", approved no less frequently than annually, which further guides the portfolio, taking into account Sirius Group's Statement of Risk Tolerance, potential strategic endeavors, and the Finance Committee's near term view of market risks.

Sirius Group operates its investment portfolio under a number of constraints. The principal constraint is to ensure that Sirius Group is able to demonstrate to internal and external constituents that it is able, and will remain able, to pay insurance claims during, and after, periods of extreme volatility to its enterprise—whether such volatility arises from within its insurance business operations or investment portfolio. Such constituents include numerous regulatory regimes, rating agencies, Sirius Group's internally developed risk models and tolerances, and shareholder volatility and return expectations.

Finally, Sirius Group views its investment portfolio as a source of capital for strategic investments and acquisitions. Taking the above factors into consideration, the Investment Policy provides a cohesive framework to mitigate risk. It prescribes a number of thresholds under which the portfolio is intended to operate. For example, one provision is meant to ensure that the group shall at all times own cash and fixed income in an amount no less than 100% of property and casualty policyholder liabilities.

Investable assets in excess of policyholder liabilities and liquidity needs are available to be invested in equity securities, which may include common equity securities and other long-term investments, including hedge funds, private equity funds and direct investments in privately held common securities investments. From time to time, Sirius Group may also invest in exchange-traded funds ("ETFs") and mutual funds. Over the long term, Sirius Group expects that investments in a portfolio of equity securities and alternative investment classes will produce higher returns than investments in fixed income securities.

Sirius Group operates subsidiaries and branches located throughout the world. Its global footprint requires Sirius Group to transact in numerous currencies. Where practical, Sirius Group aims to generally match material liabilities with assets and in many cases investable assets. Further, due to regulatory requirements, its portfolio includes short term, fixed income and equity securities held in non-U.S. denominated currencies (mainly Swedish Krona ("SEK"), Euro ("EUR") and Canadian dollar ("CAD")) that may result in net long or short non-U.S. denominated balances ("Unmatched Currency"). From time to time, Sirius Group may utilize third party tools such as currency forwards or swaps to mitigate unmatched exposure or may choose to leave such exposure unmatched. In making this assessment, it considers foreign exchange markets, the interest rate environment including forward rates, counterparty risk and expenses. Sirius Group does not apply hedge accounting to currency swaps or forwards.

Sirius International's functional currency is the SEK. Sirius Group's portfolio of fixed-maturity investments and equity securities held for general investment purposes are classified as trading and are reported at fair value. Foreign exchange gains and losses on non-SEK investments are recorded as a component of net realized and unrealized investment gains (losses). For U.S. dollar investments held by Sirius International, Sirius Group would generally experience gains or losses of a similar nature going in the opposite direction as a component of comprehensive income.

Prior to Sirius Group's acquisition by CMIG International in April 2016, an affiliate of White Mountains managed the investment assets of Sirius Group to fit within the tolerances of White Mountains' consolidated investment and strategic objectives. Sirius Group had established separate accounts with third-party registered investment advisors to manage its publicly-traded equity securities and convertible fixed-maturity securities. In addition, Sirius Group held meaningful investments in unconsolidated affiliates as well as select passive-equity-indexed exchange-traded funds. During 2016, in connection with the CMIG International acquisition, Sirius Group sold all of its holdings in unconsolidated affiliates, separate accounts and ETFs and redeployed proceeds mainly into fixed-income securities. However, Sirius Group believes that prudent levels of investments in equity securities and other long-term investments are likely to enhance total returns over the long-term. Subsequent to the CMIG International acquisition, Sirius Group has deployed into these asset classes at a measured pace with a focus on value oriented strategies.

Portfolio Composition

The following table presents the composition and fair value of Sirius Group's investment portfolio as of December 31, 2018 and 2017:

<i>(Millions)</i>	As of December 31, 2018		As of December 31, 2017	
	Fair value	% of total	Fair value	% of total
Fixed-maturity investments	\$ 1,949.2	57.2%	\$ 2,180.0	64.6%
Short-term investments	715.5	21.0%	625.0	18.5%
Equity securities	380.0	11.1%	299.2	8.9%
Other long-term investments	365.0	10.7%	269.5	8.0%
Total investments	\$ 3,409.7	100.0%	\$ 3,373.7	100.0%

As of December 31, 2018, Sirius Group's invested assets consisted of securities and other investments held for general investment purposes. Sirius Group's portfolio of fixed-maturity investments and equity securities held for general investment purposes are classified as trading and are reported at fair value as of the balance sheet date. Changes in unrealized gains and losses are reported pre-tax in revenues. Realized investment gains and losses are accounted for using the first-in first-out method and are reported pre-tax in revenues. Premiums and discounts on all fixed-maturity investments are amortized and accreted to net investment income over the anticipated life of the investment.

Sirius Group's invested assets that are measured at fair value include fixed-maturity investments, common and preferred equity securities, convertible fixed-maturity and preferred investments, and other long-term investments, such as interests in hedge funds and private equities. In determining its fair value estimates, Sirius Group uses a variety of valuation approaches and inputs. Sirius Group estimates fair value using valuation methods that maximize the use of quoted prices and other observable inputs.

The cost or amortized cost, gross unrealized investment gains and losses, net foreign currency gains and losses, and carrying values of Sirius Group's fixed-maturity investments as of December 31, 2018 and 2017, were as follows:

<i>(Millions)</i>	2018				
	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Net foreign currency gains (losses)	Fair value
Corporate debt securities	\$ 694.1	\$ 1.4	\$ (7.3)	\$ 7.6	\$ 695.8
Asset-backed securities	496.3	0.1	(3.8)	1.9	494.5
Residential mortgage-backed securities	413.0	1.7	(7.1)	5.9	413.5
U.S. government and government agency	163.9	0.3	(0.5)	4.2	167.9
Commercial mortgage-backed securities	117.7	0.2	(2.7)	0.7	115.9
Non-U.S. government and government agency	50.6	-	(0.2)	(0.1)	50.3
Preferred stocks	14.5	0.6	(6.8)	0.2	8.5
U.S. States, municipalities and political subdivision	2.8	-	-	-	2.8
Total fixed maturity investments	\$ 1,952.9	\$ 4.3	\$ (28.4)	\$ 20.4	\$ 1,949.2

<i>(Millions)</i>	2017				
	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Net foreign currency gains (losses)	Fair value
Corporate debt securities	\$ 1,017.0	\$ 3.1	\$ (4.8)	\$ (0.8)	\$ 1,014.5
Asset-backed securities	478.1	0.4	(0.6)	(2.5)	475.4
Residential mortgage-backed securities	300.7	0.1	(5.6)	(1.7)	293.5
U.S. government and government agency	85.8	-	(0.8)	(0.2)	84.8
Commercial mortgage-backed securities	193.8	0.8	(3.6)	-	191.0
Non-U.S. government and government agency	106.8	0.1	(0.9)	1.2	107.2
Preferred stocks	9.3	0.3	-	0.2	9.8
U.S. States, municipalities and political subdivision	3.8	-	-	-	3.8
Total fixed maturity investments	\$ 2,195.3	\$ 4.8	\$ (16.3)	\$ (3.8)	\$ 2,180.0

At December 31, 2018 and 2017, the weighted average credit quality of Sirius Group's fixed-maturity investments was between A+ and AA- and 96% and 95% was rated investment grade at December 31, 2018 and 2017, respectively.

The following table summarizes the ratings of the fixed-maturity investments held in Sirius Group's investment portfolio as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018	2017
AAA	\$ 602.0	\$ 689.4
AA	818.0	635.2
A	290.5	416.4
BBB	167.4	333.8
Other	71.3	105.2
Total fixed maturity investments⁽¹⁾	\$ 1,949.2	\$ 2,180.0

⁽¹⁾Credit ratings are assigned based on the following hierarchy: 1) Standard & Poor's and 2) Moody's Investor Service.

The weighted average duration of Sirius Group's fixed income portfolio as of December 31, 2018 was approximately 1.7 years, including short-term investments, and approximately 2.2 years excluding short-term investments.

The cost or amortized cost and fair value of Sirius Group's fixed maturity investments as of December 31, 2018 and 2017 are presented below by contractual maturity. Actual maturities could differ from contractual maturities because borrowers may have the right to call or prepay certain obligations with or without call or prepayment penalties.

<i>(Millions)</i>	2018		2017	
	Cost or amortized cost	Fair value	Cost or amortized cost	Fair value
Due in one year or less	\$ 249.6	\$ 254.6	\$ 106.3	\$ 106.5
Due after one year through five years	635.6	636.4	1,009.0	1,006.4
Due after five years through ten years	26.2	25.7	71.2	70.8
Due after ten years	0.1	0.1	26.9	26.6
Mortgage-backed and asset-backed securities	1,026.9	1,023.9	972.6	959.9
Preferred stocks	14.5	8.5	9.3	9.8
Total	\$ 1,952.9	\$ 1,949.2	\$ 2,195.3	\$ 2,180.0

The cost or amortized cost, gross unrealized investment gains and losses, net foreign currency gains and losses, and carrying values of Sirius Group's equity securities and other long-term investments as of December 31, 2018 and 2017 were as follows:

<i>(Millions)</i>	2018				
	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Net foreign currency gains (losses)	Fair value
Equity securities	\$ 409.4	\$ 17.8	\$ (50.8)	\$ 3.6	\$ 380.0
Other long-term investments	\$ 337.6	\$ 32.6	\$ (13.5)	\$ 8.3	\$ 365.0

<i>(Millions)</i>	2017				
	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Net foreign currency gains (losses)	Fair value
Equity securities	\$ 275.1	\$ 29.3	\$ (5.1)	\$ (0.1)	\$ 299.2
Other long-term investments	\$ 255.5	\$ 14.2	\$ (4.1)	\$ 3.9	\$ 269.5

Competition and Peers

The worldwide insurance and reinsurance markets are highly competitive. Competition is influenced by a variety of factors, including price charged and other terms and conditions offered, financial strength ratings, prior history and relationships, as well as expertise and the speed at which the company has historically paid claims.

Sirius Group competes for business in Europe, Bermuda, the United States and other international markets with numerous global competitors. Its competitors include other insurance and reinsurance companies and underwriting syndicates at Lloyd's of London, as well as London Market Companies. Some of the companies that Sirius Group competes with directly include Alleghany Corporation, Arch Capital Group Ltd., Aspen Insurance Holdings Ltd., Axis Capital Holdings Ltd., Everest Re Group, Ltd., General Reinsurance Corporation, Greenlight Capital Re, Ltd., Hannover Ruckversicherung AG, Munich Re Group, Odyssey Re Holdings Corp., PartnerRe Ltd., RenaissanceRe Holdings Ltd., Scor Global P&C, Swiss Re Group and Third Point Reinsurance Ltd. While some of these competitors have greater revenue and shareholders' equity than Sirius Group, management believes that Sirius Group is well-suited to compete against its peers.

In addition, in recent years the persistent low interest rate environment and ease of entry into the reinsurance sector has led to increased competition from non-traditional sources of capital, such as insurance-linked funds or collateralized special purpose insurers, predominantly in the property catastrophe excess reinsurance market. This alternative capital provides collateralized property catastrophe protection in the form of catastrophe bonds, industry loss warranties and other risk-linked products that facilitate the ability for non-reinsurance entities, such as hedge funds and pension funds, to compete for property catastrophe excess reinsurance business outside of the traditional treaty market. As a result, Sirius Group has observed reduced pricing and/or reduced shares in certain property catastrophe excess markets, as well as certain other markets.

Seasonality

Sirius Group's segments experience some seasonality with regard to quarterly recognition of premiums written, which are generally highest in the first quarter and lowest during the fourth quarter. We expect this trend to continue in the future.

Regulation

The business of insurance and reinsurance is regulated in all countries in which Sirius Group operates, although the degree and type of regulation varies from one jurisdiction to another. As a holding company, Sirius Group is generally not directly subject to such regulations, but its various insurance and reinsurance operating subsidiaries are subject to regulation, as summarized below.

Bermuda Insurance Regulation

Insurance Regulation Generally

The Insurance Act 1978 of Bermuda and related regulations, as amended (the "Insurance Act"), regulates the insurance businesses of Sirius Bermuda, and other Bermuda operating companies, including Alstead Reinsurance Ltd. and the Bermuda branch of Sirius International (together, the "Bermuda Operating Companies"), and provides that no person may carry on any insurance business in or from within Bermuda unless registered as an insurer under the Insurance Act by the BMA.

The BMA, in deciding whether to grant registration, has broad discretion to act as it thinks fit in the public interest. The BMA is required by the Insurance Act to determine whether the applicant is a fit and proper body to be engaged in the insurance business and, in particular, whether it has, or has available to it, adequate knowledge and expertise to operate an insurance business.

The Insurance Act does not distinguish between insurers and reinsurers: companies are registered under the Insurance Act as "insurers." The Insurance Act uses the defined term "insurance business" to include reinsurance business.

The continued registration of an applicant as an insurer is subject to the applicant complying with the terms of its registration and such other conditions as the BMA may impose from time to time. The Insurance Act also grants to the BMA powers to supervise, investigate and intervene in the affairs of insurance companies.

Each of the Bermuda Operating Companies has the ability to declare or pay dividends or make capital distributions during any 12-month period without the prior approval of Bermuda regulatory authorities on the condition that any such declaration or payment of dividends or capital distributions does not cause a breach of any of its regulatory solvency and liquidity requirements.

The Insurance Act imposes solvency and liquidity standards on Bermuda insurance companies, as well as auditing and reporting requirements. In addition, the BMA confirmed in March 2016 that it will act as the group supervisor for Sirius Group and has designated Sirius Bermuda as the designated insurer for group supervisory purposes ("Designated Insurer"). Therefore, Sirius Group is subject to the BMA's group supervision and solvency rules which cover assessing the financial situation and solvency position of Sirius Group and regulating intra-Group transactions, risk concentration, governance procedures, risk management and regulatory reporting and disclosure. See "*Regulation of Sirius Group—Bermuda Insurance Regulation—Group Supervision*" below for further discussion.

Certain significant aspects of the Bermuda insurance regulatory framework are set forth below, focusing only on Sirius Group's primary Class 4 insurer, Sirius Bermuda, which is subject to the strictest regulation out of the Bermuda Operating Companies.

Classification of Insurers

The Insurance Act distinguishes between insurers carrying on long-term business, insurers carrying on general business and insurers carrying on special purpose business. There are six general business classifications (Classes 1, 2, 3, 3A, 3B and 4), five long-term business classifications (Classes A, B, C, D and E) and one classification for special purpose insurers.

Classification as a Class 4 Insurer; Minimum Paid Up Share Capital

A body corporate is registrable as a Class 4 insurer where (i) it has at the time of its application for registration, or will have before it carries on insurance business, a total statutory capital and surplus of not less than \$100,000,000; and (ii) it intends to carry on general insurance business including excess liability business or property catastrophe reinsurance business.

Sirius Bermuda is required to maintain fully paid-up share capital of at least \$1 million.

Principal Representative

As a Class 4 insurer, Sirius Bermuda is required to maintain a principal office and to appoint and maintain a principal representative in Bermuda.

Without a reason acceptable to the BMA, an insurer may not terminate the appointment of its principal representative, and the principal representative may not cease to act as such, unless 30 days' notice in writing to the BMA is given of the intention to do so.

It is the duty of the principal representative to forthwith notify the BMA where the principal representative reaches the view that there is a likelihood of the insurer becoming insolvent, or upon becoming aware that a reportable "event" has occurred, or is believed to have occurred. Examples of a reportable "event" include a failure by the insurer to comply substantially with a condition imposed upon it by the BMA relating to a solvency margin or a liquidity or other ratio, a significant loss reasonably likely to cause the insurer to fail to comply with its enhanced capital requirement (discussed below) and the occurrence of a "material change" (as such term is defined under the Insurance Act) in its business operations.

Where there has been a significant loss which is reasonably likely to cause the insurer to fail to comply with its enhanced capital requirement, the principal representative must also furnish the BMA with a capital and solvency return reflecting an enhanced capital requirement prepared using post-loss data.

Furthermore, where a notification has been made to the BMA regarding a material change, the principal representative must furnish the BMA with unaudited interim statutory financial statements in relation to such period as the BMA may require.

Loss Reserve Specialist

As a Class 4 insurer, Sirius Bermuda is required to appoint an individual approved by the BMA to be its loss reserve specialist. In order to qualify as an approved loss reserve specialist, the applicant must be an individual qualified to provide an opinion in accordance with the requirements of the Insurance Act and the BMA must be satisfied that the individual is fit and proper to hold such an appointment.

Sirius Bermuda is required to submit annually an opinion of its approved loss reserve specialist with its capital and solvency return in respect of its total general business insurance technical provisions (i.e. the aggregate of its net premium provisions, net loss and loss expense provisions and risk margin, as each is reported in the insurer's statutory economic balance sheet). The loss reserve specialist's opinion must state, among other things, whether or not the aggregate amount of technical provisions shown in the statutory economic balance sheet as at the end of the relevant financial year (i) meets the requirements of the Insurance Act and (ii) makes reasonable provision for the total technical provisions of the insurer under the terms of its insurance contracts and agreements.

Annual Financial Statements

Sirius Bermuda prepares and submits, on an annual basis, audited GAAP financial statements and audited statutory financial statements.

The Insurance Act prescribes rules for the preparation and substance of statutory financial statements (which include, in statutory form, a balance sheet, an income statement, a statement of capital and surplus and notes thereto). The statutory financial statements include detailed information and analysis regarding premiums, claims, reinsurance and investments of the insurer.

Sirius Bermuda is also required to prepare and submit to the BMA financial statements which have been prepared under GAAP or international financial reporting standards (“IFRS financial statements”) with Sirius Bermuda filing GAAP financial statements. The insurer’s annual GAAP financial statements and the auditor’s report thereon, and the statutory financial statements are required to be filed with the BMA within four months from the end of the relevant financial year (unless specifically extended with the approval of the BMA).

The statutory financial statements do not form a part of the public records maintained by the BMA but the GAAP financial statements are available for public inspection.

Annual Statutory Financial Return and Annual Capital and Solvency Return

As a Class 4 insurer, Sirius Bermuda is required to file with the BMA a statutory financial return no later than four months after its financial year end. The statutory financial return includes, among other matters, the statutory financial statements and the calculations for the Class 4 insurer’s minimum solvency margin and liquidity ratio.

In addition, each year Sirius Bermuda is required to file with the BMA a capital and solvency return along with its annual statutory financial return. Sirius Group has published its financial condition report as of December 31, 2017 which contains the minimum solvency margin and enhanced capital requirement of Sirius Group together with those of its Bermudian subsidiaries including Sirius Bermuda.

Declaration of Compliance

At the time of filing its statutory financial statements, a Class 4 insurer is also required to deliver to the BMA a declaration of compliance, in such form and with such content as may be prescribed by the BMA, declaring whether or not the Class 4 insurer has, with respect to the preceding financial year (i) complied with all requirements of the minimum criteria applicable to it; (ii) complied with the minimum margin of solvency as at its financial year end; (iii) complied with the applicable enhanced capital requirements as at its financial year end; and (iv) observed any limitations, restrictions or conditions imposed upon issuance of its license, if applicable.

Public Disclosures

Pursuant to the Insurance Act, all commercial insurers and insurance groups are required to prepare and file with the BMA, and also publish on their website, a financial condition report.

The BMA has discretion to approve modifications and exemptions to the public disclosure rules, on application by the insurer if, among other things, the BMA is satisfied that the disclosure of certain information will result in a competitive disadvantage or compromise confidentiality obligations of the insurer.

Non-insurance Business

No Class 4 insurer may engage in non-insurance business, unless that non-insurance business is ancillary to its core business. Non-insurance business means any business other than insurance business and includes carrying on investment business, managing an investment fund as operator, carrying on business as a fund administrator, carrying on banking business, underwriting debt or securities or otherwise engaging in investment banking, engaging in commercial or industrial activities and carrying on the business of management, sales or leasing of real property.

Minimum Liquidity Ratio

The Insurance Act provides a minimum liquidity ratio for general business insurers. A Class 4 insurer engaged in general business is required to maintain the value of its relevant assets at not less than 75% of the amount of its relevant liabilities. Relevant assets include cash and time deposits, quoted investments, unquoted bonds and debentures, first liens on real estate, investment income due and accrued, accounts and premiums receivable, reinsurance balances receivable, funds held by ceding reinsurers and any other assets which the BMA, on application in any particular case made to it with reasons, accepts in that case.

The relevant liabilities are total general business insurance reserves and total other liabilities less deferred income taxes and letters of credit, guarantees and other instruments.

Minimum Solvency Margin and Enhanced Capital Requirements

Sirius Bermuda is required to maintain available statutory economic capital and surplus at a level equal to or in excess of its enhanced capital requirement (“ECR”), which is established by reference to either a model based on the BMA’s prescribed form of capital and solvency return (known as the Bermuda Solvency Capital Requirement or “BSCR”) or an approved internal capital model.

The BSCR model is a risk-based capital model which provides a method for determining a Class 4 insurer’s capital requirements (statutory economic capital and surplus) by taking into account the risk characteristics of different aspects of the Class 4 insurer’s business. The BSCR formula establishes capital requirements for ten categories of risk: fixed-income investment risk, equity investment risk, interest rate/liquidity risk, currency risk, concentration risk, premium risk, reserve risk, credit risk, catastrophe risk and operational risk. For each category, the capital requirement is determined by applying factors to asset, premium, reserve, creditor, probable maximum loss and operation items, with higher factors applied to items with greater underlying risk and lower factors for less risky items.

While not specifically referred to in the Insurance Act, the BMA has also established a target capital level (“TCL”) for each Class 4 insurer equal to 120% of its ECR. The TCL serves as an early warning tool for the BMA, and failure to maintain statutory capital at least equal to the TCL will likely result in increased regulatory oversight.

If Sirius Bermuda at any time fails to meet its applicable enhanced capital requirement, it shall, upon becoming aware of that failure, immediately notify the BMA and promptly file with the BMA a written report containing particulars of the circumstances leading to the failure and a plan detailing the manner in which the Class 4 insurer intends to rectify the failure and furnish the BMA with (i) unaudited statutory economic balance sheets and unaudited interim statutory financial statements prepared in accordance with GAAP covering such period as the BMA may require; (ii) the opinion of a loss reserve specialist in relation to total general business insurance technical provisions as set out in the economic balance sheet, where applicable; (iii) a general business solvency certificate in respect of the financial statements; and (iv) a capital and solvency return reflecting an enhanced capital requirement prepared using post failure data where applicable.

A Class 4 insurer is required to have general business assets that exceed the value of its general business liabilities by an amount prescribed by the Insurance Act, as its Minimum Solvency Margin (“MSM”). The MSM that a Class 4 insurer is required to maintain with respect to its general business is the greater of (i) U.S. \$100 million, or (ii) 50% of net premiums written (with a credit for reinsurance ceded not exceeding 25% of gross premiums), or (iii) 15% of the aggregate of net loss and loss expense provisions and other reinsurance reserves, or (iv) 25% of the ECR as reported at the end of the relevant year.

If at any time a Class 4 insurer fails to meet its MSM requirements, it must, upon becoming aware of such failure, immediately notify the BMA and promptly file a written report with the BMA containing particulars of the circumstances that gave rise to the failure and setting out its plan detailing the manner in which the Class 4 insurer intends to rectify the failure.

Eligible Capital

A Class 4 insurer is required to disclose the makeup of its capital in accordance with the “3-tiered eligible capital system”. Under this system, all of the Class 4 insurer’s capital instruments will be classified as either basic or ancillary capital which in turn will be classified into one of three tiers based on their “loss absorbency” characteristics. Highest quality capital will be classified as Tier 1 Capital, and lesser quality capital will be classified as either Tier 2 Capital or Tier 3 Capital. Under this regime, up to certain specified percentages of Tier 1, Tier 2 and Tier 3 Capital may be used to support the Class 4 insurer’s MSM, ECR and TCL.

Code of Conduct

The Insurance Code of Conduct (the “Code of Conduct”) prescribes the duties, standards, procedures and sound business principles that must be complied with by all insurers registered under the Insurance Act. The BMA will assess an insurer’s compliance with the Code of Conduct in a proportional manner relative to the nature, scale and complexity of its business.

Cancellation of Insurer's Registration

An insurer's registration may be cancelled by the BMA at the request of the insurer or on certain grounds specified in the Insurance Act. For example, such grounds include a failure by the insurer to comply with its obligations under the Insurance Act or where the BMA believes that the insurer has not been carrying on business in accordance with sound insurance principles.

Restrictions on Dividends and Distributions

A Class 4 insurer is prohibited from declaring or paying a dividend if it is in breach of its MSM, ECR or minimum liquidity ratio, or if the declaration or payment of such dividend would cause such a breach. Where an insurer fails to meet its MSM or minimum liquidity ratio on the last day of any financial year, it will be prohibited from declaring or paying any dividends during the next financial year without the approval of the BMA.

In addition, a Class 4 insurer is prohibited from declaring or paying in any financial year dividends of more than 25% of its total statutory capital and surplus (as shown on its previous financial year's statutory balance sheet) unless it files with the BMA an affidavit signed by at least two directors and the principal representative stating that it will continue to meet its solvency margin and minimum liquidity ratio.

Reduction of Capital

No Class 4 insurer may reduce its total statutory capital by 15% or more, as set out in its previous year's financial statements, unless it has received the prior approval of the BMA. Total statutory capital consists of the insurer's paid in share capital, its contributed surplus and any other fixed capital designated by the BMA as statutory capital.

A Class 4 insurer seeking to reduce its statutory capital by 15% or more, as set out in its previous year's financial statements, is also required to submit an affidavit signed by at least two directors and the principal representative stating that the proposed reduction will not cause the insurer to fail its relevant margins and such other information as the BMA may require.

Supervision, Investigation, Intervention and Disclosure

The BMA may, by notice in writing served on a registered person or a designated insurer, require the registered person or designated insurer to provide such information and/or documentation as the BMA may reasonably require with respect to matters that are likely to be material to the performance of its supervisory functions under the Insurance Act. In addition, it may require such person's auditor, underwriter, accountant or any other person with relevant professional skill of such registered person or designated insurer to prepare a report on any aspect pertaining thereto. In the case of a report, the person so appointed shall immediately give the BMA written notice of any fact or matter of which he becomes aware or which indicates to him that any condition attaching to his registration under the Insurance Act is not or has not or may not be or may not have been fulfilled and that such matters are likely to be material to the performance of its functions under the Insurance Act. If it appears to the BMA to be desirable in the interests of the clients of a registered person or relevant insurance group, the BMA may also exercise these powers in relation to subsidiaries, parent companies and other affiliates of the registered person or designated insurer.

Where the BMA suspects that a person has failed to properly register under the Insurance Act or that a registered person or designated insurer has failed to comply with a requirement of the Insurance Act or that a person is not, or is no longer, a fit and proper person to perform functions in relation to a regulated activity, it may, by notice in writing, carry out an investigation into such person (or any other person connected thereto). In connection therewith, the BMA may require every person who is or was a controller, officer, employee, agent, banker, auditor, accountant, barrister and attorney or insurance manager to make a report and produce such documents in his care, custody and control and to attend before the BMA to answer questions relevant to the BMA's investigation and to take such actions as the BMA may direct.

If it appears to the BMA that the business of the registered insurer is being conducted in a way that there is a significant risk of the insurer becoming insolvent or being unable to meet its obligations to policyholders, or that the insurer is in breach of the Insurance Act or any conditions imposed upon its registration, or the minimum criteria stipulated in the Insurance Act is not or has not been fulfilled in respect of a registered insurer, or that a person has become a controller without providing the BMA with the appropriate notice or in contravention of a notice of objection, or the registered insurer is in breach of its ECR, or that a designated insurer is in breach of any provision of the Insurance Act or the regulations or rules applicable to it, the BMA may issue such directions as it deems desirable for safeguarding the interests of policyholders or potential policyholders of the insurer or the insurance group, including but not limited to, restricting business activities, investments and dividends.

Fit and Proper Controllers

The BMA maintains supervision over the controllers of all registered insurers in Bermuda.

A controller includes (i) the managing director of the registered insurer or its parent company; (ii) the chief executive of the registered insurer or of its parent company; (iii) a shareholder controller; and (iv) any person in accordance with whose directions or instructions the directors of the registered insurer or of its parent company are accustomed to act.

The definition of shareholder controller is set out in the Insurance Act but generally refers to (i) a person who holds 10% or more of the shares carrying rights to vote at a shareholders' meeting of the registered insurer or its parent company, or (ii) a person who is entitled to exercise 10% or more of the voting power at any shareholders' meeting of such registered insurer or its parent company, or (iii) a person who is able to exercise significant influence over the management of the registered insurer or its parent company by virtue of its shareholding or its entitlement to exercise, or control the exercise of, the voting power at any shareholders' meeting.

The BMA may file a notice of objection to any person who has become a controller of any description where it appears that such person is not, or is no longer, a fit and proper person to be a controller of the registered insurer. Before issuing a notice of objection, the BMA is required to serve upon the person concerned a preliminary written notice stating the BMA's intention to issue formal notice of objection. Upon receipt of the preliminary written notice, the person served may, within 28 days, file written representations with the BMA which shall be taken into account by the BMA in making its final determination. Any person who continues to be a controller of any description after having received a notice of objection shall be guilty of an offence and/or subject to fine.

All registered insurers are required to give written notice to the BMA of a change in controller(s).

Notification of Material Changes

Registered insurers are required to give notice to the BMA of their intention to effect a material change within the meaning of the Insurance Act. Material changes include: the transfer or acquisition of insurance business; merger with or acquisition of another firm; acquisition of a controlling interest in an undertaking that is engaged in non-insurance business; outsourcing all or substantially all of the company's actuarial, risk management, compliance, underwriting or internal audit functions; transfer or expansion into another line of business or the outsourcing of an officer role.

Group Supervision

The BMA acts as group supervisor of Sirius Group and its subsidiaries (the "Regulatory Group") and has designated Sirius Bermuda as the Designated Insurer.

As group supervisor, the BMA performs a number of supervisory functions including (i) coordinating the gathering and dissemination of information which is of importance for the supervisory task of other competent authorities; (ii) carrying out a supervisory review and assessment of the Regulatory Group; (iii) carrying out an assessment of the Regulatory Group's compliance with the rules on solvency, risk concentration, intra-group transactions and good governance procedures; (iv) planning and coordinating, with other competent authorities, supervisory activities in respect of the Regulatory Group, both as a going concern and in emergency situations; (v) coordinating any enforcement action that may need to be taken against the Regulatory Group or any of its members; and (vi) planning and coordinating meetings of colleges of supervisors (consisting of insurance regulators) in order to facilitate the carrying out of the functions described above.

Group Solvency and Group Supervision

The current supervision and solvency rules (together, “Group Rules”) apply to the Regulatory Group so long as the BMA remains Sirius Group’s group supervisor. Through the Group Rules, the BMA may take action which affects Sirius Group. A summary of the Group Rules is set forth below.

Approved Group Actuary

Sirius Bermuda, as Designated Insurer, is responsible for ensuring that the Regulatory Group appoints an individual approved by the BMA to be the group actuary. The group actuary must provide an opinion on the Regulatory Group’s technical provisions as recorded in the group statutory economic balance sheet.

Annual Group Financial Statements

The Regulatory Group is required to prepare and submit, on an annual basis, financial statements prepared in accordance with either IFRS or GAAP, together with statutory financial statements. The financial statements must be audited annually by the Regulatory Group’s approved auditor who is required to prepare an auditor’s report thereon in accordance with generally accepted auditing standards. In addition, the Regulatory Group must prepare statutory financial statements (which include, in statutory form, a group balance sheet, a group income statement, a group statement of capital and surplus, and notes thereto) in respect of the parent company of the Regulatory Group. The Designated Insurer is required to file with the BMA the group statutory financial statements and the audited group GAAP or IFRS financial statements for the Regulatory Group with the BMA within five months from the end of the relevant financial year (unless specifically extended).

Annual Insurance Group Statutory Financial Return and Annual Insurance Group Capital and Solvency Return

The Regulatory Group is required to prepare an annual group statutory financial return and an insurance group capital and solvency return. The group statutory financial return must consist of (i) an insurance group business solvency certificate; (ii) particulars of ceded reinsurance listing the top-ten unaffiliated reinsurers; (iii) any adjustments to the group financial statements in the form of a reconciliation of amounts reported as total assets, total liabilities, net income and total statutory capital and surplus; (iv) a list of non-insurance financial regulated entities owned by the Regulatory Group; and (v) particulars of qualifying members of the Regulatory Group. The group capital and solvency return shall include an annual opinion of the group actuary. Both the annual insurance group statutory financial return and the insurance group capital and solvency return must be submitted to the BMA by the Designated Insurer within five months after its financial year end (unless specifically extended).

Quarterly Group Financial Statements

The Designated Insurer is required to file quarterly financial returns for the Regulatory Group with the BMA on or before the last day of the months May, August and November of each year. The quarterly Regulatory Group financial returns consist of (i) quarterly unaudited (consolidated) financial statements for each financial quarter (which must minimally include a balance sheet and income statement and must also be recent and not reflect a financial position that exceeds two months) and (ii) a list and details of material intra-group transactions and risk concentrations, details surrounding all intra-group reinsurance and retrocession arrangements and details of the top-ten counterparties and any other counterparty exposures exceeding 10% of the Regulatory Group’s statutory capital and surplus.

Public Disclosures

Pursuant to recent amendments to the Insurance Act all insurance groups are required to prepare and file with the BMA, and also publish on their website, a financial condition report.

Group Solvency Self-Assessment (“GSSA”)

The Group Rules require the board of directors of the parent company of the insurance group (the “Parent Board”) to establish solvency self-assessment procedures for the group that factors in all the foreseeable reasonably material risks. Such procedures should be carried out at least annually and assess the quality and quantity of the capital required to adequately cover the risks to which the insurance group is exposed. Such procedures must also be an integral part of the group’s risk management framework and be reviewed and evaluated on a regular basis by the Parent Board. In particular, the GSSA should, among other things, demonstrate consideration of the relationship between risk management, the quality and quantity of capital resources, the impact of risk mitigation techniques and diversification and correlation effects between material risks; a description of the group’s risk appetite; be forward-looking; include appropriate stress and scenario testing and appropriately reflect all assets and liabilities, material off-balance sheet arrangements, material intra group transactions, relevant managerial practices, systems and controls and a valuation basis that is aligned with the risk characteristics and business model of the group.

Group Minimum Solvency Margin (“Group MSM”) and Group Enhanced Capital Requirement (“Group ECR”)

An insurance group must ensure that the value of its total statutory group economic capital and surplus exceeds the aggregate of (i) the amount of the aggregate minimum margins of solvency of each qualifying member of the Regulatory Group controlled by the parent company, and (ii) the parent company’s percentage shareholding in each member where it exercises significant influence over such member but does not control it. A member is a qualifying member of the Regulatory Group if it is subject to solvency requirements in the jurisdiction in which it is registered. The Group is also required to maintain available Group statutory economic capital and surplus in an amount that is at least equal to the Group ECR and the BMA has established a group target capital level equal to 120% of Group ECR.

Group Eligible Capital

The Designated Insurer is required to disclose the makeup of the Regulatory Group’s capital in accordance with a 3-tiered eligible capital system. Under the eligible capital requirements, all of the Regulatory Group’s capital instruments will be classified as either basic or ancillary capital which in turn will be classified into one of three tiers based on their “loss absorbency” characteristics. Highest quality capital will be classified Tier 1 Capital, lesser quality capital will be classified as either Tier 2 Capital or Tier 3 Capital. A minimum threshold of Tier 1 and maximum thresholds of Tier 2 and Tier 3 Capital used to satisfy the Regulatory Group MSM and Regulatory Group ECR requirements are specified under the rules.

Group Governance

The Group Rules require the Parent Board to establish and effectively implement corporate governance policies and procedures, which it must be periodically review to ensure they continue to support the overall organizational strategy of the group. In particular, the Parent Board must:

- ensure that operational and oversight responsibilities of the group are clearly defined and documented and that the reporting of material deficiencies and fraudulent activities are transparent and devoid of conflicts of interest;
- establish systems for identifying on a risk-sensitive basis those policies and procedures that must be reviewed annually and those policies and procedures that must be reviewed at other regular intervals;
- establish a risk management and internal controls framework and ensure that it is assessed regularly and such assessment is reported to the Parent Board and the chief and senior executives;
- establish and maintain sound accounting and financial reporting procedures and practices for the group; and
- establish and keep under review group functions relating to actuarial, compliance, internal audit and risk management functions which must address certain specific requirements as set out in the Group Rules.

Designated Insurer Notification Obligations

The Designated Insurer must notify the BMA upon reaching a view that there is a likelihood of the Regulatory Group or any member of the Regulatory Group becoming insolvent or that a reportable “event” is believed to have occurred. Examples of a reportable “event” include a failure by the Regulatory Group or any member of the Regulatory Group to comply substantially with a requirement imposed upon it under the Group Rules relating to its solvency position, governance and risk management or supervisory reporting and disclosures; failure by the Designated Insurer to comply with a direction given to it under the Insurance Act in respect of the group or any of its members; a criminal conviction imposed upon any member of the Regulatory Group whether in Bermuda or abroad; material breaches of any statutory requirements by any member of the Regulatory Group located outside of Bermuda that could lead to supervisory or enforcement action by a competent authority; or a significant loss that is reasonably likely to cause the Regulatory Group to be unable to comply with its Group ECR. The Designated Insurer must promptly furnish the BMA with a written report setting out the particulars of the case and furnish a Regulatory Group capital and solvency return that reflects the Group ECR that has been prepared using post-loss data and unaudited financial statements for such period as the BMA requires.

Certain Other Bermuda Law Considerations

Sirius Group is a Bermuda exempted company incorporated under the Companies Act. As a result, Sirius Group is required to comply with the provisions of the Companies Act regulating the payment of dividends and making of distributions from contributed surplus. A company is prohibited from declaring or paying a dividend, or making a distribution out of contributed surplus, if there are reasonable grounds for believing that:

- The company is, or would after the payment be, unable to pay its liabilities as they become due; or
- The realizable value of the company’s assets would be less than its liabilities.

Under Sirius Group’s bye-laws, each common share is entitled to dividends if, and when, dividends are declared by its board of directors, subject to any preferred dividend rights which may be held by the holders any preference shares. Issued share capital is the aggregate par value of the company’s issued shares, and the share premium account is the aggregate amount paid for issued shares over and above their par value. Share premium accounts may be reduced in certain limited circumstances. In addition, the Companies Act regulates return of capital, reduction of capital and any purchase or redemption of shares by Sirius Group.

Although Sirius Group is incorporated in Bermuda, it has been designated as a nonresident of Bermuda for exchange control purposes by the BMA. Pursuant to its nonresident status, Sirius Group may hold any currency other than Bermuda dollars and convert that currency into any other currency, other than Bermuda dollars, without restriction.

Under Bermuda law, exempted companies are companies formed for the purpose of conducting business outside Bermuda from a principal place in Bermuda. All Bermuda exempted companies are exempt from certain Bermuda laws restricting the percentage of share capital that may be held by non-Bermudians. However, exempted companies may not participate in certain business transactions, including: (i) the acquisition or holding of land in Bermuda except that required for their business held by way of lease or tenancy for a term not exceeding 50 years or, with the consent of the Minister of Finance granted in his discretion, land by way of lease or tenancy for a term not exceeding 21 years in order to provide accommodation or recreational facilities for its officers and employees; (ii) the taking of mortgages on land in Bermuda to secure an amount in excess of BD\$50,000 without the consent of the relevant Ministers; (iii) the acquisition of any bonds or debentures secured by any land in Bermuda, other than bonds or debentures issued by the Bermuda government or a public authority; or (iv) the carrying on of business of any kind in Bermuda, except in furtherance of their business carried on outside Bermuda or under license granted by the Minister of Finance. Generally, it is not permitted without a special license granted by the Minister to insure Bermuda domestic risks or risks of persons of, in or based in Bermuda.

On January 1, 2019 the Economic Substance Act 2018 (the “ESA”) came into effect in Bermuda. Under the provisions of the ESA, every Bermuda registered entity engaged in a “relevant activity” must satisfy economic substance requirements by maintaining a substantial economic presence in Bermuda. Carrying on as a business either insurance or holding entity activities (both as defined in the ESA and Economic Substance Regulations 2018) are relevant activities under the ESA. To the extent that the ESA applies to any of our entities registered in Bermuda we will be required to demonstrate compliance with economic substance requirements by filing an annual economic substance declaration with the Registrar of Companies in Bermuda.

U.S. Insurance Regulation

State-Based Regulation

Sirius Group's U.S.-based insurance and reinsurance operating subsidiaries are subject to regulation and supervision in each of the states where they are domiciled and where they are licensed to conduct business. Generally, state regulatory authorities have broad supervisory and administrative powers over such matters as licenses, standards of solvency, premium rates, policy forms, investments, statutory deposits, methods of accounting, form and content of financial statements, reserves for unpaid loss and loss adjustment expenses, reinsurance, minimum capital and surplus requirements, dividends and other distributions to shareholders, annual and other report filings and market conduct.

Sirius Group's U.S.-based insurance and reinsurance subsidiaries, and their respective domiciliary state regulators (the "Domiciliary States") are as follows:

- Sirius America Insurance Company (New York State Department of Financial Services);
- Empire Insurance Company (New York State Department of Financial Services);
- WRM America Indemnity Company (New York State Department of Financial Services); and
- Oakwood Insurance Company (Tennessee Department of Commerce and Insurance).

State Accreditation and Monitoring

All state insurance regulatory bodies with jurisdiction over Sirius Group's U.S.-based insurance and reinsurance subsidiaries are accredited by the National Association of Insurance Commissioners ("NAIC"). Accredited states generally follow the model laws developed by the NAIC. However, there are jurisdictional differences that require reference to each state's insurance laws. States have laws establishing the standards that an insurer must meet to maintain its license to write business. In addition, all states, including the Domiciliary States, have enacted laws substantially similar to the NAIC's risk-based capital ("RBC") standards for property and casualty companies, which are designed to determine minimum capital requirements and to raise the level of protection that statutory surplus provides for policyholder obligations. The RBC formula for property and casualty insurance companies measures three major areas of risk: 1) underwriting, which encompasses the risk of adverse loss developments and inadequate pricing; 2) declines in asset values arising from market and/or credit risk; and 3) off-balance sheet risk arising from adverse experience from non-controlled assets, guarantees for affiliates or other contingent liabilities and excessive premium growth. RBC reports are provided annually to state regulators as part of an insurer's financial reporting requirements. Insurers having less total adjusted capital than that required by the RBC calculation will be subject to varying degrees of regulatory action, depending on the level of capital inadequacy. As of December 31, 2018, Sirius Group's U.S. domiciled subsidiaries exceeded all required RBC regulatory thresholds. The calculation of RBC requires certain judgments to be made, and, accordingly, the current RBC of Sirius Group's U.S. domiciled subsidiaries may be greater or less than the RBC calculated as of any date of determination.

The NAIC has a set of financial relationship tests known as the Insurance Regulatory Information System to assist state insurance regulators in monitoring the financial condition of insurance companies and identifying companies that require special regulatory attention operating in their respective states. Insurance companies generally submit data annually to their domiciliary state regulator, which in turn analyzes the data using prescribed financial data ratios ("IRIS ratios"), each with defined "usual ranges". Generally, regulators will begin to investigate or monitor an insurance company if its IRIS ratios fall outside the usual ranges for four or more of the ratios. If an insurance company has insufficient capital, regulators may act to reduce the amount of insurance it can issue or, in severe situations, assume control of the company. None of Sirius Group's U.S.-based (re)insurance subsidiaries is currently subject to regulatory scrutiny based on their respective IRIS ratios.

Many states have laws and regulations that limit an insurer's ability to exit a market. Some states also limit cancelling or non-renewing certain policies for specific reasons. State insurance laws and regulations include numerous provisions governing marketplace activities of insurers, including provisions governing marketing and sales practices, policyholder services, claims management and complaint handling. State regulatory authorities generally test and enforce these provisions through periodic market conduct examinations. These laws are applicable to certain types of primary insurance policies, but not applicable to reinsurance.

The NAIC's Annual Financial Reporting Model Regulation, or the Model Audit Rule, which includes provisions that are similar to certain Sarbanes-Oxley requirements for public companies, requires certain insurance companies to appoint audit committees to oversee accounting and financial reporting processes as well as oversee the audit of the insurer's statutory financial statements. Audit committees also are required to appoint independent auditors, among other things. The appointed audit committee receives reports regarding significant deficiencies, material weaknesses and solvency concerns at the insurance company level.

States are adopting laws to strengthen the ability of regulators to understand and regulate the risk-management practices of insurers and insurance groups. For example, many states have adopted measures related to the NAIC's Solvency Modernization Initiative ("SMI"), pursuant to which the NAIC reviewed the U.S. financial regulatory system and all aspects of financial regulation affecting insurance companies. Among other things, the SMI resulted in the NAIC's adoption of the Risk Management and Own Risk Solvency Model Act ("ORSA Model Act"), which requires insurers meeting premium thresholds to: 1) maintain a risk-management framework; and 2) annually submit a comprehensive report ("ORSA Report") designed to assess the adequacy of an insurer's risk-management practices, including risks related to the insurer's future solvency position. The ORSA Report is required to be filed with the lead state regulator and made available to other domiciliary regulators within the holding company system. Each of the Domiciliary States has substantially adopted the ORSA Model Act, and Sirius Group's U.S.-based (re)insurance subsidiaries are in compliance with the ORSA Model Act as adopted by the Domiciliary States.

Holding Company Regulation

As a holding company, Sirius Group is subject to the state insurance holding company statutes as well as certain other laws of each of the Domiciliary States. The insurance holding company statutes generally require an insurance holding company and insurers that are members of such holding company system to register with their domestic insurance regulators and to file certain reports with those authorities, including information concerning their capital structure, ownership, financial condition, certain intercompany transactions and general business operations.

The NAIC's amended Insurance Holding Company System Regulatory Model Act (the "Amended Holding Company Model Act"), addresses the concept of "enterprise risk" within an insurance holding company system and provides enhanced authority for states to regulate insurers as well as their affiliated entities and imposed more extensive informational requirements on parents and other affiliates of licensed insurers or reinsurers for the purpose of protecting licensed companies from enterprise risk. The Amended Holding Company Model Act requires the ultimate controlling person in an insurer's holding company structure to identify and annually report to state insurance regulators material risks within the structure that could pose enterprise risk to the insurer. Each of the Domiciliary States has substantially adopted the Amended Holding Company Model Act.

Acquisition of Control

Insurance holding company laws generally provide that no person or entity may acquire control of an insurance company, or a controlling interest in any parent company of an insurance company, without the prior approval of such insurance company's domiciliary state insurance regulator. Control is generally presumed to exist if any person acquires, directly or indirectly, 10% or more of the voting securities of an insurance company. This statutory presumption of control may be rebutted by showing that control does not exist in fact. Control may also be deemed to exist upon the possession of the power to direct or cause the direction of the management and policies of any person, whether through ownership of voting securities, by contract or otherwise.

To obtain approval of any acquisition of control, the proposed acquirer must file with the applicable insurance regulator an application disclosing, among other information, its background, financial condition, the financial condition of its affiliates, the source and amount of funds by which it will affect the acquisition, the criteria used in determining the nature and amount of consideration to be paid for the acquisition, proposed changes in the management and operations of the insurance company and other related matters. In considering an application to acquire control of an insurer, an insurance commissioner generally will consider such factors as the experience, competence and financial strength of the applicant, the integrity of the applicant's board of directors and executive officers, the acquirer's plans for the management and operation of the insurer, and any anti-competitive results that may arise from the acquisition. These regulations pertaining to an acquisition of control of an insurance company may impact a person or entity's ability to acquire Sirius Group, as well as Sirius Group's ability to acquire an insurance company.

Guaranty Funds and Mandatory Shared Market Mechanisms

All states within the U.S. and the District of Columbia have insurance guaranty fund laws requiring insurance companies doing business within those jurisdictions to participate in guaranty associations. Sirius Group's U.S.-based insurance and reinsurance subsidiaries may be required to participate in guaranty associations to help pay the obligations of impaired, insolvent or failed insurance companies to their policyholders and claimants. Such participation generally includes an assessment based on the premiums written by the insurer in such state applicable to particular lines of business.

Pricing, Investments and Dividends

Nearly all states have insurance laws requiring licensed property and casualty insurance companies to file their rates, rules and policy or coverage forms with the state's regulatory authority. In most cases, such rates, rules and forms must be approved prior to use. While pricing laws vary from state to state, their objectives are generally to ensure that rates are not excessive, unfairly discriminatory or used to engage in unfair price competition. The ability and timing of Sirius Group's U.S.-based (re)insurance subsidiaries to increase rates are dependent upon the regulatory requirements in each state where policies are sold.

Sirius Group's U.S.-based (re)insurance subsidiaries are subject to state laws and regulations that require investment portfolio diversification and that dictate the quality, quantity and general types of investments they may hold. Non-compliance may cause non-conforming investments to be non-admitted when measuring statutory surplus and, in some instances, may require divestiture. Sirius Group's investment/finance units continually monitor portfolio composition to ensure compliance with the investment rules applicable to each (re)insurance subsidiary.

Under the insurance laws of the Domiciliary States, an insurer is restricted with respect to the timing and the amount of dividends it may pay without prior approval by regulatory authorities. Under the current law of the State of Tennessee, where Oakwood Insurance Company ("Oakwood") is domiciled, an insurer has the ability, without the prior approval of the regulatory authority and subject to the availability of earned surplus, to pay dividends or make distributions which, together with dividends or distributions paid during the preceding twelve months, do not exceed the greater of (i) 10% of the insurer's surplus as regards policyholders as of the immediately preceding year end or (ii) the net income of the insurer (excluding realized capital gains) for the preceding twelve-month period ending as of the immediately preceding year end. Under the current law of the State of New York, where Sirius America, Empire Insurance Company ("Empire"), and WRM America Indemnity Company ("WRM America") are domiciled, an insurer has the ability to pay dividends during any 12-month period without the prior approval of the regulatory authority in an amount set by a formula based on the lesser of adjusted net investment income, as defined by statute, or 10% of statutory surplus, in both cases as most recently reported to the regulatory authority, subject to the availability of earned surplus and subject to dividends paid in prior periods. The insurance laws and regulations of the Domiciliary States also require that an insurer's surplus as regards policyholders following any dividend or distribution be reasonable in relation to such insurer's outstanding liabilities and adequate to meet its financial needs.

Based upon these formulas, as of December 31, 2018, Oakwood and Empire have dividend capacity without prior approval of the applicable regulatory authorities, while Sirius America and WRM America do not have dividend capacity without prior approval of the applicable regulatory authority.

U.S. Federal Regulation Affecting the Insurance Industry

Sirius Group's U.S.-based insurance and reinsurance subsidiaries are not federally regulated, but they are impacted by other federal regulations targeted at the insurance and other industries. From time to time, federal measures are proposed that may significantly affect the insurance business, for example, the Terrorism Risk Insurance Act. The Terrorism Risk Insurance Act provides a federal backstop to all U.S.-based property and casualty insurers for insurance-related losses resulting from any act of terrorism on U.S. soil or against certain U.S. air carriers, vessels or foreign mission.

The federal government also has issued certain orders and regulations that require Sirius Group's U.S.-based (re)insurance subsidiaries to establish certain internal controls. Most significant of these regulations is the U.S. Treasury Department Office of Foreign Asset Control ("OFAC"). OFAC proscribes transactions with specially designated nationals ("SDNs") and blocked countries due to ties with matters such as terrorism, drugs and money laundering. Insurance and reinsurance transactions with SDNs and blocked countries are prohibited and violation can result in significant fines.

While the federal government does not directly regulate the insurance business, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd Frank Act”) made sweeping changes to the regulation of financial services entities, products and markets. Numerous provisions of the Dodd-Frank Act require the adoption or implementation of rules or regulations. The process of adopting such implementing rules and/or regulations has, in some instances, been delayed beyond the timeframes initially imposed by the Dodd-Frank Act. Further, changes in general political, economic or market conditions, including as a result of the most recent U.S. presidential and congressional elections, could affect the scope, timing and final implementation of the Dodd-Frank Act. For example, in May 2018, the Economic Growth, Regulatory Relief, and Consumer Protection Act was signed into law, making significant changes to some provisions of the Dodd-Frank Act. The full impact of the regulations adopted under the Dodd-Frank Act on Sirius Group’s U.S.-based (re)insurance subsidiaries remains unclear.

The Dodd-Frank Act established the Federal Insurance Office (“FIO”) within the Treasury Department to monitor the insurance industry and certain lines of business. The FIO is designed principally to exercise a monitoring and information-gathering role, rather than a regulatory role. The Director of the FIO has submitted reports to Congress regarding (i) how to modernize and improve the system of insurance regulation in the U.S., (ii) the impact of Part II of the Nonadmitted and Reinsurance Reform Act of 2010 and (iii) the global reinsurance market and the regulation of reinsurance. These activities could ultimately lead to changes in the regulation of certain insurers and reinsurers in the United States.

The Dodd-Frank Act also authorizes the FIO to assist the Secretary of the Treasury Department in negotiating covered agreements. A covered agreement is an agreement between the U.S. and one or more foreign governments, authorities or regulatory entities, regarding prudential measures with respect to insurance or reinsurance. The FIO is further charged with determining, in accordance with the procedures and standards established under the Dodd-Frank Act, whether state laws are preempted by a covered agreement. Pursuant to this authority, in September 2017, the U.S. and the European Union signed a covered agreement (the “Covered Agreement”) to address, among other things, reinsurance collateral requirements. U.S. state regulators have 60 months, or five years, to adopt reinsurance reforms removing reinsurance collateral requirements for European Union reinsurers that meet the Covered Agreement’s prescribed minimum conditions or else state laws imposing such reinsurance collateral requirements may be subject to federal preemption. The NAIC is currently working to adopt amendments to the Credit for Reinsurance Model Law and Regulation to conform to the requirements of the Covered Agreement. The reinsurance collateral provisions of the Covered Agreement may increase competition, in particular with respect to pricing for reinsurance transactions, by lowering the cost at which competitors are able to provide reinsurance to U.S. insurers.

Consumer Protection Laws and Privacy and Data Security Regulation

Federal and state laws and regulations require financial institutions, including insurers, to protect the security and confidentiality of nonpublic personal information, including certain health-related and customer information, and to notify customers and other individuals about their policies and practices relating to their collection and disclosure of health-related and customer information and their practices relating to protecting the security and confidentiality of that information. State laws regulate use and disclosure of Social Security numbers and federal and state laws require notice to affected individuals, law enforcement, regulators and others if there is a breach of the security of certain nonpublic personal information, including Social Security numbers. Federal and state laws and regulations regulate the ability of financial institutions to make telemarketing calls and to send unsolicited email or fax messages to consumers and customers.

Federal and state lawmakers and regulatory bodies may be expected to consider additional or more detailed regulation regarding these subjects and the privacy and security of nonpublic personal information. Furthermore, the issues surrounding data security and the safeguarding of consumers' protected information are under increasing regulatory scrutiny by state and federal regulators, particularly in light of the number and severity of recent U.S. companies' data breaches. The Federal Trade Commission, the Federal Bureau of Investigation, the Federal Communications Commission, the New York State Department of Financial Services, and the NAIC have undertaken various studies, reports and actions regarding data security for entities under their respective supervision. Some states have recently enacted new insurance laws that require certain regulated entities to implement and maintain comprehensive information security programs to safeguard the personal information of insureds and enrollees. The New York State Department of Financial Services published a cybersecurity regulation, which became effective on March 1, 2017, with ongoing compliance deadlines over a 24 month period, and which requires financial institutions regulated by the New York State Department of Financial Services, including Sirius Group's U.S.-based (re)insurance subsidiaries, to establish a cybersecurity program. The regulation includes specific technical safeguards as well as requirements regarding governance, incident planning, data management, system testing and regulator notification. Sirius Group has taken steps to comply with the regulation in accordance with its implementation schedule.

Sirius Group expects cybersecurity risk management, prioritization and reporting to continue to be an area of significant regulatory focus by such regulatory bodies and self-regulatory organizations. Sirius Group cannot predict the effect or the compliance costs if state and federal regulators pursue investigations and increase the regulatory requirements for the security of protected information.

European Insurance Regulation

Businesses that carry out insurance activities in Europe are subject to extensive insurance laws and regulations, including prudential requirements and requirements relating to the manner in which insurance activities are conducted. These laws and regulations are generally designed to protect the interests of policyholders, consumers and claimants, rather than investors.

Prudential regulation and supervision focuses on authorization, ownership and control, resourcing and capital adequacy, risk identification and management, and sound governance. Conduct regulation focuses on the manner in which an insurer or insurance intermediary conducts itself in relation to its interactions with customers. Businesses carrying out insurance activities are primarily regulated and supervised by government authorities within their home jurisdictions.

The European Solvency II regulatory framework for insurance business provides a single set of key prudential requirements that apply to insurance and reinsurance businesses operating within the European Economic Area ("EEA"). It imposes economic risk-based solvency requirements across all member states. The aim of the Solvency II framework is to ensure that insurance and reinsurance undertakings are financially sound and can withstand adverse events in order to protect policyholders and the stability of the financial system as a whole. It also aims at the creation of a single market for insurance in the EEA with consistent regulatory requirements and harmonized supervision. The Solvency II regulatory framework is categorized into three 'pillars', covering quantitative requirements, such as capital requirements designed to ensure that sufficient and appropriate assets are held to cover insurance liabilities and risk exposure (Pillar 1), qualitative requirements relating to governance and risk-management (Pillar 2), and transparency obligations requiring disclosure of extensive information to supervisors and to the public (Pillar 3).

The Solvency II framework is set out in a set of regulations headed by an EU Directive. It also includes Delegated Acts and Implementing Technical Standards adopted by the EU Commission and Guidelines issued by the European Insurance and Occupational Pensions Authority. These address issues that are more technical in nature and contain details on the valuation of assets and liabilities, eligibility of capital, risk transfer, equivalence, internal model, and rules relating to insurance groups. The Solvency II Directive is implemented into local laws and complemented by local regulations and guidelines.

The Solvency II requirements in respect of insurance groups include group solvency and capital requirements, group disclosure and supervisory reporting, and undertaking a group own risk and solvency assessment. The Bermuda commercial insurance regulatory regime has been approved by the European Commission as being Solvency II equivalent. Therefore, the Solvency II group requirements are capped at the highest European entity, Sirius International UK Holdings Ltd. (“SIUK”). Accordingly, the Swedish Financial Supervisory Authority (the “SFSA”) is the group supervisor for the SIUK group and the BMA, has been designated as the group supervisor for the Sirius Group-level and below. As a consequence of the U.K. withdrawal from the European Union, Sirius Group is preparing for the Solvency II group requirements to apply to another holding company within the European group.

In addition to the Solvency II regime, there are a number of pan-European rules and regulations in relation to the distribution of insurance in the EEA. The Insurance Distribution Directive (EU/2016/97) was implemented in all EEA states by October 1, 2018.

The General Data Protection Regulation (EU 2016/679) (“GDPR”) became effective on May 25, 2018. The GDPR is intended to harmonize data protection procedures and enforcement across the EU and achieve consistency with the system for ensuring privacy online and it is directly applicable to data controllers and data processors in all member states. Many of the provisions of the GDPR will have a significant impact on data controllers and processors who are active within the EEA, and those who are located outside it. The penalties for breach of the new data protection regime and the insurance distribution directive are substantial.

Sweden Insurance Regulation

Sirius International is subject to regulation and supervision by the SFSA. As Sweden is a member of the EU, the SFSA supervision of branches is recognized across all locations within the EU (apart from customer conduct that is regulated and supervised locally across the EU). The SFSA has broad supervisory and administrative powers over such matters as licenses, governance and internal control, standards of solvency, investments, methods of accounting, form and content of financial statements, minimum capital and surplus requirements, and annual and other report filings. Non-compliance can be sanctioned by warnings, fees or withdrawal of license.

The Solvency II Directive is implemented in Sweden primarily through the Swedish Insurance Business Act (Sw. *försäkringsrörelselag (2010:2043)*) (the “IBA”). The “level two” implementation measures set out in the Commission Delegated Regulation (EU) 2015/35 (the “Solvency II Regulation”) have direct effect in Sweden. The IBA and the Solvency II Regulation constitute the main legal framework applicable to insurance business in Sweden. Supplementary company law for most insurance companies is provided in the Swedish Companies Act (Sw. *aktiebolagslagen (2005:551)*). In addition, the SFSA issues regulations and general guidelines.

Insurance companies are obliged to provide, on an on-going basis, information about their financial status, and the SFSA may conduct on-site inspections and review the operations at any time. In addition to what is required under the Solvency II Regulation, Swedish insurance companies must conduct the business in accordance with “generally accepted insurance practices”. A Swedish insurance company may not engage in business other than insurance business and activities that are connected with insurance business (such as claims handling, investment management, etc.). Sweden has implemented robust rules regarding the policies required and rules pertaining to conflicts of interest.

Safety Reserve

Subject to certain limitations under Swedish law, Sirius International is permitted to transfer pre-tax income amounts into an untaxed reserve referred to as a “safety reserve”. As of December 31, 2018, Sirius International’s safety reserve amounted to SEK 10.7 billion, or \$1.2 billion (based on the December 31, 2018 SEK to USD exchange rate). For the year ended December 31, 2018, Sirius International did not transfer any of its 2018 pre-tax income to the safety reserve. Under GAAP, an amount equal to the safety reserve, net of a related deferred tax liability established at the Swedish tax rate of 20.6%, is classified as shareholders’ equity. Generally, this deferred tax liability is only required to be paid by Sirius International if it fails to maintain prescribed levels of premium writings and loss reserves in future years. As a result of the indefinite deferral of these taxes, Swedish regulatory authorities apply no taxes to the safety reserve when calculating solvency capital under Swedish insurance regulations. Under local statutory requirements, an amount equal to the deferred tax liability on Sirius International’s safety reserve (\$261 million as of December 31, 2018) is included in Sirius International’s solvency capital. Access to the safety reserve is restricted to coverage of insurance and reinsurance losses and to a breach of the solvency capital requirement. Access for any other purpose requires the approval of Swedish regulatory authorities. Similar to the approach taken by Swedish regulatory authorities, most major rating agencies generally include the balance of the safety reserve, without any provision for deferred taxes, in Sirius International’s regulatory capital when assessing Sirius International’s financial strength.

Change of Control

The acquisition of a “qualifying holding” directly or indirectly in Sirius International requires approval from the SFSA prior to completion. “Qualifying holding” means:

- a direct or indirect ownership in an undertaking, where the holding represents 10% or more of the equity capital or of all voting participating interests; or
- the ability to exercise a significant influence over the management of the undertaking (e.g. possible shareholder agreements which might have an impact on the influence over the undertaking)

In addition, approval from the SFSA must be obtained when the holding is increased so that the holding represents or exceeds 20%, 30% or 50% of the equity capital or of all voting participating interests, or when the company becomes a subsidiary. The same is valid if there is a decrease. When certain persons or companies act in concert, their holdings are aggregated to determine whether such persons or companies acquire a qualifying holding or cross any relevant threshold.

The SFSA assesses the suitability of the acquirer and will generally grant authorization if, among other things, the acquisition is found to be financially sound. The SFSA will also assess the acquirer’s reputation, financial standing and possible links to money laundering and financing of terrorism. The ownership assessment also encompasses a suitability assessment of the management of all legal persons’ acquiring a qualifying holding in Sirius International. The term management includes the board of directors, deputy board of directors, the managing director and deputy managing director of the acquirer.

United Kingdom Insurance Regulation

The financial services industry in the United Kingdom is currently dual-regulated by the Financial Conduct Authority (the “FCA”) and the Prudential Regulation Authority (the “PRA”) (collectively, the “U.K. Regulators”). Prudential regulation and supervision of insurance undertakings is carried out by the PRA and the regulation and supervision of conduct matters is carried out by the FCA. All insurers and Lloyd’s managing agents are regulated by both the PRA and the FCA, while businesses that only carry on insurance intermediary activities are solely regulated by the FCA for both prudential and conduct matters. The Financial Policy Committee (which is within the Bank of England) is responsible for the overall prudential regulation of the financial services industry.

There remains some considerable uncertainty as to the legal and regulatory landscape that will exist in respect of the U.K. insurance regulatory regime and the future approach U.K. legislation and regulation may take following the U.K.’s anticipated exit from the EU on March 29, 2019 and as to the terms of any transitional agreement that may be entered into between the U.K. and EU.

Sirius Group’s U.K.-based authorized insurance subsidiaries are as follows:

- Sirius International Managing Agency Limited, a Lloyd’s managing agent that is dual-regulated by the PRA and FCA and supervised by Lloyd’s; and

- A La Carte Healthcare Limited and IMG Europe Limited, both insurance intermediaries regulated by the FCA.

Sirius International Insurance Corporation also operates in the U.K. under an EEA branch passporting license and one company within Sirius Group, Sirius International Corporate Member Limited, is a corporate member of Lloyd's.

PRA and FCA regulation

The primary statutory objectives of the PRA in relation to its supervision of insurers are (i) to promote their safety and soundness; and (ii) to contribute to the securing of an appropriate degree of protection for policyholders or those who may become policyholders. As conduct regulator, the FCA also acts to protect policyholders but the FCA's focus is to ensure that consumers are treated fairly when dealing with insurers and insurance intermediaries while the PRA's focus is to ensure that policyholders have appropriate protection in respect of the cover for the risks that they are insured against.

The U.K. Regulators have extensive powers to intervene in the affairs of the insurance businesses that they regulate and to monitor compliance with their objectives, including amending (including by imposing limitations on) or withdrawing a firm's authorization, prohibiting individuals from carrying on regulated activities, suspending firms or individuals from undertaking regulated activities and fining or requiring compensation from firms and individuals who breach their rules.

Businesses carrying out insurance activities in the U.K. must not only comply with the PRA's requirements (as set out in the PRA Rulebook) and the FCA's requirements (as set out in the FCA Handbook) but also a wide range of U.K. insurance legislation. The most notable of such legislation is the Financial Services and Markets Act 2000 ("FSMA"), which includes the requirements for becoming authorized to carry out regulated insurance activities, regulated and prohibited activities of an insurance company, the approval process for the acquisition or disposal of control of insurance companies, rules on financial promotions, transfers of insurance portfolios and market abuse provisions. This is complemented by a range of statutory instruments on certain subjects, for example the authorization or exemption process. In addition, U.K. companies carrying out insurance activities must comply with general legislation, such as the U.K. Companies Act 2006 and the data protection regime.

Lloyd's regulation

As well as regulating insurers and insurance intermediaries, the U.K. Regulators also regulate Lloyd's. The U.K. Regulators and Lloyd's have common objectives in ensuring that the Lloyd's market is appropriately regulated. Lloyd's is required to implement certain rules prescribed by the U.K. Regulators by the powers it has under the Lloyd's Act of 1982 ("Lloyd's Act") relating to the operation of the Lloyd's market. In addition, each year the U.K. Regulators require Lloyd's to satisfy an annual solvency test that measures whether Lloyd's has sufficient assets in the aggregate to meet all the outstanding liabilities of its members. The PRA and the FCA can give directions to Lloyd's in order to advance their statutory objectives.

The governing body of the Lloyd's market is the Council of Lloyd's (the "Council"). The Council is responsible for the supervision and management of the Lloyd's market and it has the power to regulate and direct the business of the market. The Lloyd's Acts, byelaws, requirements made under byelaws, minimum standards, guidance, codes of conduct and bulletins issued by or under the authority of the Council together contain the powers and requirements that apply in respect of businesses operating in the Lloyd's market.

Lloyd's does not itself carry on insurance underwriting but it regulates and supervises its members who do so. Lloyd's permits its corporate and individual members ("Members") to underwrite insurance risks through Lloyd's syndicates. Members of Lloyd's may participate in a syndicate for one or more underwriting years by providing capital to support the syndicate's underwriting, alone or together with other Members. Members are not required to be authorized by the PRA or the FCA under FSMA but they are supervised by Lloyd's and must comply with applicable Lloyd's rules. All syndicates are managed by Lloyd's-approved managing agents, who are also authorized by the PRA and dual-regulated by the PRA and the FCA. Managing agents receive fees and profit commissions in respect of the underwriting and administrative services they provide to the syndicates they manage. Lloyd's prescribes, in respect of its managing agents and Members, certain minimum standards relating to their management and control, financial resources and various other requirements. In addition, as dual-regulated firms, managing agents must comply with the relevant parts of the PRA Rulebook and the FCA Handbook (including FCA capital resources requirements).

Lloyd's operates internationally through a number of trading licenses and local arrangements, and such activities are subject to local regulation and the specific requirements of those licenses or local arrangements.

Sirius Group participates in the Lloyd's market through the 100% ownership of Sirius International Corporate Member Limited, a Lloyd's Corporate Member, which is the sole member of Syndicate 1945. Syndicate 1945 commenced underwriting on July 1, 2011 and is managed by another wholly-owned subsidiary with Sirius Group, Sirius International Managing Agency. Lloyd's approved stamp capacity for Syndicate 1945 in 2019 is £81 million, or approximately \$103 million (based on the December 31, 2018 GBP to USD exchange rate). Stamp capacity is a measure of the amount of net premium (gross premiums written less acquisition costs) that a syndicate is authorized by Lloyd's to write.

A corporate member of Lloyd's is bound by the rules of the Society of Lloyd's which are prescribed by the byelaws and requirements of the Council of Lloyd's under powers conferred by the Lloyd's Acts. These rules govern Sirius Group's corporate member and its participation in Syndicate 1945 and among other things prescribe its Lloyd's membership subscription fees and contributions to the Lloyd's Central Fund ("Central Fund"). If a Member is unable to pay its obligations to policyholders, such obligations may be payable by the Central Fund. If Lloyd's determines that the Central Fund needs to be increased, it may levy premiums on current Members. The Council of Lloyd's has discretion to call upon up to 3% of a Member's underwriting capacity in any one year as a Central Fund contribution.

The underwriting capacity of a Member must be supported by providing a deposit in the form of cash, securities, letters of credit or guarantees ("Funds at Lloyd's") in an amount to be determined pursuant to the Members' capital requirements set by Lloyd's. The amount of such deposit is calculated for each Member through the completion of a twice-yearly capital adequacy exercise. Pursuant to requirements of the U.K. Regulators applicable to the Members of Lloyd's as a whole, Lloyd's must demonstrate that each Member has sufficient assets to meet its underwriting liabilities plus a required solvency margin. The requirement to maintain such solvency margin can have the effect of reducing the amount of funds available to distribute as profits to the Member or result in the Member having to deposit additional Funds at Lloyd's to cover its solvency margin.

The amounts of capital required by Lloyd's to be maintained in the form of Funds at Lloyd's to support the activities of the Members of a syndicate is determined by a combination of the managing agent's assessment of capital requirements for the syndicate, and review and challenge by Lloyd's. The managing agent's assessment of capital requirements for the syndicate determines its view of the Solvency Capital Requirement ("SCR"); this represents the capital needed to support the syndicate, based on modeling individual syndicate robustness against the risk environment in which the syndicate operates. Lloyd's may or may not approve the level of SCR as submitted by the managing agent and has the authority to require the SCR to be increased. The approved or amended SCR is then uplifted by an economic capital margin (currently a flat 35% for all syndicates) to produce an amount of syndicate capital known as the economic capital assessment ("ECA"). The level of the ECA is set to ensure that Lloyd's overall aggregate capital is maintained at a level necessary to retain its desired rating, as well as to meet the requirements of the U.K. Regulators. Any failure to comply with these requirements may affect the amount of business which the syndicate may underwrite and/or could result in sanctions being imposed by Lloyd's and/or the U.K. Regulators. The process and the method by which the required capital is calculated may alter from year to year and may affect the level of participation of Members in a particular syndicate.

In addition to a Member's Funds at Lloyd's, at a syndicate level insurance premiums are held in a premium trust fund for the benefit of policyholders whose contracts are underwritten by the syndicate and these funds are the first resources used to pay claims made by policyholders of that syndicate.

Lloyd's has wide discretionary powers to regulate a Member's underwriting. For example, Lloyd's may change the way that syndicate expenses are allocated or vary the Funds at Lloyd's investment criteria. Any such change may affect the Member's return on investment. All syndicates at Lloyd's must also submit their business plans to Lloyd's for approval and amendments or restrictions may be applied to proposed business plans or, in extreme circumstances, approval may be refused which would lead to that syndicate ceasing to underwrite for the following year of account.

Change of Control

The change of control requirements in the U.K. are similar to the Swedish regulatory requirements. Prior regulatory consent is required before a person (alone or together with any associates) can acquire direct or indirect control over a U.K. authorized firm.

Prior approval is also required where a person (together with any associates) increases its holding of shares or voting power from (i) less than 20% to 20% or more, (ii) less than 30% to 30% or more, and (iii) less than 50% to 50% or more. The change of control requirements apply whether such change of control results from an external acquisition or an internal restructuring resulting in a new controller.

For U.K. authorized insurance intermediaries, the control threshold percentages are amended such that there is a single 20% threshold where prior regulatory consent is required.

In relation to the acquisition or increase of direct or indirect control over a Lloyd's managing agent or Lloyd's corporate member, such as Sirius International Managing Agency Limited and Sirius International Corporate Member Limited respectively, prior approval is also required from Lloyd's.

Ratings

Ratings by independent agencies are an important factor in establishing the competitive position of insurance and reinsurance companies and are important to Sirius Group's ability to market and sell its products and services. Rating organizations continually review the financial positions of reinsurers and insurers, including Sirius Group. As of December 31, 2018, Sirius Group's insurance and reinsurance operating subsidiaries were rated as follows:

	A.M. Best ⁽¹⁾	Fitch ⁽²⁾	Standard & Poor's ⁽³⁾
Rating	"A" (Excellent)	"A –" (Strong)	"A –" (Strong)
Outlook/ Watch	Stable	Stable	Stable

⁽¹⁾"A" is the third highest of 16 financial strength ratings assigned by A.M. Best.

⁽²⁾"A –" is the seventh highest of 19 financial strength ratings assigned by Fitch.

⁽³⁾"A –" is the seventh highest of 21 financial strength ratings assigned by Standard & Poor's.

These ratings reflect A.M. Best's, Fitch's and Standard & Poor's respective opinions of the ability of Sirius Group to pay claims and are not evaluations directed to security holders. A.M. Best maintains a letter-scale rating system ranging from "A++" (Superior) to "F" (in liquidation). Fitch maintains a letter-scale rating system ranging from "AAA" (Exceptionally Strong) to "C" (Distressed). Standard & Poor's maintains a letter-scale rating system ranging from "AAA" (Extremely Strong) to "D" (Default).

These ratings are subject to periodic review by, and may be revised downward or revoked at the sole discretion of, A.M. Best, Fitch, and Standard & Poor's, respectively.

On June 21, 2018, Standard & Poor's affirmed Sirius Group's and its main subsidiaries' financial strength rating at "A –" (Strong) with a stable outlook.

On June 27, 2018, Fitch removed Sirius Group and its main subsidiaries from negative watch and affirmed the financial strength rating at "A –" (Strong) with a stable outlook.

On November 29, 2018, A.M. Best removed Sirius Group and its main subsidiaries from under review with negative implications and affirmed the financial strength rating at "A" (Excellent) with a stable outlook.

Employees

As of December 31, 2018, Sirius Group had 1,055 employees. Sirius Group believes its relationships with employees are satisfactory.

Available Information

Our Internet website address is <https://www.siriusgroup.com>. From time to time, we may make available on our website certain financial information of our operating subsidiaries. We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and file or furnish reports, proxy statements, and other information with the U.S. Securities and Exchange Commission (“SEC”), including Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and 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. Such reports and other information filed by the Company with the SEC are available free of charge on our website at ir.siriusgroup.com as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The SEC maintains an Internet site that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC at www.sec.gov. The contents of the websites referred to above are not incorporated herein.

Item 1A. Risk Factors

You should carefully consider the following risk factors, in addition to the other information included in this Annual Report on Form 10-K, including matters addressed in the section entitled “Cautionary Statement Regarding Forward-Looking Statements” and the financial statements and notes to the financial statements included herein. Sirius Group may face additional risks and uncertainties that are not presently known to us, or that Sirius Group currently deems immaterial, which may also impair our business.

Risks Related to Sirius Group’s Business and Industry

Sirius Group is exposed to unpredictable catastrophic events that could adversely affect its results of operations and financial condition.

Sirius Group writes reinsurance contracts and insurance policies that cover unpredictable catastrophic events. Covered unpredictable catastrophic events, predominantly in its property catastrophe excess line of business, include natural perils and other disasters, such as hurricanes, windstorms, earthquakes, floods, wildfires and severe winter weather. Catastrophes can also include terrorist attacks, explosions and infrastructure failures. Sirius Group has significant exposure to a potential major earthquake or series of earthquakes in California, the Midwestern United States, Canada, Japan and Latin America and to windstorm damage in Northern Europe, the Northeast United States, the United States Atlantic Coast (i.e., Massachusetts to Florida) and the United States Gulf Coast (i.e., Florida to Texas) regions and Japan.

Similar exposures to losses caused by the same types of catastrophic events occur in other lines of business such as marine, aviation, contingency, casualty, trade credit and accident and health, including pandemic risk. Pandemic risk is the increase in mortality or morbidity over an annual period associated with a rapidly spreading virus (either within a highly populated geographic area or on a global basis) with a high mortality or morbidity rate. Sirius Group’s catastrophe losses, net of reinsurance and reinstatement premiums, were \$194 million, \$259 million, and \$109 million for the years ended December 31, 2018, 2017, and 2016, respectively.

The extent of catastrophe losses is a function of both the severity of the event and total amount of insured exposure affected by the event. Increases in the value and concentration of insured property or insured individuals, the effects of inflation, changes in weather patterns, such as climate change, and increased terrorism could increase the future frequency and/or severity of claims from catastrophic events. Claims from catastrophic events could materially adversely affect Sirius Group’s results of operations and financial condition. Sirius Group’s ability to write new reinsurance contracts and insurance policies could also be impacted as a result of corresponding reductions in Sirius Group’s capital levels.

Although Sirius Group attempts to manage its exposure to such events through a multitude of approaches, including geographic diversification, geographic limits, individual policy limits, exclusions or limitations from coverage, purchase of reinsurance and expansion of supportive collateralized capacity, the availability of these management tools may be dependent on market factors and, to the extent available, may not respond in the way that is expected. For instance, Sirius Group seeks to manage its exposure to catastrophe losses by limiting the aggregate insured value of policies in geographic areas with exposure to catastrophic events by estimating PML for many different catastrophe scenarios and by buying reinsurance, including retrocession coverage. To manage and analyze aggregate insured values and PML, Sirius Group uses a variety of tools, including external and internal catastrophe modeling software packages. Estimates of PMLs are dependent on many variables, including assumptions about demand surge and storm surge, loss adjustment expenses, insurance-to-value for the underlying properties, the relationship of the actual event parameters to the modelled event and the quality of portfolio data provided to Sirius Group by ceding companies (in the case of Sirius Group's reinsurance operations). Accordingly, if these assumptions about the variables are incorrect, the losses Sirius Group might incur from an actual catastrophe could be materially higher than its expectation of losses generated from modelled catastrophe scenarios which could materially adversely affect Sirius Group's financial condition, liquidity or results of operations.

Given the inherent uncertainty of models, the usefulness of such models as a tool to evaluate risk is subject to a high degree of uncertainty that could result in actual losses that are materially different than Sirius Group's estimates including PMLs, and Sirius Group's financial results may be adversely impacted, perhaps significantly.

Sirius Group uses third-party vendor and proprietary analytic and modeling capabilities, including global property catastrophe models, which consolidates and reports on all its worldwide property exposures, to calculate expected PML from various property natural catastrophe scenarios. Sirius Group uses these models and software to help it control risk accumulation, inform management and other stakeholders of capital requirements and to improve the risk/return profile in Sirius Group's overall portfolio of reinsurance contracts. However, given the inherent uncertainty of modeling techniques and the application of such techniques, these models and databases may not accurately address a variety of matters impacting Sirius Group's coverages.

For example, catastrophe modeling is dependent upon several broad economic and scientific assumptions, such as storm surge (the water that is pushed toward the shore by the force of a windstorm), demand surge (the localized increase in prices of goods and services that often follows a catastrophe) and zone density (the percentage of insured perils that would be affected in a region by a catastrophe). Third-party modeling software also does not provide information for all territories or perils for which Sirius Group writes business. Catastrophe modeling is inherently uncertain due to process risk (i.e., the probability and magnitude of the underlying event) and parameter risk (i.e., the probability of making inaccurate model assumptions).

The inherent uncertainties underlying, or the incorrect usage or misunderstanding of these tools may lead to unanticipated exposure to risks relating to certain perils or geographic regions which could have a material adverse effect on Sirius Group's business, prospects, financial condition or results of operations.

Sirius Group's loss and LAE reserves may be inadequate to cover its ultimate liability for losses and as a result its financial results could be adversely affected.

Sirius Group must maintain reserves adequate to cover its estimated ultimate liabilities for LAE. Loss and LAE reserves are typically comprised of (i) case reserves for claims reported ("case reserves") and (ii) incurred but not reported ("IBNR") reserves for losses that have occurred but for which claims have not yet been reported and for expected future development on case reserves. These reserves are estimates of what the settlement and administration of claims will cost based on facts and circumstances then known to Sirius Group. These estimates involve actuarial and claims assessments, and require Sirius Group to make a number of assumptions about future events that are subject to unexpected changes and are beyond its control, such as future trends in claim severity, frequency, inflation, legislative and judicial changes and other factors.

Because of uncertainties associated with estimating ultimate loss and LAE reserves, we are unable to guarantee that Sirius Group's reserves are adequate. In the event that Sirius Group's reserves become insufficient to cover its actual losses and LAE, Sirius Group may need to add to its reserves, which could have a material adverse effect on Sirius Group's results of operations and financial condition.

In addition, Sirius Group reserves for losses and LAE include an estimate of Sirius Group's ultimate liability for natural catastrophe events, and asbestos and environmental claims for which Sirius Group cannot estimate the ultimate value using traditional reserving techniques, and for which there are significant uncertainties in estimating the amount of Sirius Group's potential losses.

Sirius Group is reliant on financial strength and creditworthiness ratings, and any downgrade may have a material adverse effect on Sirius Group's business, prospects, financial condition and results from operations.

Third-party rating agencies assess and rate the financial strength, including claims-paying ability, of insurers and reinsurers. These ratings are based upon criteria established by the rating agencies and are subject to revision at any time at the sole discretion of the agencies. Some of the criteria relate to general economic conditions and other circumstances outside of the rated company's control. These financial strength ratings are used by policyholders, agents and brokers to assess the suitability of insurers and reinsurers as business counterparties and are an important factor in establishing the competitive position of insurance and reinsurance companies.

The maintenance of an "A-" or better financial strength rating from A.M. Best Company Inc. ("A.M. Best") and/or Standard & Poor's is particularly important to the ability of Sirius Group's operating (re)insurance subsidiaries to bind property and casualty insurance and reinsurance business in most markets. General creditworthiness ratings are used by existing or potential investors to assess the likelihood of repayment on a particular debt issue. The maintenance of an investment grade creditworthiness rating (e.g., "BBB-" or better from Standard & Poor's or Fitch) is important to Sirius Group's ability to raise new debt with acceptable terms. Strong creditworthiness ratings are important factors that provide better financial flexibility when issuing new debt or restructuring existing debt.

Rating agencies periodically evaluate Sirius Group to confirm that it continues to meet the criteria of the ratings previously assigned to Sirius Group.

A downgrade, withdrawal or negative watch/outlook of the financial strength rating of Sirius Group's operating (re)insurance companies could severely limit or prevent Sirius Group from writing new policies or renewing existing policies, which could have a material adverse effect on Sirius Group's results of operations and financial condition. A downgrade, withdrawal or negative watch/outlook of Sirius Group's creditworthiness ratings could limit its ability to raise new debt or could make new debt more costly and/or have more restrictive conditions.

Additionally, some of Sirius Group's assumed reinsurance contracts contain optional cancellation, commutation and/or funding provisions that would be triggered if A.M. Best and/or Standard & Poor's were to downgrade the financial strength ratings of Sirius Group's principal (re)insurance operating subsidiaries below "A-". A client may choose to exercise these rights depending on, among other things, the reasons for such a downgrade, the extent of the downgrade, the prevailing market conditions, the degree of unexpired coverage, and the pricing and availability of replacement reinsurance coverage. Sirius Group cannot predict in advance how many of its clients would actually exercise such rights in the event of such a downgrade, but widespread exercise of these options could be materially adverse.

Currently, Sirius Group's and its main subsidiaries' have financial strength ratings of "A-" (Strong) with a stable outlook from Standard & Poor's and Fitch and "A" (Excellent) with a stable outlook from A.M. Best. Our ratings are subject to periodic review by these agencies and we can offer no assurances that our ratings will remain at their current levels or that any of our ratings will remain unchanged. For example, following the April 2016 acquisition of Sirius Group by CMIG International, A.M. Best issued a negative outlook in its rating of Sirius Group. The negative outlook reflected A.M. Best's concern over the credit profile of CMIG International, represented by CMIG International's high financial leverage. Fitch similarly lowered Sirius Group's rating by one notch due to its concern over CMIG International's short operating history, rapid business growth and high and increasing leverage. Sirius Group's credit ratings may continue to be impacted by actions taken by CMIG International.

Sirius Group's investment portfolio may suffer reduced returns or losses, which could adversely affect Sirius Group's results of operations and financial condition. Adverse changes in interest rates, foreign currency exchange rates, equity markets, debt markets or market volatility could result in significant losses to the fair value of Sirius Group's investment portfolio.

Sirius Group's investment portfolio is overseen in accordance with the investment policy and guidelines approved by the Finance Committee of the Sirius Group board of directors. At December 31, 2018, Sirius Group's investment portfolio consisted of fixed-maturity investments (including U.S. and foreign government bonds, corporate debt, mortgage-backed, asset-backed and other fixed-maturity securities), short-term investments, equity securities, convertibles and other long-term investments, including hedge funds and private equity funds.

Sirius Group invests to maximize long-term total returns (after-tax) while taking prudent levels of risk and maintaining a diversified portfolio subject to its investment guidelines, policy and various regulatory restrictions. However, investing entails substantial risks. Sirius Group may not achieve its investment objectives, and investment performance may vary substantially over time. Investment returns are an important part of Sirius Group's strategy to grow, and fluctuations in the fixed-income or equity markets could impair Sirius Group's results of operations and financial condition.

Both Sirius Group's investment income and the fair market value of its investment portfolio are affected by general economic and market conditions, including fluctuations in interest rates, foreign currency exchange rates, debt market levels, equity market levels and market volatility.

Interest rates are highly sensitive to many factors, including governmental monetary policies, domestic and international economic and political conditions and other factors beyond Sirius Group's control. In particular, a significant increase in interest rates could result in significant losses in the fair value of Sirius Group's investment portfolio. In addition, certain fixed-income securities, such as mortgage-backed and asset backed securities, carry prepayment risk or, in a rising interest rate environment, may not pre-pay as quickly as expected. Conversely, in a low interest rate environment, Sirius Group may be forced to reinvest proceeds from investments that have matured or have been prepaid or sold at lower yields, which will reduce Sirius Group's investment returns. Additionally, a change in interest rates could adversely affect Sirius Group's results of operations and financial condition.

The table below summarizes the estimated effects of hypothetical increases and decreases in market interest rates on Sirius Group's fixed-maturity investments. The size of interest rate decreases presented may be limited in order to floor interest rates at a de minimis level.

(Millions)	Fair Value at December 31, 2018	Assumed Change in Relevant Interest Rate	Estimated Fair Value After Change in Interest Rate	Pre-Tax Increase (Decrease) in Carrying Value
Fixed-maturity investments	\$ 1,949.2	300 bp decrease	\$ 2,063.3	\$ 114.1
		200 bp decrease	2,026.8	77.6
		100 bp decrease	1,988.6	39.4
		50 bp decrease	1,969.3	20.1
		50 bp increase	1,927.7	(21.5)
		100 bp increase	1,906.2	(43.0)
		200 bp increase	1,863.2	(86.0)
		300 bp increase	1,820.2	(129.0)

Sirius Group's investment portfolio is also exposed to investment credit risk, which is the risk that the value of certain investments may decrease due to a deterioration in the financial condition, operating performance or business prospects of, or the liquidity available to, one or more issuers of those securities or, in the case of mortgaged-back and other asset-backed securities, due to the deterioration of the loans or other assets that underlie the securities. Mortgage-backed securities are particularly sensitive to changes in U.S. economic conditions, including deterioration of the U.S. housing market and unemployment, among other factors.

Sirius Group is also exposed to changes in equity markets. A significant decline in the equity markets, such as that experienced from September 2008 to March 2009, could have a material adverse effect on Sirius Group's results of operations and financial condition. Assuming a hypothetical 10% and 30% increase or decrease in the value of Sirius Group's equity securities and other long-term investments as of December 31, 2018, the carrying value of Sirius Group's equity securities and other long-term investments would have increased or decreased by approximately \$75 million and \$224 million pre-tax, respectively.

Since a portion of Sirius Group's investment portfolio is invested in securities denominated in currencies other than the U.S. dollar, the value of Sirius Group's portfolio is sensitive to changes in foreign currency rates. Sirius Group is also exposed to changes in the volatility levels of various investment markets. The underlying conditions prompting such changes are outside of Sirius Group's control and could adversely affect the value of Sirius Group's investments and results of operations and financial condition.

A portion of Sirius Group's investment portfolio is invested in securities indexed based on the London Interbank Offered Rate ("LIBOR"). On July 27, 2017, the U.K. Financial Conduct Authority announced that it will no longer persuade or compel banks to submit rates for the calculation of LIBOR after 2021, which is expected to result in these widely used reference rates no longer being available. At this time, it is not possible to predict the effect of any such changes, any establishment of alternative reference rates or any other reforms to LIBOR that may be enacted in the U.K. or elsewhere. Uncertainty as to the nature of such potential changes, alternative reference rates or other reforms may adversely affect the trading market for LIBOR-based securities, including those held in our investment portfolio. For discussion regarding changes to LIBOR, see "Changes in the method for determining LIBOR and the potential replacement of LIBOR may affect our cost of capital and net investment income" below.

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

As a result of concerns about the accuracy of the calculation of LIBOR, a number of British Bankers Association ("BBA") member banks entered into settlements with certain regulators and law enforcement agencies with respect to the alleged manipulation of LIBOR. Actions by the BBA, regulators or law enforcement agencies as a result of these or future events may result in changes to the manner in which LIBOR is determined. Potential changes or uncertainty related to such potential changes, alternative reference rates or other reforms may adversely affect the market for LIBOR-based securities, including certain of our LIBOR-based assets and liabilities. More generally, any of the above changes or any other consequential changes to LIBOR or any other "benchmark" as a result of international, national or other proposals for reform or other "initiatives" or "investigations" or any other further uncertainty in relation to timing and manner of implementation of such changes, could have a material adverse effect on the value of return on any securities based on or linked to a "benchmark" such as certain of our LIBOR-based assets and liabilities. We are not able to predict what the impact of such changes may be on our cost of capital or net investment income.

An unexpected accumulation of attritional losses may adversely affect Sirius Group's operating results.

In addition to Sirius Group's exposures to natural catastrophe and other large losses as discussed above, Sirius Group's operating results may be adversely affected by unexpectedly large accumulations of smaller losses. Sirius Group seeks to manage this risk by using appropriate underwriting processes to guide the pricing, terms and acceptance of risks. These processes, which may include pricing models, are intended to ensure that premiums received are sufficient to cover the expected levels of attritional losses and a contribution to the cost of natural catastrophes and large losses where necessary. However, it is possible that these underwriting approaches and/or pricing models may not work as intended and that actual losses from a class of risks may be greater than expected. Sirius Group's pricing models are also subject to the same limitations as the models used to assess exposures to natural catastrophe losses noted above. Accordingly, these factors could adversely impact Sirius Group's financial condition and/or operating results.

A decrease in the fair value of Global A&H and/or Sirius Group's intangible assets may result in future impairments.

As of December 31, 2018, goodwill and intangible assets represented approximately 35% of Sirius Group's consolidated shareholders' equity. Goodwill and intangible assets are assessed for impairment on an annual basis or more frequently if events or changes in circumstances indicate that the carrying amount may not be recoverable. These assessments require Sirius Group to use significant judgment in making various estimates and assumptions, such as the determination of expected future cash flows and/or earnings, and actual results may ultimately be materially different from such estimates and assumptions. For example, expected future cash flows and/or earnings may be materially and negatively impacted as a result of, among other things, a decrease in renewals and new business, loss of key personnel, lower-than-expected yields and/or cash flows from Sirius Group's investment portfolio, as applicable, or higher-than-expected claims activity and incurred losses as well as other general economic factors. As a result of these potential changes, the estimated fair value of Sirius Group's goodwill and intangible assets may decrease, causing the carrying value to exceed the fair value and the goodwill and/or intangible assets to be impaired. If an impairment is determined to exist, the carrying value of the goodwill and/or intangible asset is adjusted to its implied fair value with the corresponding expense recorded in Sirius Group's income statement, as applicable, in the period in which the impairment is determined. If Sirius Group is required to record goodwill impairments in the future, its financial condition and results of operations would be negatively affected.

Sirius Group is exposed to unpredictable casualty insurance risks that could adversely affect its results of operations and financial condition.

Sirius Group writes insurance and reinsurance policies covering casualty risks. Casualty insurance generally covers the financial consequences of the legal liability of an individual or organization resulting from negligent acts causing bodily injury and/or property damage to a third party. Claims from such business can take years to develop and settle and can be subject to unanticipated claims and economic inflation. Accordingly, if Sirius Group's pricing and/or reserving assumptions are incorrect, higher than expected losses could materially adversely affect Sirius Group's financial condition, liquidity or results of operations.

The property and casualty insurance and reinsurance industries are highly competitive and cyclical and Sirius Group may not be able to compete effectively in the future.

The property and casualty insurance and reinsurance industries are highly competitive and have historically been cyclical, experiencing periods of severe price competition and less selective underwriting standards ("soft markets") followed by periods of relatively high prices and more selective underwriting standards ("hard markets"). Sirius Group competes with numerous reinsurance companies throughout the world and Lloyd's Syndicate 1945, the Lloyd's syndicate that Sirius Group sponsors and that is managed through Syndicate 1945, also competes with other Lloyd's syndicates and London market companies. Many of these competitors have greater financial, marketing and management resources available to them, including greater revenue and shareholders' equity, have established long-term and continuing business relationships throughout the insurance and reinsurance industries and may have higher financial strength ratings, which can be a significant competitive advantage for them.

Soft primary insurance market conditions could lead to a significant reduction in reinsurance premium rates, less favorable contract terms and fewer submissions for Sirius Group's reinsurance underwriting capacity. The supply of reinsurance is also related to the level of reinsured losses and the level of industry capital which, in turn, may fluctuate in response to changes in rates of return earned in the reinsurance industry. As a result, the 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 improvements in reinsurance rate levels and terms and conditions.

In recent years, the persistent low interest rate environment and ease of entry into the reinsurance sector has led to increased competition from non-traditional sources of capital, such as insurance-linked funds or collateralized special purpose insurers, predominantly in the property catastrophe excess reinsurance market. This alternative capital provides collateralized property catastrophe protection in the form of catastrophe bonds, industry loss warranties and other risk-linked products that facilitate the ability of non-reinsurance entities, such as hedge funds and pension funds, to compete for property catastrophe excess reinsurance business outside of the traditional treaty market. This alternative capacity is also expanding into lines of business other than property catastrophe reinsurance.

Consequently, the market is currently in a prolonged phase of the soft market cycle in many lines of business, particularly in certain property catastrophe excess reinsurance markets, and, as a result, many of Sirius Group's products are experiencing varying degrees of rate pressure. To the extent these trends continue or accelerate, Sirius Group's financial condition or operating results could be adversely affected.

Sirius Group may not successfully alleviate risk through reinsurance arrangements. Additionally, Sirius Group may not collect all amounts due from its reinsurers under its existing reinsurance arrangements.

Sirius Group attempts to limit its risk of loss through the purchase of reinsurance, including retrocession coverage (i.e., the reinsurance of reinsurance). The availability and cost of reinsurance protection is subject to market conditions, which are outside of Sirius Group's control. In addition, the coverage provided by these reinsurance arrangements may be inadequate to cover Sirius Group's future liabilities. As a result, Sirius Group may not be able to successfully alleviate risk through these arrangements, which could have a material adverse effect on Sirius Group's results of operations and financial condition.

Purchasing reinsurance does not relieve Sirius Group of the underlying obligations to policyholders or ceding companies, so any inability to collect amounts due from reinsurers could adversely affect Sirius Group's financial condition and results of operations. Inability to collect amounts due from reinsurers can result from a number of scenarios, including: (i) reinsurers choosing to withhold payment due to a dispute or other factors beyond Sirius Group's control; and (ii) reinsurers becoming unable to pay amounts owed to Sirius Group as a result of a deterioration in their financial condition. While Sirius Group regularly reviews the financial condition of its reinsurers and currently believes their financial condition is strong, it is possible that one or more of these reinsurers will be adversely affected by future significant losses or economic events, causing them to be unable or unwilling to pay amounts owed to Sirius Group.

In addition, due to factors such as the price or availability of reinsurance coverage, Sirius Group sometimes decides to increase the amount of risk retained by purchasing less reinsurance or no reinsurance for a particular geographical region. Such determinations have the effect of increasing Sirius Group's financial exposure to losses associated with such risks and, in the event of significant losses associated with a given risk, could have a material adverse effect on Sirius Group's financial condition and results of operations.

Sirius Group, or agents appointed by Sirius Group, may act based on inaccurate or incomplete information regarding the insurance accounts Sirius Group underwrites, or such agents may exceed their authority or act fraudulently when binding policies on Sirius Group's behalf.

Sirius Group, and its MGUs and other agents who have the ability to bind policies on Sirius Group's behalf, rely on information provided by insureds or their representatives when underwriting insurance policies. While Sirius Group may make inquiries to validate or supplement the information provided, Sirius Group may make underwriting decisions based on incorrect or incomplete information. It is possible that Sirius Group will misunderstand the nature or extent of the activities and the corresponding extent of the risks that Sirius Group insures because of its reliance on inadequate or inaccurate information. If any such agents exceed their authority or engage in fraudulent activities, Sirius Group's financial condition and results of operations could be materially adversely affected.

Unexpected volatility or illiquidity associated with some of Sirius Group's investments could significantly and negatively affect Sirius Group's financial results, liquidity and ability to conduct business.

Sirius Group holds, or may in the future purchase, certain investments that include, but are not limited to, publicly traded equities, hedge funds, private equity funds, bonds, bank loans, emerging market debt, nonagency residential mortgage-backed securities, asset-backed securities, commercial mortgage-backed securities, derivatives and other investment products. During the height of the financial crisis, both fixed-income and equity markets were more illiquid and volatile than expected. If Sirius Group requires significant amounts of cash on short notice in excess of normal cash requirements, it may have difficulty selling these investments in a timely manner and/or be forced to sell them for less than it otherwise would have been able to realize. If Sirius Group is forced to sell its assets in unfavorable market conditions, there can be no assurance that it will be able to sell them for the prices at which it has recorded them and may be forced to sell them at significantly lower prices. As a result, Sirius Group's business, financial condition, liquidity or results of operations could be adversely affected.

A portion of Sirius Group's investment portfolio consists of hedge fund and private equity fund investments. The underlying investments in these funds are typically publicly traded and private equity securities and investments, and, as such, are subject to market risks that are similar to Sirius Group's equity securities. However, these investments entail substantial risks and are generally illiquid. Redemption of investments in certain of these funds is subject to restrictions including lock-up periods where no redemptions or withdrawals are allowed, restrictions on redemption frequency and advance notice periods for redemptions. Amounts requested for redemptions remain subject to market fluctuations until the redemption effective date, which generally falls at the end of the defined redemption period.

Global climate change may have a material adverse effect on Sirius Group's operating results and financial condition.

There are concerns that the higher level of weather-related catastrophes and other losses incurred by the industry in prior years is indicative of changing weather patterns, including as a result of global climate change, which could cause such events to persist. This would lead to higher overall losses that Sirius Group may not be able to recoup, particularly in the current economic and competitive environment, and higher reinsurance costs. In addition, rising sea levels are expected to add to the risks associated with coastal flooding in many geographical areas. Large scale climate change could increase both the frequency and severity of Sirius Group's loss costs associated with property damage and business interruption due to storms, floods and other weather-related events. Over the long-term, global climate change could impair Sirius Group's ability to predict the costs associated with future weather events and could also give rise to new environmental liability claims in the energy, manufacturing and other industries Sirius Group serves.

Given the scientific uncertainty of predicting the effect of climate cycles and global climate change on the frequency and severity of natural catastrophes and the lack of adequate predictive tools, Sirius Group may be unable to adequately model the associated exposures and potential losses in connection with such catastrophes that could have a material adverse effect on Sirius Group's business, financial condition or results of operations.

Sirius Group has significant foreign operations that expose it to certain additional risks, including foreign currency risks and political risk.

Through its multinational reinsurance operations, Sirius Group conducts business in a variety of foreign (non-U.S.) currencies, the principal exposures being the Swedish Krona, British Pound Sterling, Euro and Canadian dollar. As a result, a significant portion of Sirius Group's assets, liabilities, revenues and expenses are denominated in currencies other than the U.S. dollar and are therefore subject to foreign currency risk. Significant changes in foreign exchange rates may adversely affect Sirius Group's results of operations and financial condition.

Sirius Group's foreign operations are also subject to legal, political and operational risks that may be greater than those present in the U.S. As a result, Sirius Group's operations at these foreign locations could be temporarily or permanently disrupted.

Sirius Group may suffer losses from unfavorable outcomes from litigation and other legal proceedings.

In the ordinary course of business, Sirius Group is subject to litigation and other legal proceedings as part of the claims process, the outcomes of which are uncertain. Sirius Group maintains reserves for claims-related legal proceedings as part of its loss and LAE reserves. Adverse outcomes are possible and could negatively impact Sirius Group's financial condition.

Furthermore, as industry practices and legal, judicial, social and other conditions change, unexpected issues related to claims and coverage may emerge. These issues may adversely affect Sirius Group's results of operations and financial condition by either extending coverage beyond Sirius Group's underwriting intent or by increasing the number and size of claims. In some instances, these changes may not become apparent until sometime after Sirius Group has issued the affected insurance contracts. Examples of emerging claims and coverage issues include, but are not limited to:

- new theories of liability and disputes regarding medical causation with respect to certain diseases;
- assignment-of-benefits agreements, where rights of insurance claims and benefits of the insurance policy are transferred to third parties, and which can result in inflated repair costs and legal expenses to insurers and reinsurers;
- claims related to data security breaches, information system failures or cyber-attacks; and
- claims related to blackouts caused by space weather.

In addition, from time to time Sirius Group is subject to legal proceedings that are not related to the claims process. In the event of an unfavorable outcome in one or more non-claims legal matters, Sirius Group's ultimate liability may be in excess of amounts reserved and such additional amounts may be material to Sirius Group's results of operations and financial condition. Furthermore, it is possible that these non-claims legal proceedings could result in unexpected outcomes that may materially impact Sirius Group's business or operations.

The effects of, and uncertainty regarding, the U.K.'s withdrawal from the European Union could negatively impact Sirius Group's investment portfolio, business and results of operations.

At a referendum in June 2016, the U.K. voted in favor of leaving the European Union, and the U.K. is anticipated to exit from the EU on March 29, 2019. Since the referendum, there has been an increase in market volatility which has been further impacted by continuing uncertainty around the terms of the withdrawal. During withdrawal negotiations and beyond, the impact on the U.K. and European economies and the broader global economy could be significant, resulting in negative impacts, such as increased volatility and illiquidity, and potentially lower economic growth on markets in the U.K., Europe and globally, which may negatively impact the value of Sirius Group's investment portfolio, business and results of operations. The timing and terms of the U.K.'s withdrawal from the European Union could also have an adverse impact on the operation or prospects of Lloyd's. While Lloyd's has established a European subsidiary company through which Lloyd's syndicates will have access to the European Union single market, there can be no assurance that the arrangements envisaged will not result in increased costs for conducting business in the European Union's single market. In addition, Sirius International will lose its passporting rights to operate in the U.K. and its U.K. branch would be unable to operate should there be a withdrawal by the U.K. from the European Union without any agreement in place between the U.K. and the European Union, and without the U.K. government standing by its promise to allow financial institutions to operate under a temporary permissions regime in the U.K. Sirius International plans to apply to the U.K. regulators (PRA and FCA) to establish a Third Country Branch, to enable it to continue to operate in the U.K. The approval for the branch is expected to be secured before the U.K. temporary permissions regime has expired on December 31, 2020. This will add an additional regulatory burden on the U.K. branch as it will fall under the direct supervision of the U.K. regulators. In addition, if the U.K. leaves the European Union on March 29, 2019 it will have an adverse effect on the Solvency II group capital structure. To resolve this concern, Sirius Group has undertaken a plan to reorganize the Solvency II group and change of control applications have been made to the regulatory authorities of the applicable regulated companies. The capital structure of the Solvency II group may be negatively impacted if Sirius Group does not obtain regulatory approvals by March 29, 2019 and no other solution is implemented.

Sirius Group's reinsurance operations are largely dependent upon ceding companies' evaluation of risk.

Sirius Group, like other reinsurance companies that write treaty reinsurance, generally does not evaluate separately each of the assumed individual insurance risks under Sirius Group's reinsurance contracts. As such, Sirius Group is largely dependent upon the cedents' original underwriting decisions. Sirius Group is subject to the risk that the cedents may not have adequately or accurately evaluated the risks that they have insured, and Sirius Group has reinsured, and that the premiums ceded may not adequately compensate Sirius Group for the risks it assumes. If Sirius Group's reserves are insufficient to cover the actual loss and LAE arising from Sirius Group's treaty reinsurance business, Sirius Group would have to strengthen its reserves and incur charges to its earnings. These charges could be significant and could have a material adverse effect on Sirius Group's results of operations and financial condition.

Consolidation in the insurance and reinsurance industries could adversely impact Sirius Group.

The insurance and reinsurance industries have been consolidating over the past several years and the consolidation trend may continue and even accelerate in the near future. These consolidated client and competitor enterprises may try to use their enhanced market power to negotiate price reductions for Sirius Group's products and services and/or obtain a larger market share through increased line sizes. If competitive pressures reduce prices, Sirius Group would generally expect to reduce its future underwriting activities thus resulting in reduced premiums and a reduction in expected earnings. As the insurance industry consolidates, competition for customers will become more intense and the importance of sourcing and properly servicing each customer will become greater. Sirius Group could incur greater expenses relating to customer acquisition and retention, further reducing Sirius Group's operating margins. In addition, insurance companies that merge may be able to spread their risks across a consolidated, larger capital base so that they require less reinsurance. The number of companies offering retrocessional reinsurance may decline. Reinsurance intermediaries could also continue to consolidate, potentially adversely impacting Sirius Group's ability to access business and distribute its products. Sirius Group could also experience more robust competition from larger, better capitalized competitors. Any of the foregoing could adversely affect Sirius Group's business or its results of operations.

Since Sirius Group depends on a small number of brokers for a large portion of its revenues, loss of business provided by any one of them could adversely affect Sirius Group.

Sirius Group markets its reinsurance worldwide primarily through reinsurance brokers. The reinsurance brokerage industry generally, and Sirius Group's sources of business specifically, are concentrated. During 2018, 2017, and 2016, Sirius Group received 54%, 50% and 48%, respectively, of its reinsurance business from three major reinsurance brokers as follows: Aon Corporation and subsidiaries—26%, 22% and 22%, respectively; Guy Carpenter & Company and subsidiaries—18%, 18% and 18%, respectively; and WT Butler and Co. Ltd.—10%, 10% and 8%, respectively. A decision of one or more of these brokers to reduce substantially or eliminate its business with Sirius Group could adversely affect its business, results of operations or financial condition. In addition, numerous brokers and their affiliates have equity interests in reinsurance companies that compete with Sirius Group. These brokers may favor these reinsurers over other companies, including members of Sirius Group.

Sirius Group's reliance on intermediaries subjects it to the intermediaries' credit risk.

In accordance with industry practice, Sirius Group frequently pays amounts owing in respect of claims under its contracts to reinsurance brokers and, to a lesser extent, MGUs that, in turn, make payments to the cedents. In the event that a broker or MGU fails to make such a payment, depending on the jurisdiction, Sirius Group may remain liable to the cedent for the deficiency. Conversely, when premiums for reinsurance contracts are paid to reinsurance brokers or MGUs for payment to Sirius Group, these premiums may be deemed to have been paid and the cedent may no longer be liable to Sirius Group for those amounts, whether or not actually received by Sirius Group. Intermediaries generally are less capitalized than the businesses Sirius Group reinsures and therefore may be unable to pay their debts when due. Consequently, Sirius Group faces credit risk associated with intermediaries during the payment process.

The regulatory framework under which Sirius Group operates and potential changes thereto could have a material adverse effect on its business.

Sirius Group's activities are subject to extensive regulation under the laws and regulations of the U.S., the U.K., Bermuda, Sweden and the European Union and its member states and the other jurisdictions in which Sirius Group operates.

Sirius Group's operations in each of these jurisdictions are subject to varying degrees of regulation and supervision. The laws and regulations of the jurisdictions in which Sirius Group's insurance and reinsurance subsidiaries are domiciled require, among other things, that these subsidiaries maintain minimum levels of statutory capital, surplus and liquidity, meet solvency standards, submit to periodic examinations of their financial condition and restrict payments of dividends, distributions and reductions of capital in certain circumstances. Statutes, regulations and policies to which Sirius Group's insurance and reinsurance subsidiaries are subject may also restrict the ability of these subsidiaries to write insurance and reinsurance policies, make certain investments and distribute funds.

Sirius Group devotes a significant amount of time and resources to comply with various regulatory requirements imposed in Bermuda, Sweden, the U.S. and the U.K. and various other jurisdictions around the globe. There remains significant uncertainty as to the impact that these various regulations and legislation will have on Sirius Group. Such impacts could include constraints on Sirius Group's ability to move capital between subsidiaries or requirements that additional capital be provided to subsidiaries in certain jurisdictions, which may adversely impact Sirius Group's profitability. In addition, while Sirius Group currently has excess capital and surplus under applicable capital adequacy requirements, such requirements or similar regulations, in their current form or as they may be amended in the future, may have a material adverse effect on Sirius Group's business, financial condition or results of operations.

Sirius Group's insurance and reinsurance operating subsidiaries may not be able to maintain necessary licenses, permits, authorizations or accreditations in territories where Sirius Group is currently engaged in business or obtain them in new territories, or may be able to do so only at significant cost. In addition, Sirius Group may not be able to comply fully with, or obtain appropriate exemptions from, the wide variety of laws and regulations applicable to insurance or reinsurance companies or holding companies. In addition to insurance and financial industry regulations, Sirius Group's activities are also subject to relevant economic and trade sanctions, money laundering regulations, and anti-corruption laws including the U.S. Foreign Corrupt Practices Act, U.K. Bribery Act 2010 and the Bermuda Bribery Act 2016, which may increase the costs of regulatory compliance, limit or restrict Sirius Group's ability to do business or engage in certain regulated activities, or subject Sirius Group to the possibility of regulatory actions or proceedings.

There can be no assurance that Sirius Group, its employees, or its agents acting on Sirius Group's behalf are in full compliance with all applicable laws and regulations or their interpretation by the relevant authorities and, given the complex nature of the risks, it may not always be possible for Sirius Group to ascertain compliance with such laws and regulations. Failure to comply with or to obtain appropriate authorizations and/or exemptions under any applicable laws or regulations, including those referred to above, could subject Sirius Group to investigations, criminal sanctions or civil remedies, including fines, injunctions, loss of an operating license, reputational consequences, and other sanctions, all of which could have a material adverse effect on Sirius Group's business. Also, changes in the laws or regulations to which Sirius Group is subject could have a material adverse effect on its business. In addition, in most jurisdictions, government regulatory authorities have the power to interpret or amend applicable laws and regulations, and have discretion to grant, renew or revoke licenses and approvals Sirius Group needs to conduct its activities. Such governmental and regulatory authorities may require Sirius Group to incur substantial costs in order to comply with such laws and regulations.

Risks associated with changes in U.S. health care legislation could negatively affect Sirius Group's accident and health business.

Sirius Group derives revenues from, among other things, the provision of accident and health premiums in the U.S., that is, providing insurance to institutions that participate in the U.S. healthcare delivery infrastructure. Changes in U.S. healthcare legislation, specifically the Patient Protection and Affordable Care Act of 2010 (the "Healthcare Act") (and legislative reforms related thereto), have made significant changes to the regulation of health insurance including, but not limited to, the healthcare delivery system, the healthcare cost reimbursement structure in the U.S. and the rate of growth of health care costs in the U.S. and may negatively affect Sirius Group's accident and health business. In addition, Sirius Group may be subject to regulations, guidance or determinations emanating from the various regulatory authorities authorized under the Healthcare Act. It is difficult to predict the effect that the Healthcare Act, or any regulatory pronouncement made thereunder, will have on Sirius Group's results of operations or financial condition.

Sirius Group may be unable to adequately maintain its systems and safeguard the security of its data, which may adversely impact Sirius Group's ability to operate its business and cause reputational harm and financial loss.

Because Sirius Group's business and operations rely on secure and efficient information technology systems, Sirius Group depends on its ability and the ability of certain third parties, including vendors and business partners, to access Sirius Group's computer systems to perform necessary functions such as providing quotes and product pricing, billing and processing premiums, administering claims, and reporting its financial results. The functioning of these systems may be impacted by any number of events, including power outages, natural and man-made catastrophes, and cyber-attacks even though backup and recovery systems and contingency plans are in place. In the event Sirius Group is unable to access its systems, or any third-party system that it relies upon, Sirius Group's ability to operate its business effectively may be significantly impaired, which could adversely affect our consolidated financial condition or results of operations.

Sirius Group's business also depends upon its ability to securely process, store, transmit and safeguard confidential and proprietary information that is in Sirius Group's possession. This information includes confidential information relating to Sirius Group's business, and personally identifiable information ("PII") and protected health information ("PHI") belonging to employees, customers, claimants and business partners. Even though we rely on sophisticated commercial control technologies to maintain security and confidentiality of our systems, Sirius Group's systems may be vulnerable to a variety of forms of unauthorized access that could result in a data breach, including hackers, computer viruses, and other cyber-attacks, as well as breaches that result from dishonest employees, errors by employees or lost or stolen computer devices, and Sirius Group may not be able to protect the confidentiality of such information.

Third parties present an additional risk of cyber-related events. Sirius Group outsources certain technological and business process functions to third-party providers. Sirius Group relies on these third parties to maintain and store PII and PHI and other confidential information on their systems. As needed, Sirius Group also transmits such information by e-mail and other electronic means. Sirius Group attempts to establish sufficient controls and secure capabilities to transmit such information and to prevent unauthorized disclosure, but these controls may not be sufficient. Furthermore, third-party providers may not have appropriate controls in place to protect such information.

Sirius Group's computer systems have been and will continue to be the target of cyber-attacks, despite the measures we have taken and may take in the future to address and mitigate cybersecurity and technology risks. We cannot assure you that our systems and networks will not be subject to successful attacks, breaches or interference. At this time, Sirius Group is not aware that it has experienced a material cybersecurity breach. Sirius Group is also not aware of any third-party vendor having experienced a material cybersecurity breach that impacted Sirius Group's data. The risk of cyber-attack may increase, and Sirius Group may experience more significant attacks in the future. The risks identified above could expose Sirius Group to data breaches, disruptions of service, financial losses and significant increases in compliance costs and reputational harm to Sirius Group, any of which could affect its business and results of operations.

In addition, a data breach that involves the compromise of PII or PHI could subject Sirius Group to legal liability or regulatory action under data protection and privacy laws and regulations enacted by federal, state and foreign governments, or other regulatory bodies. In particular, the European Union has passed the GDPR, which came into force in May 2018. The GDPR includes more stringent operational requirements on entities that receive or process personal data (as compared to previous European Union law), along with significant penalties for non-compliance. As a result, Sirius Group's ability to conduct its business and Sirius Group's results of operations might be materially and adversely affected.

Operational risks, including human or systems failures, are inherent in Sirius Group's business.

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

Sirius Group's modeling, underwriting and information technology and application systems are critical to its business and reputation. Moreover, Sirius Group's technology and applications have been an important part of its underwriting process and ability to compete successfully. Such technology is and will continue to be a very important part of the underwriting process. Sirius Group has also licensed certain systems and data from third parties. Sirius Group cannot be certain that it will have access to these, or comparable service providers, or that Sirius Group's technology or applications will continue to operate as intended. In addition, Sirius Group cannot be certain that these service providers or consultants could be replaced without slowing Sirius Group's underwriting response time. A major defect or failure in Sirius Group's internal controls or information technology and application systems could result in management distraction, harm to Sirius Group's reputation, a loss or delay of revenues or increased expense.

Sirius Group depends on key personnel to manage the business effectively and they may be difficult to replace.

Sirius Group's performance substantially depends on the efforts and abilities of its management team and other executive officers and key employees. Furthermore, much of Sirius Group's competitive advantage is based on the expertise, experience and know-how of its key management personnel. Sirius Group does not have fixed-term employment agreements with many of its key employees or key-man life insurance and the loss of one or more of these key employees could adversely affect Sirius Group's business, results of operations and financial condition. Sirius Group's success also depends on the ability to hire and retain additional personnel. Difficulty in hiring or retaining personnel could adversely affect Sirius Group's results of operations and financial condition.

Sirius Group faces unforeseen liabilities arising from possible acquisitions and dispositions of businesses or difficulties integrating acquired businesses.

Sirius Group has engaged in acquisitions of businesses in the past, including the acquisitions of Armada and IMG in 2017, and may continue to do so in the future. Any future acquisitions may expose it to operational challenges and risks, including:

- integrating financial and operational reporting systems;
- establishing satisfactory budgetary and other financial controls;
- funding increased capital needs and overhead expenses;
- obtaining management personnel required for expanded operations;
- funding cash flow shortages that may occur if anticipated sales and revenues are not realized or are delayed, whether by general economic or market conditions or unforeseen internal difficulties;
- the value of assets acquired may be lower than expected or may diminish due to credit defaults or changes in interest rates and liabilities assumed may be greater than expected;
- the assets and liabilities acquired by Sirius Group may be subject to foreign currency exchange rate fluctuation; and
- financial exposures in the event that the sellers of the entities acquired are unable or unwilling to meet their indemnification, reinsurance and other obligations to Sirius Group.

Sirius Group's ability to achieve the benefits anticipated from any business acquisition will depend in large part upon its ability to successfully integrate such businesses in an efficient and effective manner. Sirius Group may not be able to integrate such businesses successfully, or the process may take longer than expected. The integration of operations may require the dedication of significant management resources, which may distract management's attention from day-to-day business. If Sirius Group is unable to successfully integrate the operations of such acquired businesses, it may be unable to realize the full benefits it expects to achieve as a result of such acquisitions and Sirius Group's business and results of operations may be lower than expected.

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

Sirius Group's future capital requirements depend on many factors, including regulatory requirements, the ability to write new business successfully, the frequency and severity of catastrophic events, and the ability to establish premium rates and reserves at levels sufficient to cover losses. Sirius Group may need to raise additional funds through financings or curtail its growth and reduce its assets. Any equity or debt financing, if available at all, may be on unfavorable terms. Disruption in the financial markets may limit Sirius Group's ability to access capital required to operate its business and Sirius Group may be forced to delay raising capital or bear a higher cost of capital, which could decrease Sirius Group's profitability and significantly reduce its financial flexibility. In addition, if Sirius Group experiences a credit rating downgrade, withdrawal or negative watch/outlook in the future, it could incur higher borrowing costs and may have more limited means to access capital. If Sirius Group cannot obtain adequate capital on favorable terms or at all, its business, results of operations and financial condition could be adversely affected.

Sirius Group has incurred losses in the past and may incur losses in the future.

Sirius Group had a comprehensive (loss) of approximately \$(80) million, \$(78) million, and \$(34) million for 2018, 2017, and 2016, respectively. Sirius Group expects to incur increased operating expenses related to its growth initiatives, including the purchase of two MGUs, and primary insurance platform to support its business. If revenue fails to grow at anticipated rates, or if operating costs rise without a commensurate increase in revenue, then the imbalance between revenue and operating expenses will negatively impact Sirius Group's liquidity as well as its ability to achieve profitability in upcoming quarters. Sirius Group's lack of recent profitability may indicate that it needs to re-evaluate its plan of operations or change its strategies in order to generate a profit. A lack of profitability could adversely affect the price of its common shares and liquidity.

Sirius Group's results of operations may fluctuate significantly from period to period and may not be indicative of its long-term prospects.

Sirius Group's results of operations may fluctuate significantly from period to period. These fluctuations result from a variety of factors, including the seasonality of the insurance and reinsurance business, the volume and mix of reinsurance and insurance products that Sirius Group writes, loss experience on Sirius Group's insurance and reinsurance liabilities, the performance of Sirius Group's investment portfolio and its ability to assess and integrate its risk management strategy effectively. In particular, Sirius Group seeks to underwrite products and make investments to achieve long-term results. As a result, at any given time, Sirius Group's short-term results of operations may not be indicative of its long-term prospects.

Sirius Group is a holding company with no direct operations, and its insurance and reinsurance subsidiaries' ability to pay dividends and other distributions to Sirius Group is restricted by law.

Sirius Group is a holding company and carries out its business through its insurance and reinsurance subsidiaries. Accordingly, Sirius Group is dependent upon receipt of funds from other members of Sirius Group to fulfil its obligations. Sirius Group's subsidiaries may not be able to generate cash flow sufficient to pay a dividend or distribute funds to Sirius Group. In addition, under the insurance laws of certain jurisdictions in which Sirius Group's insurance and reinsurance subsidiaries are domiciled, an insurer or reinsurer is restricted with respect to the timing or the amount of dividends it may pay without prior approval by their relevant regulatory authorities.

Sirius Group's top tier regulated insurance and reinsurance operating subsidiary is Sirius Bermuda. Sirius Bermuda's ability to pay dividends is limited under Bermuda law and regulations. Under the Insurance Act, Sirius Bermuda is restricted with respect to the payment of dividends. Sirius Bermuda is prohibited from declaring or paying in any financial year dividends of more than 25% of its total statutory capital and surplus (as shown on its previous financial year's statutory balance sheet) unless it files, at least seven days before payment of such dividends, with the BMA an affidavit stating that it will continue to meet the required margins following the declaration of those dividends. Accordingly, Sirius Bermuda can pay approximately \$539 million to its parent company, Sirius International Group, Ltd., during 2019 without providing an affidavit to the BMA. Sirius Bermuda indirectly owns Sirius International Insurance Corporation, Sirius America Insurance Company and Sirius Group's other insurance and reinsurance operating companies, each of which are limited in their ability to pay dividends by the insurance laws of their relevant jurisdictions.

As of December 31, 2018, Sirius Group and its intermediate holding companies had \$52 million of net unrestricted cash, short-term investments and fixed-maturity investments outside of its regulated and unregulated insurance and reinsurance operating subsidiaries. Management believes that Sirius Group's cash balances, cash flows from operations and cash flows from investments are adequate to meet expected cash requirements for the foreseeable future on both a holding company and operating subsidiary level. However, if Sirius Group's insurance and reinsurance subsidiaries cannot pay dividends in future periods, it may have difficulty servicing its debt and meeting its holding company expenses. Dividend payments and other distributions from Sirius Group's subsidiaries also may be subject to withholding taxes, which would reduce the amount available to service Sirius Group's debt.

The current state of the global economy and capital markets increases the possibility of adverse effects on Sirius Group's financial position and results of operations. Economic downturns could impair Sirius Group's investment portfolio and affect the primary insurance market, which could, in turn, harm Sirius Group's results of operations and reduce the volume of new business.

Global capital markets in the U.S. and Europe, as well as other leading markets, continue to experience volatility. Although conditions may be improving, the longer this economic situation persists, the greater the probability that these risks could have an adverse effect on Sirius Group's financial results. This may be evidenced in several ways including, but not limited to, a potential reduction in Sirius Group's premium income, financial losses in Sirius Group's investment portfolio and decreases in revenue and net income.

Unfavorable economic conditions also could increase Sirius Group's funding costs, limit its access to the capital markets or result in a decision by lenders not to extend credit to Sirius Group. These events could prevent Sirius Group from increasing its underwriting activities and negatively impact Sirius Group's results of operations. In addition, Sirius Group's cedents and other counterparties may be affected by such developments in the financial markets, which could adversely affect their ability to meet their obligations to Sirius Group.

Risks Related to Tax Matters

Sirius Group has significant deferred tax assets, which may become devalued if either Sirius Group does not generate sufficient future taxable income or applicable corporate tax rates are reduced.

Sirius Group's total net deferred tax liability as of December 31, 2018 was \$35 million. Of that amount, \$33 million relates to net deferred tax assets in the U.S. subsidiaries, \$156 million relates to net deferred tax assets in Luxembourg subsidiaries, \$12 million relates to net deferred tax assets in the United Kingdom subsidiaries and \$236 million relates to net deferred tax liabilities in Sweden subsidiaries. Net deferred tax assets and liabilities reflect carryforward tax attributes and temporary differences between the book basis and tax basis of various assets and liabilities. Utilization of most deferred tax assets is dependent on generating sufficient future taxable income in the appropriate jurisdiction and/or entity. If it is determined that it is more likely than not that sufficient future taxable income will not be generated, Sirius Group would be required to increase applicable valuation allowance(s). Most of Sirius Group's deferred tax assets are determined by reference to applicable corporate income tax rates, in particular in the U.S., Luxembourg and Sweden. Accordingly, in the event of new legislation that reduces any such corporate income tax rates, the carrying value of certain of Sirius Group's deferred tax assets would decrease. A material devaluation in Sirius Group's deferred tax assets due to either insufficient taxable income or lower corporate income tax rates would have an adverse effect on Sirius Group's results of operations and financial condition.

Two of Sirius Group's Swedish non-insurance subsidiaries are involved in tax disputes.

The Swedish Tax Authority ("STA") has denied deductions claimed by two of Sirius Group's Swedish subsidiaries in certain tax years for interest they paid on intra-group debt instruments. Sirius Group is currently challenging the STA's denial in court based on the technical merits. In October 2018, one of the Swedish subsidiaries received an adverse decision from Sweden's Administrative Court, which Sirius Group has appealed. Sirius Group's reserve for uncertain tax positions has taken into account this and other relevant developments in these tax disputes and in applicable Swedish tax law including recent case law. Sirius Group also has taken into account the Stock Purchase Agreement by which Sirius Group was sold to CMIG International in 2016. Pursuant to such agreement, the seller agreed to indemnify the buyer and Sirius Group for, among other things, (i) any additional tax liability in excess of Sirius Group's accounting for uncertain tax positions for tax periods prior to the sale of Sirius Group to CMIG International, and (ii) an impairment in Sirius Group's net deferred tax assets resulting from a final determination by a tax authority. While Sirius Group intends to continue challenging the STA's denial based on the technical merits (including the appeal of the adverse court decision received in October 2018), the ultimate resolution of these tax disputes is uncertain and no assurance can be given that there will be no material changes to Sirius Group's operating results or balance sheet in connection with these uncertain tax positions or the related indemnification.

Sirius Group may be treated as a PFIC, in which case a U.S. holder of Sirius Group common shares would be subject to disadvantageous rules under U.S. federal income tax laws.

If Sirius Group is considered a passive foreign investment company ("PFIC") for U.S. federal income tax purposes, a U.S. shareholder will be subject to adverse tax consequences, including subjecting the U.S. shareholder to a greater tax liability than might otherwise apply and subjecting the U.S. shareholder to tax on amounts in advance of when tax would otherwise be imposed, in which case its investment in Sirius Group could be materially adversely affected. In addition, if Sirius Group were considered a PFIC, upon the death of any U.S. individual owning shares, such individual's heirs or estate would not be entitled to a "step-up" in the basis of the shares that might otherwise be available under U.S. federal income tax laws. A U.S. shareholder may avoid some of the adverse tax consequences of owning an equity interest in a PFIC by making a qualified electing fund election. If Sirius Group is a PFIC, an electing U.S. shareholder is likely to recognize income in a taxable year in amounts significantly greater than the distributions received from Sirius Group, if any, in such taxable year.

Sirius Group will be treated as a PFIC for U.S. federal income tax purposes in any taxable year for which either (i) at least 75% of Sirius Group's gross income consists of certain types of "passive income" or (ii) at least 50% of the average value of Sirius Group's assets produce, or are held for the production of, "passive income." Unless an exception applies, "passive income" includes dividends, interest, rents and royalties. For these purposes, if Sirius Group owns (directly or indirectly) at least 25% (by value) of the stock of another corporation, for purposes of determining whether Sirius Group is a PFIC, Sirius Group is treated as if it held the proportionate share of the assets of such other corporation, and as if it received directly the proportionate share of the income of such other corporation. Under a specific exception, as amended by the 2017 tax reform known as the Tax Cuts and Jobs Act (Pub. L. 115-97) ("2017 Tax Cuts and Jobs Act"), passive income does not include income derived in the active conduct of an insurance business by a qualifying insurance corporation. Whether an insurance company is a qualifying insurance corporation is determined based on an asset to liability test. The test requires the insurance company to have applicable insurance liabilities in excess of 25% of its total assets as reported on the company's financial statements.

Based on Sirius Group's assets, income and activities, including those of its subsidiaries engaged in the active conduct of an insurance business, Sirius Group does not expect that it will be treated as a PFIC in 2019; however, this conclusion is not free from doubt and the IRS could take the position that Sirius Group is a PFIC. While Sirius Group expects its insurance subsidiaries will qualify for the active insurance income exception for qualified insurance corporations, absent regulations and other detailed guidance relating to the interpretations of the 2017 Tax Cuts and Jobs Act, there can be no assurance that Sirius Group's insurance subsidiaries will meet the requirements for this exception. Moreover, PFIC classification is a factual determination made annually, and even if Sirius Group is not a PFIC in 2019, it could become a PFIC in later years. Accordingly, Sirius Group cannot assure you that it will not be treated as a PFIC for 2019 or for any future year.

Sirius Group may become subject to increased taxation in Bermuda and other countries as a result of the OECD's plan on "base erosion and profit shifting" or as a result of being listed on the EU list of non-cooperative jurisdictions for tax purposes.

The Organisation for Economic Cooperation and Development ("OECD"), with the support of the Group of Twenty ("G20"), initiated the "base erosion and profit shifting" ("BEPS") project in 2013 in response to concerns that international tax standards have not kept pace with changes in global business practices and that changes are needed to international tax laws to address situations where multinational enterprises may pay little or no tax in certain jurisdictions by shifting profits away from jurisdictions where the activities creating those profits may take place. In October 2015, the OECD issued "final reports" in connection with the BEPS project. The final reports were approved for adoption by the G20 finance ministers in November 2015 and provide the basis for international standards for corporate taxation, which are designed to prevent, among other things, treaty-shopping, the artificial shifting of income to tax havens and low-tax jurisdictions, the erosion of the tax base through interest deductions on intercompany debt and the artificial avoidance of permanent establishments (i.e., tax nexus with a jurisdiction). Action 6 (treaty abuse) led to the development of a global multilateral instrument to incorporate and facilitate changes to tax treaties, which was signed on June 7, 2017.

Legislation to adopt these standards has been enacted or is currently under consideration in a number of jurisdictions, including country-by-country reporting. As a result, Sirius Group's earnings may be subject to income tax, or intercompany payments may be subject to withholding tax, in jurisdictions where they are not currently taxed or at higher rates of tax than currently taxed. The applicable tax authorities could also attempt to apply such taxes to past earnings and payments. Any such additional taxes could materially increase Sirius Group's effective tax rate. Also, the adoption of these standards may increase the complexity and costs associated with tax compliance and adversely affect Sirius Group's financial position and results of operations.

On March 12, 2019, the Council of the European Union added Bermuda to the list of non-cooperative jurisdictions for tax purposes. While it is difficult to predict the effects of such recent development, Sirius Group does not currently expect any material short-term adverse effects as a result of Bermuda being included on this list. Bermuda has taken, and intends to take measures to remove it from the list, but if Bermuda is kept on this list, Sirius Group and its subsidiaries may be subject to certain adverse tax and non-tax consequences, which may depend in part on future changes in tax laws and/or administration of relevant European Union countries.

Sirius Group may become subject to income tax (or an increased amount of income tax) in one or more countries, including the U.S., which could materially reduce Sirius Group's after-tax returns and the value of Sirius Group common shares.

Due to their business operating models, a portion of the income of two of Sirius Group's foreign insurance companies is treated as effectively connected with a U.S. trade or business, and Sirius Group complies with the applicable U.S. income tax filing and payment requirements accordingly. Other than these deemed U.S. businesses, Sirius Group (including its foreign subsidiaries) currently intends to conduct substantially all of its businesses and operations in a manner such that it will not otherwise be engaged in a trade or business in the U.S. and will not be subject to more U.S. income tax than it currently incurs. However, the matter is not free from doubt in light of the applicable tax law and guidance regarding activities that constitute being engaged in a trade or business in the U.S. for U.S. federal income tax purposes. Accordingly, Sirius Group cannot assure you that the IRS will not contend, perhaps successfully, that a foreign entity in Sirius Group is engaged in a trade or business in the U.S. or is subject to more U.S. income tax than it currently incurs. A foreign corporation deemed to be so engaged would be subject to U.S. federal income tax, as well as branch profits tax, on its income that is treated as effectively connected with the conduct of that trade or business unless the corporation is entitled to relief under an applicable tax treaty.

Sirius Group could become subject to income tax in one or more countries, including the U.S., as a result of activities performed by it, adverse developments or changes in law, contrary conclusions by the relevant tax authorities or other causes. The imposition of any of these income taxes could materially reduce Sirius Group's post-tax returns available for distributions on, and consequently the value of, Sirius Group common shares.

The impact of Bermuda's letter of commitment to the OECD to eliminate harmful tax practices is uncertain and could adversely affect Sirius Group's tax status in Bermuda.

The OECD has published reports and launched a global dialogue among member and non-member countries on measures to limit harmful tax competition. These measures are largely directed at counteracting the effects of tax havens and preferential tax regimes in countries around the world. According to the OECD, Bermuda is a jurisdiction that has substantially implemented the internationally agreed tax standard and as such is listed on the OECD 'white list'. However, Sirius Group is unable to predict whether any changes will be made to this classification or whether any such changes will subject Sirius Group or its Bermuda operations to additional taxes.

An "ownership change" could limit Sirius Group's ability to utilize tax loss and credit carryforwards in the U.S. to offset future taxable income.

As of December 31, 2018, Sirius Group had a deferred tax asset (net of valuation allowance) in the U.S. of approximately \$50 million representing tax attributes including net operating loss carryforwards and tax credit carryforwards. Sirius Group's ability to use the tax attributes underlying such deferred tax asset to offset future taxable income may be significantly limited if Sirius Group experiences an "ownership change" as defined in Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"). In general, an ownership change will occur when the percentage of ownership (by value) of one or more "5-percent shareholders" (as defined in the Code) in Sirius Group common shares has increased by more than 50% over the lowest percentage owned by such shareholders at any time during the prior three years (calculated on a rolling basis). An entity that experiences an ownership change generally will be subject to an annual limitation on its pre-ownership change tax loss and credit carryforwards equal to the equity value of the corporation immediately before the ownership change, multiplied by the long-term, tax-exempt rate posted monthly by the IRS (subject to certain adjustments). The limitation on Sirius Group's ability to utilize tax loss and credit carryforwards arising from an ownership change under Section 382 would depend on the value of Sirius Group's equity at the time of any ownership change. If Sirius Group were to experience an "ownership change", it is possible that a significant portion of Sirius Group's tax loss and credit carryforwards could expire before Sirius Group would be able to use them to offset future taxable income.

The ongoing effects of the 2017 Tax Cuts and Jobs Act and BEAT could make Sirius Group's results difficult to predict.

Sirius Group's effective tax rate may fluctuate in the future as a result of the 2017 Tax Cuts and Jobs Act, which included significant enacted changes in U.S. income tax law that had a meaningful impact on Sirius Group's provision for income taxes and requires significant judgments and estimates in the interpretation and calculations. Sirius Group recorded the effects in its financial statements for the year ended December 31, 2018. However, Sirius Group cannot assure that the IRS will apply the new tax law in a way similar to Sirius Group's interpretation.

The enacted tax legislation included, among other new provisions, a reduction in the corporate tax rate, new limitations on the deductibility of net interest, and the Base Erosion and Anti-Abuse Minimum Tax (“BEAT”). Proposed regulations interpreting and applying some of these provisions have been issued by the U.S. Department of the Treasury and the IRS, and additional guidance may be forthcoming. It is not possible to predict if, when or in what form such guidance will be provided and whether such guidance will be applied on a retroactive basis. The BEAT levies a significant tax on cross border payments to related group companies. This tax will subject intragroup reinsurance arrangements to a base erosion tax on premiums ceded. While Sirius Group intends to operate in a manner that limits its exposure to BEAT, at this time, subject to revision or finalization of proposed regulations issued in December 2018 and other additional guidance, uncertainty about the financial impact on Sirius Group of this new tax remains and Sirius Group cannot reassure you it will not be subject to material amounts of BEAT in the future. Accordingly, BEAT could materially impact Sirius Group’s provision for taxes in the future.

Sirius Group may be subject to tax withholding under FATCA, which may reduce investment returns and distributions to shareholders.

The Hiring Incentives to Restore Employment Act provides that a 30% withholding tax will be imposed on certain payments of U.S. source income and certain payments of proceeds from the sale of property that could give rise to U.S. source interest or dividends unless Sirius Group and the applicable foreign subsidiaries enter into an agreement with the IRS to disclose the name, address and taxpayer identification number of certain U.S. persons that own, directly or indirectly, an interest in Sirius Group as well as certain other information relating to any such interest (these rules are commonly known as the Foreign Account Tax Compliance Act, or “FATCA”). The IRS has released final and proposed regulations and other guidance that provide for the phased implementation of the foregoing withholding and reporting requirements. On December 19, 2013, the U.S. Department of the Treasury signed a Model 2 non-reciprocal intergovernmental agreement (the “Model 2 IGA”) with Bermuda. The Model 2 IGA modifies the foregoing requirements but generally requires similar information to be disclosed to the IRS. Although Sirius Group will attempt to satisfy any obligations imposed on it to avoid the imposition of this withholding tax, no assurance can be given that it will be able to satisfy these obligations. If Sirius Group or its subsidiaries become subject to a withholding tax as a result of FATCA, the return of all shareholders may be materially adversely affected.

U.S. tax-exempt organizations who own Sirius Group common shares may recognize unrelated business taxable income.

A U.S. tax-exempt organization may recognize unrelated business taxable income if Sirius Group is a “controlled foreign corporation” (which we also refer to as a “CFC”) as discussed below, and the organization is a 10% U.S. Shareholder, or if the related person insurance income (“RPII”) inclusion rules above apply. U.S. tax-exempt organizations should consult their own tax advisors regarding the risk of recognizing unrelated business taxable income as a result of the ownership of Sirius Group common shares. A “10% U.S. Shareholder” is a U.S. person who owns (directly, indirectly through foreign entities or constructively) at least 10% of the total combined voting power of Sirius Group’s voting shares, or at least 10% of the total value of shares of all classes of stock of such foreign corporation.

Changes in U.S. federal income tax law and other jurisdictions could materially adversely affect an investment in Sirius Group common shares.

The U.S. federal income tax laws and interpretations regarding whether a company is engaged in a trade or business within the U.S. or whether a company is a CFC or PFIC or has RPII are subject to change, possibly on a retroactive basis. Treasury regulations were issued in proposed form regarding the application of the PFIC rules to an insurance company. Additionally, the 2017 Tax Cuts and Jobs Act changed in material ways the tests for whether a foreign insurance company is a PFIC, and no regulations have yet been issued with respect to these new rules. Additionally, the Treasury regulations regarding RPII are still in proposed form. New Treasury regulations or pronouncements interpreting or clarifying such rules may be forthcoming from the IRS. It is not possible to predict if, when or in what form such guidance will be provided and whether such guidance will be applied on a retroactive basis. Due to the absence of specific authority with respect to these issues, the amount, timing and character of income, gain or loss recognized with respect to a U.S. shareholder could be significantly different from that described herein. Additionally, changes in tax law in non-U.S. jurisdictions may also adversely affect Sirius Group’s tax treatment and that of its subsidiaries. You are urged to consult your own tax advisor regarding the tax consequences of owning Sirius Group shares in your particular circumstances.

Reduced U.S. federal income tax rates for qualified dividend income may not be available in the future.

As long as Sirius Group common shares are readily tradable on an established securities market in the U.S. and it is not a PFIC, then under current U.S. law, dividends paid on Sirius Group common shares to U.S. individual shareholders should qualify as “qualified dividend income” and be eligible for reduced U.S. federal income tax rates. The U.S. Congress has, in the past, considered legislation that would exclude shareholders of foreign corporations from this preferential U.S. federal income tax treatment unless either (i) the corporation is organized or created under the laws of a country that has entered into a “comprehensive income tax treaty” with the U.S. or (ii) the stock of such corporation is readily tradable on an established securities market in the U.S. and the corporation is organized or created under the laws of a country that has a “comprehensive income tax system” that the U.S. Secretary of the Treasury determines is satisfactory for this purpose. Sirius Group would likely not satisfy either of these tests and, accordingly, if this or similar legislation were to become law, individual U.S. shareholders would no longer qualify for reduced U.S. federal income tax rates on dividends paid by it.

Sirius Group may be treated as a CFC and might be subject to the rules for related person insurance income, and in either case this may subject a U.S. holder of Sirius Group common shares to disadvantageous rules under U.S. federal income tax laws.

A CFC for U.S. federal income tax purposes is any foreign corporation if, on any day of the taxable year, 10% U.S. Shareholders own (directly, indirectly through foreign entities or by attribution by application of certain constructive ownership rules) more than 50% (25% in the case of certain insurance companies) of the total combined voting power of all classes of that corporation’s voting shares, or more than 50% (25% in the case of certain insurance companies) of the total value of all the corporation’s shares. If Sirius Group is a CFC, each 10% U.S. Shareholder must annually include in its income its pro rata share of Sirius Group’s “subpart F income,” and its “global intangible low-taxed income” even if no distributions are made.

If, with respect to any of Sirius Group’s non-U.S. insurance subsidiaries, (i) 20% or more of the gross income in any taxable year is attributable to insurance or reinsurance policies of which the direct or indirect insureds are direct or indirect U.S. shareholders of Sirius Group (regardless of the number of shares owned by those shareholders) or persons related to such U.S. shareholders and (ii) direct or indirect insureds, whether or not U.S. persons, and persons related to such insureds own directly or indirectly 20% or more of the voting power or value of Sirius Group’s shares, any U.S. person who owns any shares directly or indirectly on the last day of the taxable year would most likely be required to include its allocable share of the RPII of the applicable subsidiary for the taxable year in its income, even if no distributions are made. Sirius Group believes it is not likely that these conditions will be satisfied. However, Sirius Group cannot assure you that this will be the case. Consequently, Sirius Group cannot assure you that a person who is a direct or indirect U.S. shareholder will not be required to include amounts in its income in respect of RPII in any taxable year.

Sirius Group may become subject to taxes in Bermuda after March 31, 2035, which may have a material adverse effect on its results of operations and your investment.

The Bermuda Minister of Finance, under the Exempted Undertakings Tax Protection Act 1966 of Bermuda, as amended, has given Sirius Group and each of its Bermuda incorporated subsidiaries 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 any such entity or any of its operations, shares, debentures or other obligations until March 31, 2035, except insofar as such tax applies to persons ordinarily resident in Bermuda or to any taxes payable by it in respect of real property owned or leased by it in Bermuda. Given the limited duration of the Bermuda Minister of Finance’s assurance, there can be no assurance that Sirius Group will not be subject to any Bermuda tax after March 31, 2035.

U.S. Treasury Regulations may limit Sirius Group’s ability to make acquisitions of U.S.-domiciled companies using corporate stock.

On April 4, 2016 and July 12, 2018, the IRS and the Treasury Department issued final and temporary regulations on corporate inversions. Among other provisions, the regulations provide for a “cash box rule” that in general reduces a foreign corporation’s value by the percentage of passive assets it holds for the purpose of applying the inversion ownership test. Failure of such test could result in the acquiring corporation being taxed as a U.S. corporation. As a result of these regulations, the size of any U.S. company that Sirius Group could acquire for stock may need to be dramatically reduced to avoid severe adverse tax consequences. Sirius Group would need to monitor its passive assets to avoid such adverse tax consequences.

Risks Related to Sirius Group Common Shares

There can be no assurance that Sirius Group will be able to comply with the continued listing standards of Nasdaq.

Sirius Group is required to demonstrate compliance with Nasdaq's continued listing requirements in order to continue to list its common shares on Nasdaq. If Nasdaq delists Sirius Group common shares from trading on its exchange for failure to meet the continued listing requirements, Sirius Group and its shareholders could face significant material adverse consequences including:

- a limited availability of market quotations for Sirius Group securities;
- a determination that Sirius Group common shares are a "penny stock," which will require brokers trading in Sirius Group common shares to adhere to more stringent rules, possibly resulting in a reduced level of trading activity in the secondary trading market for Sirius Group common shares;
- a limited amount of analyst coverage; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

The National Securities Markets Improvement Act of 1996, which is a federal statute, prevents or preempts the states from regulating the sale of certain securities, which are referred to as "covered securities." If Nasdaq delists Sirius Group common shares, the common shares would not be covered securities and Sirius Group would be subject to regulation in each state in which it offers its securities.

Sirius Group has limited experience complying with the reporting and other requirements of a publicly traded company. Fulfilling Sirius Group's obligations incident to being a public company, including with respect to the requirements of the Sarbanes-Oxley Act of 2002, will be expensive and time consuming, and any delays or difficulties in satisfying these obligations could have a material adverse effect on Sirius Group's future results of operations and share price.

Prior to the completion of the Merger in November 2018, Sirius Group had operated as a private company, and prior to April 2016 as a subsidiary of a public company, and had not been subject to the same financial and other reporting and corporate governance requirements as a public company. As a result of the completion of the Merger, as a public company, Sirius Group is or will be required, among other things, to:

- prepare and file periodic reports in compliance with the federal securities laws;
- define and expand the roles and the duties of its board of directors and its committees;
- institute more comprehensive compliance, investor relations and internal audit functions; and
- evaluate and maintain its system of internal control over financial reporting, and report on management's assessment thereof, in compliance with rules and regulations of the SEC.

The changes necessitated by becoming a public company require a significant commitment of additional resources and management oversight, which has increased Sirius Group's operating costs and may divert attention away from the day-to-day management of the business. These changes also place significant additional demands on Sirius Group's finance and accounting staff, as they adjust to working for a newly public company, and on Sirius Group's financial accounting and information systems. Other expenses associated with being a public company include, but are not limited to, increases in auditing, accounting and legal fees and expenses, investor relations expenses, increased directors' fees and director and officer liability insurance costs, registrar and transfer agent fees and listing fees. The costs and time commitments of Sirius Group's staff could be substantially more than we currently expect. Therefore, our historical consolidated financial statements may not be indicative of our future costs and performance as a stand-alone public company. Moreover, if our finance and accounting personnel are unable for any reason to respond adequately to the increased demands resulting from being an independent public company, the quality and timeliness of our financial reporting may suffer, and we could experience significant deficiencies or material weaknesses in our disclosures.

In particular, the Sarbanes-Oxley Act of 2002 requires Sirius Group to document and test the effectiveness of its internal control over financial reporting in accordance with an established internal control framework, and to report on management's conclusions as to the effectiveness of its internal controls. Likewise, Sirius Group's independent registered public accounting firm will be required to provide an attestation report on the effectiveness of Sirius Group's internal control over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002, starting with the filing of Sirius Group's Annual Report on Form 10-K for the year ended December 31, 2019. In addition, Sirius Group is required under the Exchange Act to maintain disclosure controls and procedures and internal control over financial reporting. Sirius Group's operating results could be harmed or we may not be able to meet our reporting obligations if we fail to implement required new or improved controls, or encounter difficulties in their implementation. If management is unable to conclude that Sirius Group has effective internal control over financial reporting, investors could lose confidence in the reliability of its financial statements. This could result in a decrease in the value of Sirius Group common shares. Failure to comply with the Sarbanes-Oxley Act of 2002 could potentially subject Sirius Group to sanctions or investigations by the SEC, Nasdaq or other regulatory authorities.

A significant percentage of the outstanding Sirius Group common shares are held by a single shareholder, which could impact your liquidity, and future sales of Sirius Group common shares by this shareholder may lower the trading price of Sirius Group common shares.

CM Bermuda Ltd. (“CM Bermuda”), a direct wholly owned subsidiary of CMIG International, owns approximately 96.0% of the outstanding Sirius Group common shares as of February 28, 2019. Continuation of this concentrated ownership would result in a limited amount of shares being available to be traded in the market, resulting in reduced liquidity.

The shares held by CM Bermuda are restricted securities within the meaning of Rule 144 under the Securities Act and are eligible for resale in the public market without registration subject to volume, manner of sale and holding period limitations under Rule 144 under the Securities Act. Further, pursuant to the Registration Rights Agreement, dated as of November 5, 2018, between the Company, CM Bermuda and Easterly Acquisition Sponsor, LLC, all of the common shares owned by CM Bermuda are eligible to be registered under the Securities Act of 1933, as amended, subject to certain limitations set forth in the registration rights agreement, and may be offered and sold to the public from time to time after the effectiveness of the related registration statement. Sirius Group has also filed a registration statement with respect to the resale of certain of its securities held by other holders, which has been declared effective by the SEC. Upon effectiveness of such registration statements, these parties may sell large amounts of Sirius Group common shares in the open market or in privately negotiated transactions, which could have the effect of increasing the volatility in Sirius Group common share price or putting significant downward pressure on the price of Sirius Group common shares.

Sales of substantial amounts of Sirius Group common shares in the public market, or the perception that such sales will occur, could adversely affect the market price of Sirius Group common shares and make it difficult for it to raise funds through securities offerings in the future.

Sirius Group’s shareholders will be subject to significant dilution upon the occurrence of certain events, which could result in a decrease in the Sirius Group common share price.

In connection with the Merger, Sirius Group issued warrants to certain investors that may be exercised for an aggregate of 5.4 million common shares at an exercise price of \$21.53 per share, and converted warrants to the former Easterly stockholders that may be exercised for an aggregate of 6.1 million common shares at an exercise price of \$18.89 per share. In addition, Sirius Group has 14.1 million common shares reserved or designated for future issuance pursuant to the Sirius Group Long Term Incentive Plan and 2018 Omnibus Incentive Plan.

Sales of substantial amounts of Sirius Group common shares into the public markets by the holders of these warrants and equity grants following their exercise or vesting will be dilutive to Sirius Group’s existing shareholders and could result in a decrease in the Sirius Group common share price.

Future issuances of any equity securities may dilute the interests of Sirius Group’s shareholders and decrease the trading price of Sirius Group common shares.

Any future issuance of equity securities could dilute the interests of Sirius Group’s shareholders and could substantially decrease the trading price of Sirius Group common shares. Sirius Group may issue equity or equity-linked securities in the future for a number of reasons, including to finance Sirius Group’s operations and business strategy (including in connection with acquisitions and other transactions), to adjust Sirius Group’s ratio of debt to equity, to satisfy its obligations upon the exercise of then-outstanding options or other equity-linked securities, if any, or for other reasons.

The trading price of Sirius Group’s securities is volatile and subject to wide fluctuations in response to various factors, some of which are beyond Sirius Group’s control.

The trading price of Sirius Group’s securities is volatile and subject to wide fluctuations in response to various factors, some of which are beyond Sirius Group’s control. Any of the factors listed below could have a material adverse effect on your investment in Sirius Group’s securities and Sirius Group’s securities may trade at prices significantly below the price paid for such securities. In such circumstances, the trading price of Sirius Group’s securities may not recover and may experience a further decline.

Factors affecting the trading price of Sirius Group's securities may include:

- actual or anticipated fluctuations in Sirius Group's periodic financial results or the financial results of companies perceived to be similar to Sirius Group;
- changes in the market's expectations about Sirius Group's operating results;
- Sirius Group's operating results failing to meet the expectation of securities analysts or investors in a particular period;
- changes in financial estimates and recommendations by securities analysts concerning Sirius Group or its industry in general;
- operating and stock price performance of other companies that investors deem comparable to Sirius Group;
- changes in laws and regulations affecting Sirius Group's business;
- Sirius Group's ability to meet compliance requirements;
- commencement of litigation involving Sirius Group;
- changes in Sirius Group's capital structure, such as future issuances of securities or the incurrence of additional debt;
- the volume of Sirius Group common shares available for public sale;
- any major change in Sirius Group's board of directors or management;
- sales of substantial amounts of common shares by Sirius Group's directors, executive officers or significant shareholders or the perception that such sales could occur; and
- general economic and political conditions such as recessions, interest rates, international currency fluctuations and acts of war or terrorism or other catastrophes.

Broad market and industry factors may materially harm the market price of Sirius Group's securities irrespective of its operating performance. The stock market in general, and Nasdaq in particular, has experienced price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the particular companies affected. The trading prices and valuations of these stocks, and of Sirius Group's securities, may not be predictable. A loss of investor confidence in the market for insurance securities or the stocks of other companies which investors perceive to be similar to Sirius Group could depress Sirius Group's share price regardless of Sirius Group's business, prospects, financial conditions or results of operations. A decline in the market price of Sirius Group's securities also could adversely affect Sirius Group's ability to issue additional securities and its ability to obtain additional financing in the future.

Sirius Group's controlling shareholder, CM Bermuda, has significant influence over Sirius Group, which could limit your ability to influence the outcome of key transactions, including a change of control. CM Bermuda's interests may not be aligned with your interests on any matter requiring shareholder approval, and actions taken by CMIG International, CM Bermuda's controlling shareholder, could be adverse to Sirius Group and its other shareholders.

As of February 28, 2019, CM Bermuda beneficially owns, and is entitled to vote, approximately 87.0% of the voting power of Sirius Group's issued and outstanding equity securities. As a result, subject to the terms of the Shareholders Agreement dated November 5, 2018, CM Bermuda has the ability to elect all the members of Sirius Group's board of directors and thereby controls its business and affairs, including any determinations with respect to mergers or other business combinations, the acquisition or disposition of assets, the incurrence of indebtedness, the issuance of any additional common shares or other equity securities, the repurchase or redemption of common shares and the payment of dividends. In addition, CM Bermuda is able to determine the outcome of all matters requiring shareholder approval and, subject to the terms of the Shareholders Agreement, may cause or prevent a change of control of Sirius Group and could preclude any unsolicited acquisition of Sirius Group. CM Bermuda's interests may not be aligned with your interests on any matter requiring shareholder approval. In addition, the concentration of ownership could deprive you of an opportunity to receive a premium for your common shares as part of a sale of Sirius Group, and may ultimately affect the market price of Sirius Group common shares.

Under Bermuda law, CM Bermuda may be able to acquire compulsorily the common shares of minority holders by a procedure under the Companies Act known as a “scheme of arrangement.” A scheme of arrangement could be effected by obtaining the agreement of Sirius Group and of holders of common shares, representing in the aggregate a majority in number and at least 75% in value of the common shareholders present and voting at a court ordered meeting held to consider the scheme of arrangement. The scheme of arrangement must then be sanctioned by the Bermuda Supreme Court. If a scheme of arrangement receives all necessary agreements and sanctions, upon the filing of the court order with the Registrar of Companies in Bermuda, all holders of common shares could be compelled to sell their shares under the terms of the scheme of arrangement. As of the date of this Annual Report on Form 10-K, CM Bermuda owns in excess of 75% of Sirius Group’s common shares and, therefore, CM Bermuda could choose to implement a scheme of arrangement.

In addition, in connection with CMIG International’s acquisition of Sirius Group, CMIG International initially recognized most of the acquired assets and liabilities at fair value for its own reporting but chose not to elect “push down” accounting for Sirius Group. The application of “push down accounting” by CMIG International would be material to the financial statements of Sirius Group.

As a “controlled company” within the meaning of Nasdaq rules, Sirius Group qualifies for exemptions from certain corporate governance requirements. Sirius Group has the opportunity to elect any of the exemptions afforded a controlled company, but has not made any such election as of the date of this Annual Report on Form 10-K.

Because CM Bermuda controls more than a majority of the total voting power for the election of directors, Sirius Group is a “controlled company” within the meaning of Nasdaq rules. Under these rules, a company of which more than 50% of the voting power is held by another person or group of persons acting together is a “controlled company” and may elect not to comply with certain stock exchange rules regarding corporate governance, including:

- the requirement that a majority of its board of directors consist of independent directors;
- the requirement that its director nominees be selected or recommended for the board’s selection by a majority of the board’s independent directors in a vote in which only independent directors participate or by a nominating committee comprised solely of independent directors, in either case, with a formal written charter or board resolutions, as applicable, addressing the nominations process and such related matters as may be required under the federal securities laws; and
- the requirement that its compensation committee be composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibilities.

Sirius Group does not currently rely on any of these exemptions, but there is no assurance that it will not rely on these exemptions in the future. If Sirius Group were to utilize some or all of these exemptions, you may not have the same protections afforded to shareholders of companies that are subject to all of the Nasdaq rules regarding corporate governance, and the trading price of Sirius Group common shares may be materially adversely affected.

As a “foreign private issuer” under the rules and regulations of the SEC, Sirius Group is permitted to file less or different information with the SEC than a company incorporated in the U.S. or otherwise subject to these rules, and to follow certain home country corporate governance practices in lieu of certain Nasdaq requirements applicable to U.S. issuers. Sirius Group has the opportunity to elect any of these exemptions afforded a foreign private issuer, but has not made any such election as of the date of this Annual Report on Form 10-K.

Sirius Group is considered a “foreign private issuer” under the rules and regulations of the SEC. Accordingly, Sirius Group is not required to file periodic reports and financial statements with the SEC as frequently or within the same time frames as U.S. companies with securities registered under the Exchange Act. In addition, Sirius Group is not required to comply with other regulations applicable to U.S. companies, including Regulation FD, which imposes restrictions on the selective disclosure of material information to shareholders. Furthermore, as a “foreign private issuer” whose common shares are listed on Nasdaq, Sirius Group is permitted to follow certain home country corporate governance practices in lieu of certain Nasdaq requirements.

Sirius Group does not currently rely on the scaled disclosure practices permitted by the SEC or the alternate governance practices permitted by Nasdaq, but there is no assurance that it will not rely on these exemptions in the future. If Sirius Group were to utilize some or all of these exemptions, you may not be provided with the same disclosures or have the same protections afforded to shareholders of companies that are subject to all of the SEC's disclosure requirements and Nasdaq rules regarding corporate governance, and the trading price of Sirius Group common shares may be materially adversely affected.

Sirius Group relies principally on dividends and other distributions on equity paid by Sirius Group's operating subsidiaries and limitations on their ability to pay dividends to Sirius Group could adversely impact shareholders' ability to receive dividends on Sirius Group common shares.

Dividends and other distributions on equity paid by Sirius Group's operating subsidiaries are Sirius Group's principal source for cash in order for Sirius Group to be able to pay any dividends and other cash distributions to its shareholders. If Sirius Group's operating subsidiaries incur debt on their own behalf in the future, the instruments governing the debt may restrict their ability to pay dividends or make other distributions to Sirius Group.

You will have limited ability to bring an action against Sirius Group or against Sirius Group's directors and officers, or to enforce a judgment against Sirius Group or them, because Sirius Group is incorporated in Bermuda and because certain of Sirius Group's directors and officers reside outside the U.S.

Sirius Group is incorporated in Bermuda and conducts much of its operations outside the U.S. Certain of Sirius Group's officers and directors reside outside the U.S. and a substantial portion of the assets of those persons are located outside of the U.S. As a result, it could be difficult or impossible for you to bring an action against Sirius Group or against these individuals in Bermuda in the event that you believe that your rights have been infringed under the applicable securities laws or otherwise. Even if you are successful in bringing an action of this kind, the laws of Bermuda could render you unable to enforce a judgment against Sirius Group's assets or the assets of Sirius Group's directors and officers.

In addition, class actions and derivative actions are generally not available to shareholders under Bermuda law. The Bermuda courts, however, would ordinarily be expected to permit a shareholder to commence an action in the name of a company to remedy a wrong to the company where the act complained of is alleged to be beyond the corporate power of the company or illegal, or would result in the violation of the company's memorandum of association or bye-laws, including any breach of fiduciary duty claims in cases where the actions from which such claims arise have not been ratified by a majority of the shareholders.

As a result of the above, Sirius Group shareholders may have more difficulty in protecting their interests in the face of actions taken by management, members of the board of directors or controlling shareholders than they would as public shareholders of a U.S. company.

If securities or industry analysts do not publish or cease publishing research or reports about Sirius Group, its business or its industry, or if they change their recommendations regarding Sirius Group common shares adversely, the price and trading volume of the common shares could decline.

The trading market for Sirius Group common shares is influenced by the research and reports that industry or securities analysts may publish about Sirius Group, its business, its industry or its competitors. Securities and industry analysts are not required to publish research on Sirius Group. If any of the analysts who may cover Sirius Group change their recommendation regarding Sirius Group common shares adversely, or provide more favorable relative recommendations about Sirius Group's competitors, the price of Sirius Group common shares would likely decline. If any analyst who may cover Sirius Group were to cease coverage of Sirius Group or fail to regularly publish reports on it, Sirius Group could lose visibility in the financial markets, which in turn could cause its share price or trading volume to decline.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Sirius Group maintains a professional office in Hamilton, Bermuda, which serves as its headquarters and its registered office. Sirius Group and Sirius Bermuda are headquartered in Hamilton, Bermuda. Sirius International is headquartered in Stockholm, Sweden with various branch offices in Europe, Asia and Bermuda. Sirius America is headquartered in New York, New York with various offices in the U.S. and in Toronto, Canada. IMG is headquartered in Indianapolis, Indiana with various offices in the United Kingdom and Hong Kong. Armada is headquartered in Hunt Valley, Maryland. Sirius Group's home offices and all of its branch offices are leased. We believe that our office space is sufficient for us to conduct our operations for the foreseeable future.

Item 3. Legal Proceedings

Sirius Group, and the insurance and reinsurance industry in general, are routinely subject to claims-related litigation and arbitration in the normal course of business, as well as litigation and arbitration that do not arise from, or are directly related to, claims activity. Sirius Group's estimates of the costs of settling matters routinely encountered in claims activity are reflected in the reserves for unpaid loss and LAE.

Although the ultimate outcome of claims and non-claims-related litigation and arbitration, and the amount or range of potential loss at any particular time, is often inherently uncertain, management does not believe that the ultimate outcome of such claims and non-claims-related litigation and arbitration will have a material adverse effect on Sirius Group's financial condition, results of operations or cash flows. See Note 22 "*Commitments and Contingencies—Legal Proceedings*" in Sirius Group's audited financial statements included elsewhere this Annual Report on Form 10-K.

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

Market Information and Number of Holders

Our common shares have been listed on the Nasdaq Global Select Market under the symbol "SG" since November 6, 2018. Prior to that time, there was no public market for our common shares.

On February 28, 2019, there were 419 shareholders of record of our common shares.

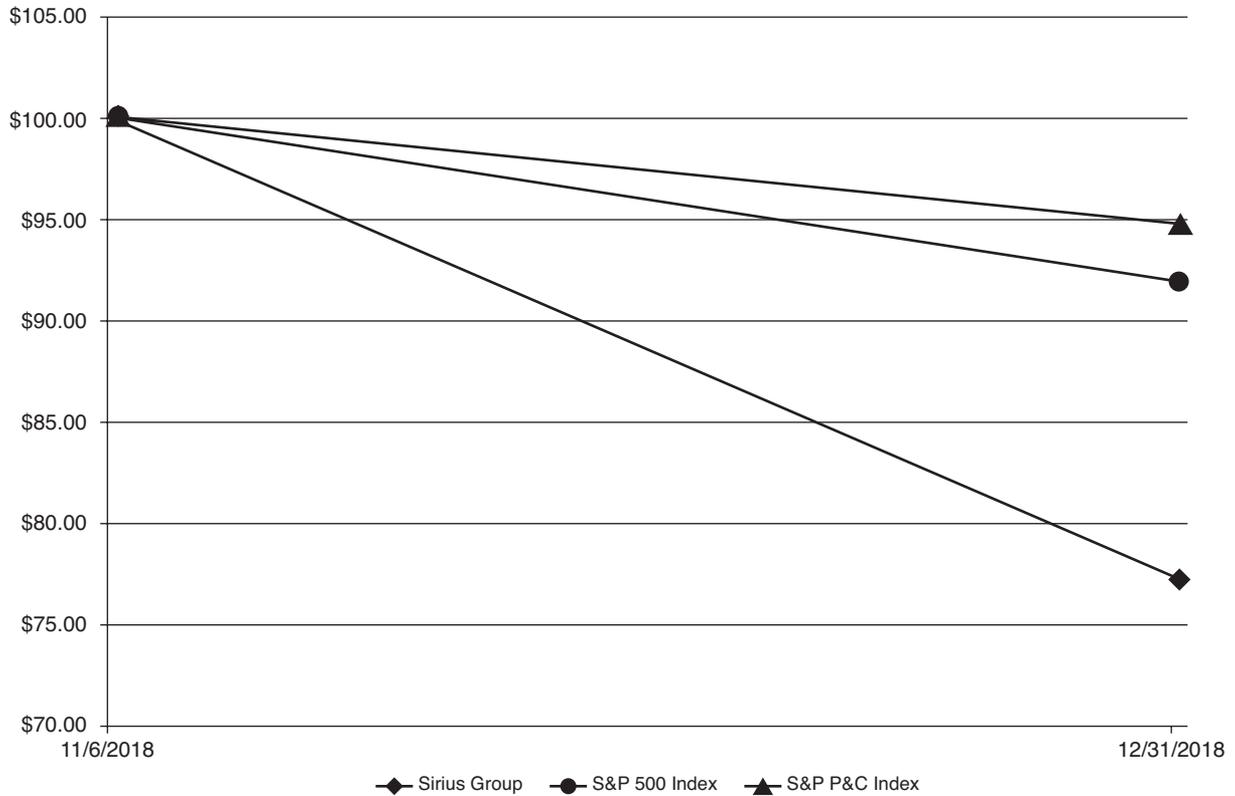
Dividend Policy

As of December 31, 2018, we have not paid any dividends to our public shareholders. While we expect to pay cash dividends in the future, the declaration and payment of future dividends will be at the discretion of our Board of Directors and will depend upon many factors, including our earnings, 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. For additional information regarding our liquidity and capital resources refer to Item 7 "*Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources*".

Performance Graph

The following graph compares cumulative total shareholder return on our common shares since November 6, 2018 (first day of trading) through December 31, 2018 to the cumulative total return, assuming reinvestment of dividends, of S&P 500 Composite Stock Index ("S&P 500 Index") and the S&P 500 Property & Casualty Insurance Index ("S&P P&C Index"). The graph assumes that \$100 was invested on November 6, 2018. The share price performance presented below is not necessarily indicative of future results.

Cumulative Total Shareholder Return⁽¹⁾⁽²⁾



⁽¹⁾Stock price appreciation plus dividends.

⁽²⁾This graph is not “soliciting material” is not deemed filed with the SEC, and is not to be incorporated by reference in any filing by us under the Securities Act of 1933 or the Securities and Exchange Act of 1934.

Unregistered Sales of Equity Securities.

Not applicable.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

In connection with the Merger, the Company and CM Bermuda, the sole holder of the Company’s common shares prior to the Merger, entered into a Redemption Agreement, dated November 2, 2018 (the “CM Bermuda Redemption Agreement”), pursuant to which, effective as of the closing of the Merger, the Company redeemed 9,519,280 of the Company’s common shares at a price per share equal to \$17.22447, the payment for which was funded from cash distributed by Sirius Bermuda (not out of the funds released from the trust account in connection with the consummation of the Merger) and paid in cash by the Company on November 16, 2018.

Item 6. Selected Financial Data

The following table sets forth selected consolidated historical financial information derived from Sirius Group's (i) audited financial statements included elsewhere in this Annual Report on Form 10-K as of December 31, 2018 and 2017 and for each of the three years ended December 31, 2018, (ii) unaudited financial statements not included elsewhere in this Annual Report on Form 10-K as of December 31, 2016, 2015, and 2014 and for the years ended December 31, 2015 and 2014. You should read the following selected financial information in conjunction with the sections entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Financial Statements and Supplementary Data".

	For the Years Ended December 31,				
	2018	2017	2016	2015	2014
	(in millions, except for share and per share amounts)				
Selected Statement of (Loss) Income Data:					
Net earned insurance and reinsurance premiums	\$ 1,262.3	\$ 1,035.3	\$ 890.1	\$ 847.0	\$ 873.9
Net investment income	71.4	56.8	56.2	39.9	41.1
Net realized investment gains (losses)	2.3	(27.2)	288.3	138.5	65.0
Net unrealized investment (losses) gains	(23.2)	(10.5)	(238.2)	102.5	144.2
Other revenue	112.7	21.7	9.1	(2.4)	(5.8)
Loss and loss adjustment expenses	900.0	811.2	519.3	422.7	345.3
Insurance and reinsurance acquisition expenses	255.4	197.2	210.3	189.8	193.6
Other underwriting expenses	146.2	106.1	107.3	107.9	129.7
General and administrative expenses	77.9	91.9	85.1	27.1	30.5
Interest expense on debt	30.8	22.4	34.6	26.6	26.3
Net (loss) income attributable to common shareholder	(43.3)	(156.1)	32.5	291.2	288.8
Comprehensive (loss) income attributable to common shareholder	(80.0)	(78.3)	(33.6)	196.2	185.5
Per Common Share Data:					
Basic (loss) earnings per common share	\$ (0.36)	\$ (1.30)	\$ 0.27	\$ 2.43	\$ 2.41
Diluted (loss) earnings per common share	\$ (0.36)	\$ (1.30)	\$ 0.27	\$ 2.43	\$ 2.41
Cash dividends declared per common share	\$ -	\$ -	\$ 0.23	\$ -	\$ 0.42
Basic weighted average common shares outstanding ⁽¹⁾	119,253,924	120,000,000	120,000,000	120,000,000	120,000,000
Diluted weighted average common shares outstanding ⁽²⁾	119,253,924	120,000,000	120,000,000	120,000,000	120,000,000
Operating Ratios:					
Loss and loss adjustment expense ratio ⁽³⁾	71.3%	78.4%	58.3%	49.9%	39.5%
Acquisition expense ratio ⁽⁴⁾	20.2%	19.0%	23.6%	22.4%	22.2%
Other underwriting expense ratio ⁽⁵⁾	11.6%	10.2%	12.1%	12.7%	14.8%
Combined ratio ⁽⁶⁾	103.1%	107.6%	94.0%	85.0%	76.5%

	As of December 31,				
	2018	2017	2016	2015	2014
	(in millions, except for share and per share amounts)				
Selected Balance Sheet Data:					
Total investments and cash	\$ 3,541.9	\$ 3,604.3	\$ 3,814.5	\$ 3,678.2	\$ 3,289.9
Reinsurance recoverable on unpaid losses	350.2	319.7	291.5	283.1	322.2
Total assets	6,007.7	5,823.6	5,166.5	5,091.9	5,192.3
Loss and loss adjustment expense reserves	2,016.7	1,898.5	1,620.1	1,644.4	1,809.8
Unearned insurance and reinsurance premiums	647.2	506.8	398.0	342.2	338.6
Debt	696.8	723.2	396.2	403.0	402.6
Total common shareholders' equity	1,704.5	1,917.0	1,988.1	1,959.1	1,762.6
Book value per common share	\$ 14.80	\$ 15.98	\$ 16.57	\$ 16.33	\$ 14.69
Diluted book value per common share	\$ 14.80	\$ 15.98	\$ 16.57	\$ 16.33	\$ 14.69
Common shares outstanding—basic ⁽¹⁾	119,253,924	120,000,000	120,000,000	120,000,000	120,000,000
Common shares outstanding—diluted ⁽²⁾	119,253,924	120,000,000	120,000,000	120,000,000	120,000,000

⁽¹⁾On April 27, 2016, Sirius Group split its 12,000 common shares by a multiple of 10,000 resulting in 120,000,000 common shares and changed the par value of the common shares from \$1.00 per share to \$0.01 per share. Sirius Group's basic and diluted earnings per share calculations have been retrospectively adjusted for all periods presented to reflect the change in capital structure.

⁽²⁾As of December 31, 2018, Sirius Group had 6,088,535 warrants issued to former Easterly shareholders and 5,418,434 warrants issued to Series B preference shareholders outstanding. The Company also granted incentive compensation awards which provides for certain employees to purchase fully-vested common shares and be issued performance unit shares, which would give rise to potential additional Sirius Group shares outstanding. See Note 3 ("Significant transactions,"), Note 14 ("Employee benefit plans and compensation plans") and Note 16 ("Earnings per share") to Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for additional information.

⁽³⁾The loss and loss adjustment expense ratio is calculated by dividing loss and loss adjustment expenses by net earned insurance and reinsurance premiums.

⁽⁴⁾The acquisition expense ratio is calculated by dividing insurance and reinsurance acquisition expenses by net earned insurance and reinsurance premiums.

⁽⁵⁾The other underwriting expense ratio is calculated by dividing other underwriting expenses by net earned insurance and reinsurance premiums.

⁽⁶⁾The combined ratio is calculated by combining the loss and loss adjustment ratio, the acquisition expense ratio, and the other underwriting expense ratio.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

The following is management’s discussion and analysis (“MD&A”) of the Company’s audited consolidated results of operations for the years ended December 31, 2018, 2017, and 2016 and the Company’s consolidated financial condition, liquidity and capital resources as of and for the years ended December 31, 2018 and 2017. This discussion and analysis should be read in conjunction with the Company’s audited consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. The consolidated financial statements have been prepared in accordance with GAAP.

The following MD&A includes forward-looking statements, which are subject to risks, uncertainties and other factors that could cause our actual results to differ materially from those expressed or implied by our forward-looking statements. See “**Cautionary Note Regarding Forward-Looking Statements**”.

Index to Management’s Discussion and Analysis of Financial Condition and Results of Operations

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Overview

Sirius Group is a Bermuda exempted company whose principal businesses are conducted through its insurance and reinsurance subsidiaries and other affiliates. Sirius Group's subsidiaries, including Sirius Bermuda Insurance Company Ltd. ("Sirius Bermuda"), Sirius International Insurance Corporation ("Sirius International"), Sirius America Insurance Company ("Sirius America") and Lloyd's Syndicate 1945 ("Syndicate 1945"), provide insurance, reinsurance and insurance services on a worldwide basis. Sirius Group writes treaty and facultative reinsurance, as well as primary insurance. Sirius Group's primary insurance business has historically been predominantly accident and health insurance. In recent years, Sirius Group expanded its accident and health primary business capabilities in the U.S. via the acquisitions of International Medical Group Acquisition, Inc. ("IMG") and ArmadaCorp Capital, LLC ("Armada") in 2017. In addition to growing in accident and health insurance, Sirius Group further expanded its primary insurance platform launching its primary Surety and Environmental insurance platforms in the U.S. in late 2017. In mid-2018, Sirius Group began writing primary Casualty insurance through Pie Insurance Holdings, Inc. ("Pie Insurance"), a start-up specializing in a data driven approach to workers compensation insurance, where Sirius Group also has a minority investment and carrier relationship. In addition to these primary insurance platforms, Sirius Group re-entered the U.S. Casualty reinsurance market in early 2017.

Background and Recent Developments

Easterly Acquisition Corp.

On November 5, 2018, the Company completed the transactions contemplated by the definitive Agreement and Plan of Merger ("Merger Agreement"). Under the terms of the Merger Agreement, Easterly Acquisition Corp. ("Easterly") merged with Sirius Acquisitions Holding Company III and became a wholly-owned subsidiary of the Company (the "Merger"). Upon the closing of the Merger, Easterly's common stock was exchanged for the Company's common shares at an exchange ratio (the "Exchange Ratio") calculated as (i) the amount of cash per public share of Easterly common stock in Easterly's trust account (the "Trust Account") immediately prior to the closing of the Merger divided by (ii) (x) 1.05 multiplied by (y) Sirius Group's adjusted diluted book value per common share as of September 30, 2018 ("Sirius Group September 30 Adjusted DBVPS"). Based on the Sirius Group September 30 Adjusted DBVPS, estimated as of September 30, 2018, and funds in the Trust Account on November 5, 2018, the Exchange Ratio was equal to 0.609. Following the Merger, the Company's common shares are traded on the Nasdaq Global Select Market under the symbol "SG."

Easterly held a special meeting of Easterly stockholders on November 2, 2018 to approve the completion of the transactions contemplated by the Merger Agreement. Easterly Acquisition Sponsor, LLC (the "Sponsor") and Easterly's other stockholders approved each of the proposals presented at the special meeting. After the special meeting, but prior to the consummation of the Merger, certain Easterly public stockholders exercised their redemption rights as provided for by Easterly's charter. In total, out of the Trust Account balance of \$149 million, there were \$110 million of redemptions by Easterly public stockholders, which decreased the amount of cash in the Trust Account available for general corporate purposes following the Merger. After the redemption of shares held by Easterly's public stockholders, there was \$39 million in the Trust Account. This resulted in the issuance of 2,280,241 common shares to Easterly public stockholders.

Pursuant to the letter agreement among Easterly, the Sponsor and the Company (the "Sponsor Letter"), the private placement warrants issued to the Sponsor at the closing of the Merger were cancelled. Pursuant to the Merger Agreement, each issued and outstanding public warrant was converted into a warrant exercisable for Company common shares. The number of Company common shares subject to converted warrants was equal to the number of shares of Easterly common stock subject to each Easterly warrant immediately prior to the closing of the Merger multiplied by the Exchange Ratio, and each converted warrant had an exercise price per Company common share equal to the exercise price per share of Easterly common stock subject to such Easterly warrant immediately prior to the closing of the Merger divided by the Exchange Ratio. This resulted in the issuance of 6,088,535 converted warrants.

Sirius Group Private Placement

In connection with the closing of the Merger, the Company completed a private placement of Series B preference shares, common shares, and warrants (the “Sirius Group Private Placement”) at a price per share equal to (i) 1.05 multiplied by (ii) the Sirius Group September 30 Adjusted DBVPS, or \$17.22447. Investors in the Sirius Group Private Placement included affiliated funds of Gallatin Point Capital, The Carlyle Group, Centerbridge Partners, L.P. and Bain Capital Credit, together with certain employees, directors and “friends & family”. The Sirius Group Private Placement raised proceeds of \$226 million, resulting in the purchase of:

- 11,901,670 Series B preference shares with a cost basis of \$196 million,
- 1,225,954 of Common shares with a cost basis of \$21 million,
- 5,418,434 warrants that are exercisable for common shares for a period of five years after the Merger at a strike price equal to 125% of the per share purchase price, or \$21.53 with a cost basis of \$10 million.
- Issuance costs of \$2 million

ESPP

In connection with the Merger, Sirius Group implemented the Employee Share Purchase Plan (“ESPP”), which provided all employees of Sirius Group with a one-time opportunity to purchase between 100 and 1,000 Company common shares at a price equal to 85% of market value for the first 100 shares and 100% of market value for the next 900 shares. For this purpose, market value of the Company common shares was equal to 1.05 times the Sirius Group September 30 Adjusted DBVPS. Employees had the option of paying for the shares upfront or, in the case of employees who are not executive officers, through a loan that is repaid over a two-year period through payroll deductions. Through the ESPP, 405 employees purchased 149,236 Company common shares prior to the consummation of the Merger, with a cost basis of \$3 million.

Gross proceeds of the cash in the Easterly Trust Account assumed by Sirius Group upon the closing of the Merger, the Sirius Group Private Placement, and the ESPP sum to \$268 million.

Common shares redemption agreement

In connection with the Merger, the Company and CM Bermuda Ltd. (“CM Bermuda”), the sole holder of the Company’s common shares prior to the Merger, entered into a redemption agreement, dated November 2, 2018 (the “CM Bermuda Redemption Agreement”), pursuant to which, effective as of the closing of the Merger, the Company redeemed 9,519,280 of the Company’s common shares at a price per share equal to \$17.22447 for \$164 million, which was paid on November 16, 2018.

Also in connection with the Merger, on November 16, 2018 the Company completed a post-closing adjustment of \$1.6 million that was settled in cash with CM Bermuda based on the reported book value per share of \$16.44 as of September 30, 2018, pursuant to the Merger Agreement.

Sirius Group incurred certain contractual costs associated with the Merger of \$9 million and \$7 million of various legal, advisory, and other consulting costs for the Merger and the Private Placement that were charged to Additional paid-in surplus.

Series A preference shares redemption agreement

In connection with the Merger, the Company, IMG Acquisition Holdings, LLC (“IMGAH”) and Sirius Acquisitions Holding Company II completed the transactions contemplated by its previously announced redemption agreement and the Company redeemed all of the outstanding Series A redeemable preference shares, which were held by IMGAH, for \$95 million in cash. Effective as of the completion of the redemption, the parties terminated the registration rights agreement and the shareholder’s agreement between the Company and IMGAH. In addition, the parties agreed that any remaining contingent consideration in respect of the IMG acquisition, will be paid in cash, not in Series A redeemable preference shares as previously contemplated in the agreement in respect of the IMG acquisition.

WRM America Indemnity Company, Inc.

On August 16, 2018, Sirius Group acquired 100% ownership of WRM America from WRM America Indemnity Holding Company, LLC for \$17 million in cash. WRM America is a New York-domiciled insurer with a run-off book of business mainly comprised of general liability, educator's legal liability, automobile liability and physical damage, property and excess catastrophe liability. As part of the purchase of WRM America, Sirius Group acquired \$3 million of indefinite lived intangible assets related to insurance licenses.

The Phoenix Holdings Ltd.

Sirius Group had a commitment to purchase approximately 46.24% of the shares of The Phoenix Holdings Ltd. ("The Phoenix") from Delek Group for a sum of New Israeli Shekel ("NIS") 2.3 billion in cash (or \$663 million using the December 31, 2017 NIS to USD conversion rate), subject to certain adjustments for interest and earnings. The commitment terminated on July 2, 2018.

Reportable Segments

Sirius Group provides insurance and reinsurance products for property lines and agriculture ("Global Property"), accident and health ("Global A&H") and specialty lines including Aviation & Space, Marine, Trade Credit, Contingency, Casualty, Surety, and Environmental ("Specialty & Casualty"), which together with Runoff & Other, constitute its four reportable segments.

- **Global Property**—The Global Property segment consists of Sirius Group's underwriting lines of business which offer other property insurance and reinsurance, property catastrophe excess reinsurance and agriculture reinsurance on a worldwide basis.
- **Global A&H**—The Global A&H segment consists of Sirius Group's Global A&H insurance and reinsurance underwriting unit along with two managing general underwriters ("MGUs") (IMG and Armada). As part of Global A&H, Sirius Group provides supplemental healthcare and medical travel insurance products as well as related administration services through its MGU subsidiaries.
- **Specialty & Casualty**—The Specialty & Casualty segment offers insurance and reinsurance specialty & casualty product lines on a worldwide basis. Specialty lines represent unique risks where the more difficult and unusual risks are underwritten. Because specialty lines tend to be the more unusual or high risks, much of the market is characterized by a higher degree of specialization. Specialty & Casualty consists of Aviation & Space, Marine, Trade Credit, Contingency, Casualty, Surety, and Environmental specialty lines.
- **Runoff & Other**—The Runoff & Other segment consists of asbestos risks, environmental risks, and other long-tailed liability exposures, in addition to results from Sirius Global Solutions Holding Company ("Sirius Global Solutions"), which specializes in the acquisition and management of runoff liabilities for insurance and reinsurance companies, both in the U.S. and internationally.

Marketplace Trends

The global insurance and reinsurance marketplace is highly competitive and cyclical, which is most evident in property catastrophe excess due to the recent influx of capital into the industry. This trend is in large part due to the persistently low global interest rate environment which has led to alternative sources of capital entering the industry through insurance-linked financial instruments, which have provided attractive yields and diversification relative to existing portfolios. In addition, there has been a trend towards increased ceding commissions on assumed proportional reinsurance. These trends have led to consistently decreasing underwriting margins for several years, with the impact varying by product and market.

Optimism in the industry surrounding improved pricing has been negated by another year of significant catastrophe activity, with 2018 and 2017 representing two of the four largest catastrophe years on record. Hurricane Michael and Typhoon Jebi were the two most significant wind events in 2018. We estimate that the market loss for Typhoon Jebi is now in excess of \$10 billion. In addition, the Carr, Mendocino, Camp and Woolsey wildfires resulted in projected combined losses of \$15 to \$17 billion. Based upon current projections, total catastrophe losses for 2018 are estimated to be approximately \$72 billion globally. If these trends continue, there will likely be a continued erosion of industry reserves.

Overall, insurance market conditions remained unsettled in 2018. Also, there was little indication that there would be any significant interest rate improvements in the coming months, which would lead to enhanced investment returns. Efforts by Sirius Group to redeploy capital into other business lines to spread risk and secure additional revenue generating ventures remain on track. Global A&H coupled with our two MGUs, IMG and Armada, continued to record strong results in 2018. We have continued to scale up our recent specialty lines of business (Casualty, Environmental, and Surety) to remain vigilant in the marketplace, and to seek potential expansion opportunities through mergers and acquisitions.

Recent activity in London surrounding Lloyd's has indicated a potential shift in the market. Lloyd's has remained a household name in the insurance market for centuries, but many involved with Lloyd's today are now evaluating the costs and benefits of conducting business in the market. Lloyd's management has acknowledged that costs and an increased regulatory environment have impacted the Lloyd's market, and that changes will likely occur in both the short-term and long-term to address these recent developments.

We have a strong reputation in the insurance industry and a knowledgeable and experienced management team. We will opportunistically react as the industry evolves, adding underwriting teams who value our underwriting-comes-first culture during a time of market consolidation. We have the resources to provide insurance and reinsurance solutions to a variety of customers. It is our commitment to our long-term and local relationships and customer service that differentiates Sirius Group from its peers.

Executive Summary

Years Ended December 31, 2018 and 2017

Sirius Group ended 2018 with a net (loss) attributable to common shareholders of \$(43) million and basic earnings per common share of \$(0.36). This compares to a net (loss) attributable to common shareholders of \$(156) million and basic earnings per common share of \$(1.30) in 2017. The increase was primarily due to lower catastrophe losses and net favorable prior year loss reserve development, higher net realized and unrealized investment gains as a result of favorable foreign exchange movements, and higher net service fee income from IMG and Armada. In 2018, Sirius Group recorded catastrophe losses, net of reinsurance and reinstatement premiums, of \$194 million compared to \$259 million in 2017. Catastrophe losses in 2018 included \$91 million for Typhoon Jebi, \$36 million for Hurricane Michael, \$12 million for the California Wildfires, and \$9 million for Typhoon Trami, whereas catastrophe losses in 2017 included \$83 million for Hurricane Irma, \$79 million for Hurricane Maria and \$45 million for Hurricane Harvey. The 2018 results included \$7 million of net favorable prior year loss reserve development compared to \$1 million in 2017.

Sirius Group's combined ratio was 103% for the year ended December 31, 2018 compared to 108% for the year ended December 31, 2017. The decrease in the combined ratio was driven by lower catastrophe losses, partially offset by higher current accident year losses in the Global Property and Specialty & Casualty segments. Sirius Group's 2018 combined ratio included 15 points of catastrophe losses, net of reinsurance and reinstatement premiums, compared to 25 points for 2017. The combined ratio in 2018 was impacted by 1 point of net favorable prior year loss development compared to no benefit in 2017.

Years Ended December 31, 2017 and 2016

Sirius Group ended 2017 with a net (loss) attributable to common shareholder of \$(156) million and basic earnings per common share of \$(1.30). This compares to a net income attributable to common shareholder of \$33 million and basic earnings per common share of \$0.27 in 2016. The decreases were due to higher catastrophe losses and lower net favorable prior year loss reserve development, which was partially offset by net service fee income from IMG and Armada and a gain on revaluation of contingent consideration related to the IMG and Armada Earnouts of \$49 million. In 2017, Sirius Group recorded catastrophe losses, net of reinsurance and reinstatement premiums, of \$259 million compared to \$109 million for 2016. Catastrophe losses for 2017 included \$83 million for Hurricane Irma, \$79 million for Hurricane Maria and \$45 million for Hurricane Harvey, whereas catastrophe losses for 2016 included \$25 million for the Ecuador Earthquake, \$24 million for the Alberta Wildfires, and \$23 million for Hurricane Matthew. The 2017 results included \$1 million of net favorable prior year loss reserve development compared to \$64 million for 2016.

Sirius Group's combined ratio was 108% for 2017 compared to 94% for 2016. The increase in the combined ratio was driven by higher catastrophe losses and lower net favorable prior year loss reserve development. Sirius Group's combined ratio included 25 points of catastrophe losses for 2017 compared to 12 points for 2016 and included no combined ratio benefit from net favorable prior year loss reserve development in 2017 compared to 7 points in 2016.

Book Value Per Share

Sirius Group ended 2018 with book value per common share of \$14.80 compared to book value per common share of \$15.98 as of December 31, 2017, a decrease of 7.4%. The decrease in book value per common share was due to a comprehensive (loss) of \$(80) million, the repurchase of CM Bermuda shares of \$164 million, and the \$36 million charge related to the increase in the redemption value of the Series B preference shares, partially offset by the \$70 million of common shares sold in connection with the Merger. Total common shareholders' equity at the end of the fourth quarter of 2018 was \$1,704 million.

Sirius Group ended 2017 with book value per common share of \$15.98 compared to book value per common share of \$16.57 as of December 31, 2016, a decrease of 3.6% due to the comprehensive (loss) recognized.

Return on equity

The return on net (loss) attributable to common shareholders on beginning common shareholders' equity was (2.3)% for 2018 compared to (7.9)% for 2017 due to a lower net (loss) recognized.

The return on net (loss) attributable to common shareholders on beginning common shareholders' equity was (7.9)% for 2017 compared to 1.7% for 2016 due to the net (loss) recognized.

Adjusted Book Value Per Share

Sirius Group ended 2018 with Adjusted book value per share of \$15.24, which incorporates an assumption that the Series B preference shares will convert into common shares on a one-for-one basis, compared to \$15.98 as of December 31, 2017, a decrease of 4.6%, due to the comprehensive (loss) recognized.

Sirius Group ended 2017 with Adjusted book value per share of \$15.98 compared to Adjusted book value per common share of \$16.57 as of December 31, 2016, a decrease of 3.6% due to the comprehensive (loss) recognized.

See "Non-GAAP Financial Measures" for a reconciliation of Adjusted book value and Adjusted book value per share to the comparable GAAP measures.

Operating (loss) attributable to common shareholders

For the year ended December 31, 2018, Operating (loss) attributable to common shareholders was \$(56) million compared to \$(128) million for 2017, driven by lower catastrophe losses, partially offset by higher current accident year losses in the Global Property and Specialty & Casualty segments.

For the year ended December 31, 2017, Operating (loss) attributable to common shareholders was \$(128) million compared to \$(8) million for 2016, driven by higher catastrophe losses.

See "Non-GAAP Financial Measures" for a reconciliation of Operating (loss) income attributable to common shareholders to the comparable GAAP measure.

Consolidated Results of Operations – Years Ended December 31, 2018, 2017, and 2016

(Expressed in millions of U.S. dollars, except share and per share information)

Years ended December 31,	2018	2017	2016
Revenues			
Gross written premiums	\$ 1,821.0	\$ 1,439.3	\$ 1,269.0
Net written premiums	\$ 1,357.1	\$ 1,090.2	\$ 938.1
Net earned insurance and reinsurance premiums	\$ 1,262.3	\$ 1,035.3	\$ 890.1
Net investment income	71.4	56.8	56.2
Net realized investment gains (losses)	2.3	(27.2)	288.3
Net unrealized investment (losses)	(23.2)	(10.5)	(238.2)
Net foreign exchange gains (losses)	22.7	9.2	(11.0)
Gain on revaluation of contingent consideration	9.6	48.8	-
Other revenue	112.7	21.7	9.1
Total revenues	1,457.8	1,134.1	994.5
Expenses			
Loss and loss adjustment expenses (“LAE”)	900.0	811.2	519.3
Insurance and reinsurance acquisition expenses	255.4	197.2	210.3
Other underwriting expenses	146.2	106.1	107.3
General and administrative expenses	77.9	91.9	85.1
Intangible asset amortization expenses	15.8	10.2	-
Impairment of intangible assets	8.0	5.0	-
Interest expense on debt	30.8	22.4	34.6
Total expenses	1,434.1	1,244.0	956.6
Pre-tax income (loss)	23.7	(109.9)	37.9
Income tax (expense) benefit	(40.4)	(26.4)	7.3
(Loss) income before equity in earnings of unconsolidated affiliates	(16.7)	(136.3)	45.2
Equity in earnings of unconsolidated affiliates, net of tax	-	-	6.6
Net (loss) income	(16.7)	(136.3)	51.8
Income attributable to non-controlling interests	(1.4)	(13.7)	(19.3)
Net (loss) income attributable to Sirius Group	(18.1)	(150.0)	32.5
Accrued dividends on Series A redeemable preference shares	(2.6)	(6.1)	-
Change in carrying value of Series B preference shares	(36.4)	-	-
Redemption of Series A redeemable preference shares	13.8	-	-
Net (loss) income attributable to Sirius Group’s common shareholders	\$ (43.3)	\$ (156.1)	\$ 32.5
Comprehensive (loss) income			
Net (loss) income	\$ (16.7)	\$ (136.3)	\$ 51.8
Other comprehensive income (loss), net of tax			
Change in foreign currency translation, net of tax	(61.9)	71.7	(67.3)
Net change in other, net of tax	-	-	1.2
Total other comprehensive (loss) income	(61.9)	71.7	(66.1)
Comprehensive (loss)	(78.6)	(64.6)	(14.3)
Income attributable to non-controlling interests	(1.4)	(13.7)	(19.3)
Comprehensive (loss) attributable to Sirius Group	\$ (80.0)	\$ (78.3)	\$ (33.6)
Ratios:			
Loss ratio ⁽¹⁾	71.3%	78.4%	58.3%
Acquisition expense ratio ⁽²⁾	20.2%	19.0%	23.6%
Other underwriting expense ratio ⁽³⁾	11.6%	10.2%	12.1%
Combined ratio⁽⁴⁾	103.1%	107.6%	94.0%
Selected financial data:			
Basic earnings per common share and common share equivalent	\$ (0.36)	\$ (1.30)	\$ 0.27
Diluted earnings per common share and common share equivalent	\$ (0.36)	\$ (1.30)	\$ 0.27
Weighted average number of common shares and common share equivalents outstanding	119,253,924	120,000,000	120,000,000
Return on equity ⁽⁵⁾	(2.3)%	(7.9)%	1.7%
Operating (loss) attributable to common shareholders ⁽⁶⁾	\$ (56.4)	\$ (128.4)	\$ (7.5)

⁽¹⁾The loss ratio is calculated by dividing loss and LAE expenses by net earned insurance and reinsurance premiums.

⁽²⁾The acquisition expense ratio is calculated by dividing insurance and reinsurance acquisition expenses by net earned insurance and reinsurance premiums.

⁽³⁾The other underwriting expense ratio is calculated by dividing other underwriting expenses by net earned insurance and reinsurance premiums.

⁽⁴⁾The combined ratio is calculated by combining the loss ratio, the acquisition expense ratio, and the other underwriting expense ratio.

⁽⁵⁾Return on equity is calculated by dividing Net (loss) income attributable to Sirius Group’s common shareholders for the period by the beginning common shareholders’ equity.

⁽⁶⁾Operating (loss) attributable to common shareholders is a non-GAAP financial measure. See “Non-GAAP Financial Measures” for a reconciliation of Operating (loss) attributable to common shareholders to the comparable GAAP measure.

Selected balance sheet data:	As of December 31, 2018	As of December 31, 2017	As of December 31, 2016
Common shares outstanding	115,151,251	120,000,000	120,000,000
Series B preference shares outstanding	11,901,670	-	-
Total shares outstanding	127,052,921	120,000,000	120,000,000
Total common shareholders' equity	\$ 1,704.5	\$ 1,917.0	\$ 1,988.1
Series B preference shares	232.2	-	-
Adjusted book value ⁽¹⁾	\$ 1,936.7	\$ 1,917.0	\$ 1,988.1
Book value per common share	\$ 14.80	\$ 15.98	\$ 16.57
Adjusted book value per share ⁽¹⁾	\$ 15.24	\$ 15.98	\$ 16.57

⁽¹⁾Adjusted book value and Adjusted book value per share are non-GAAP financial measures. See "Non-GAAP Financial Measures" for a reconciliation of Adjusted book value and Adjusted book value per share to the comparable GAAP measures.

Years Ended December 31, 2018 and 2017

Gross written premiums – Gross written premiums in 2018 was \$1,821 million, an increase of \$382 million or 27% compared to gross written premiums of \$1,439 million in 2017, with Specialty & Casualty up 49% and Global Property up 31%. See "Results of reportable segments" below.

Net written premiums – Net written premiums in 2018 was \$1,357 million, an increase of \$267 million or 24% compared to net written premiums of \$1,090 million in 2017, with Specialty & Casualty up 52%, Global Property up 18% and Global A&H up 11%. See "Results of reportable segments" below.

Net earned insurance and reinsurance premiums – Net earned insurance and reinsurance premiums in 2018 was \$1,262 million, an increase of \$227 million or 22% compared to net earned insurance and reinsurance premiums of \$1,035 million in 2017, with Specialty & Casualty up 47%, Global A&H up 17%, and Global Property up 13%. See "Results of reportable segments" below.

Net investment income, Net realized investment gains (losses), Net unrealized investment gains (losses) and Net foreign exchange gains (losses) – Net investment income increased 25% to \$71 million in 2018 from \$57 million in 2017 due to a higher interest rate environment and increased dividend income. Sirius Group reported net realized investment gains of \$2 million in 2018, which included \$17 million of net realized foreign currency gains, compared to net realized investment (losses) of \$(27) million in 2017, which included \$(19) million of net realized foreign currency (losses). Net unrealized investment (losses) were \$(23) million in 2018, which included \$36 million of net unrealized foreign currency gains, compared to net unrealized investment (losses) of \$(11) million in 2017, which included \$(52) million of net unrealized foreign currency (losses). See "Summary of investment results" below. Additionally, Sirius Group recorded \$23 million of non-investment related foreign exchange gains in 2018 compared to \$9 million of non-investment related foreign exchange gains in 2017. Included in the 2018 amount is \$28 million of favorable currency movement compared to \$11 million of favorable foreign currency movement in 2017 on the SEK Subordinated Notes, which were issued in September 2017. See "Foreign currency translation" below.

Gain on revaluation of contingent consideration – Gain on revaluation of contingent consideration decreased to \$10 million in 2018 from \$49 million in 2017. In 2018, the gain on the revaluation of contingent consideration related to the remeasurement of the IMG and Armada Earnouts, whereas in 2017, the gain was mainly due to the settlement and remeasurement of the Armada Earnout.

Other revenue – Other revenue increased to \$113 million in 2018 from \$22 million in 2017. The increase in other revenue was primarily attributable to management's estimate of a right of indemnification against a third party in connection with an uncertain tax position and an increase in service fee revenue in Global A&H recognized by IMG and Armada, which were both acquired in the second quarter of 2017.

Loss and loss adjustment expenses – Loss and loss adjustment expenses increased 11% to \$900 million in 2018 from \$811 million in 2017, primarily due to increased net earned insurance and reinsurance premiums, partially offset by lower catastrophe losses and higher net favorable prior year loss reserve development. See “*Results of reportable segments*” below.

Insurance and reinsurance acquisition expenses – Insurance and reinsurance acquisition expenses increased 29% to \$255 million in 2018 from \$197 million in 2017, primarily due to an increase in net earned insurance and reinsurance premiums and higher acquisition expenses for Global Property, Global A&H and Specialty & Casualty, primarily due to business mix. See “*Results of Reportable Segments*” below.

Other underwriting expenses – Other underwriting expenses increased 38% to \$146 million in 2018 from \$106 million in 2017 due to increases in Specialty & Casualty, Global A&H, Global Property, and Runoff & Other. The increase in Specialty & Casualty was due to the new initiatives in Casualty, Surety and Environmental. The increase in Global A&H was due to the \$16 million of operating expense for the MGUs, which are included in other underwriting expenses following their integration into the Accident and Health insurance and reinsurance underwriting unit starting in 2018. See “*Results of reportable segments*” below.

General and administrative expenses – General and administrative expenses decreased 15% to \$78 million in 2018 from \$92 million in 2017. This decrease was primarily due to \$13 million of retention bonus expenses recorded in 2017 relating to the CMIG International acquisition and lower incentive compensation expense. See Note 15 “*Common shareholders’ equity, mezzanine equity, and non-controlling interests*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K with respect to the CMIG International acquisition. The retention bonus expense was reimbursed by White Mountains to Sirius Group on an after-tax basis (recorded as Additional paid-in surplus) as stipulated in the stock purchase agreement between CMIG International and White Mountains. Sirius Group did not incur retention bonus expenses in 2018 related to the CMIG International acquisition. Additionally, the decrease in General and administrative expenses was partially offset by an increase in expenses related to IMG and Armada. In prior periods, all MGU expenses were disclosed within General and administrative expenses. Starting in 2018, certain operating expenses for the MGUs are reflected in unallocated LAE and other underwriting expense, representing costs associated with the support of the Global A&H underwriting team.

Intangible asset amortization expenses – Intangible asset amortization expenses increased to \$16 million in 2018 from \$10 million in 2017 due to the amortization of the intangible assets related to the IMG and Armada acquisitions, which were both acquired during the second quarter of 2017.

Impairment of intangible assets – Impairment of intangible assets increased 60% to \$8 million in 2018 from \$5 million in 2017. In 2018 and 2017, Sirius Group recognized an impairment related to trade names acquired as part of the acquisition of IMG.

Interest expense on debt – Interest expense on debt increased 41% to \$31 million in 2018 from \$22 million in 2017 due to interest expense of \$12 million related to the 2017 SEK Subordinated Notes, which were issued in September 2017. See “*Financing*” below.

Years Ended December 31, 2017 and 2016

Gross written premiums – Gross written premiums in 2017 was \$1,439 million, an increase of \$170 million or 13% compared to gross written premiums of \$1,269 million in 2016, with Specialty & Casualty up 27%, Global Property up 15%, and Global A&H up 14%. See “*Results of reportable segments*” below.

Net written premiums – Net written premiums in 2017 was \$1,090 million, an increase of \$152 million or 16% compared to net written premiums of \$938 million in 2016, with Specialty & Casualty up 41%, Global A&H up 23% and Global Property up 8%. See “*Results of reportable segments*” below.

Net earned insurance and reinsurance premiums – Net earned insurance and reinsurance premiums in 2017 was \$1,035 million, an increase of \$145 million or 16% compared to net earned insurance and reinsurance premiums of \$890 million in 2016, with Specialty & Casualty up 21%, Global Property up 17%, and Global A&H up 13%. See “*Results of reportable segments*” below.

Net investment income, Net realized investment gains (losses), Net unrealized investment gains (losses) and Net foreign exchange gains (losses) – Net investment income increased 1% to \$57 million in 2017 from \$56 million in 2016. Sirius Group reported net realized investment (losses) of \$(27) million in 2017, which included \$(19) million of net realized foreign currency (losses), compared to net realized investment gains of \$288 million in 2016, which included \$50 million of net realized foreign currency gains. Net unrealized investment (losses) were \$(11) million in 2017, which included \$(52) million of net unrealized foreign currency (losses), compared to net unrealized investment (losses) of \$(238) million in 2016, which included \$(8) million of net unrealized foreign currency (losses). During the first quarter of 2016, Sirius Group sold its investment in Symetra, which generated a net realized investment gain of \$223 million and a net unrealized investment (loss) of \$(219) million, for a total net impact of \$4 million. In 2017, net realized and net unrealized investment (losses) were primarily related to foreign currency (losses). Additionally, Sirius Group recorded \$9 million of non-investment related foreign exchange gains in 2017 compared to \$(11) million of non-investment related foreign exchange (losses) in 2016. See “*Foreign Currency Translation*” below.

Gain on revaluation of contingent consideration – 2017 results include a \$49 million gain on revaluation of contingent consideration related to the IMG and Armada Earnouts, mainly due to the settlement and remeasurement of the Armada Earnout. See Note 3 “*Significant transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K.

Other revenue – Other revenue in 2017 of \$22 million consisted primarily of service fee revenue from IMG and Armada. Other revenue in 2016 included a \$5 million gain on the change in fair value of weather derivatives, a \$2 million bargain gain on the acquisition of Mount Beacon Holdings, LLC (“Mount Beacon”) and a \$2 million gain on the sale of Ashmere Insurance Company (“Ashmere”). See Note 3 “*Significant transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K.

Loss and loss adjustment expenses – Loss and loss adjustment expenses increased 56% to \$811 million in 2017 from \$519 million in 2016, primarily due to higher catastrophe losses and lower net favorable prior year loss reserve development in 2017. See “*Results of Reportable Segments*” below.

Insurance and reinsurance acquisition expenses – Insurance and reinsurance acquisition expenses decreased 6% to \$197 million in 2017 from \$210 million in 2016 primarily due to lower commissions in Global A&H, partially offset by an increase in net earned insurance and reinsurance premiums. See “*Results of Reportable Segments*” below.

Other underwriting expenses – Other underwriting expenses decreased 1% to \$106 million in 2017 from \$107 million in 2016 primarily due to lower variable incentive expense accruals. See “*Results of reportable segments*” below.

General and administrative expenses – General and administrative expenses increased 8% to \$92 million in 2017 from \$85 million in 2016. General and administrative expenses in 2017 included \$45 million of expenses related to IMG and Armada and \$13 million of retention bonus expenses for management and employees as a result of our acquisition by CMIG International. The retention bonus expenses were reimbursed by White Mountains to Sirius Group on an after-tax basis (recorded as Additional paid-in surplus) as stipulated in the stock purchase agreement between CMIG International and White Mountains. General and administrative expenses in 2016 included \$37 million of transaction bonus expenses and \$18 million of retention bonus expenses, both of which were reimbursed by White Mountains to Sirius Group on an after-tax basis (recorded as Additional paid-in surplus).

Intangible asset amortization expenses – Intangible asset amortization of \$10 million in 2017 related to the amortization of intangible assets as a result of Sirius Group’s acquisitions of IMG and Armada in the second quarter of 2017. See Note 3 “*Significant transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K.

Impairment of intangible assets – Sirius Group recognized an impairment of \$5 million related to trade names acquired as part of the acquisition of IMG. See Note 3 “*Significant transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K.

Interest expense on debt – Interest expense on debt decreased 37% to \$22 million in 2017 from \$35 million in 2016 due to a lower interest rate on the \$400.0 million face value of senior unsecured notes (“2016 SIG Senior Notes”) versus the \$400.0 million face value of senior unsecured notes that were issued in 2007 (the “2007 SIG Senior Notes”), which were retired in 2016. The retirement of the 2007 SIG Senior Notes in 2016 resulted in a \$6 million prepayment penalty, which was recorded as a component of interest expense. See “*Financing*” below.

Summary of Investment Results

Pre-Tax return on investments

Total return on investments includes investment income, net realized gains and losses and the change in unrealized gains and losses generated by the investment portfolio including equity method investments for which we have made a fair value election and net income or loss in investments in unconsolidated affiliates. Total return is calculated on a pre-tax basis and includes the impact of investment related foreign exchange gains or losses whether reflected in pre-tax income or other comprehensive income, unless otherwise noted. Returns are calculated on average investments for the period displayed and presented gross of separately managed account fees as well as internal expenses in order to produce a better comparison to benchmark returns that exclude an expense load.

Sirius Group maintains an equity portfolio that consists of equity securities, and other long-term investments, including hedge funds, private equity funds and direct investments in privately held common equity securities investments. From time to time, Sirius may also invest in exchange-traded funds (“ETFs”) and mutual funds. For return purposes, investments in fixed-income ETFs and mutual funds are included in the fixed income results and excluded from equity portfolio results. Returns exclude the impact of third-party currency forwards and/or swaps.

The following is a summary of Sirius Group’s total pre-tax net investment results and performance metrics for the years ended 2018, 2017, and 2016:

<i>(Millions)</i>	Years Ended December 31,		
	2018	2017	2016
Pre-tax investment results			
Net investment income	\$ 71.4	\$ 56.8	\$ 56.2
Net realized and unrealized investment (losses) gains ⁽¹⁾	(20.9)	(37.7)	50.1
Equity in earnings of unconsolidated affiliates ⁽²⁾	-	-	6.6
Change in foreign currency translation on investments recognized through other comprehensive income ⁽³⁾	(96.6)	83.9	(83.1)
Net pre-tax investment (losses) gains	\$ (46.1)	\$ 103.0	\$ 29.8

⁽¹⁾Includes foreign exchange gains (losses) for the years ended December 31, 2018, 2017, and 2016 of \$53.0 million, \$(70.8) million and \$42.3 million, respectively.

⁽²⁾Relates primarily to Sirius Group’s equity method investment in OneBeacon Insurance Group, Ltd. Refer to Note 19 “Investments in unconsolidated entities” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K.

⁽³⁾Excludes non-investment related foreign exchange gains (losses) for the years ended December 31, 2018, 2017, and 2016 of \$22.7 million, \$9.2 million and \$(11.0) million, respectively.

	Years Ended December 31,		
	2018	2017	2016
Performance metrics			
Total fixed income investment returns:			
In U.S. dollars	0.4%	2.9%	0.4%
In local currencies	1.5%	1.8%	1.8%
<i>Bloomberg Barclays U.S. Agg 1-3 Year Total Return Value Unhedged USD</i>	1.6%	0.9%	1.3%
<i>OMX Stockholm OMRX Total Bond Index</i>	1.0%	0.3%	2.6%
Total equity securities and other long-term investments returns:			
In U.S. dollars	(6.7)%	16.8%	11.5%
In local currencies	(5.1)%	13.8%	11.7%
<i>S&P 500 Index (total return)</i>	(4.4)%	21.8%	12.0%
Total consolidated portfolio			
In U.S. dollars	(0.9)%	4.1%	0.9%
In local currencies	0.3%	2.9%	2.2%

Years Ended December 31, 2018 and 2017

Sirius Group's pre-tax total gross return on invested assets was (0.9)% in 2018 compared to 4.1% in 2017. The 2018 result included foreign currency losses on investments, which decreased the total pre-tax return by (1.2)% as the U.S. dollar strengthened against foreign currencies. The 2017 result included foreign currency gains on investments, which contributed 1.2% to the total pre-tax return. The currency gains were mainly generated from Swedish Krona ("SEK") and Euro ("EUR") holdings as both currencies strengthened in excess of 10% against the U.S. dollar. Foreign currency losses on investments reduced the 2016 return by 1.3% as our SEK, EUR and British Pound Sterling ("GBP") holdings weakened against the U.S. dollar.

Net investment income was \$15 million higher in 2018 versus 2017 due to the higher interest rate in environment in 2018 and increased dividend income.

Net realized and unrealized investment (losses) gains on investments, excluding foreign currency, were \$(74) million in 2018 compared to \$33 million in 2017. The increase in investment losses for 2018 was driven by losses arising from investments in global equities consistent with overall market performance, the impact of rising interest rates on our fixed income portfolio, and underperformance of risk assets in Europe and Asia. In 2017, Sirius Group benefited from its deployment into equity, alternative investment strategies and overall better market conditions in 2017.

Fixed income results (including short-term investments)

As of December 31, 2018, the fixed income portfolio duration was approximately 1.7 years compared to 2.0 years as of December 31, 2017. The average credit quality of the fixed income portfolio, including short-term investments, was AA at December 31, 2018 and 2017. As of December 31, 2018 and 2017, Sirius Group held \$361 million and \$399 million, respectively, of non-U.S. denominated fixed income securities.

The fixed income portfolio return in 2018 was 0.4% on a U.S. dollar basis and 1.5% in original currencies. Our U.S. portfolio returned 1.5% versus the Barclays, 1-3 Year Aggregate ("BarcAg 1-3") of 1.6%. Our non-U.S. portfolio gained 1.3% in original currencies, which compares to the OMX Stockholm OMRX Total Return Bond Index ("OMRX") of 1.0%. This was driven by a strong performance of our Canadian dollar and SEK-denominated fixed income holdings.

The fixed income portfolio returned 2.9% on a U.S. dollar basis and 1.8% in local currencies in 2017. Our U.S. portfolio returned 1.9% versus the BarcAg1-3 of 0.9%. Our non-U.S. portfolio returned 0.8% in original currencies which compares to the OMRX of 0.3% due to a market-driven strong performance of our Canadian dollar, EUR and SEK-denominated fixed income holdings.

Equity securities and other long-term investments results

As of December 31, 2018, the equity and other long-term investments portfolio included \$439 million of U.S. dollar and \$149 million of non-U.S. dollar denominated securities.

In 2018, the equity portfolio returned (6.7)% on a U.S. dollar basis and (5.1)% on a local currency basis. The S&P 500 returned (4.4)% for the same period. Performance lagged the S&P 500 in 2018 given the performance of our non-U.S. dollar exposure as well as our private equity and hedge fund portfolios that are in the early stages of investment.

As of December 31, 2017, the equity and other long-term investments portfolio included \$290 million of U.S. dollar and \$176 million of non-U.S. dollar denominated securities.

In 2017, the equity portfolio returned 16.8% on a U.S. dollar basis and 13.8% in local currencies. The S&P 500 returned 21.8% for the same period.

Years Ended December 31, 2017 and 2016

Sirius Group's pre-tax total return on invested assets was 4.1% for 2017 compared to 0.9% for 2016. The 2017 result included foreign currency gains on investments, which contributed 1.2% to the total pre-tax return. The currency gains were mainly generated from SEK and EUR holdings as both currencies strengthened in excess of 10% against the U.S. dollar. Foreign currency losses on investments reduced the 2016 return by 1.3% as SEK, EUR and GBP holdings weakened against the U.S. dollar.

Fixed income results (including short term investments)

As of December 31, 2017, the fixed income portfolio duration was approximately 2.0 years compared to 3.0 years as of December 31, 2016. The reduction of duration was made to better position the portfolio against market losses arising from a rising rate environment. The average credit quality of the fixed income portfolio was AA as of December 31, 2017 and AA- as of December 31, 2016. The one-notch credit reduction was a result of incidental shifts in the portfolio mix rather than a change in investment strategy.

As of December 31, 2017, Sirius Group held \$399 million of non-U.S. denominated fixed income securities. Given the low, and in many cases negative, interest rate environment throughout Europe, Sirius Group redeployed \$249 million of EUR and GBP fixed income into USD fixed income and EUR equities during 2017.

The fixed income portfolio returned 2.9% for 2017 on a U.S. dollar basis and 1.8% in local currencies for the same period. The U.S. fixed income portfolio returned 1.9% versus the BarcAg1-3 of 0.9%. Our non-U.S. fixed income portfolio returned 0.8% in original currencies which compared to the OMRX return of 0.3%.

Equity securities and other long-term investments results

The Company benefited in 2017 versus 2016 from its continued, albeit modest, deployment into equity and alternative investment strategies. For 2017, the equity portfolio returned 16.8% on a U.S. dollar basis and 13.8% in local currencies. The S&P 500 returned 21.8% for the same period. At December 31, 2017, the equity and other long-term investments portfolio included \$290 million of U.S. dollar and \$176 million of non-U.S. dollar denominated securities. For 2016, the Sirius Group equity portfolio returned 11.5% on a U.S. dollar basis and 11.7% in local currencies for the same period. The S&P 500 returned 12.0% for the same period.

Foreign Currency Translation

Impact of foreign currency translation

The U.S. dollar is the functional currency for Sirius Group's businesses except for Sirius International, Syndicate 1945, several subsidiaries of IMG, and the Canadian reinsurance operations of Sirius America. Sirius Group also invests in securities denominated in foreign currencies. Assets and liabilities recorded in these foreign currencies are translated into U.S. dollars at exchange rates in effect at the balance sheet date, and revenues and expenses are converted using the average exchange rates for the period. Net foreign exchange gains and losses arising from the translation of functional currencies into U.S. dollars are reported in shareholders' equity and in Accumulated other comprehensive (loss). As of December 31, 2018 and 2017, Sirius Group had net unrealized foreign currency translation (losses) of \$(202) million and \$(141) million, respectively, recorded in Accumulated other comprehensive (loss) on its Consolidated Balance Sheets.

Assets and liabilities relating to foreign operations are remeasured into the functional currency using current exchange rates; revenues and expenses are remeasured into the functional currency using the weighted average exchange rate for the period. The resulting exchange gains and losses are reported as a component of net income in the period in which they arise within Net realized investment gains (losses), Net unrealized investment (losses), and Net foreign exchange gains (losses).

The following rates of exchange for the U.S. dollar have been used for translation of assets and liabilities whose functional currency is not the U.S. dollar as of December 31, 2018 and 2017:

Currency	Closing Rate December 31, 2018	Closing Rate December 31, 2017
Swedish kronor	8.9397	8.2051
British pound	0.7850	0.7398
Euro	0.8734	0.8339
Canadian dollar	1.3614	1.2556

Sirius International holds a large portfolio of investments that are denominated in U.S. dollars, but its functional currency is the SEK. When Sirius International prepares its stand-alone GAAP financial statements, it remeasures its U.S. dollar-denominated investments to SEK and recognizes the related foreign currency remeasurement gains or losses through pre-tax income. When Sirius Group consolidates Sirius International, it translates Sirius International's stand-alone GAAP financial statements to U.S. dollars and recognizes the related foreign currency translation gains or losses through other comprehensive income (loss). Since Sirius Group reports its financial statements in U.S. dollars, there is no net effect to book value per common share or to investment returns from foreign currency translation on its U.S. dollar-denominated investments at Sirius International. However, net realized and unrealized investment gains (losses), other revenues, net income (loss), earnings per share and other comprehensive income (loss) can be significantly affected during periods of high volatility in the foreign exchange rate between the U.S. dollar and other currencies, especially the SEK.

A summary of the impact of foreign currency translation on Sirius Group's consolidated financial results for the years ended December 31, 2018, 2017, and 2016 was as follows:

<i>(Millions)</i>	Years Ended December 31,		
	2018	2017	2016
Net realized investment gains (losses) - foreign currency ⁽¹⁾	\$ 17.3	\$ (19.1)	\$ 50.0
Net unrealized investment gains (losses) - foreign currency ⁽²⁾	35.7	(51.7)	(7.7)
Net realized and unrealized investment gains (losses) - foreign currency	53.0	(70.8)	42.3
Net foreign exchange gains (losses) - foreign currency translation gains(losses) ⁽³⁾	16.0	20.7	(17.5)
Net foreign exchange gains (losses) - currency swaps ⁽³⁾	6.9	(11.3)	6.5
Net foreign exchange (losses) - other ⁽³⁾	(0.2)	(0.2)	-
Income tax expense	2.0	3.3	2.4
Total foreign currency remeasurement gains (losses) recognized through net (loss) income, after tax	77.7	(58.3)	33.7
Change in foreign currency translation on investments recognized through other comprehensive (loss) income, after tax	(96.6)	83.9	(83.1)
Change in foreign currency translation on non-investment net liabilities recognized through other comprehensive income (loss), after tax	34.7	(12.2)	15.8
Total foreign currency translation gains (losses) recognized through other comprehensive income (loss), after tax	61.9	71.7	(67.3)
Total foreign currency gains (losses) recognized in comprehensive (loss), after tax	\$ 15.8	\$ 13.4	\$ (33.6)

⁽¹⁾Component of Net realized investment gains (losses) on the Consolidated Statements of (Loss) Income

⁽²⁾Component of Net unrealized investment (losses) on the Consolidated Statements of (Loss) Income

⁽³⁾Component of Net foreign exchange gains (losses) on the Consolidated Statements of (Loss) Income

As of December 31, 2018 the following currencies represented the largest exposure to foreign currency risk as a percentage of Sirius Group's shareholders' equity: the SEK 13% (short) and the Israeli shekel 4% (long). As of December 31, 2017, the following currencies represented the largest exposure to foreign currency risk as a percentage of Sirius Group's shareholder's equity: the SEK 9% (short) and the Israeli shekel 4% (long).

Investment portfolio composition by currency

As of December 31, 2018 and 2017, Sirius Group's investment portfolio included approximately \$468 million and \$575 million in non-U.S. dollar denominated investments, most of which is denominated in SEK, EUR, GBP, CAD and NIS. The investment values in this portfolio are impacted by changes in the exchange rate between the U.S. dollar and those currencies.

Set forth below is the carrying value of our investment holdings in U.S. dollars and foreign currencies as of December 31, 2018 and 2017:

Currency (Millions)	Carrying Value at December 31, 2018		Carrying Value at December 31, 2017	
	Local Currency	USD	Local Currency	USD
U.S. dollar	2,941.6	\$ 2,941.6	2,798.9	\$ 2,798.9
Swedish kronor	1,348.1	150.8	1,765.7	215.4
Euro	105.2	120.5	141.2	169.5
British pound	8.2	10.4	9.1	12.3
Canadian dollar	84.0	61.7	78.0	62.0
Israeli shekel	232.7	62.1	233.6	67.3
Other	-	62.6	-	48.3
Total investments		\$ 3,409.7		\$ 3,373.7

During 2018, the U.S. dollar strengthened 9% against the SEK, 6% against the GBP and 5% against the EUR. These foreign currency movements resulted in approximately \$44 million of foreign currency investment losses, which are recorded as a component of net realized and unrealized investment gains or losses recognized in pre-tax income and change in foreign currency translation on investments recognized in other comprehensive income. During 2017, the U.S. dollar weakened 9% against the SEK, 8% against the GBP and 12% against the EUR. These foreign currency movements resulted in approximately \$16 million of foreign currency investment gains, which are recorded as a component of net realized and unrealized investment gains or losses recognized in pre-tax income and change in foreign currency translation on investments recognized in other comprehensive income.

Results of Reportable Segments

Global Property

Global Property consists of Sirius Group's underwriting lines of business which offer other property insurance and reinsurance, property catastrophe excess reinsurance, and agriculture reinsurance on a worldwide basis.

Global Property (Millions) Years ended December 31,	2018	2017	2016
Gross written premiums	\$ 962.4	\$ 732.1	\$ 634.9
Net written premiums	655.0	556.2	514.2
Net earned insurance and reinsurance premiums	636.0	564.4	481.8
Loss and allocated LAE	(518.2)	(499.5)	(256.6)
Insurance and reinsurance acquisition expenses	(121.1)	(112.9)	(100.3)
Technical (loss) profit	\$ (3.3)	\$ (48.0)	\$ 124.9
Unallocated LAE	(10.5)	(12.9)	(11.9)
Other underwriting expenses	(68.2)	(63.3)	(65.1)
Underwriting (loss) income	\$ (82.0)	\$ (124.2)	\$ 47.9
Ratios:			
Loss ratio ⁽¹⁾	83.1%	90.8%	55.7%
Acquisition expense ratio ⁽²⁾	19.0%	20.0%	20.8%
Other underwriting expense ratio ⁽³⁾	10.7%	11.2%	13.5%
Combined ratio ⁽⁴⁾	112.8%	122.0%	90.0%

⁽¹⁾The loss ratio is calculated by dividing the sum of loss and allocated LAE and Unallocated LAE expenses by net earned insurance and reinsurance premiums.

⁽²⁾The acquisition expense ratio is calculated by dividing insurance and reinsurance acquisition expenses by net earned insurance and reinsurance premiums.

⁽³⁾The other underwriting expense ratio is calculated by dividing other underwriting expenses by net earned insurance and reinsurance premiums.

⁽⁴⁾The combined ratio is calculated by combining the loss ratio, the acquisition expense ratio, and the other underwriting expense ratio.

Underwriting Results

2018 vs. 2017:

Gross written premiums increased 31% to \$962 million in 2018 from \$732 million in 2017, due primarily to an increase in Other Property (\$218 million), of which \$130 million was due to a fronting arrangement. This fronting arrangement records offsetting gross and ceded loss and commission results, less a margin to Sirius Group. Net written premiums increased 18% to \$655 million in 2018 from \$556 million in 2017, due to an increase in Other Property (\$92 million) from favorable rate changes and new opportunities. The Other Property fronting arrangement did not significantly impact Global Property's net written or earned insurance and reinsurance premiums for either 2018 or 2017.

Global Property produced a net combined ratio of 113% in 2018 compared to 122% in 2017. The decrease in the combined ratio was driven by lower catastrophe losses offset by higher net unfavorable prior year loss reserve development and higher current year losses in certain Other Property accounts.

Global Property recorded an underwriting (loss) of (\$82) million and \$(124) million in 2018 and 2017, respectively. The 2018 results included catastrophe losses of \$192 million (30 points), net of reinsurance and reinstatement premiums, from Typhoon Jebi (\$91 million), Hurricane Michael (\$36 million), California Wildfires (\$12 million), Typhoon Trami (\$9 million), and other catastrophe events. The 2017 results included catastrophe losses of \$245 million (43 points), net of reinsurance and reinstatement premiums, from Hurricane Maria (\$76 million), Hurricane Irma (\$75 million), Hurricane Harvey (\$42 million) and other catastrophe events. Net unfavorable prior year loss reserve development was \$44 million (7 points) in 2018 compared to \$2 million of net unfavorable prior year loss reserve development (less than 1 point) in 2017. In 2018, unfavorable prior year loss reserve development was recorded in Other Property (\$35 million) and Property Catastrophe Excess (\$13 million), resulting from higher than expected loss reporting from recent accident years, including \$21 million from Hurricanes Harvey, Irma, and Maria. In 2017, unfavorable prior year loss reserve development in Other Property (\$18 million) was partially offset by \$14 million of favorable prior year loss reserve development for Property Catastrophe Excess.

2017 vs. 2016:

Gross written premiums increased 15% to \$732 million in 2017 from \$635 million in 2016, due primarily to an increase in Other Property (\$41 million) due to increased treaty participations. Net written premiums increased 8% to \$556 million in 2017 from \$514 million in 2016, due to the aforementioned increase in Other Property from increased treaty participations.

Global Property produced a combined ratio of 122% for 2017 compared to 90% in 2016. The increase in the combined ratio was driven by higher catastrophe losses and a higher frequency of non-catastrophe property losses.

Global Property recorded an underwriting (loss) of \$(124) million in 2017 compared to \$48 million of underwriting income for 2016. The 2017 results included \$245 million (43 points) of catastrophe losses, net of reinsurance and reinstatement premiums, from Hurricane Maria (\$76 million), Hurricane Irma (\$75 million), Hurricane Harvey (\$42 million), California Wildfires (\$21 million), Mexico Earthquakes (\$13 million) and other catastrophe events. This was an increase of \$139 million from 2016. Net unfavorable prior year loss reserve development was \$2 million (less than 1 point) in 2017 compared to \$27 million of net favorable prior year loss reserve development (6 points) in 2016. Unfavorable prior year loss reserve development in Other Property (\$18 million) was partially offset by \$14 million of favorable prior year loss reserve development for Property Catastrophe Excess in 2017.

Global Property gross written premiums

Global Property (Millions) Years ended December 31,	2018	2017	2016
Other property	\$ 623.0	\$ 405.2	\$ 364.4
Property catastrophe excess	275.3	255.3	233.2
Agriculture	64.1	71.6	37.3
Total	\$ 962.4	\$ 732.1	\$ 634.9

2018 vs. 2017:

Gross written premiums increased 31% to \$962 million in 2018 from \$732 million in 2017, due to an Other Property fronting arrangement, which was \$130 million of the total increase. The remaining increases in Other Property and Property Catastrophe Excess were driven by favorable rate changes and new opportunities.

2017 vs. 2016:

Global Property's gross written premiums increased 15% to \$732 million in 2017 from \$635 million in 2016, due to increased treaty participations.

Global Property net earned insurance and reinsurance premiums

Global Property (Millions) Years ended December 31,	2018	2017	2016
Other property	\$ 396.7	\$ 337.5	\$ 305.7
Property catastrophe excess	180.5	159.6	140.4
Agriculture	58.8	67.3	35.7
Total	\$ 636.0	\$ 564.4	\$ 481.8

2018 vs. 2017:

Net earned insurance and reinsurance premiums increased 13% to \$636 million in 2018 from \$564 million in 2017 for Other Property and Property Catastrophe Excess due to favorable rate changes and new opportunities. The Other Property fronting arrangement did not significantly impact Global Property's net earned insurance and reinsurance premiums for either the 2018 or 2017 periods.

2017 vs. 2016:

Global Property's net earned insurance and reinsurance premiums increased 17% to \$564 million in 2017 from \$482 million in 2016. The primary driver was Agriculture, which increased by \$32 million, or 89%, due to an increased share in U.S. agricultural insurance programs.

Global A&H

Global A&H consists of Sirius Group's Global A&H insurance and reinsurance underwriting unit along with two MGUs (IMG and Armada).

Global A&H (Millions) Years ended December 31,	2018	2017	2016
Gross written premiums	\$ 500.6	\$ 494.6	\$ 436.1
Net written premiums	379.8	341.5	277.6
Net earned insurance and reinsurance premiums	357.6	306.8	272.2
Loss and allocated LAE	(189.0)	(175.0)	(164.8)
Insurance and reinsurance acquisition expenses	(109.7)	(89.6)	(71.7)
Technical profit	\$ 58.9	\$ 42.2	\$ 35.7
Unallocated LAE	(5.9)	(4.8)	(6.8)
Other underwriting expenses	(27.4)	(23.4)	(23.3)
Underwriting income	\$ 25.6	\$ 14.0	\$ 5.6
Service fee revenue	115.7	65.9	-
MGU unallocated LAE	(14.0)	-	-
MGU other underwriting expenses	(16.1)	-	-
MGU general and administrative expenses	(53.6)	(44.8)	-
Underwriting income, including net service fee income	\$ 57.6	\$ 35.1	\$ 5.6
Ratios:			
Loss ratio ⁽¹⁾	54.5%	58.6%	63.0%
Acquisition expense ratio ⁽²⁾	30.7%	29.2%	26.3%
Other underwriting expense ratio ⁽³⁾	7.7%	7.6%	8.6%
Combined ratio⁽⁴⁾	92.9%	95.4%	97.9%

⁽¹⁾The loss ratio is calculated by dividing the sum of loss and allocated LAE and Unallocated LAE expenses by net earned insurance and reinsurance premiums.

⁽²⁾The acquisition expense ratio is calculated by dividing insurance and reinsurance acquisition expenses by net earned insurance and reinsurance premiums.

⁽³⁾The other underwriting expense ratio is calculated by dividing other underwriting expenses by net earned insurance and reinsurance premiums.

⁽⁴⁾The combined ratio is calculated by combining the loss ratio, the acquisition expense ratio, and the other underwriting expense ratio.

Underwriting Results

2018 vs. 2017:

Gross written premiums increased 1% to \$501 million in 2018 from \$495 million in 2017 while net written premiums increased 11% to \$380 million in 2018 from \$342 million in 2017 due to retaining A&H business previously ceded to a subsidiary of IMG, which was acquired by Sirius Group in May 2017.

Global A&H produced a net combined ratio of 93% in 2018 compared to 95% in 2017. The decrease in the combined ratio was due to net favorable prior year loss reserve development of \$15 million (4 points) in 2018 compared to \$4 million (1 point) of net favorable prior year loss reserve development in 2017; in both periods, the net favorable prior year loss reserve development was driven by lower than expected claims activity. The increase in the net acquisition expense ratio from the prior period was due to retaining A&H business previously ceded to a subsidiary of IMG, which was acquired by Sirius Group in May 2017, and increased primary insurance writings. Additionally, net earned insurance and reinsurance premiums increased 17% to \$358 million in 2018 from \$307 million in 2017.

Underwriting income, including net service fee income, for Global A&H was \$58 million in 2018 compared to \$35 million in 2017. The increase of \$23 million was primarily driven by net service fee income generated by IMG and Armada, which were both acquired during the second quarter of 2017. Starting in 2018, certain operating expenses for the MGUs are reflected in Unallocated LAE and Other underwriting expense, representing costs associated with the support of the Global A&H underwriting team.

2017 vs. 2016:

Gross written premiums increased 13% to \$495 million in 2017 from \$436 million in 2016, while net written premiums increased 23% to \$342 million in 2017 from \$278 million in 2016, due to increased primary insurance writings. Increased net earned insurance and reinsurance premiums (13%) and an improved combined ratio (driven by lower incurred losses) resulted in an underwriting income of \$14 million in 2017 compared to \$6 million in 2016.

Global A&H produced a combined ratio of 95% for 2017 compared to 98% in 2016. The decrease in the combined ratio was driven by lower current accident year loss ratios due to the non-renewal of certain underperforming accounts.

Underwriting income, which includes net service fee income, for Global A&H was \$35 million in 2017, an increase of \$29 million over 2016, driven by increased net earned insurance and reinsurance premiums, improved underwriting results, and the acquisition of IMG and Armada, which contributed additional net service fee income. IMG and Armada produced \$21 million of net service fee income, which included service fee revenue of \$66 million, net of \$45 million of general and administrative expenses.

Specialty & Casualty

Specialty & Casualty consists of Sirius Group's insurance and reinsurance underwriting units which, offer Specialty & Casualty product lines on a worldwide basis.

Specialty & Casualty (Millions)			
Years ended December 31,	2018	2017	2016
Gross written premiums	\$ 325.1	\$ 218.1	\$ 170.7
Net written premiums	292.7	193.0	137.4
Net earned insurance and reinsurance premiums	239.5	163.2	135.2
Loss and allocated LAE	(142.9)	(99.6)	(71.2)
Insurance and reinsurance acquisition expenses	(65.5)	(41.1)	(37.7)
Technical profit	\$ 31.1	\$ 22.5	\$ 26.3
Unallocated LAE	(5.9)	(5.3)	(4.4)
Other underwriting expenses	(28.2)	(16.5)	(15.1)
Underwriting (loss) income	\$ (3.0)	\$ 0.7	\$ 6.8
Ratios:			
Loss ratio ⁽¹⁾	62.1%	64.3%	55.9%
Acquisition expense ratio ⁽²⁾	27.3%	25.2%	27.9%
Other underwriting expense ratio ⁽³⁾	11.8%	10.1%	11.2%
Combined ratio⁽⁴⁾	101.2%	99.6%	95.0%

⁽¹⁾The loss ratio is calculated by dividing the sum of loss and allocated LAE and Unallocated LAE expenses by net earned insurance and reinsurance premiums.

⁽²⁾The acquisition expense ratio is calculated by dividing insurance and reinsurance acquisition expenses by net earned insurance and reinsurance premiums.

⁽³⁾The other underwriting expense ratio is calculated by dividing other underwriting expenses by net earned insurance and reinsurance premiums.

⁽⁴⁾The combined ratio is calculated by combining the loss ratio, the acquisition expense ratio, and the other underwriting expense ratio.

Underwriting Results

2018 vs. 2017:

Gross written premiums increased 49% to \$325 million in 2018 from \$218 million in 2017, due mainly to new initiatives in Casualty (\$98 million), Environmental (\$10 million) and Surety (\$7 million), offset by a decrease in Marine (\$21 million). Net written premiums increased 52% to \$293 million in 2018 from \$193 million in 2017, due to the same lines of business as the gross written premiums increase. The decrease in Marine was due to the decision not to renew the book written in Sirius International's London office due to underwriting performance.

Specialty & Casualty produced a net combined ratio of 101% in 2018 compared to 100% in 2017. The lower net combined ratio was due to a lower Loss ratio driven by lower catastrophe losses and increased favorable prior year loss reserve development, partially offset by higher current year losses in Aviation & Space and a higher Other underwriting expense ratio caused by the primary Surety and Environmental specialty lines, which were newly launched in late 2017.

Specialty & Casualty recorded an underwriting (loss) of \$(3) million in 2018 compared to underwriting income of \$1 million in 2017. Specialty & Casualty had \$18 million (8 points) of favorable prior year loss reserve development in 2018, primarily driven by Aviation & Space (\$8 million) and Marine (\$7 million), compared to \$12 million (7 points) of favorable prior year loss reserve development in 2017, primarily driven by Marine (\$5 million) and Trade Credit (\$4 million). Catastrophe losses, net of reinsurance and reinstatement premiums, were \$2 million (1 point), in 2018 compared to \$14 million (9 points) in 2017, mainly due to Hurricanes Irma, Maria, and Harvey (primarily in Marine).

Other underwriting expenses increased 65% to \$28 million in 2018 from \$17 million in 2017. The increase in Other underwriting expenses was primarily driven by Casualty, as well as the Surety and Environmental lines of business, which were newly launched in late 2017.

2017 vs. 2016:

Gross written premiums increased 27% to \$218 million in 2017 from \$171 million in 2016, primarily a result of re-entering the U.S. casualty reinsurance market in 2017. Net written premiums increased 41% to \$193 million in 2017 from \$137 million in 2016, due to the same reason.

Specialty & Casualty produced a combined ratio of 100% for 2017 compared to 95% in 2016. The increase in the combined ratio was driven by higher loss and LAE ratios in Aviation & Space, Trade Credit, and Marine.

Specialty & Casualty recorded underwriting income of \$1 million in 2017 compared to underwriting income of \$7 million in 2016. 2017 results included \$14 million (9 points) of catastrophe losses, net of reinsurance and reinstatement premiums, mainly due to Hurricanes Irma, Maria, and Harvey (primarily in Marine) as compared to \$3 million (2 points) of catastrophe losses in 2016, net of reinsurance and reinstatement premiums. Specialty & Casualty recorded \$12 million (7 points) of favorable prior year loss reserve development in 2017, primarily in Marine (\$5 million) and Trade Credit (\$4 million) compared to \$25 million (18 points) of favorable prior year loss reserve development in 2016, primarily from Aviation & Space (\$12 million) and Marine (\$7 million).

Other underwriting expenses increased 13% to \$17 million in 2017 from \$15 million in 2016. The increase in Other underwriting expenses was primarily driven by Casualty which was newly launched in 2017.

Specialty & Casualty gross written premiums

Specialty & Casualty (Millions)			
Years ended December 31,	2018	2017	2016
Casualty	\$ 136.4	\$ 38.2	\$ 0.6
Aviation & Space	72.5	65.7	61.6
Trade Credit	48.1	39.7	31.6
Marine	34.7	56.1	57.7
Contingency	16.6	18.4	19.2
Environmental	10.1	-	-
Surety	6.7	-	-
Total	\$ 325.1	\$ 218.1	\$ 170.7

2018 vs. 2017:

Gross written premiums increased 49% to \$325 million in 2018 from \$218 million in 2017. Increases in gross written premiums were primarily driven by new initiatives in Casualty (\$98 million), partially offset by a decline in Marine (\$21 million). Additionally, gross written premiums include amounts related to Environmental (\$10 million) and Surety (\$7 million).

2017 vs. 2016:

Specialty & Casualty gross written premiums increased 27% to \$218 million in 2017 from \$171 million in 2016, primarily a result of re-entering the U.S. casualty reinsurance market in 2017.

Specialty & Casualty net earned insurance and reinsurance premiums

Specialty & Casualty (Millions) Years ended December 31,	2018	2017	2016
Casualty	\$ 80.8	\$ 15.0	\$ 0.5
Aviation & Space	60.4	53.8	45.1
Trade Credit	42.5	32.6	32.1
Marine	36.2	46.6	43.4
Contingency	15.0	15.2	14.1
Surety	3.7	-	-
Environmental	0.9	-	-
Total	\$ 239.5	\$ 163.2	\$ 135.2

2018 vs. 2017:

Net earned insurance and reinsurance premiums increased 47% to \$240 million in 2018 from \$163 million in 2017. Casualty (\$66 million) and Trade Credit (\$10 million) were the main drivers of the increase from the prior year.

2017 vs. 2016:

Net earned insurance and reinsurance premiums increased 21% to \$163 million in 2017 from \$135 million in 2016. Net earned insurance and reinsurance premiums increased for all Specialty & Casualty lines, with the largest increases in Casualty and Aviation & Space. The increase in Casualty was due to our re-entry into the U.S. casualty reinsurance market in 2017.

Runoff & Other

Runoff & Other consists of business related to asbestos and environmental risks and other long-tailed liability exposures, in addition to results from Sirius Global Solutions, which specializes in the acquisition and management of runoff liabilities for insurance and reinsurance companies both in the U.S. and internationally.

Runoff & Other (Millions) Years ended December 31,	2018	2017	2016
Gross written premiums	\$ 32.9	\$ (5.5)	\$ 27.3
Net written premiums	29.6	(0.5)	8.9
Net earned insurance and reinsurance premiums	29.2	0.9	0.9
Loss and allocated LAE	(13.0)	(11.0)	(2.6)
Insurance and reinsurance acquisition expenses	(2.8)	3.5	(0.6)
Technical profit (loss)	\$ 13.4	\$ (6.6)	\$ (2.3)
Unallocated LAE	(1.6)	(3.1)	(1.0)
Other underwriting expenses	(6.3)	(2.9)	(3.8)
Underwriting income (loss)	\$ 5.5	\$ (12.6)	\$ (7.1)
Service fee revenue	-	-	4.3
General and administrative expenses	(3.1)	(4.0)	(6.2)
Underwriting income (loss), net of service fee income	\$ 2.4	\$ (16.6)	\$ (9.0)

Underwriting Results

2018 vs. 2017:

Runoff & Other recorded \$33 million of gross written premiums in 2018 compared to \$(6) million of gross written premiums in 2017. Gross written premiums in 2018 related primarily to premiums from two loss portfolio transfers and a quota share. The negative gross written premiums in 2017 related to the cancellation of Mount Beacon Insurance Company's ("Mount Beacon Insurance") inforce business per a consent order approved by the Florida Office of Insurance Regulation. This cancellation did not impact net earned insurance and reinsurance premiums.

Runoff & Other recorded underwriting income (loss), net of service fee income, of \$2 million and \$(17) million for 2018 and 2017, respectively. In 2018, Runoff & Other recorded \$18 million of net favorable prior year loss reserve development compared to \$13 million of net unfavorable prior year loss reserve development in 2017. The net favorable prior year loss reserve development for Runoff & Other in 2018 included reductions in World Trade Center claims in response to revised information received by the Company and runoff Casualty reserves. In 2017, the Company increased its asbestos reserves by \$59 million, which was offset by reductions of other runoff claims reserves of \$46 million. The 2017 asbestos incurred losses were primarily a result of an in-depth analysis of Sirius Group's loss reserves in 2017. The asbestos study was initiated in response to increased estimates of industry asbestos losses promulgated by leading financial analysts. External asbestos experts were engaged by Sirius Group to assist with the actuarial and claims review of asbestos exposures within Sirius Group. Management booked the highest central estimate of the internal and external indications resulting from the in-depth study. See "Summary of Critical Accounting Estimates" below.

2017 vs. 2016:

The negative gross written premiums in Runoff & Other relates to the cancellation of Mount Beacon Insurance's inforce business per a consent order approved by the Florida Office of Insurance Regulation. Mount Beacon Insurance recognized \$12 million of negative gross written premiums and a corresponding change in gross unearned insurance and reinsurance premiums with a decrease in ceded written premiums and ceded unearned insurance and reinsurance premiums (100% of which were ceded to Florida Specialty). This cancellation did not impact net earned insurance and reinsurance premiums.

Runoff & Other recorded \$13 million of net unfavorable prior year loss reserve development in 2017. During 2017, Sirius Group strengthened its asbestos loss reserves by \$59 million, which was offset by reductions of other runoff loss reserves of \$46 million, as discussed above.

Reinsurance Protection

The following tables display Sirius Group’s underwriting ratios prior to cessions to reinsurers (“Gross”), cessions to reinsurers (“Ceded”) and after cessions to reinsurers (“Net”) basis. See “Reinsurance Protection” in Item 1 “Business” for further information.

Years ended December 31, 2018, 2017, and 2016

Gross, Ceded, and Net Combined Ratios Year ended December 31, 2018	Global Property	Global A&H	Specialty & Casualty	Total
Gross ratios:				
Loss ratio	71.3%	54.6%	56.7%	64.6%
Acquisition expense ratio	22.0%	28.3%	25.8%	21.6%
Other underwriting expense ratio	7.6%	5.8%	10.5%	8.8%
Gross Combined ratio	100.9%	88.7%	93.0%	95.0%
Ceded ratios:				
Loss ratio	42.6%	54.9%	10.5%	44.2%
Acquisition expense ratio	29.3%	21.0%	12.4%	25.8%
Ceded Combined ratio	71.9%	75.9%	22.9%	70.0%
Net ratios:				
Loss ratio	83.1%	54.5%	62.1%	71.3%
Acquisition expense ratio	19.0%	30.7%	27.3%	20.2%
Other underwriting expense ratio	10.7%	7.7%	11.8%	11.6%
Net Combined ratio	112.8%	92.9%	101.2%	103.1%

Sirius Group’s net combined ratio was 8 points higher than the gross combined ratio due to the costs of retrocessional protections with limited ceded loss recoveries. An Other Property fronting arrangement, which records offsetting gross and ceded loss and commission results, less a margin to Sirius Group, also impacted the gross and ceded loss and commission ratios in 2018.

Gross, Ceded, and Net Combined Ratios Year ended December 31, 2017	Global Property	Global A&H	Specialty & Casualty	Total
Gross ratios:				
Loss ratio	80.0%	60.1%	68.9%	74.6%
Acquisition expense ratio	20.0%	28.5%	23.4%	20.1%
Other underwriting expense ratio	8.8%	5.5%	8.7%	7.9%
Gross Combined ratio	108.8%	94.1%	101.0%	102.6%
Ceded ratios:				
Loss ratio	40.9%	64.0%	94.3%	61.5%
Acquisition expense ratio	20.1%	26.6%	13.4%	23.6%
Ceded Combined ratio	61.0%	90.6%	107.7%	85.1%
Net ratios:				
Loss ratio	90.8%	58.6%	64.3%	78.4%
Acquisition expense ratio	20.0%	29.2%	25.2%	19.0%
Other underwriting expense ratio	11.2%	7.6%	10.1%	10.2%
Net Combined ratio	122.0%	95.4%	99.6%	107.6%

Sirius Group's net combined ratio was 5 points higher than the gross combined ratio in 2017 due to the costs of property retrocessional protections with limited ceded loss recoveries which was partially offset by ceded loss recoveries in Marine and Trade Credit.

Gross, Ceded, and Net Combined Ratios Year ended December 31, 2016	Global Property	Global A&H	Specialty & Casualty	Total
Gross ratios:				
Loss ratio	50.0%	62.1%	54.7%	55.1%
Acquisition expense ratio	20.7%	28.1%	25.5%	23.7%
Other underwriting expense ratio	10.8%	5.4%	8.9%	8.7%
Gross Combined ratio	81.5%	95.6%	89.1%	87.5%
Ceded ratios:				
Loss ratio	27.0%	60.3%	50.1%	46.3%
Acquisition expense ratio	20.1%	31.3%	16.0%	23.7%
Ceded Combined ratio	47.1%	91.6%	66.1%	70.0%
Net ratios:				
Loss ratio	55.7%	63.0%	55.9%	58.3%
Acquisition expense ratio	20.8%	26.3%	27.9%	23.6%
Other underwriting expense ratio	13.5%	8.6%	11.2%	12.1%
Net Combined ratio	90.0%	97.9%	95.0%	94.0%

Sirius Group's net combined ratio was 6 points higher than the gross combined ratio in 2016 due to the costs of property and Aviation & Space retrocessional protections with limited ceded loss recoveries.

Non-GAAP Financial Measures

In presenting Sirius Group's results, management has included and discussed the following non-GAAP financial measures: Adjusted book value, Adjusted book value per share and Operating (loss) attributable to common shareholders. The Company believes that these non-GAAP financial measures, which may be defined and calculated differently by other companies, better explain and enhance the understanding of the Company's results of operations. However, these measures should not be viewed as a substitute for those determined in accordance with generally accepted accounting principles in the United States of America ("GAAP") and the rules and regulations of the U.S. Securities and Exchange Commission.

Sum of Total common shareholders' equity and Series B preference shares (Adjusted book value) and Adjusted book value per common and preference shares outstanding, including Series B preference shares (Adjusted book value per Share)

In connection with the closing of the Merger, the Company completed the Sirius Group Private Placement. The price per share of \$17.22447 for the common shares and Series B preference shares issued in the Sirius Group Private Placement was the same. Sirius Group believes that the Merger and the Private Placement were parts of an overall integrated capitalization strategy for the Company, which should be assessed on a combined basis, not as separate transactions.

Adjusted book value and Adjusted book value per share are non-GAAP financial measures used to show the Company's total worth on a per-share basis and are useful to management and investors in analyzing the intrinsic value of the Company.

Total shares outstanding is derived by summing common shares and Series B preference shares outstanding. Adjusted book value is derived by summing common shareholders' equity and the Series B preference share amount reflected in mezzanine equity. Outstanding warrants are excluded as they are anti-dilutive. Adjusted book value per share is derived by dividing the Adjusted book value by the total shares outstanding. The reconciliation to total common shareholders' equity and book value per common share, the most directly comparable GAAP measures, are presented in the table below.

(Expressed in Millions, except share information)	As of December 31,		
	2018	2017	2016
Common shares outstanding	115,151,251	120,000,000	120,000,000
Series B preference shares outstanding	11,901,670	-	-
Total shares outstanding	127,052,921	120,000,000	120,000,000
Total common shareholders' equity	\$ 1,704.5	\$ 1,917.0	\$ 1,988.1
Series B preference shares	232.2	-	-
Adjusted book value	\$ 1,936.7	\$ 1,917.0	\$ 1,988.1
Book value per common share	\$ 14.80	\$ 15.98	\$ 16.57
Adjusted book value per share	\$ 15.24	\$ 15.98	\$ 16.57

Operating (loss) attributable to common shareholders

The Company uses Operating (loss) attributable to common shareholders as a measure to evaluate the underlying fundamentals of its operations and believes it to be a useful measure of its corporate performance. Operating (loss) attributable to common shareholders as used herein differs from net (loss) income attributable to common shareholders, which the Company believes is the most directly comparable GAAP measure, by the exclusion of net realized and unrealized gains and losses on investments, net foreign exchange gains (losses) and the associated income tax expense or benefit. The Company's management believes that Operating (loss) attributable to common shareholders is useful to investors because it removes the variability arising from fluctuations in the Company's fixed maturity investment portfolio, equity investments trading, investments-related derivatives, and net foreign exchange gains (losses) and the associated income tax expense or benefit of those fluctuations. The following is a reconciliation of net (loss) income attributable to common shareholders to Operating (loss) attributable to common shareholders for the years ended December 31, 2018, 2017, and 2016.

(Expressed in Millions)	Years Ended December 31,		
	2018	2017	2016
Net (loss) income attributable to common shareholders	\$ (43.3)	\$ (156.1)	\$ 32.5
Adjustment for net realized and unrealized losses (gains) on investments	20.9	37.7	(50.1)
Adjustment for net foreign exchange (gains) losses	(22.7)	(9.2)	11.0
Adjustment for income tax (benefit) ⁽¹⁾	(11.3)	(0.8)	(0.9)
Operating (loss) attributable to common shareholders	\$ (56.4)	\$ (128.4)	\$ (7.5)

⁽¹⁾Adjustment for income tax (benefit) expense represents the income tax benefit (expense) associated with the adjustment for net realized and unrealized losses (gains) on investments and the income tax benefit (expense) associated with the adjustment for net foreign exchange gains. The income tax impact is estimated by applying the statutory rates of applicable jurisdictions, after consideration of other relevant factors.

Liquidity and Capital Resources

Liquidity is a measure of a company's ability to generate cash flows sufficient to meet short-term and long-term cash requirements of its business operations. Sirius Group's insurance and reinsurance operations are subject to regulation and supervision in each of the jurisdictions where they are domiciled and licensed to conduct business. Generally, regulatory authorities have broad supervisory and administrative powers over such matters as licenses, standards of solvency, premium rates, policy forms, investments, security deposits, methods of accounting, form and content of financial statements, reserves for unpaid loss and LAE, reinsurance, minimum capital and surplus requirements, dividends and other distributions to shareholders, periodic examinations and annual and other report filings. In general, such regulation is for the protection of policyholders rather than shareholders. Sirius Group manages its liquidity needs primarily through the maintenance of a short duration and high quality fixed income portfolio.

Dividend Capacity

Sirius Group's top tier regulated insurance and reinsurance operating subsidiary is Sirius Bermuda. Sirius Bermuda's ability to pay dividends is limited under Bermuda law and regulations. Under the Insurance Act, Sirius Bermuda is restricted with respect to the payment of dividends. Sirius Bermuda is prohibited from declaring or paying in any financial year dividends of more than 25% of its total statutory capital and surplus (as shown on its previous financial year's statutory balance sheet) unless it files, at least seven days before payment of such dividends, with the BMA an affidavit stating that it will continue to meet the required margins following the declaration of those dividends. Accordingly, Sirius Bermuda can pay approximately \$539 million to its parent company, Sirius International Group, Ltd., during 2019 without providing an affidavit to the BMA. Sirius Bermuda indirectly owns Sirius International Insurance Corporation, Sirius America Insurance Company and Sirius Group's other insurance and reinsurance operating companies, each of which are limited in their ability to pay dividends by the insurance laws of their relevant jurisdictions.

Sirius International has the ability to pay dividends up to Sirius Bermuda subject to the availability of unrestricted equity, calculated in accordance with the Swedish Act on Annual Accounts in Insurance Companies and the SFSA. Unrestricted equity is calculated on a consolidated group account basis and on a parent account basis. Differences between the two include but are not limited to accounting for goodwill, subsidiaries (with parent accounts stated at original foreign exchange rates), taxes and pensions. Sirius International's ability to pay dividends is limited to the "lower of" unrestricted equity as calculated within the group and parent accounts. As of December 31, 2018, Sirius International had \$373 million (based on the December 31, 2018 SEK to USD exchange rate) of unrestricted equity on a parent account basis (the lower of the two approaches) available to pay dividends in 2019. The amount of dividends available to be paid by Sirius International in any given year is also subject to cash flow and earnings generated by Sirius International's business, the maintenance of adequate solvency capital ratios for Sirius International and the consolidated Sirius International UK Holdings Ltd. group, as well as to dividends received from its subsidiaries, including Sirius America. Earnings generated by Sirius International's business that are allocated to the Safety Reserve are not available to pay dividends (see "Safety Reserve" below). During 2018, Sirius International did not declare a dividend and paid \$20 million of dividends declared in 2017.

Under the normal course of business, Sirius America has the ability to pay dividends to its immediate parent during any twelve-month period without the prior approval of regulatory authorities in an amount set by a formula based on the lesser of net investment income, as defined by statute, or 10% of statutory surplus, in both cases as most recently reported to regulatory authorities, subject to the availability of earned surplus and subject to dividends paid in prior periods. Based on this formula, Sirius America does not have any dividend capacity as of December 31, 2018, without prior regulatory approval. As of December 31, 2018, Sirius America had \$522 million of statutory surplus and \$108 million of earned surplus. During 2018, Sirius America did not pay any dividends to its immediate parent.

During 2018 and 2017, the Company did not pay any dividends to its shareholders. The Company paid \$27 million in dividends to its former parent on April 18, 2016. As of December 31, 2018, Sirius Group had \$52 million of net unrestricted cash, short-term investments, and fixed maturity investments outside of its regulated and unregulated insurance and reinsurance operating subsidiaries.

Capital Maintenance

There is a capital maintenance agreement between Sirius International and Sirius America, which obligates Sirius International to make contributions to Sirius America's surplus in order for Sirius America to maintain surplus equal to at least 125% of the company action level risk-based capital as defined in the NAIC's Property/Casualty Risk-Based Capital Report. The agreement provides for a maximum contribution to Sirius America of \$200 million. During 2018, Sirius International did not make any contributions to the surplus of Sirius America. In 2017, Sirius International provided Sirius America with an accident year stop-loss cover, with an attachment point in excess of 83% and a limit of \$27.0 million. This accident year stop-loss reinsurance was not renewed in 2018. In addition, at November 1, 2016, Sirius America and Sirius International entered into a quota share agreement whereby Sirius America ceded Sirius International 75% of its reinsurance business on an accident year basis. This quota share agreement was in force through March 31, 2018. In the third quarter of 2018, Sirius America entered into a commutation agreement with Sirius International and commuted all outstanding balances related to the accident year stop-loss and the 75% quota share. For 2018 and 2017, Sirius America ceded \$9 million and \$115 million, respectively, of premiums earned to Sirius International under this quota share agreement.

Safety Reserve

Subject to certain limitations under Swedish law, Sirius International is permitted to transfer pre-tax income amounts into an untaxed reserve referred to as a "Safety Reserve." As of December 31, 2018, Sirius International's Safety Reserve amounted to SEK 10.7 billion, or \$1.2 billion (based on the December 31, 2018 SEK to USD exchange rate). Under GAAP, an amount equal to the Safety Reserve, net of a related deferred tax liability established at the Swedish tax rate, is classified as shareholder's equity. Generally, this deferred tax liability is only required to be paid by Sirius International if it fails to maintain prescribed levels of premium writings and loss reserves in future years. As a result of the indefinite deferral of these taxes, Swedish regulatory authorities apply no taxes to the Safety Reserve when calculating solvency capital under Swedish insurance regulations.

Pursuant to tax legislation enacted in Sweden in June 2018, the tax rate applicable to Swedish corporations will be reduced from 22.0% to 21.4% starting in 2019, and then to 20.6% starting in 2021. The enacted legislation also included a new provision treating an amount equal to 6% of the Safety Reserve balance as of January 1, 2021, as taxable income subject to tax at the applicable 20.6% rate. Based on this new provision, Sirius International's positive effect of the decreased tax rate on the deferred tax liability is offset by an additional deferred tax liability in the amount of \$15 million as of December 31, 2018. Accordingly, for 2018, the deferred tax liability on Sirius International's Safety Reserve decreased to \$261 million.

Under local statutory requirements, an amount equal to the deferred tax liability on Sirius International's Safety Reserve (\$261 million as of December 31, 2018) is included in solvency capital. Access to the Safety Reserve is restricted to coverage of insurance and reinsurance losses and to coverage of a breach of the Solvency Capital Requirement. Access for any other purpose requires the approval of Swedish regulatory authorities. Similar to the approach taken by Swedish regulatory authorities, most major rating agencies generally include the \$1.2 billion balance of the Safety Reserve, without any provision for deferred taxes, in Sirius International's regulatory capital when assessing Sirius International and Sirius Group's financial strength. Subject to certain limitations under Swedish law, Sirius International is permitted to transfer certain portions of its pre-tax income to its Swedish parent companies to minimize taxes (referred to as a group contribution). During 2018, Sirius International did not transfer any of its 2018 pre-tax income via group contributions to its Swedish parent companies.

Insurance Float

Insurance float is an important aspect of Sirius Group's insurance and reinsurance operations. Insurance float represents funds that an insurance or reinsurance company holds for a limited time. In an insurance or reinsurance operation, float arises because premiums are collected before losses are paid. This interval can extend over many years. During that time, the insurer or reinsurer invests the funds. When the premiums that an insurer or reinsurer collects do not cover the losses and expenses it eventually must pay, the result is an underwriting loss, which can be considered as the cost of insurance float.

Insurance float can increase in a number of ways, including through acquisitions of insurance and reinsurance operations, organic growth in existing insurance and reinsurance operations and recognition of losses that do not immediately cause a corresponding reduction in investment assets. Conversely, insurance float can decrease in a number of other ways, including sales of insurance and reinsurance operations, shrinking or runoff of existing insurance and reinsurance operations, the acquisition of operations that do not have substantial investment assets (e.g., an agency) and the recognition of gains that do not cause a corresponding increase in investment assets. It is Sirius Group's intention to generate low-cost float over time through a combination of acquisitions and organic growth in its existing insurance and reinsurance operations.

Certain operational leverage metrics can be measured with ratios that are calculated using insurance float. There are many activities that do not change the amount of insurance float at an insurance or reinsurance company but can have a significant impact on Sirius Group's operational leverage metrics. For example, investment gains and losses, foreign currency translation gains and losses, debt issuances and repurchases/repayments, common and preference share issuances and repurchases and dividends paid to shareholders are all activities that do not change insurance float but can meaningfully impact operational leverage metrics that are calculated using insurance float. During 2018, insurance float increased by \$172 million due to higher premium volume and major catastrophe losses recorded in 2018, primarily from Typhoon Jebi and Hurricane Michael. These catastrophe losses increase Sirius Group's insurance float when they are first recorded but will decrease insurance float as the catastrophe losses are paid or reserves reduced.

The following table illustrates Sirius Group's consolidated insurance float position as of December 31, 2018 and 2017:

<i>(Millions)</i>	December 31, 2018	December 31, 2017
Loss and LAE reserves	\$ 2,016.7	\$ 1,898.5
Unearned insurance and reinsurance premiums	647.2	506.8
Ceded reinsurance payable	206.9	139.1
Funds held under reinsurance treaties	110.6	73.4
Deferred tax liability on safety reserve	261.1	286.6
	3,242.5	2,904.4
Float liabilities		
Cash	119.4	215.8
Reinsurance recoverable on paid and unpaid losses	405.2	337.2
Insurance and reinsurance premiums receivable	630.6	543.6
Funds held by ceding companies	186.8	153.2
Deferred acquisition costs	141.6	120.9
Ceded unearned insurance and reinsurance premiums	159.8	106.6
	1,643.4	1,477.3
Float assets		
Insurance float	\$ 1,599.1	\$ 1,427.1
Insurance float as a multiple of total capital ⁽¹⁾	0.6x	0.5x
Insurance float as a multiple of common shareholders' equity	0.9x	0.7x

⁽¹⁾See calculation of total capital below in the "Financing" table.

Financing

Management believes that Sirius Group has the flexibility and capacity to obtain funds externally as needed through debt or equity financing on both a short-term and long-term basis. However, Sirius Group can provide no assurance that, if needed, it would be able to obtain additional debt or equity financing on satisfactory terms, if at all.

The following table summarizes Sirius Group’s capital structure as of December 31, 2018 and 2017:

<i>(Millions)</i>	December 31, 2018	December 31, 2017
2017 SEK Subordinated Notes	\$ 303.6	\$ 330.7
2016 SIG Senior Notes	393.2	392.5
Total debt	696.8	723.2
Series B preference shares	232.2	-
Series A redeemable preference shares	-	106.1
Common shareholders’ equity	1,704.5	1,917.0
Total capital	\$ 2,633.5	\$ 2,746.3
Total debt to total capital	26%	26%
Total debt, Series B preference shares, and Series A redeemable preference shares to total capital	35%	30%

2017 SEK Subordinated Notes

On September 22, 2017, Sirius Group issued floating rate callable subordinated notes denominated in Swedish kronor (“SEK”) in the amount of SEK 2,750 million (or \$346 million on date of issuance) at a 100% issue price (“2017 SEK Subordinated Notes”). The 2017 SEK Subordinated Notes were issued in an offering that was exempt from the registration requirements of the Securities Act of 1933 (the “Securities Act”). The 2017 SEK Subordinated Notes bear interest on their principal amount at a floating rate equal to the applicable Stockholm Interbank Offered Rate (“STIBOR”) for the relevant interest period plus an applicable margin, payable quarterly in arrears on March 22, June 22, September 22, and December 22 in each year commencing on December 22, 2017, until maturity in September 2047.

Sirius Group incurred \$5 million in expenses related to the issuance of the 2017 SEK Subordinated Notes (including SEK 27.5 million, or \$4 million, in underwriting fees), which have been deferred and are being recognized into interest expense over the life of the 2017 SEK Subordinated Notes.

A portion of the proceeds were used to fully redeem the outstanding \$250 million Sirius International Group, Ltd. (“SIG”) Preference Shares (“SIG Preference Shares”), see Note 15 “*Common shareholder’s equity, mezzanine equity, and non-controlling interests*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K for further details and discussion with respect to the SIG Preference Shares redemption. Taking into effect the amortization of all underwriting and issuance expenses, and applicable STIBOR, the 2017 SEK Subordinated Notes yield an effective rate of approximately 3.8% and 3.5% for the years ended December 31, 2018 and 2017, respectively. Sirius Group recorded \$12 million and \$3 million of interest expense, inclusive of amortization of issuance costs, on the 2017 SEK Subordinated Notes for 2018 and 2017, respectively.

2016 SIG Senior Notes

On November 1, 2016, Sirius Group issued \$400 million face value of senior unsecured notes (“2016 SIG Senior Notes”) at an issue price of 99.209% for net proceeds of \$392 million after taking into effect both deferrable and non-deferrable issuance costs. The 2016 SIG Senior Notes were issued in an offering that was exempt from the registration requirements of the Securities Act. The 2016 SIG Senior Notes bear an annual interest rate of 4.6%, payable semi-annually in arrears on May 1, and November 1, in each year commencing on May 1, 2017, until maturity in November 2026.

Sirius Group incurred \$5 million in expenses related to the issuance of the 2016 SIG Senior Notes (including \$3 million in underwriting fees), which have been deferred and are being recognized into interest expense over the life of the 2016 SIG Senior Notes.

Taking into effect the amortization of the original issue discount and all underwriting and issuance expenses, the 2016 SIG Senior Notes yield an effective rate of approximately 4.7% per annum. Sirius Group recorded \$19 million of interest expense, inclusive of amortization of issuance costs on the 2016 SIG Senior Notes, for both 2018 and 2017, respectively.

Series A Redeemable Preference Shares

In May 2017, Sirius Group issued Series A redeemable preference shares, with 150,000 shares authorized and 100,000 issued at the issuance date, with liquidation preference of \$1,000 per preference share. The Series A redeemable preference shares participated in dividends on an as-converted basis with common shares. In connection with the Merger, the Company, IMGAH and Sirius Acquisitions Holding Company II completed the transactions contemplated by its previously announced Redemption Agreement and the Company redeemed all of the outstanding Series A redeemable preference shares, which were held by IMGAH, for \$95 million in cash. In addition, the parties agreed that any remaining contingent consideration in respect of the IMG acquisition, will be paid in cash, not in Series A redeemable preference shares as previously contemplated in the agreement in respect of the IMG acquisition.

Series B Preference Shares

In connection with the closing of the Merger, Sirius Group issued 11,901,670 of the 15,000,000 authorized Series B preference shares, with a par value of \$0.01 per share, to the Preference Share Investors as part of the Sirius Group Private Placement. The Series B Preference shares contain both a mandatory conversion and optional redemption features, with the optional redemption features allowing for settlement in either common shares or cash. Sirius Group accounts for the Series B preference shares outside of permanent equity as mezzanine equity in the Consolidated Balance Sheets as its ability to settle in common shares cannot be assured, and thus we presume that Sirius Group will be required to settle the Series B preference shares in cash, as if it were a redemption feature.

The Series B preference shares rank senior to common shares with respect to dividend rights, rights of liquidation, winding-up, or dissolution of the Company and junior to all of the Company's existing and future policyholder obligations and debt obligations. Without the consent of the holders of the Series B preference shares, the Company may not issue any class or series of shares that rank senior or pari passu with the Series B preference shares as to the payment of dividends or as to distribution of assets upon any voluntary or involuntary liquidation, winding-up or dissolution of the Company, if the aggregate gross proceeds from the issuance of all such senior or pari passu shares equals or exceeds \$100 million.

The Company adjusts the carrying value of the Series B preference shares to equal the redemption value at the end of each reporting period. As of December 31, 2018, the balance of the Series B preference shares was \$232 million.

Standby letter of credit facilities

On November 8, 2017, Sirius International entered into four standby letter of credit facility agreements totaling \$215 million to provide capital support for Lloyd's Syndicate 1945. The first letter of credit is a renewal of a \$125 million facility with Nordea Bank Finland plc, \$100 million of which is issued on an unsecured basis. The second letter of credit is a \$25 million secured facility with Lloyd's Bank plc. Lloyd's Bank plc had previously participated in this program but in a different capacity. The third letter of credit agreement is a \$30 million unsecured facility with Barclays Bank plc. The fourth letter of credit agreement is a \$35 million facility with DNB Bank ASA London Branch, \$25 million of which is issued on an unsecured basis. Each facility is renewable annually. The above referenced facilities are subject to various affirmative, negative and financial covenants that the Company considers to be customary for such borrowings, including certain minimum net worth and maximum debt to capitalization standards.

On November 9, 2018, Sirius International renewed two standby letter of credit facility agreements totaling \$160 million to provide capital support for Lloyd's Syndicate 1945. The first letter of credit is a renewal of a \$125 million facility with Nordea Bank Finland Abp, London Branch, which is issued on an unsecured basis. The second letter of credit is a \$35 million facility with DNB Bank ASA, Sweden Branch, \$25 million of which is issued on an unsecured basis. Each facility is renewable annually. The above referenced facilities are subject to various affirmative, negative and financial covenants that the Company considers to be customary for such borrowings, including certain minimum net worth and maximum debt to capitalization standards.

Sirius International has other secured letter of credit and trust arrangements with various financial institutions to support its insurance operations. As of December 31, 2018 and 2017, these secured letter of credit and trust arrangements were collateralized by pledged assets and assets in trust of SEK 2.9 billion and SEK 2.1 billion, or \$321 million and \$261 million (based on the December 31, 2018 and 2017 SEK to USD exchange rates, respectively). As of December 31, 2018 and 2017, Sirius America's trust arrangements were collateralized by pledged assets and assets in trust of \$56 million and \$56 million, respectively. As of December 31, 2018 and 2017, Sirius Bermuda's trust arrangements were collateralized by pledged assets and assets in trust of \$320 million and \$123 million, respectively.

Revolving credit facility

In February 2018, Sirius Group, through its indirectly wholly-owned subsidiary Sirius International Group, Ltd., entered into a three-year, \$300 million senior unsecured revolving credit facility (the “Facility”). The Facility provides access to loans for working capital and general corporate purposes, and letters of credit to support obligations under insurance and reinsurance agreements and retrocessional agreements. The Facility is subject to various affirmative, negative and financial covenants that Sirius Group considers to be customary for such borrowings, including certain minimum net worth, maximum debt to capitalization and financial strength rating standards. As of December 31, 2018, there were no outstanding borrowings under the Facility.

Debt and standby letter of credit facility covenants

As of December 31, 2018, Sirius Group was in compliance with all of the covenants under the 2017 SEK Subordinated Notes, the 2016 SIG Senior Notes, the Nordea Bank Finland Abp, London Branch facility, and the DNB Bank ASA, Sweden Branch facility. In addition, as of December 31, 2018, Sirius Group was in compliance with all of the covenants under the Facility.

Off Balance Sheet Arrangements

Sirius Group is not party to any off-balance sheet transaction, agreement or other contractual arrangement as defined by Item 303(a)(4) of Regulation S-K to which an entity unconsolidated with Sirius Group is a party that management believes is reasonably likely to have a current or future effect on its financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that Sirius Group believes is material to investors.

Contractual Obligations and Commitments

Below is a schedule of Sirius Group's material contractual obligations and commitments as of December 31, 2018:

(Millions)	Due in One Year or Less	Due in Two to Three Years	Due in Four to Five Years	Due After Five Years	Total
Debt (including interest payments) ⁽¹⁾	\$ 29.2	\$ 58.3	\$ 58.3	\$ 1,007.7	\$ 1,153.5
Loss and LAE reserves ⁽²⁾	765.0	486.3	254.1	511.3	2,016.7
Long-term incentive compensation ⁽³⁾	13.1	5.2	0.4	-	18.7
Projected pension benefit obligation ⁽⁴⁾	0.4	0.8	0.8	15.5	17.5
Operating leases ⁽⁵⁾	10.4	16.8	11.0	1.9	40.1
Total contractual obligations⁽⁶⁾⁽⁷⁾⁽⁸⁾⁽⁹⁾	\$ 818.1	\$ 567.4	\$ 324.6	\$ 1,536.4	\$ 3,246.5

⁽¹⁾ The amounts in the table above reflect Sirius Group's contractual obligations with respect to the principal and interest payments on Sirius Group's outstanding debt. Refer to Note 11 "Debt and Standby Letters of Credit Facilities" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for further details and discussion on the debt and financing arrangements of Sirius Group.

⁽²⁾ We are obligated to pay claims for specified loss events covered by the insurance and reinsurance contracts we write. Such loss payments represent our most significant future payment obligation. The total amount in the table above reflects our best estimate of our reserve for losses and loss expenses, refer to "Critical Accounting Estimates – Loss and LAE Reserves" for further details. The timing of claim payments is subject to significant uncertainty. Sirius Group maintains a portfolio of marketable investments with varying maturities and a substantial amount of short-term investments to provide adequate liquidity for the payment of claims. We have not taken into account corresponding reinsurance recoverable amounts that would be due to us.

⁽³⁾ Sirius Group grants incentive awards to certain key employees of Sirius Group and its subsidiaries. This includes awards that primarily consist of performance units. Awards earned are subject to the attainment of pre-specified performance goals at the end of a three-year period or as otherwise determined. Refer to Note 14 "Employee benefit plans and compensation plans" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for further details and discussion on the incentive plan obligation.

⁽⁴⁾ Swedish and German employees of Sirius International can participate in defined benefit plans which are based on the employees' pension entitlements and length of employment. Refer to Note 14 "Employment benefit plans and compensation plans" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for further details describing the projected pension benefit obligation.

⁽⁵⁾ In the ordinary course of business, we renew and enter into new leases for office space which expire at various dates. There are no provisions within Sirius Group's operating leasing agreements that would trigger acceleration of future lease payments. Sirius Group does not finance its operations through the securitization of its trade receivables, through special purpose entities or through synthetic leases. Further, Sirius Group has not entered into any material arrangements requiring it to guarantee payment of third-party debt or lease payments or to fund losses of an unconsolidated special purpose entity.

⁽⁶⁾ Letters of credit outstanding, the IMG Earnout, and the Armada Earnout are excluded from the table above.

⁽⁷⁾ Sirius Group has future binding commitments to fund certain other long-term investments. These commitments totaled \$82 million at December 31, 2018. These commitments do not have fixed funding dates. Therefore, these commitments are excluded from the table above.

⁽⁸⁾ Starting in 2018, the Company has issued equity incentives for certain employees and other non-employee independent directors under the 2018 Omnibus Plan. Obligations arising from these incentives are excluded from the table above. Refer to Note 14 "Employee benefit plans and compensation plans" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for further details and discussion on the incentive plan obligation.

⁽⁹⁾ The Series B Preference shares contain both a mandatory conversion and optional redemption features, with the optional redemption features allowing for settlement in either common shares or cash. Sirius Group accounts for the Series B preference shares outside of permanent equity as mezzanine equity in the Consolidated Balance Sheets as its ability to settle in common shares cannot be assured, and thus we presume that Sirius Group will be required to settle the Series B preference shares in cash, as if it were a redemption feature. Therefore, these commitments are excluded from the table above.

Cash Flows

Sirius Group primarily derives cash from the net inflow of premiums less claim payments related to underwriting activities and from net investment income. The insurance and reinsurance business inherently provides liquidity, as premiums are received in advance of the time claims are paid. However, the amount of cash required to fund claim payments can fluctuate significantly from period to period, due to the low frequency and high severity nature of certain types of business we write. Sirius Group's remaining cash flows are generally reinvested in our investment portfolio. In addition, as previously disclosed, Sirius Group has access to a \$300 million senior unsecured revolving credit facility that provides access to loans for working capital and general corporate purposes, and letters of credit to support obligations under insurance and reinsurance agreements and retrocessional agreements.

The following table summarizes our consolidated cash flows from operating, investing and financing activities for 2018, 2017, and 2016.

<i>(Millions)</i>	For the Years Ended December 31,		
	2018	2017	2016
Net cash provided from (used for) ⁽¹⁾			
Operations	\$ 108.0	\$ (36.0)	\$ (46.8)
Investing activities	(189.9)	66.0	18.5
Financing activities	(6.6)	53.6	30.9
Effect of exchange rate changes on cash	(9.9)	9.9	(9.4)
(Decrease) increase in cash during year	\$ (98.4)	\$ 93.5	\$ (6.8)

⁽¹⁾ Refer to the Consolidated Statements of Cash Flows in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for further details and discussion on the debt and financing arrangements of Sirius Group.

Cash flows from operations for the years ended December 31, 2018, 2017, and 2016

Net cash provided from (used for) operations was \$108 million, \$(36) million and \$(47) million for the years ended 2018, 2017, and 2016, respectively. Cash flows from operations increased \$144 million in 2018 compared to 2017 primarily due to higher amounts of net premiums collected, partially offset by higher net paid losses and acquisition costs. Cash flows from operations increased \$11 million in 2017 compared to 2016 due to higher amounts of net premiums collected, partially offset by higher net paid losses. Sirius Group does not believe the trends in 2017 and 2016 will have a meaningful impact on its future liquidity or its ability to meet its future cash requirements.

Long-term compensation items affecting cash flows from operations

During 2018, 2017, and 2016, Sirius Group made long-term incentive payments totaling \$6 million, \$16 million and \$23 million, respectively.

During 2017, Sirius Group made retention related bonus payments totaling \$31 million to management and employees as a result of the acquisition by CMIG International. During 2016, Sirius Group made transaction related bonus payments totaling \$37 million primarily to management and employees as a result of the CMIG International acquisition. The transaction and retention related bonus payments were reimbursed by White Mountains to Sirius Group in 2017 and 2016, respectively, as stipulated in the stock purchase agreement between CMIG International and White Mountains.

Cash flows from investing and financing activities for the years ended December 31, 2018, 2017, and 2016

Cash flows (used for) provided from investing activities were \$(190) million, \$66 million and \$19 million for the years ended December 31, 2018, 2017, and 2016, respectively. From 2017 to 2018, cash flows (used for) provided from investing decreased \$256 million as result of Sirius Group's reduction in fixed maturity duration securities to better position the portfolio for a rising interest rate environment and the deployment of cash flow from operations into the overall investment strategy. From 2016 to 2017, cash flows from investing activities increased by \$47 million, as a result of Sirius Group's reduction in fixed-maturity duration securities to better position the portfolio for a rising interest rate environment.

Cash flows (used for) provided from financing activities were \$(7) million, \$54 million and \$31 million for 2018, 2017, and 2016, respectively. Cash flows (used for) provided from financing activities decreased by \$60 million primarily as a result of the CM Bermuda common shares redemption and the Series A redeemable preference shares redemption which more than offset the gross proceeds of the Sirius Group Private Placement and the Easterly Trust Account assumed upon the closing of the Merger. Cash flows provided from financing activities increased by \$23 million from 2016 to 2017 primarily as a result of the 2017 SEK Subordinated Notes issuance that occurred in September 2017.

Cash flows from investing and financing activities for the year ended December 31, 2018

Financing and other capital activities

On November 5, 2018, the Company completed the Merger and the Sirius Group Private Placement. Gross proceeds of the Sirius Group Private Placement, together with cash in the Easterly Trust Account assumed by Sirius Group upon the closing of the Merger, aggregated to \$268 million. See Note 3 “*Significant Transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion.

In connection with the Merger, Sirius Group implemented the Employee Share Purchase Plan (“ESPP”), which provided all employees of Sirius Group with a one-time opportunity to purchase between 100 and 1,000 Company common shares at a price equal to 85% of market value for the first 100 shares and 100% of market value for the next 900 shares. Gross proceeds of the ESSP amounted to \$3 million. See Note 3 “*Significant Transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion.

On November 16, 2018, in connection with the Merger, the Company paid CM Bermuda \$164 million to redeem certain common shares. See Note 3 “*Significant Transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion.

On November 16, 2018, in connection with the Merger, the Company completed a post-closing adjustment that was settled in cash to CM Bermuda. Based on the reported book value per share of \$16.44 as of September 30, 2018, pursuant to the Merger Agreement, Sirius Group paid \$1.6 million to CM Bermuda. See Note 3 “*Significant Transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion.

On November 5, 2018, in connection with the Merger, the Company paid IMGAAH \$95 million to redeem all of the outstanding Series A redeemable preference shares, which were held by IMGAAH. In addition, the parties agreed that any remaining contingent consideration in respect of the IMG acquisition would be paid in cash, not in Series A redeemable preference shares as was previously contemplated in the IMG acquisition agreement. On November 8, 2018, the Company paid \$4 million to IMGAAH for the contingent payment for the 2017 calendar year. See Note 3 “*Significant Transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion.

During 2018, Sirius Group paid \$9 million of certain contractual costs associated with the Merger and \$7 million of various legal, advisory, and other consulting costs for the Sirius Group Private Placement.

During 2018, Sirius Group paid \$18 million of interest on the 2016 SIG Senior Notes and \$12 million of interest on the 2017 SEK Subordinated Notes.

During 2018, as stipulated in the stock purchase agreement between CMIG International and White Mountains, White Mountains paid Sirius Group \$1 million for certain long-term incentive payments that Sirius Group paid to its employees.

Acquisitions and dispositions

On August 16, 2018, Sirius Group purchased 100% of WRM America for \$17 million. See Note 3 “*Significant Transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion,

Cash flows from investing and financing activities for the year ended December 31, 2017

Financing and other capital activities

On December 29, 2017, Sirius Group settled approximately 82% of the Armada Earnout with Armada Enterprise for \$31 million.

On October 25, 2017, Sirius Group's indirect wholly-owned subsidiary SIG, redeemed all of the SIG Preference Shares. The redemption price equaled the \$1,000 liquidation preference per preference share. Sirius Group accounted for the SIG Preference Shares as a conditionally redeemable instrument within Non-controlling interests.

On September 22, 2017, Sirius Group issued SEK 2,750.0 million (or \$346.1 million on date of issuance) of 2017 SEK Subordinated Notes at a 100% issue price. Net proceeds were \$341 million, after taking into effect issuance costs.

On April 25, 2017, Sirius Group made a payment of \$4 million to retire the note that was issued as part of the acquisition of the runoff loss reserve portfolio of Old Lyme Insurance Company Ltd.

During 2017, Sirius Group paid \$14 million of dividends on the SIG Preference Shares and \$18 million of interest on the 2016 Senior Notes, \$3 million of interest on the 2017 SEK Subordinated Notes, and \$1 million of interest on the Old Lyme Note.

During 2017, as stipulated in the stock purchase agreement between CMIG International and White Mountains, White Mountains paid Sirius Group \$3 million for certain long-term incentive payments that Sirius Group paid to its employees.

Acquisitions and dispositions

On May 26, 2017, Sirius Group purchased 100% ownership of IMG and its subsidiaries. Included in the total consideration was \$251 million of cash.

On April 3, 2017, Sirius Group purchased 100% of Armada and its subsidiaries. Included in the total consideration was \$123 million of cash.

See Note 3 "*Significant Transactions*" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion.

Cash flows from investing and financing activities for the years ended December 31, 2016

Financing and other capital activities

On November 1, 2016, Sirius Group issued \$400.0 million face value of 2016 SIG Senior Notes at an issue price of 99.209% for net proceeds of \$392.4 million after taking into effect issuance costs.

During 2016, Sirius Group retired the \$400.0 million face value of 2007 SIG Senior Notes using the funds received from the issuance of the 2016 SIG Senior Notes and paid a prepayment penalty of \$6 million.

During 2016, Sirius Group paid \$27 million of dividends to its immediate parent.

During 2016, Sirius Group paid \$19 million of dividends on the SIG Preference Shares and \$32 million of interest on the 2007 SIG Senior Notes.

During 2016, as stipulated in the stock purchase agreement between CMIG International and White Mountains, White Mountains paid Sirius Group \$5 million for certain long-term incentive payments that Sirius Group paid to its employees.

During 2016, as stipulated in the stock purchase agreement between CMIG International and White Mountains, White Mountains paid Sirius Group \$17 million, representing the after-tax cost of industry loss warrants that White Mountains required Sirius Group to purchase to mitigate the potential impact of major natural catastrophe events on Sirius Group's balance sheet pending the close of the sale to CMIG International.

Acquisitions and dispositions

On April 18, 2016, in conjunction with the acquisition by CMIG International, Sirius Group sold its investment in OneBeacon Insurance Group, Ltd. in connection with the sale of Sirius Group to CMIG International and received proceeds of \$178 million.

On February 1, 2016, in conjunction with the sale of Symetra from White Mountains to Sumitomo Life Insurance Company, Sirius Group sold its investment in Symetra and received proceeds of \$560 million.

During 2016, Sirius Global Solutions completed the sale of Ashmere in connection with the sale of Sirius Group to CMIG International and received proceeds of \$19 million.

During 2016, Sirius Global Solutions partnered with another company to form Florida Specialty Acquisition LLC (“FSA”). Sirius Global Solutions paid \$16 million to acquire 100% of FSA’s common shares. FSA acquired Mount Beacon and its subsidiaries, including Mount Beacon Insurance for \$17 million during 2016.

See Note 3 “*Significant Transactions*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion.

Summary of Critical Accounting Estimates

Loss and LAE Reserves

General Description

Sirius Group establishes loss and LAE reserves that are estimates of future amounts needed to pay claims and related expenses for events that have already occurred. Sirius Group also obtains reinsurance whereby another reinsurer contractually agrees to indemnify Sirius Group for all or a portion of the reinsurance risks underwritten by Sirius Group. Such arrangements, where one reinsurer provides reinsurance to another reinsurer, are usually referred to as “retrocessional reinsurance” arrangements. Sirius Group establishes estimates of amounts recoverable from retrocessional reinsurance in a manner consistent with the loss and LAE liability associated with reinsurance contracts offered to its customers (the “ceding companies”), net of an allowance for uncollectible amounts. Net reinsurance loss reserves represent loss and LAE reserves reduced by retrocessional reinsurance recoverable on unpaid losses. In addition to those risk factors which give rise to inherent uncertainties in establishing insurance loss and LAE reserves, the inherent uncertainties of estimating such reserves are even greater for the reinsurer, due primarily to: (1) the claim-tail for reinsurers and insurers working through MGUs being further extended because claims are first reported to either the original primary insurance company or the MGU and then through one or more intermediaries or reinsurers, (2) the diversity of loss development patterns among different types of reinsurance treaties, facultative contracts or primary insurance contracts, (3) the necessary reliance on the ceding companies, intermediaries and MGUs for information regarding reported claims and (4) the differing reserving practices among ceding companies and MGUs.

As part of its risk management process, management periodically engages external actuarial and claims consultants to independently evaluate the adequacy of the net carried loss and LAE reserves. These analyses generally include assessments of special liabilities such as asbestos and environmental claims. Management considers the results of the independent analysis as a supplement to internal recommendations when determining carried loss and LAE reserve amounts.

Loss and LAE Reserves by Reportable Segment

The following table summarizes the net loss and LAE reserves, separated between (i) case reserves for claims reported (“Case”) and (ii) incurred but not reported (“IBNR”) reserves for losses that have occurred but for which claims have not yet been reported and for expected future development on case reserves as of December 31, 2018 and 2017.

Net loss and LAE reserves by class of business <i>(Millions)</i>	December 31, 2018		
	Case	IBNR	Total
Global Property	\$ 487.8	\$ 264.3	\$ 752.1
Global A&H	76.6	76.3	152.9
Specialty & Casualty	149.5	129.7	279.2
Runoff & Other	210.6	271.7	482.3
Total	\$ 924.5	\$ 742.0	\$ 1,666.5

Net loss and LAE reserves by class of business <i>(Millions)</i>	December 31, 2017		
	Case	IBNR	Total
Global Property	\$ 382.3	\$ 273.3	\$ 655.6
Global A&H	70.2	90.4	160.6
Specialty & Casualty	168.2	79.4	247.6
Runoff & Other	213.1	301.9	515.0
Total	\$ 833.8	\$ 745.0	\$ 1,578.8

In order to reduce the potential uncertainty of loss reserve estimation, Sirius Group obtains information from numerous sources to assist in the reserving process. Sirius Group’s underwriters and pricing actuaries devote considerable effort to understanding and analyzing a ceding company’s operations and loss history during the underwriting of the business, using a combination of client and industry statistics. Such statistics normally include historical premium and loss data by class of business, individual claim information for larger claims, distributions of insurance limits provided and the risk characteristics of the underlying insureds, loss reporting and payment patterns and rate change history. This analysis is used to project expected loss ratios for each treaty or contract during the upcoming contract period. These expected ultimate loss ratios are aggregated across all treaties and are input directly into the loss reserving process. For primary business, a similar portfolio analysis is performed for each MGU program that takes into account expected changes in the aggregated risk profile of the policyholders within each program. The aggregation of risks yields a more stable indication of expected losses that is used to estimate ultimate losses and thus IBNR for recently written business.

Sirius Group’s expected annual loss reporting assumptions are updated at least once a year. Expected loss ratios underlying the recent underwriting years are updated quarterly.

Sirius Group relies heavily on information reported by MGUs and ceding companies, as discussed above. In order to determine the accuracy and completeness of such information, Sirius Group underwriters, actuaries, and claims personnel perform audits of certain MGUs and ceding companies, where customary. Generally, ceding company audits are not customary outside the United States. In such cases, Sirius Group reviews information from ceding companies for unusual or unexpected results. Any material findings are discussed with the ceding companies. Sirius Group sometimes encounters situations where it is determined that a claim presentation from a ceding company is not in accordance with contract terms. Most situations are resolved without the need for litigation or arbitration. However, in the infrequent situations where a resolution is not possible, Sirius Group vigorously defends its position in such arbitration or litigation.

To reduce volatility in underwriting income and protect capital, Sirius Group generally obtains reinsurance whereby another reinsurer contractually agrees to indemnify Sirius Group for all or a portion of the risks underwritten by Sirius Group. Sirius Group establishes estimates of amounts recoverable from reinsurers on its primary business and retrocessional reinsurance on its reinsurance business in a manner consistent with the loss and LAE liability associated with reinsurance contracts offered to its customers, net of an allowance for uncollectible amounts, if any. Net reinsurance loss reserves represent loss and LAE reserves reduced by ceded reinsurance recoverable on unpaid losses.

The following table details our prior year loss reserve development of liability for net unpaid claims and claim expenses for the years ended December 31, 2018, 2017, and 2016.

	Years Ended December 31,		
	2018	2017	2016
Development by reportable segment <i>(Millions)</i>	(Favorable) unfavorable development	(Favorable) unfavorable development	(Favorable) unfavorable development
Global Property	\$ 43.6	\$ 2.2	\$ (26.8)
Global A&H	(15.0)	(4.0)	(7.8)
Specialty & Casualty	(18.3)	(12.1)	(24.8)
Runoff & Other	(17.6)	13.3	(4.3)
Total net (favorable) development	\$ (7.3)	\$ (0.6)	\$ (63.7)

Loss and LAE development—2018

During the year ended December 31, 2018, Sirius Group had net favorable prior year loss reserve development of \$7 million. During 2018, Sirius Group strengthened its Global Property loss reserves by \$44 million in Other Property (\$35 million) and Property Catastrophe Excess (\$13 million), resulting from higher than expected loss reporting from recent accident years, including \$21 million from Hurricanes Harvey, Irma, and Maria. Specialty & Casualty had net favorable loss reserve development of \$18 million, primarily driven by Aviation & Space (\$8 million) and Marine (\$7 million). The net favorable prior year loss reserve development of \$18 million for Runoff & Other included reductions in World Trade Center claims in response to revised information received by the Company and runoff Casualty reserves. Global A&H recorded \$15 million of net favorable loss reserve development due to lower than expected claims activity.

Loss and LAE development—2017

During the year ended December 31, 2017, Sirius Group had net favorable prior year loss reserve development of \$1 million. During 2017, Sirius Group strengthened its asbestos loss reserves by \$59 million, which was offset by reductions of other runoff claims reserves of \$46 million, which is reflected in Runoff & Other. Specialty & Casualty had net favorable prior year loss reserve development of \$12 million, which is comprised of Marine (\$5 million), Trade Credit (\$4 million), Aviation & Space (\$2 million), and Contingency (\$1 million).

Loss and LAE development—2016

During the year ended December 31, 2016, Sirius Group had net favorable prior year loss reserve development of \$64 million. The major reductions in loss reserve estimates were recognized in Global Property (\$27 million) and Specialty & Casualty (\$25 million). The decrease in Global Property was driven by Other Property (\$23 million) due primarily to reductions in the ultimate loss estimates for natural catastrophes that occurred between 2010 and 2015 due to lower than expected claims activity. The decrease in Specialty & Casualty was mainly due to Aviation & Space and Marine with decreases of \$12 million and \$7 million, respectively. Asbestos losses of \$14 million in 2016 were offset by other long tail favorable loss reserve development in Runoff & Other.

Global Property

Actual Results vs. Initial Estimates

Generally, initial actuarial estimates of IBNR reserves not related to a specific large event are based on the loss ratio method applied to each class of business. Sirius Group regularly reviews the adequacy of its recorded reserves by using a variety of generally accepted actuarial methods, including historical incurred and paid loss development methods. Estimates of the initial expected ultimate losses involve management judgment and are based on historical information for that class of business, which includes loss ratios, market conditions, changes in pricing and conditions, underwriting changes, changes in claims emergence, and other factors that may influence expected ultimate losses. If actual loss activity differs substantially from expectations, an adjustment to recorded reserves may be warranted. As time passes, loss reserve estimates for a given year will rely more on actual loss activity and historical patterns than on initial assumptions.

For major events, particularly natural catastrophe, Sirius Group develops assessments of the ultimate losses associated with each individual event. Estimates are based on information from ceding companies, third party and internal catastrophe models, and by applying overall estimates of insured industry losses to Sirius Group's exposure information.

Changes in all estimates will be recorded in the period in which the changes occur. In accident years where the updated estimates are lower than our initial estimates, we experience favorable development. Conversely, in accident years where the revised estimates are higher than our original estimates, there is adverse development on prior accident year reserves.

Potential Variability in Loss Reserve Estimates

There are possible variations from current estimates of loss reserves due to changes in a few of the many key assumptions. In order to quantify the potential volatility in the loss reserve estimates for Global Property, Sirius Group employs a stochastic simulation approach to produce a range of results around the central estimate and estimated probabilities of possible outcomes. Both the probabilities and the related modeling are subject to inherent uncertainties. The simulation relies on a significant number of assumptions, such as variation in industry losses for major events, historical loss reserve development volatility, and unanticipated inflation.

Global A&H

Actual Results vs. Initial Estimates

Generally, initial actuarial estimates of IBNR reserves not related to a specific event are based on the loss ratio method applied to each class of business. Sirius Group regularly reviews the adequacy of its recorded reserves by using a variety of generally accepted actuarial methods, including historical incurred and paid loss development methods. Estimates of the initial expected ultimate losses involve management judgment and are based on historical information for that class of business, which includes loss ratios, market conditions, changes in pricing and conditions, underwriting changes, changes in claims emergence, and other factors that may influence expected ultimate losses. If actual loss activity differs substantially from expectations, an adjustment to recorded reserves may be warranted. As time passes, loss reserve estimates for a given year will rely more on actual loss activity and historical patterns than on initial assumptions.

Changes in all estimates will be recorded in the period in which the changes occur. In accident years where the updated estimates are lower than our initial estimates, we experience favorable development. Conversely, in accident years where the revised estimates are higher than our original estimates, there is adverse development on prior accident year reserves.

Potential Variability in Loss Reserve Estimates

There are possible variations from current estimates of loss reserves due to changes in a few key assumptions. In order to quantify the potential volatility in the loss reserve estimates for Global A&H, Sirius Group employs a stochastic simulation approach to produce a range of results around the central estimate and estimated probabilities of possible outcomes. Both the probabilities and the related modeling are subject to inherent uncertainties. The simulation relies on a significant number of assumptions, such as variation in historical loss reserve development patterns, individual claims estimates and unanticipated inflation.

Specialty & Casualty

Actual Results vs. Initial Estimates

Generally, initial actuarial estimates of IBNR reserves not related to a specific event are based on the loss ratio method applied to each class of business. Sirius Group regularly reviews the adequacy of its recorded reserves by using a variety of generally accepted actuarial methods, including historical incurred and paid loss development methods. Estimates of the initial expected ultimate losses involve management judgment and are based on historical information for that class of business, which includes loss ratios, market conditions, changes in pricing and conditions, underwriting changes, changes in claims emergence, and other factors that may influence expected ultimate losses. If actual loss activity differs substantially from expectations, an adjustment to recorded reserves may be warranted. As time passes, loss reserve estimates for a given year will rely more on actual loss activity and historical patterns than on initial assumptions.

For major events, Sirius Group develops assessments of the ultimate losses associated with each individual event. Estimates are based on information from ceding companies and by applying overall estimates of insured industry losses to Sirius Group's exposure information.

Changes in all estimates will be recorded in the period in which the changes occur. In accident years where the updated estimates are lower than our initial estimates, we experience favorable development. Conversely, in accident years where the revised estimates are higher than our original estimates, there is adverse development on prior accident year reserves.

Potential Variability in Loss Reserve Estimates

There are possible variations from current estimates of loss reserves due to changes in key assumptions. In order to quantify the potential volatility in the loss reserve estimates for Specialty & Casualty lines, Sirius Group employs a stochastic simulation approach to produce a range of results around the central estimate and estimated probabilities of possible outcomes. Both the probabilities and the related modeling are subject to inherent uncertainties. The simulation relies on a significant number of assumptions, such as variation in historical loss reserve development patterns, individual claims estimates, potential misestimating the initial expected losses during the pricing process, and unanticipated inflation.

Runoff & Other

Runoff & Other consists of results from Sirius Global Solutions, which specializes in the acquisition and management of runoff liabilities for insurance and reinsurance companies along with other lines of business that Sirius Group is currently not writing.

Actual Results vs. Initial Estimates

Sirius Group regularly reviews the adequacy of its recorded reserves by using a variety of generally accepted actuarial methods, including historical incurred and paid loss development methods, and market and exposure analyses. Estimates of the expected ultimate losses involve management judgment and are based on historical information for that class of business, which includes loss ratios, market conditions, changes in pricing and conditions, underwriting changes, changes in claims emergence, review of judicial and economic trends, and other factors that may influence expected ultimate losses. If actual loss activity differs substantially from expectations, an adjustment to recorded reserves may be warranted. As time passes, loss reserve estimates for a given year will rely more on actual loss activity and historical patterns than on initial assumptions.

Changes in all estimates will be recorded in the period in which the changes occur. In accident years where the updated estimates are lower than our initial estimates, we experience favorable development. Conversely, in accident years where the revised estimates are higher than our original estimates, there is adverse development on prior accident year reserves.

Potential Variability in Loss Reserve Estimates

There are possible variations from current estimates of loss reserves due to changes in key assumptions. In order to quantify the potential volatility in the loss reserve estimates for Runoff & Other, Sirius Group employs a stochastic simulation approach to produce a range of results around the central estimate and estimated probabilities of possible outcomes. Both the probabilities and the related modeling are subject to inherent uncertainties. The simulation relies on a significant number of assumptions, such as variation in historical loss reserve development patterns, individual claims estimates, litigation and judicial trends and unanticipated inflation.

Asbestos and Environmental (“A&E”) Reserves

Included in Sirius Group’s Runoff & Other are A&E loss reserves. Sirius Group’s A&E exposure is primarily from reinsurance contracts written between 1974 through 1985 by acquired companies. The exposures are mostly higher layer excess of loss treaty and facultative coverages with relatively low limits exposed for each claim. The acquisition of companies having modest portfolios of A&E exposure has been typical of several prior Sirius Global Solutions transactions and is likely to be an element of at least some future acquisitions. However, the acquisition of new A&E liabilities is undertaken only after careful due diligence and utilizing conservative reserving assumptions in relation to industry benchmarks. In the case of portfolios acquired previously, the exposures arise almost entirely from old assumed reinsurance contracts having small limits of liability.

Net incurred loss activity for asbestos and environmental for the years ended December 31, 2018, 2017, and 2016 was as follows:

Net incurred loss and LAE activity (Millions)	Years Ended December 31,		
	2018	2017	2016
Asbestos	\$ (6.9)	\$ 59.0	\$ 13.6
Environmental	4.0	6.1	0.4
Total	\$ (2.9)	\$ 65.1	\$ 14.0

Sirius Group recorded a decrease of \$7 million, an increase of \$59 million, and an increase of \$14 million of asbestos-related incurred losses and LAE in 2018, 2017, and 2016, respectively. The decrease of \$7 million for 2018 was driven by favorable loss reserve development, primarily due to benign claims activity on the Sirius Global Solutions portfolio. The 2017 incurred losses were primarily a result of an in-depth analysis of Sirius Group’s loss reserves undertaken in 2017. The asbestos study was initiated in response to increased estimates of industry asbestos losses promulgated by leading financial analysts. External asbestos experts were engaged by Sirius Group to assist with the actuarial and claims review of asbestos exposures within Sirius Group. Management booked the highest central estimate of the internal and external indications resulting from the in-depth study. The 2016 incurred losses were primarily the result of management’s monitoring of a variety of metrics including actual paid and reported claims activity.

Sirius Group recorded \$4 million, \$6 million, and an insignificant amount of environmental losses in 2018, 2017, and 2016, respectively, on its already existing reserves.

Sirius Group’s net reserves for A&E losses were \$200 million and \$221 million as of December 31, 2018 and 2017, respectively. Sirius Group’s asbestos three-year net paid survival ratio was approximately 10.2 years as of December 31, 2018 and 2017. Sirius Group’s environmental three-year net paid survival ratio was approximately 4.2 years and 4.3 years as of December 31, 2018 and 2017, respectively.

Sirius Group’s reserves for A&E losses as of December 31, 2018 represent management’s best estimate of its ultimate liability based on information currently available. However, as case law expands, and medical and clean-up costs increase and industry settlement practices change, Sirius Group may be subject to asbestos and environmental losses beyond currently estimated amounts. Sirius Group cannot reasonably estimate at the present time loss reserve additions arising from any such future adverse developments and cannot be sure that allocated loss reserves will be sufficient to cover additional liability arising from any such adverse developments.

The following tables show gross and net loss and LAE payments for A&E exposures for the years ended December 31, 2009 through December 31, 2018:

<i>(Millions)</i> Years Ended December 31	Asbestos paid loss and LAE		Environmental paid loss and LAE	
	Gross	Net	Gross	Net
2009	\$ 11.4	\$ 10.3	\$ 1.5	\$ 1.5
2010	14.5	12.1	0.8	0.9
2011	20.4	15.6	3.2	3.6
2012	34.7	29.4	2.3	1.5
2013	25.9	20.3	1.8	1.8
2014	21.9	16.8	1.5	1.5
2015	22.0	19.4	4.2	3.6
2016	21.8	20.1	3.4	3.3
2017	24.7	20.8	4.7	4.0
2018	15.5	13.3	4.0	4.0

A&E Claims Activity

Sirius Group utilizes specialized claims-handling processes on A&E exposures, including management notification of claims development, and a quarterly monitoring meeting. The issues presented by these types of claims require expertise and an awareness of the various trends and developments in relevant jurisdictions. Generally, Sirius Group sets up claim files for each reported claim by each cedent for each individual insured. In many instances, a single claim notification from a cedent could involve several years and layers of coverage resulting in a file being set up for each involvement. Precautionary claim notices are submitted by the ceding companies in order to preserve their right to pursue coverage under the reinsurance contract. Such notices do not contain an incurred loss amount. Accordingly, an open claim file is not established.

As of December 31, 2018, Sirius Group had 1,722 open claim files for asbestos and 372 open claim files for environmental exposures. Sirius Group's A&E claim activity for the last three years is illustrated in the table below:

A&E Claims Activity	Years Ended December 31,		
	2018	2017	2016
Asbestos			
Total asbestos claims at the beginning of the year	1,741	1,935	2,348
Asbestos claims reported during the year	193	180	207
Asbestos claims closed during the year	(212)	(374)	(620)
Total asbestos claims at the end of the year	1,722	1,741	1,935
Environmental			
Total environmental claims at the beginning of the year	357	361	462
Environmental claims reported during the year	88	80	59
Environmental claims closed during the year	(73)	(84)	(160)
Total environmental claims at the end of the year	372	357	361
Total			
Total A&E claims at the beginning of the year	2,098	2,296	2,810
A&E claims reported during the year	281	260	266
A&E claims closed during the year	(285)	(458)	(780)
Total A&E claims at the end of the year	2,094	2,098	2,296

Fair Value Measurements

General

Fair value measurements are categorized into a hierarchy that distinguishes between inputs based on market data from independent sources (“observable inputs”) and a reporting entity’s internal assumptions based upon the best information available when external market data is limited or unavailable (“unobservable inputs”). Quoted prices in active markets for identical assets or liabilities have the highest priority (“Level 1”), followed by observable inputs other than quoted prices, including prices for similar but not identical assets or liabilities (“Level 2”), and unobservable inputs, including the reporting entity’s estimates of the assumptions that market participants would use, having the lowest priority (“Level 3”).

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 instrument. 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 instruments categorized in Level 3. In periods of market dislocation, the observability of prices and inputs may be reduced for many instruments. This may lead the Company to change the selection of the valuation technique (for example, from market to cash flow approach) or to use multiple valuation techniques to estimate the fair value of a financial instrument. These circumstances could cause an instrument to be reclassified between levels within fair value hierarchy. Investments valued using Level 1 inputs include fixed maturity investments, primarily investments in U.S. Treasuries Bills and Notes, equity securities, and short-term investments. Investments valued using Level 2 inputs are primarily comprised of fixed maturity investments, which have been disaggregated into classes, including U.S. government and government agency, corporate debt securities, mortgage-backed and asset-backed securities, non-U.S. government and government agency, U.S. state and municipalities and political sub division and preferred stocks. Investments valued using Level 2 inputs also include certain ETFs that track U.S. stock indices such as the S&P 500 but are traded on foreign exchanges. Fair value estimates for investments that trade infrequently and have few or no observable market prices are classified as Level 3 measurements. Sirius Group determines when transfers between levels have occurred as of the beginning of the period.

Valuation techniques

Sirius Group uses outside pricing services to assist in determining fair values for its investments. For investments in active markets, Sirius Group uses the quoted market prices provided by outside pricing services to determine fair value. The outside pricing services Sirius Group uses have indicated that they will only provide prices where observable inputs are available. In circumstances where quoted market prices are unavailable or are not considered reasonable, Sirius Group estimates the fair value using industry standard pricing models and observable inputs such as benchmark yields, reported trades, broker-dealer quotes, issuer spreads, benchmark securities, bids, offers, prepayment speeds, reference data including research publications, and other relevant inputs. Given that many fixed maturity investments do not trade on a daily basis, the outside pricing services evaluate a wide range of fixed maturity investments by regularly drawing parallels from recent trades and quotes of comparable securities with similar features. The characteristics used to identify comparable fixed maturity investments vary by asset type and take into account market convention.

The valuation process above is generally applicable to all of Sirius Group’s fixed maturity investments. The techniques and inputs specific to asset classes within Sirius Group’s fixed maturity investments for Level 2 securities that use observable inputs are as follows:

U.S. government and government agency

U.S. government and government agency securities consist primarily of debt securities 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. Fixed maturity investments included in U.S. government and government agency securities are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources and integrate other observations from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The fair value of each security is individually computed using analytical models which incorporate option adjusted spreads and other daily interest rate data.

Non-U.S. government and government agency

Non-U.S. government and government agency securities consist of debt securities issued by non-U.S. governments and their agencies along with supranational organizations (also known as sovereign debt securities). Securities held in these sectors are primarily priced by pricing services who employ proprietary discounted cash flow models to value the securities. Key quantitative inputs for these models are daily observed benchmark curves for treasury, swap, and high issuance credits. The pricing services then apply a credit spread for each security which is developed by in-depth and real time market analysis. For securities in which trade volume is low, the pricing services utilize data from more frequently traded securities with similar attributes. These models may also be supplemented by daily market and credit research for international markets.

Corporate debt securities

Corporate debt securities consist primarily of investment-grade debt of a wide variety of U.S. and non-U.S. corporate issuers and industries. The corporate fixed maturity investments are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources regarding the issuer of the security and obtain credit data, as well as other observations, from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The pricing services also consider the specific terms and conditions of the securities, including any specific features which may influence risk.

Mortgage-backed and asset-backed securities

The fair value of mortgage and asset-backed securities is primarily priced by pricing services using a pricing model that uses information from market sources and leveraging similar securities. Key inputs include benchmark yields, reported trades, underlying tranche cash flow data, collateral performance, plus new issue data, as well as broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including issuer, vintage, loan type, collateral attributes, prepayment speeds, default rates, recovery rates, cash flow stress testing, credit quality ratings, and market research publications.

U.S. states, municipalities, and political subdivisions

The U.S. states, municipalities, and political subdivisions portfolio contains debt securities issued by U.S. domiciled state and municipal entities. These securities are generally priced by independent pricing services using the techniques for U.S. government and government agency securities.

Preferred stocks

The fair value of preferred stocks is generally priced by independent pricing services using an evaluated pricing model that calculates the appropriate spread over a comparable security for each issue. Key inputs include exchange prices (underlying and common stock of same issuer), benchmark yields, reported trades, broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including sector, coupon, credit quality ratings, duration, credit enhancements, early redemption features, and market research publications.

Level 3 Investments

Level 3 valuations are generated from techniques that use assumptions not observable in the market. These unobservable assumptions reflect Sirius Group's assumptions, that market participants would use in valuing the investment. Generally, certain securities may start out as Level 3 when they are originally issued but as observable inputs become available in the market, they may be reclassified to Level 2.

Sirius Group employs a number of procedures to assess the reasonableness of the fair value measurements for its other long-term investments, including obtaining and reviewing the audited annual financial statements of hedge funds and private equity funds and periodically discussing each fund's pricing with the fund manager. However, since the fund managers do not provide sufficient information to evaluate the pricing inputs and methods for each underlying investment, the inputs are considered to be unobservable.

The fair values of Sirius Group's investments in private equity securities and private debt instruments have been classified as Level 3 measurements. They are carried at fair value and are initially valued based on transaction price and their valuation is subsequently estimated based on available evidence such as a market transaction in similar instruments and other financial information for the issuer.

Investments measured using Net Asset Value

The fair value of Sirius Group's investments in hedge funds and private equity funds has been determined using net asset value. The hedge fund's administrator provides quarterly updates of fair value in the form of Sirius Group's proportional interest in the underlying fund's net asset value (collectively "NAV"), which is deemed to approximate fair value, generally with a three month delay in valuation. The fair value of investment in hedge funds is measured using the NAV practical expedient and therefore has been not categorized within the fair value hierarchy. The private equity funds provide quarterly or semi-annual partnership capital statements with a three or six month delay which are used as a basis for valuation. These private equity investments vary in investment strategies and are not actively traded in any open markets. The fair value of these investments are measured using NAV practical expedient and therefore have not been categorized with the fair value hierarchy. Due to a lag in reporting, some of the fund managers, fund administrators, or both, are unable to provide final fund valuations as of the Company's reporting date. In these circumstances, Sirius Group estimates the return of the current period and uses all credible information available. This includes utilizing preliminary estimates reported by its fund managers and using other information that is available to Sirius Group with respect to the underlying investments, as necessary.

See Note 9 "*Fair value measurements*" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for a summary of fair value measurements for investments as of December 31, 2018 and 2017 by level.

Other Long-Term Investments

As of December 31, 2018, Sirius Group's other long-term investments accounted for at fair value include \$118 million in hedge funds and \$183 million in private equity funds versus \$60 million in hedge funds and \$145 million in private equity funds as of December 31, 2017. As of December 31, 2018, Sirius Group held investments in nine hedge funds and 27 private equity funds versus investments in seven hedge funds and 28 private equity funds as of December 31, 2017.

The largest investment in a single fund was \$55 million and \$31 million as of December 31, 2018 and 2017, respectively. The fair value of Sirius Group's investments in hedge funds and private equity funds is based upon Sirius Group's proportionate interest in the underlying fund's net asset value, which is deemed to approximate fair value. Sirius Group employs a number of procedures to assess the reasonableness of the fair value measurements for its other long-term investments, including obtaining and reviewing each fund's audited financial statements and discussing each fund's pricing with the fund's manager. However, since the fund managers do not provide sufficient information to independently evaluate the pricing inputs and methods for each underlying investment, the inputs are considered to be unobservable.

In circumstances where the underlying investments are publicly traded, such as the investments made by hedge funds, the fund manager uses current market prices to determine fair value. In circumstances where the underlying investments are not publicly traded, such as the investments made by private equity funds, the private equity fund managers generally consider the need for a liquidity discount on each of the underlying investments when determining the fund's NAV. In the event Sirius Group believes that the valuation provided by the fund manager differs from its expectations due to illiquidity or other factors associated with its investment in the fund, Sirius Group will adjust the fund manager's NAV to more appropriately represent the fair value of its interest in the investment.

Sensitivity analysis of likely returns on hedge fund and private equity fund investments

Sirius Group’s investment portfolio includes investments in hedge funds and private equity funds. As of December 31, 2018, the value of investments in hedge funds and in private equity funds was \$118 million and \$183 million, respectively. The underlying investments are typically publicly traded and private equity securities and, as such, are subject to market risks that are similar to Sirius Group’s equity securities. The following illustrates the estimated effect on December 31, 2018 fair value resulting from a 10% change and a 30% change in market value:

<i>(Millions)</i> Fund Type	Change in fair value		Change in fair value	
	10% decline	10% increase	30% decline	30% increase
Hedge funds	\$ (11.8)	\$ 11.8	\$ (35.5)	\$ 35.5
Private equity funds	\$ (18.3)	\$ 18.3	\$ (54.9)	\$ 54.9

Hedge fund and private equity fund returns are commonly measured against the benchmark returns of hedge fund indices and/or the S&P 500 Index. The historical returns for each index in the past five years are listed below:

	Years Ended December 31,				
	2018	2017	2016	2015	2014
HFRX Equal Weighted Strategies Index	(5.4)%	4.8%	3.8%	(1.5)%	(0.5)%
S&P 500 Index	(4.4)%	21.8%	12.0%	1.4%	13.7%

Goodwill and Intangible Assets

Goodwill represents the excess of purchase price over the fair value of nets assets acquired from the acquisitions of IMG and Armada. Intangible assets with a finite life are amortized over the estimated useful life of the asset. Intangible assets with an indefinite useful life are not amortized.

Sirius Group early adopted Accounting Standards Update (“ASU”) No. 2017-04, *Simplifying the Test for Goodwill Impairment*, which eliminates Step Two from the goodwill impairment test. Under the new standard, to the extent the carrying amount of a reporting unit exceeds the fair value, an impairment charge should be recorded that is equal to the difference. The impairment charge recognized should not exceed the total amount of goodwill allocated to the reporting unit.

Goodwill and intangible assets are assessed for impairment on an annual basis or more frequently if events or changes in circumstances indicate that it is more likely than not that an impairment exists. Such events or circumstances may include an economic downturn in a geographic market or change in the assessment of future operations.

In the absence of any indications of potential impairment, the evaluation of goodwill is performed during the fourth quarter of each year and when events or changes in circumstances indicate that it is more likely than not that the asset is impaired. Sirius Group primarily uses two approaches to value goodwill and intangibles: the income approach, which converts future estimates of cash flows by reporting unit to a single (discounted) current value and the market approach, which uses prices and other information from transactions for identical or similar assets or liabilities. If goodwill or intangible assets are impaired, they are written down to their fair value with a corresponding expense reflected in the Consolidated Statements of Income and Comprehensive Income in the period in which the determination is made.

Goodwill

Sirius Group recognized goodwill of \$278 million and \$123 million from the 2017 acquisitions of IMG and Armada, respectively. These amounts represent the fair value of the consideration paid, less the aforementioned identified and valued intangible assets. IMG’s goodwill balance is primarily attributed to IMG’s assembled workforce and access to the supplemental health care and medical travel insurance market. Armada’s goodwill balance is primarily attributed to Armada’s assembled workforce and access to the supplemental healthcare insurance market, and additional synergies to be realized in the future.

During 2018, Sirius Group determined that the Global A&H operating segment was appropriate for purposes of testing goodwill for impairment. The Global A&H operating segment produces discrete financial information that management regularly reviews and its components have similar economic characteristics. The components of the Global A&H operating segment have similar economic characteristics including (1) the nature of the products and services; (2) the nature of the production processes; (3) the type or class of customer for their products and services; (4) the methods used to distribute the products or providing services; and (5) the nature of the regulatory environment, if applicable (e.g. insurance). Based on management's consideration of these five factors, it was determined that all of the components of the Company's Global A&H operating segment have similar economic characteristics in that all components primarily write accident and health insurance products ranging from disability, travel medical, stop-loss, accident and ex-pat health coverage written on a global basis. The acquisitions of both Armada and IMG were executed with the long term goal of generating insurance operating results by moving the business written by these MGUs to Sirius Group's insurance carriers, supplemented in the near term by the fee based revenue produced through the brokering of this business that is currently being underwritten by external insurance carriers.

In the fourth quarter of 2018, Sirius Group performed goodwill impairment testing for Global A&H. Management calculated a range of fair values using the income approach and market approach and compared the concluded fair values to the carrying values of Global A&H. Management determined that no point in the fair value range was the best estimate of fair value for each reporting unit, so the midpoint was used to assess goodwill. Next, management compared the fair values to the carrying values of Global A&H. The fair value midpoint exceeded the carrying value by 6.2%. Expected future cash flows and/or earnings may be materially and negatively impacted as a result of, among other things, a decrease in renewals and new business, loss of key personnel, lower-than-expected yields or higher-than-expected claims activity and incurred losses as well as other general economic factors.

There was no evidence of potential impairment for goodwill as of December 31, 2018.

Indefinite Lived Intangible Assets

In 2018, Sirius Group recognized \$3 million of indefinite lived intangible assets related to insurance licenses from the acquisition of WRM America. In total, Sirius Group held \$22 million and \$27 million of indefinite lived intangible assets as of December 31, 2018 and 2017, respectively.

For the years ended December 31, 2018 and 2017, Sirius Group recognized an impairment of \$8 million and \$5 million related to a trade name intangible asset, with an indefinite life, acquired as part of the acquisition of IMG. The impairments resulted from lower than anticipated growth when comparing the forecasted results against a reforecast of results at year end. A quantitative impairment review of the IMG trade name intangible asset was performed by applying the royalty replacement method to determine the asset's fair value as of December 31, 2018 and 2017, respectively. Under the royalty replacement method, the fair value of IMG's trade names intangible asset was determined based on a market participant's view of the royalty that would be paid to license the right to use the trade name. This quantitative analysis incorporated several assumptions including forecasted future revenues and cash flows, estimated royalty rate, based on similar licensing transactions and market royalty rates, and discount rate, which incorporates assumptions such as weighted-average cost of capital and risk premium.

For the year ended December 31, 2016, Sirius Group did not recognize any impairments on intangible assets with an indefinite life.

Premiums

Sirius Group accounts for insurance and reinsurance policies that it writes in accordance with authoritative guidance. Premiums written are recognized as revenues and are earned ratably over the term of the related policy or reinsurance treaty. Unearned premiums represent the portion of premiums written that are applicable to future insurance or reinsurance coverage provided by policies or treaties in force. Sirius Group also charges fees on certain insurance policies.

Sirius Group writes primary insurance business ("primary business" or "insurance"), as well as treaty and facultative reinsurance business ("assumed business"). The majority of Sirius Group's treaty reinsurance premiums are derived from pro-rata ("proportional") and excess of loss ("non-proportional") reinsurance contracts, which in 2018 amounted to 47% and 28%, respectively, of its total gross written premiums. Primary business represented 25% of total gross written premiums.

Primary Business

Sirius Group's primary business is predominantly accident and health insurance. In recent years, we have expanded our primary business capabilities in the United States, which has resulted in increased accident and health insurance business. During 2017, Sirius Group acquired IMG and Armada to further expand the accident and health business. Both acquired entities are MGUs. Sirius Group further expanded its primary insurance platform launching its primary Surety and Environmental insurance platforms in the U.S. in late 2017. In mid-2018, we began writing primary Casualty insurance through Pie Insurance, a start-up specializing in a data driven approach to workers compensation insurance, where we also have a minority investment and carrier relationship.

Assumed Business

Reinsurance premiums, commissions, expense reimbursements and reserves related to reinsured business are accounted for on a basis consistent with those used in accounting for the original policies issued and the terms of the reinsurance contracts. Reinsurance premiums ceded are expensed over the period the reinsurance coverage is provided. Ceded unearned insurance and reinsurance premiums represent the portion of premiums ceded applicable to the unexpired term of policies in force.

Sirius Group's reinsurance protection primarily consists of proportional and non-proportional protections to cover aviation, trade credit, energy, marine and property exposures. Attachment points and coverage limits vary by region around the world. Sirius Group's core proportional property reinsurance programs provide protection for parts of the non-proportional treaty accounts written in Europe, the Americas, Caribbean, Asia, the Middle East and Australia. These reinsurance protections are designed to increase underwriting capacity where appropriate, and to reduce exposure both to large catastrophe losses and to a frequency of smaller loss events.

The following table summarizes Sirius Group's gross premiums written for primary and assumed business for the years ended December 31, 2018, 2017, and 2016:

(Millions)	Years Ended December 31,					
	2018		2017		2016	
	Gross Premiums Written	% of Total	Gross Premiums Written	% of Total	Gross Premiums Written	% of Total
Primary						
Global Property	\$ 47.9	3%	\$ 31.1	2%	\$ 35.5	3%
Global A&H	364.6	20%	390.7	27%	281.0	22%
Specialty & Casualty	42.0	2%	33.0	2%	32.5	2%
Runoff & Other	-	0%	(4.6)	0%	19.5	2%
Total primary	\$ 454.5	25%	\$ 450.2	31%	\$ 368.5	29%
Assumed						
Proportional						
Global Property	\$ 459.9	25%	\$ 327.1	23%	\$ 262.2	21%
Global A&H	97.4	5%	57.9	4%	112.3	9%
Specialty & Casualty	278.0	15%	142.9	10%	93.4	7%
Runoff & Other	33.0	2%	(0.7)	0%	5.2	0%
Total proportional	\$ 868.3	47%	\$ 527.2	37%	\$ 473.1	37%
Non-proportional						
Global Property	\$ 390.5	22%	\$ 373.9	26%	\$ 337.2	27%
Global A&H	38.6	2%	46.0	3%	42.8	3%
Specialty & Casualty	69.1	4%	42.2	3%	44.8	4%
Runoff & Other	-	0%	(0.2)	0%	2.6	0%
Total non-proportional	\$ 498.2	28%	\$ 461.9	32%	\$ 427.4	34%
Total assumed	1,366.5	75%	989.1	69%	900.5	70%
Gross premiums written	\$ 1,821.0	100%	\$ 1,439.3	100%	\$ 1,269.0	100%

Premium Estimates

The nature of the insurance and reinsurance business requires Sirius Group to record premium estimates due to a time lag from the point when premium and related commission and expense activity is recorded by a ceding company and the point when such information is reported by the ceding company to Sirius Group. This time lag can vary from one to several contractual reporting periods (i.e., quarterly / monthly). This lag is common in the reinsurance business and is slightly longer when a reinsurance intermediary is involved.

As a result of this time lag in reporting, Sirius Group estimates a portion of its written premium and related commissions and expenses. Given the nature of Sirius Group's business, estimated premium balances, net of related commissions and expenses, comprise a large portion of total premium balances receivable. The estimation process begins by identifying which major accounts have not reported activity at the most recent period end. In general, premium estimates for excess of loss business are based on expected premium income included in the contractual terms. For proportional business, Sirius Group's estimates are derived from expected premium volume based on contractual terms or ceding company reports and other correspondence and communication with underwriters, intermediaries and ceding companies. Once premium estimates are determined, related commission and expense estimates are derived using contractual terms.

Sirius Group closely monitors its estimation process on a quarterly basis and adjusts its estimates as more information and actual amounts become known. There is no assurance that the amounts estimated by Sirius Group will not deviate from the amounts reported by the ceding company or reinsurance intermediary. Any such deviations are reflected in the results of operations when they become known.

The following table summarizes Sirius Group's premium estimates and related commissions and expenses as of December 31, 2018 and 2017:

December 31, 2018				
<i>(Millions)</i>	Gross Premium Estimates	Net Premium Estimates	Net Commission and Expense Estimates	Net Amount Included in Reinsurance Balances Receivable
Global Property	\$ 450.5	\$ 249.5	\$ (41.3)	\$ 208.2
Global A&H	177.3	139.7	(52.5)	87.2
Specialty & Casualty	180.0	170.2	(49.2)	121.0
Runoff & Other	3.3	3.3	2.7	6.0
Total	\$ 811.2	\$ 562.7	\$ (140.3)	\$ 422.4

December 31, 2017				
<i>(Millions)</i>	Gross Premium Estimates	Net Premium Estimates	Net Commission and Expense Estimates	Net Amount Included in Reinsurance Balances Receivable
Global Property	\$ 329.2	\$ 247.8	\$ (72.1)	\$ 175.7
Global A&H	174.1	130.8	(49.7)	81.1
Specialty & Casualty	158.6	146.4	(40.8)	105.6
Runoff & Other	-	-	-	-
Total	\$ 661.9	\$ 525.0	\$ (162.6)	\$ 362.4

Earnout Obligations

Current accounting guidance related to business combinations requires us to estimate and recognize the fair value of liabilities related to potential earnout obligations as of the acquisition dates for all acquisitions subject to earnout provisions. During 2017, we completed two acquisitions resulting in the initial recognition of \$122 million of earnout obligations.

The fair value of these earnout obligations is based on the present value of the expected future payments to be made to the sellers of the acquired entities in accordance with the provisions outlined in the respective purchase agreements. In determining fair value, we estimate the acquired entity's future operating results and obtain market participant assumptions. Based on these inputs, we estimate future payments in accordance with the earnout formula and performance targets specified in each purchase agreement. We then discount these payments to present value using a risk-adjusted rate that takes into consideration market-based rates of return that reflect the ability of the acquired entity to achieve the targets. Changes in estimated future operating results, market participant assumptions, or the risk-adjusted discount rate would result in a change in the fair value of recorded earnout obligations.

The amounts recorded as earnout payables, which are primarily based upon the estimated future operating results of the acquired entities subsequent to the acquisition date, are measured at fair value as of the acquisition date and are included on that basis in the recorded purchase price consideration. See Note 3 "*Significant transactions*" and Note 9 "*Fair value measurements*" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for a more detailed discussion. We will record subsequent changes in these estimated earnout obligations in our consolidated statement of (loss) income when incurred.

As of December 31, 2018, the aggregate amount of the maximum earnout obligations related to these acquisitions was \$74 million, of which \$29 million was recorded, based on the estimated fair value of the expected future payments to be made. The maximum potential earnout payables represent the maximum amount of additional consideration that could be paid pursuant to the terms of the purchase agreements. See Note 3 "*Significant transactions*" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K for additional discussion on 2017 business combinations.

Income Taxes

Sirius Group and its Bermuda domiciled subsidiaries are not subject to Bermuda income tax under current Bermuda law. In the event there is a change in the current law such that taxes are imposed, Sirius Group and its Bermuda domiciled subsidiaries would be exempt from such tax until March 31, 2035, pursuant to the Bermuda Exempted Undertakings Tax Protection Act of 1966. Sirius Group has subsidiaries and branches that operate in various other jurisdictions around the world that are subject to tax in the jurisdictions in which they operate. The jurisdictions in which Sirius Group's subsidiaries and branches are subject to tax are Australia, Belgium, Canada, Denmark, Germany, Gibraltar, Hong Kong (China), Luxembourg, Malaysia, the Netherlands, Shanghai (China), Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

Recoverability of Net Deferred Tax Asset

Sirius Group records a valuation allowance against deferred tax assets if it becomes more likely than not that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances from period to period are included in income tax expense in the period of change. In determining whether or not a valuation allowance, or change therein, is warranted, Sirius Group considers factors such as prior earnings history, expected future earnings, carryback and carryforward periods and strategies that, if executed, would result in the realization of a deferred tax asset. It is possible that certain planning strategies or projected earnings in certain subsidiaries may not be feasible to utilize the entire deferred tax asset, which could result in material changes to Sirius Group's deferred tax assets and tax expense.

For a more detailed discussion of our net deferred tax asset and our framework for assessing its recoverability, see Note 12 "*Income taxes*" in Sirius Group's audited financial statements included elsewhere in this Annual Report on Form 10-K.

Uncertain Tax Positions

Recognition of the benefit of a given tax position is based upon whether a company determines that it is more likely than not that a tax position will be sustained upon examination based upon the technical merits of the position. In evaluating the more likely than not recognition threshold, Sirius Group must presume that the tax position will be subject to examination by a taxing authority with full knowledge of all relevant information. If the recognition threshold is met, then the tax position is measured at the largest amount of benefit that is more than 50% likely of being realized upon ultimate settlement.

The Swedish Tax Authority (“STA”) has denied deductions claimed by two of our Swedish subsidiaries in certain tax years for interest they paid on intra-group debt instruments. We have challenged the STA’s denial in court based on the technical merits. Our reserve for uncertain tax positions has taken into account relevant developments in these tax disputes and in applicable Swedish tax law including recent case law. We also have taken into account the Stock Purchase Agreement by which Sirius Group was sold to CMIG International in 2016. Pursuant to such Agreement, the seller agreed to indemnify the buyer and us for, among other things, (1) any additional tax liability in excess of our accounting for uncertain tax positions for tax periods prior to the sale of Sirius Group to CMIG International, and (2) an impairment in our net deferred tax assets resulting from a final determination by a tax authority.

With few exceptions, Sirius Group is no longer subject to U.S. federal, state or non-U.S. income tax examinations by tax authorities for years before 2014.

For a more detailed discussion of our uncertain tax positions, see Note 12 “*Income taxes*” in Sirius Group’s audited financial statements included elsewhere in this Annual Report on Form 10-K.

Earnings of Certain Subsidiaries

Sirius Group has capital and liquidity in many of its subsidiaries, some of which may reflect undistributed earnings. If such capital or liquidity were to be paid or distributed to us or our subsidiaries, as dividends or otherwise, they may be subject to income or withholding taxes. Sirius Group generally intends to operate, and manage its capital and liquidity, in a tax-efficient manner. However, the applicable tax laws in the relevant countries are subject to change, possibly with retroactive effect, including in response to Organisation for Economic Cooperation and Development (“OECD”) guidance. Accordingly, such payments or earnings may be subject to income or withholding tax in jurisdictions where they are not currently taxed or at higher rates of tax than currently taxed, and the applicable tax authorities could also attempt to apply income or withholding tax to past earnings or payments.

U.S. Tax Reform

The Tax Cut and Jobs Act was enacted into law in the U.S. in December 2017. Among other provisions, the Act includes a new 21% corporate tax rate, the impacts of which (including on our deferred tax assets) were already taken into account in our financial results for the year ended December 31, 2017. The Act also includes a new base erosion and anti-abuse tax (“BEAT”). Proposed regulations interpreting and applying some of these provisions have been issued by the U.S. Department of the Treasury and the IRS, and additional guidance may be forthcoming. It is not possible to predict if, when or in what form such guidance will be provided and whether such guidance will be applied on a retroactive basis. The BEAT levies a significant tax on cross border payments to related group companies. This tax will subject intragroup reinsurance arrangements to a base erosion tax on premiums ceded. While Sirius Group intends to operate in a manner that limits its exposure to BEAT, at this time, subject to revision or finalization of proposed regulations issued in December 2018 and other additional guidance, uncertainty about the financial impact on Sirius Group of this new tax remains and no assurance can be given that Sirius Group will not be subject to material amounts of BEAT in the future. Accordingly, BEAT could materially impact our provision for taxes in the future.

Recent Accounting Pronouncements

Premium amortization on callable debt securities

In March 2017, the Financial Accounting Standards Board (“FASB”) issued ASU 2017-08, *Premium Amortization on Purchased Callable Debt Securities* (Accounting Standards Codification (“ASC”) 310-20), which changes the amortization period for certain purchased callable debt securities. Under the new guidance, for investments in callable debt securities held at a premium, the premium will be amortized over the period to the earliest call date. The new guidance does not change the amortization period for callable debt securities held at a discount. The new guidance is effective for annual and interim periods beginning after December 15, 2018. We plan to adopt the standard on its effective date of January 1, 2019. We do not expect the standard to have a material impact on our reported consolidated financial condition, results of operations, cash flows or required disclosures.

Credit losses

In June 2016, the FASB issued ASU 2016-13, *Measurement of Credit Losses on Financial Instruments* (ASC 326), which establishes new guidance for the recognition of credit losses for financial assets measured at amortized cost. The new guidance, which applies to financial assets that have the contractual right to receive cash, including reinsurance receivables, requires reporting entities to estimate the credit losses expected over the life of a credit exposure using historical information, current information and reasonable and supportable forecasts that affect the collectability of the financial asset. The new guidance is effective for annual and interim periods beginning after December 15, 2019. We plan to adopt the standard on its effective date of January 1, 2020. We do not expect the standard to have a material impact on our reported consolidated financial condition, results of operations, cash flows or required disclosures.

Leases

In February 2016, the FASB issued ASU 2016-02, *Leases* (ASC 842). The new guidance requires lessees to recognize lease assets and liabilities on the balance sheet for both operating and financing leases, with the exception of leases with an original term of 12 months or less. Under existing guidance, recognition of lease assets and liabilities is not required for operating leases. The new guidance requires that lease assets and liabilities to be recognized and measured initially based on the present value of the lease payments. The new guidance is effective for annual and interim periods beginning after December 15, 2018. Sirius Group will adopt this guidance as of January 1, 2019. We estimate adoption of this standard will result in recognition of additional net lease assets and lease liabilities of approximately \$38 million. We do not believe this standard will materially affect our consolidated net earnings.

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

Sirius Group's consolidated balance sheet includes a substantial amount of assets and liabilities whose fair values are subject to market risk. The term market risk refers to the risk of loss arising from adverse changes in interest rates, credit spreads, equity markets prices and other relevant market rates and prices. Due to Sirius Group's sizable investment portfolio, market risk can have a significant effect on Sirius Group's consolidated financial position.

Interest Rate Risk of Fixed-maturity Investments

In connection with Sirius Group's consolidated insurance and reinsurance subsidiaries, Sirius Group invests in interest rate sensitive securities, primarily debt securities. Sirius Group generally manages the interest rate risk associated with its portfolio of fixed-maturity investments by monitoring the average of investment-grade corporate securities; U.S. government and agency securities; foreign government, agency and provincial obligations; preferred stocks; asset-backed and mortgage-backed securities; and municipal obligations.

Increases and decreases in prevailing interest rates generally translate into decreases and increases in fair values of fixed-maturity investments, respectively. Additionally, fair values of interest rate sensitive instruments may be affected by the creditworthiness of the issuer, prepayment options, relative values of alternative investments, the liquidity of the instrument and other market factors.

The tables below summarize the estimated effects of hypothetical increases and decreases in market interest rates on Sirius Group's fixed-maturity investments as of December 31, 2018. The size of interest rate decreases presented may be limited in order to floor interest rates at a de minimis level.

(Millions)	Fair Value at December 31, 2018	Assumed Change in Relevant Interest Rate	Estimated Fair Value After Change in Interest Rate	Pre-Tax Increase (Decrease) in Carrying Value
Fixed-maturity investments	\$ 1,949.2	300 bp decrease	\$ 2,063.3	\$ 114.1
		200 bp decrease	2,026.8	77.6
		100 bp decrease	1,988.6	39.4
		50 bp decrease	1,969.3	20.1
		50 bp increase	1,927.7	(21.5)
		100 bp increase	1,906.2	(43.0)
		200 bp increase	1,863.2	(86.0)
		300 bp increase	1,820.2	(129.0)

The magnitude of the fair value decrease in rising rates scenarios may be more significant than the fair value increase in comparable falling rates scenarios. This can occur because (i) the analysis floors interest rates at a de minimis level in falling rate scenarios, muting price increases, (ii) portions of the fixed-maturity investment portfolio may be callable, muting price increases in falling interest rate scenarios and/or (iii) portions of the fixed-maturity investment portfolio may experience cash flow extension in higher interest rate environments, which generally results in lower fixed income asset prices.

Equity Securities and Other Long-term Investments Price Risk

The carrying values of Sirius Group's equity securities and other long-term investments are based on quoted market prices or management's estimates of fair value as of the balance sheet date. Market prices of equity securities, in general, are subject to fluctuations. These fluctuations could cause the amount realized upon sale or exercise of these instruments to differ significantly from the current reported value. The fluctuations may result from perceived changes in the underlying economic characteristics of the investment, the relative price of alternative investments, supply and demand imbalances for a particular security, or other market factors. Assuming a hypothetical 10% and 30% increase or decrease in the value of Sirius Group's equity securities and other long-term investments as of December 31, 2018, the carrying value of Sirius Group's equity securities and other long-term investments would have increased or decreased by approximately \$75 million and \$224 million, pre-tax, respectively.

Long-term obligations

The following table summarizes the fair value and carrying value of financial instruments as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018		2017	
	Fair value ⁽¹⁾	Carrying value	Fair value ⁽¹⁾	Carrying value
Liabilities, Mezzanine equity, and Non-controlling interest:				
2017 SEK Subordinated Notes	\$ 309.5	\$ 303.6	\$ 341.4	\$ 330.7
2016 SIG Senior Notes	\$ 347.6	\$ 393.2	\$ 392.3	\$ 392.5
Series B preference shares	\$ 191.7	\$ 232.2	\$ -	\$ -
Series A redeemable preference shares	\$ -	\$ -	\$ 90.0	\$ 106.1

⁽¹⁾ Fair value estimated by internal pricing and considered a Level 3 measurement.

Foreign Currency Exchange Risk

Sirius Group holds non-U.S. dollar denominated assets and liabilities, which are valued using period-end exchange rates. Sirius Group has non-U.S. dollar denominated foreign revenues and expenses, which are valued using average exchange rates over the period. Foreign currency exchange-rate risk is the risk that Sirius Group will incur losses on a U.S. dollar basis due to adverse changes in foreign currency exchange rates.

The following table illustrates the pre-tax effect that a hypothetical 10% increase (i.e., U.S. dollar strengthening) or decrease (i.e., U.S. dollar weakening) in the rate of exchange from the Swedish krona, the Euro, the British pound sterling, the Canadian dollar and the Israeli shekel to the U.S. dollar would have on the carrying value of Sirius Group's net assets as of December 31, 2018 and 2017:

<i>(Millions)</i>	December 31, 2018		December 31, 2017	
	10% increase	10% decrease	10% increase	10% decrease
Swedish Krona to U.S. dollar	\$ 28.0	\$ (28.0)	\$ 16.7	\$ (16.7)
Euro to U.S. dollar	3.6	(3.6)	(0.4)	0.4
British Pound Sterling to U.S. dollar	0.2	(0.2)	0.4	(0.4)
Canadian Dollar to U.S. dollar	(0.9)	0.9	(1.0)	1.0
Israeli Shekel to U.S. dollar	(6.2)	6.2	(7.2)	7.2

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 Sirius International Insurance Group, Ltd.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sirius International Insurance Group, Ltd. and its subsidiaries (the “Company”) as of December 31, 2018 and 2017, and the related consolidated statements of (loss) income, comprehensive (loss), shareholders’ equity, and cash flows for each of the three years in the period ended December 31, 2018, including the related notes and financial statement schedules listed in the index appearing under Item 15(a)(2) (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 of these consolidated financial statements 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

New York, New York

March 14, 2019

We have served as the Company’s auditor since at least 2001, which includes periods before the Company became subject to SEC reporting requirements. We have not been able to determine the specific year we began serving as auditor of the Company.

Sirius International Insurance Group, Ltd.
Consolidated Balance Sheets
As at December 31, 2018 and 2017

<i>(Expressed in millions of U.S. dollars, except share information)</i>	2018	2017
Assets		
Fixed maturity investments, trading, at fair value <i>(Amortized cost 2018: \$1,952.9; 2017: \$2,195.3)</i>	\$ 1,949.2	\$ 2,180.0
Short-term investments, at fair value <i>(Amortized cost 2018: \$716.1; 2017: \$625.3)</i>	715.5	625.0
Equity securities, trading, at fair value <i>(Cost 2018: \$409.4; 2017: \$275.1)</i>	380.0	299.2
Other long-term investments, at fair value <i>(Cost 2018: \$337.6; 2017: \$255.5)</i>	365.0	269.5
Cash	119.4	215.8
Restricted cash	12.8	14.8
Total investments and cash	3,541.9	3,604.3
Accrued investment income	14.1	14.1
Insurance and reinsurance premiums receivable	630.6	543.6
Reinsurance recoverable on unpaid losses	350.2	319.7
Reinsurance recoverable on paid losses	55.0	17.5
Funds held by ceding companies	186.8	153.2
Ceded unearned insurance and reinsurance premiums	159.8	106.6
Deferred acquisition costs	141.6	120.9
Deferred tax asset	202.5	244.1
Accounts receivable on unsettled investment sales	5.0	0.3
Goodwill	400.6	401.0
Intangible assets	195.6	216.3
Other assets	124.0	82.0
Total assets	\$ 6,007.7	\$ 5,823.6
Liabilities		
Loss and loss adjustment expense reserves	\$ 2,016.7	\$ 1,898.5
Unearned insurance and reinsurance premiums	647.2	506.8
Ceded reinsurance payable	206.9	139.1
Funds held under reinsurance treaties	110.6	73.4
Deferred tax liability	237.4	282.2
Debt	696.8	723.2
Accounts payable on unsettled investment purchases	3.2	0.3
Other liabilities	150.5	176.8
Total liabilities	4,069.3	3,800.3
Commitments and contingencies (see Note 22)		
Mezzanine equity		
Series B preference shares	232.2	-
Series A redeemable preference shares	-	106.1
Total mezzanine equity	232.2	106.1
Common shareholders' equity		
Common shares <i>(shares issued and outstanding, 2018: 115,151,251; 2017: 120,000,000)</i>	1.2	1.2
Additional paid-in surplus	1,089.1	1,197.9
Retained earnings	816.6	858.4
Accumulated other comprehensive (loss)	(202.4)	(140.5)
Total common shareholders' equity	1,704.5	1,917.0
Non-controlling interests	1.7	0.2
Total equity	1,706.2	1,917.2
Total liabilities, mezzanine equity, and equity	\$ 6,007.7	\$ 5,823.6

See Notes to Consolidated Financial Statements

Sirius International Insurance Group, Ltd.
Consolidated Statements of (Loss) Income
For the years ended December 31, 2018, 2017, and 2016

<i>(Expressed in millions of U.S. dollars, except share and per share information)</i>	2018	2017	2016
Revenues			
Net earned insurance and reinsurance premiums	\$ 1,262.3	\$ 1,035.3	\$ 890.1
Net investment income	71.4	56.8	56.2
Net realized investment gains (losses)	2.3	(27.2)	288.3
Net unrealized investment (losses)	(23.2)	(10.5)	(238.2)
Net foreign exchange gains (losses)	22.7	9.2	(11.0)
Gain on revaluation of contingent consideration	9.6	48.8	-
Other revenue	112.7	21.7	9.1
Total revenues	1,457.8	1,134.1	994.5
Expenses			
Loss and loss adjustment expenses	900.0	811.2	519.3
Insurance and reinsurance acquisition expenses	255.4	197.2	210.3
Other underwriting expenses	146.2	106.1	107.3
General and administrative expenses	77.9	91.9	85.1
Intangible asset amortization expenses	15.8	10.2	-
Impairment of intangible assets	8.0	5.0	-
Interest expense on debt	30.8	22.4	34.6
Total expenses	1,434.1	1,244.0	956.6
Pre-tax income (loss)	23.7	(109.9)	37.9
Income tax (expense) benefit	(40.4)	(26.4)	7.3
(Loss) income before equity in earnings of unconsolidated affiliates	(16.7)	(136.3)	45.2
Equity in earnings of unconsolidated affiliates, net of tax	-	-	6.6
Net (loss) income	(16.7)	(136.3)	51.8
Less: Income attributable to non-controlling interests	(1.4)	(13.7)	(19.3)
Net (loss) income attributable to Sirius Group	(18.1)	(150.0)	32.5
Less: Accrued dividends on Series A redeemable preference shares	(2.6)	(6.1)	-
Less: Change in carrying value of Series B preference shares	(36.4)	-	-
Add: Redemption of Series A redeemable preference shares	13.8	-	-
Net (loss) income attributable to Sirius Group's common shareholders	\$ (43.3)	\$ (156.1)	\$ 32.5
Net (loss) income per common share and common share equivalent			
Basic earnings per common share and common share equivalent	\$ (0.36)	\$ (1.30)	\$ 0.27
Diluted earnings per common share and common share equivalent	\$ (0.36)	\$ (1.30)	\$ 0.27
Weighted average number of common shares and common share equivalents outstanding:			
Basic weighted average number of common shares and common share equivalents outstanding	119,253,924	120,000,000	120,000,000
Diluted weighted average number of common shares and common share equivalents outstanding	119,253,924	120,000,000	120,000,000

See Notes to Consolidated Financial Statements.

Sirius International Insurance Group, Ltd.
Consolidated Statements of Comprehensive (Loss)
For the years ended December 31, 2018, 2017, and 2016

<i>(Expressed in millions of U.S. dollars)</i>	2018	2017	2016
Comprehensive (loss) income			
Net (loss) income	\$ (16.7)	\$ (136.3)	\$ 51.8
Other comprehensive (loss) income			
Change in foreign currency translation, net of tax	(61.9)	71.7	(67.3)
Net change in other, net of tax	-	-	1.2
Total other comprehensive (loss) income	(61.9)	71.7	(66.1)
Comprehensive (loss)	(78.6)	(64.6)	(14.3)
Net (income) attributable to non-controlling interests	(1.4)	(13.7)	(19.3)
Comprehensive (loss) attributable to Sirius Group	\$ (80.0)	\$ (78.3)	\$ (33.6)

See Notes to Consolidated Financial Statements.

Sirius International Insurance Group, Ltd.
Consolidated Statements of Shareholders' Equity
For the years ended December 31, 2018, 2017, and 2016

<i>(Expressed in millions of U.S. dollars, except per share information)</i>	2018	2017	2016
Common shares			
Balance at beginning of year	\$ 1.2	\$ 1.2	\$ 0.1
Issuance of common shares	0.1	-	-
Share repurchase from CM Bermuda	(0.1)	-	-
Stock split	-	-	1.1
Balance at end of year	<u>1.2</u>	<u>1.2</u>	<u>1.2</u>
Additional paid-in surplus			
Balance at beginning of year	1,197.9	1,184.6	1,096.1
Issuance of common shares and warrants, net of expenses	52.7	-	-
Share compensation expense	2.5	-	-
Share repurchase from CM Bermuda	(163.9)	-	-
Return of capital to CM Bermuda	(1.6)	-	-
Capital contribution from former parent	1.4	13.3	89.6
Other, net	0.1	-	-
Stock split	-	-	(1.1)
Balance at end of year	<u>1,089.1</u>	<u>1,197.9</u>	<u>1,184.6</u>
Retained earnings			
Balance at beginning of year	858.4	1,014.5	1,009.0
Cumulative effect of an accounting change	1.6	-	-
Balance at beginning of period, as adjusted	<u>860.0</u>	<u>1,014.5</u>	<u>1,009.0</u>
Net income (loss)	(16.7)	(136.3)	51.8
Income attributable to non-controlling interests	(1.4)	(13.7)	(19.3)
Accrued dividends on Series A redeemable preference shares	(2.6)	(6.1)	-
Change in carrying value of Series B preference shares	(36.4)	-	-
Redemption of Series A redeemable preference shares	13.8	-	-
Dividends to former parent	-	-	(27.0)
Other, net	(0.1)	-	-
Balance at end of year	<u>816.6</u>	<u>858.4</u>	<u>1,014.5</u>
Accumulated other comprehensive (loss)			
Balance at beginning of year	(140.5)	(212.2)	(146.1)
Accumulated net foreign currency translation (losses)			
Balance at beginning of year	(140.5)	(212.2)	(144.9)
Net change in foreign currency translation	(61.9)	71.7	(67.3)
Balance at end of year	<u>(202.4)</u>	<u>(140.5)</u>	<u>(212.2)</u>
Accumulated other comprehensive income (loss), other			
Balance at beginning of year	-	-	(1.2)
Net change, other	-	-	1.2
Balance at end of year	<u>-</u>	<u>-</u>	<u>-</u>
Balance at the end of year	<u>(202.4)</u>	<u>(140.5)</u>	<u>(212.2)</u>
Total common shareholders' equity	\$ 1,704.5	\$ 1,917.0	\$ 1,988.1
Non-controlling interests	1.7	0.2	251.3
Total equity	\$ 1,706.2	\$ 1,917.2	\$ 2,239.4
Per share data			
Dividends declared per common share	\$ -	\$ -	\$ 0.23

See Notes to Consolidated Financial Statements.

Sirius International Insurance Group, Ltd.
Consolidated Statements of Cash Flows
For the years ended December 31, 2018, 2017, and 2016

<i>(Expressed in millions of U.S. dollars)</i>	2018	2017	2016
Cash flows from operations:			
Net (loss) income	\$ (16.7)	\$ (136.3)	\$ 51.8
Adjustments to reconcile net (loss) income to net cash provided from (used for) operations:			
Net realized and unrealized investment (losses) gains	20.9	37.7	(50.1)
Amortization of premium on fixed maturity investments	5.8	16.6	21.1
Amortization of intangible assets	15.8	10.2	-
Depreciation and other amortization	9.5	8.9	6.7
Share-based compensation	2.0	-	-
Revaluation of contingent consideration	(9.6)	(48.8)	-
Impairment of intangible assets	8.0	5.0	-
Excess of fair value of acquired net assets over cost	-	-	(4.3)
Undistributed equity in earnings of unconsolidated affiliates, after-tax	-	-	(6.6)
Other operating items:			
Net change in loss and loss adjustment expense reserves	203.7	188.3	18.1
Net change in reinsurance recoverable on paid and unpaid losses	(95.7)	(11.1)	(23.6)
Net change in funds held by ceding companies	(48.0)	(38.9)	(15.1)
Net change in unearned insurance and reinsurance premiums	195.5	55.7	60.8
Net change in ceded reinsurance payable	93.4	22.8	11.5
Net change in ceded unearned insurance and reinsurance premiums	(76.3)	14.4	(1.9)
Net change in insurance and reinsurance premiums receivable	(144.1)	(102.3)	(95.4)
Net change in deferred acquisition costs	(28.4)	(27.0)	(14.2)
Net change in funds held under reinsurance treaties	42.7	5.8	13.0
Net change in current and deferred income taxes, net	18.7	13.3	(12.0)
Net change in other assets and liabilities, net	(89.2)	(50.3)	(6.6)
Net cash provided from (used for) operations	108.0	(36.0)	(46.8)
Cash flows from investing activities:			
Net change in short-term investments	(90.1)	(1.0)	(202.7)
Sales of fixed maturities and convertible fixed maturity investments	1,373.1	1,422.4	2,454.7
Maturities, calls, and paydowns of fixed maturity and convertible fixed maturity investments	102.7	292.2	141.8
Sales of common equity securities	353.1	87.6	851.6
Distributions and redemptions of other long-term investments	72.4	40.6	27.9
Sales of consolidated subsidiaries and unconsolidated affiliates, net of cash sold	-	0.8	173.5
Contributions to other long-term investments	(160.1)	(167.5)	(73.5)
Purchases of common equity securities	(505.7)	(222.3)	(232.7)
Purchases of fixed maturities and convertible fixed maturity investments	(1,321.3)	(1,018.5)	(3,192.3)
Purchases of consolidated subsidiaries, net of cash acquired	(7.9)	(354.5)	27.5
Net change in unsettled investment purchases and sales	(1.2)	(7.9)	38.4
Other, net	(4.9)	(5.9)	4.3
Net cash (used for) provided from investing activities	(189.9)	66.0	18.5
Cash flows from financing activities:			
Proceeds from issuance of common shares, net of expenses	61.2	-	-
Proceeds from issuance of Series B preference shares	195.8	-	-
Redemption of common shares from CM Bermuda	(164.0)	-	-
Return of capital to CM Bermuda	(1.6)	-	-
Redemption of Series A redeemable preference shares	(95.0)	-	-
Capital contribution from former parent	1.4	13.3	89.6
Issuance of debt, net of issuance costs	-	340.8	392.4
Redemption of SIG Preference Shares	-	(250.0)	-
Repayment of debt	-	(3.8)	(405.6)
Payment of contingent consideration	(4.4)	(30.6)	-
Change in collateral held on Interest Rate Cap	-	(1.1)	(0.5)
Cash dividends paid to former parent	-	-	(27.0)
Cash dividends paid to non-controlling interests	-	(14.1)	(18.8)
Other, net	-	(0.9)	0.8
Net cash (used for) provided from financing activities	(6.6)	53.6	30.9
Effect of exchange rate changes on cash	(9.9)	9.9	(9.4)
Net (decrease) increase in cash during year	(98.4)	93.5	(6.8)
Cash and restricted cash balance at beginning of year	230.6	137.1	143.9
Cash and restricted cash balance at end of year	\$ 132.2	\$ 230.6	\$ 137.1
Supplemental disclosures of cash flow information:			
Income taxes paid	\$ 19.1	\$ 16.7	\$ 8.3
Interest paid	\$ 30.0	\$ 22.0	\$ 31.6

See Notes to Consolidated Financial Statements.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
For the years ended December 31, 2018, 2017, and 2016

Note 1. General

Sirius International Insurance Group, Ltd. (the “Company”) is a Bermuda exempted company whose principal businesses are conducted through its wholly and majority owned insurance subsidiaries (collectively with the Company, “Sirius Group”). The company provides insurance, reinsurance, and insurance services on a worldwide basis.

Note 2. Summary of significant accounting policies

Basis of presentation

The accompanying consolidated financial statements at December 31, 2018, have been prepared in accordance with generally accepted accounting principles in the United States of America (“GAAP”) and the rules and regulations of the U.S. Securities and Exchange Commission (“SEC”). The accompanying consolidated financial statements present the consolidated results of operations, financial condition, and cash flows of the Company and its subsidiaries and those entities in which the Company has control and a majority economic interest as well as those variable interest entities (“VIEs”) that meet the requirements for consolidation. All intercompany transactions have been eliminated in consolidation.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Certain amounts in the prior period financial statements have been reclassified to conform to the current presentation. Tabular dollar amounts are in millions, with the exception of share and per share amounts. All amounts are reported in U.S. dollars, except where noted otherwise.

Significant accounting policies

Investment securities

Sirius Group’s invested assets consist of securities and other investments held for general investment purposes. Sirius Group’s portfolio of fixed maturity investments and equity securities held for general investment purposes are classified as trading and are reported at fair value as of the balance sheet date. Changes in unrealized gains and losses are reported pre-tax in revenues. Realized investment gains and losses are accounted for using the first-in first-out method and are reported pre-tax in revenues. Premiums and discounts on all fixed maturity investments are amortized and/or accreted to income over the anticipated life of the investment and are reported in Net investment income.

Sirius Group’s invested assets that are measured at fair value include fixed maturity investments, common and preferred equity securities, and other long-term investments, such as interests in hedge funds and private equities. Fair value is defined as the price received to sell an asset in an orderly transaction between market participants at the measurement date reflecting the highest and best use valuation concepts. In determining its estimates of fair value, Sirius Group uses a variety of valuation approaches and inputs. Whenever possible, Sirius Group estimates fair value using valuation methods that maximize the use of quoted prices and other observable inputs.

Short-term investments

Short-term investments consist of money market funds, certificates of deposit and other securities which, at the time of purchase, mature or become available for use within one year. Short-term investments are carried at fair value.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
For the years ended December 31, 2018, 2017, and 2016

Other long-term investments

Other long-term investments consist primarily of hedge funds, private equity funds, other investments in limited partnerships and other private equity securities. The fair value of other long-term investments is generally based upon Sirius Group's proportionate interest in the underlying fund's net asset value, which is deemed to approximate fair value. In addition, due to a lag in reporting, some of the fund managers, fund administrators, or both, are unable to provide final fund valuations as of the Company's reporting date. In these circumstances, Sirius Group estimates the return of the current period and uses all credible information available. This includes utilizing preliminary estimates reported by its fund managers and using information that is available to Sirius Group with respect to the underlying investments, as necessary. The changes in fair value are reported in pre-tax revenues in Net unrealized investment (losses). Actual final fund valuations may differ from Sirius Group's estimates and these differences are recorded in the period they become known as a change in estimate.

Other long-term investments also includes certain investments that are eligible for the equity method where Sirius Group has elected the fair value option under which the changes in fair value are reported in pre-tax revenues in Net unrealized investment (losses). (See **Note 19**.)

Cash

Cash includes amounts on hand and demand deposits with banks and other financial institutions. Amounts presented in the statement of cash flows are shown net of balances acquired and sold in the purchase or sale of the Company's consolidated subsidiaries.

Restricted cash

Restricted cash represents cash and cash equivalents that Sirius Group is (a) holding for the benefit of a third party and is legally or contractually restricted as to withdrawal or usage for general corporate purposes; and (b) not replaceable by another type of asset other than cash or cash equivalents, under the terms of Sirius Group's contractual arrangements with such third parties.

Insurance and reinsurance operations

Premiums written are recognized as revenues and are earned ratably over the term of the related policy or reinsurance treaty. Premiums written include amounts reported by brokers, managing general underwriters, and ceding companies, supplemented by the Company's own estimates of premiums where reports have not been received. The determination of premium estimates requires a review of the Company's experience with the ceding companies, managing general underwriters, familiarity with each market, the timing of the reported information, an analysis and understanding of the characteristics of each class of business, and management's judgment of the impact of various factors, including premium or loss trends, on the volume of business written and ceded to the Company. On an ongoing basis, the Company's underwriters review the amounts reported by these third parties for reasonableness based on their experience and knowledge of the subject class of business, taking into account the Company's historical experience with the brokers or ceding companies. Unearned premiums represent the portion of premiums written that are applicable to future insurance or reinsurance coverage provided by policies or treaties in force.

Deferred acquisition costs represent commissions, premium taxes, brokerage expenses, and other costs which are directly attributable to the successful acquisition or renewal of contracts and vary with the production of business. These costs are deferred and amortized over the period during which the premiums are earned. Amortization of Deferred acquisition costs are shown net of contractual commissions earned on reinsurance ceded within Insurance and reinsurance acquisition expenses. Deferred acquisition costs are limited to the amount expected to be recovered from future earned premiums and anticipated investment income. This limitation is referred to as a premium deficiency. A premium deficiency is recognized if the sum of expected loss and loss adjustment expenses ("LAE"), expected dividends to policyholders, unamortized acquisition costs, and maintenance costs exceeds related unearned premiums and anticipated investment income. A premium deficiency is recognized by charging any unamortized acquisition costs to expense to the extent required in order to eliminate the deficiency. If the premium deficiency exceeds unamortized acquisition costs, then a liability is accrued for the excess deficiency.

Other underwriting expenses consist primarily of personnel related expenses (including salaries, benefits, and variable compensation expense) and other general operating expenses related to the underwriting operations.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
For the years ended December 31, 2018, 2017, and 2016

Losses and LAE are charged against income as incurred. Unpaid insurance loss and LAE reserves are based on estimates (generally determined by claims adjusters, legal counsel, and actuarial staff) of the ultimate costs of settling claims, including the effects of inflation and other societal and economic factors. Unpaid reinsurance loss and LAE reserves are based primarily on reports received from ceding companies and actuarial projections. Unpaid loss and LAE reserves represent management's best estimate of ultimate losses and LAE, net of estimated salvage and subrogation recoveries, if applicable. Such estimates are regularly reviewed and updated and any resulting adjustments are reflected in current operations. The process of estimating loss and LAE reserves involves a considerable degree of judgment by management and the ultimate amount of expense to be incurred could be greater or less than the amounts currently reflected in the financial statements.

Sirius Group enters into ceded reinsurance contracts to protect its businesses from losses due to concentration of risk, to manage its operating leverage ratios and to limit losses arising from catastrophic events. Such reinsurance contracts are executed through excess of loss treaties and catastrophe contracts under which the reinsurer indemnifies for a specified part or all of certain types of losses over stipulated amounts arising from any one occurrence or event. Sirius Group has also entered into quota share treaties with reinsurers under which all risks meeting prescribed criteria are covered on a pro-rata basis. The amount of each risk ceded by Sirius Group is subject to maximum limits which vary by line of business and type of coverage. Although these contracts protect Sirius Group, these reinsurance arrangements do not relieve Sirius Group from its primary obligations to insureds.

Amounts recoverable from reinsurers are estimated in a manner consistent with the claim liability associated with the reinsured policies. The collectability of reinsurance recoverables is subject to the solvency of the reinsurers. Sirius Group is selective in regard to its reinsurers, principally placing reinsurance with those reinsurers with a strong financial condition, industry ratings, and underwriting ability. Management monitors the financial condition and ratings of its reinsurers on an ongoing basis.

Reinsurance premiums, commissions, expense reimbursements, and reserves related to reinsured business are accounted for on a basis consistent with those used in accounting for the original policies issued and the terms of the reinsurance contracts. Reinsurance premiums ceded are expensed over the period the reinsurance coverage is provided. Ceded unearned insurance and reinsurance premiums represent the portion of premiums ceded applicable to the unexpired term of policies in force. Funds held by ceding companies represent amounts due to Sirius Group in connection with certain assumed reinsurance agreements in which the ceding company retains a portion of the premium to provide security against future loss payments. The funds held by ceding companies are generally invested by the ceding company and a contractually agreed interest amount is credited to Sirius Group and recognized as investment income. Funds held under reinsurance treaties represent contractual payments due from Sirius Group that have been retained to secure such obligations.

Accruals for contingent commission liabilities are established for reinsurance contracts that provide for the stated commission percentage to increase or decrease based on the loss experience of the contract. Changes in the estimated liability for contingent commission arrangements are recorded as Insurance and reinsurance acquisition expenses. Accruals for contingent commission liabilities are determined through the review of the contracts that have these adjustable features and are estimated based on expected loss and LAE.

Derivative financial instruments

Sirius Group holds derivative financial instruments for both risk management and investment purposes. Sirius Group recognizes all derivatives as either assets or liabilities, measured at fair value, in the Consolidated Balance Sheets. Changes in the fair value of derivative instruments are recognized in current period pre-tax income.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
For the years ended December 31, 2018, 2017, and 2016

Deferred software costs

Sirius Group capitalizes costs related to computer software developed for internal use during the application development stage of software development projects. These costs generally consist of certain external, payroll, and payroll-related costs. Sirius Group begins amortization of these costs once the project is completed and ready for its intended use. Amortization is on a straight-line basis and over a useful life of three to five years. As of December 31, 2018 and 2017, Sirius Group had unamortized deferred software costs of \$9.3 million and \$10.5 million, respectively. For the years ended December 31, 2018, 2017, and 2016, Sirius Group had amortization expenses of \$4.8 million, \$4.6 million, and \$3.2 million, respectively, related to software developed for internal use.

Share-based compensation

Share-based compensation plans are accounted for in accordance with the Accounting Standards Codification (“ASC”) Topic 718 “Compensation - Stock Compensation” Sirius Group recognizes the compensation expense for stock restricted share and performance share awards based on the fair value of the award on the date of grant over the requisite service period. Awards under both the 2016 Long Term Incentive Plan and 2018 Omnibus plan vest over three years. The Company has elected to recognize forfeitures as they occur rather than estimating service-based forfeitures over the requisite service period.

Defined benefit plans

Certain Sirius Group employees in Europe participate in defined benefit plans. The liability for the defined benefit plans that is reported on the Consolidated Balance Sheets is the current value of the defined benefit obligation at the end of the period, reduced by the fair value of the plan’s managed assets, with adjustments for actuarial gains and losses. The defined benefit pension plan obligation is calculated annually by independent actuaries. The current value of the defined benefit obligation is determined through discounting of expected future cash flows, using interest rates determined by current market interest rates. The service costs and actuarial gains and losses on the defined benefit obligation and the fair value on the plan assets are recognized in the Consolidated Statements of Income.

Commission and other revenue recognition

Sirius Group recognizes agent commissions and other revenues when it has fulfilled all of its obligations necessary to earn the revenue and when it can both reliably estimate the amount of revenue, net of any amounts expected to be uncollectible, and any amounts associated with expected cancellations.

Earnings per share

Earnings per share is reported in accordance with ASC Topic 260 *Earnings per Share*. Basic earnings (loss) per share is computed by dividing net income (loss) available to Sirius Group common shareholders by the weighted-average number of common shares outstanding during the period. Diluted earnings per share is computed by dividing net income available to Sirius Group common shareholders by the weighted-average number of common shares outstanding adjusted to give effect to potentially dilutive securities. (See **Note 16**.)

Federal and foreign income taxes

Some of Sirius Group’s subsidiaries file consolidated tax returns in the United States. Sirius Group has subsidiaries in various jurisdictions, including but not limited to Sweden, the United Kingdom, and Luxembourg, which are subject to applicable taxes in those jurisdictions.

Deferred tax assets and liabilities are recorded when a difference between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for tax purposes exists, and for other temporary differences. The deferred tax asset or liability is recorded based on tax rates expected to be in effect when the difference reverses. The deferred tax asset is recognized when it is more likely than not that it will be realized.

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The Tax Cuts and Jobs Act (the “TCJA”) which was enacted into law in the U.S. in December 31, 2017 includes a new base erosion and anti-abuse tax (“BEAT”), which is essentially a minimum tax that is potentially applicable to certain otherwise deductible payments made by U.S. entities to non-U.S. affiliates, including cross-border interest payments and reinsurance premiums. The statutory BEAT rate is 5% in 2018 and will rise to 10% in 2019-2025 and then 12.5% in 2026 and thereafter. The TCJA also includes provisions for Global Intangible Low-Taxed Income (“GILTI”) under which taxes on foreign income are imposed on the excess of a deemed return on tangible assets of certain foreign subsidiaries. Consistent with accounting guidance, Sirius Group will treat BEAT as an in period tax charge when incurred in future periods for which no deferred taxes need to be provided and has made an accounting policy election to treat GILTI taxes in a similar manner.

Foreign currency exchange

The U.S. dollar is the functional currency for Sirius Group’s businesses except for Sirius International Insurance Corporation (“Sirius International”), Lloyd’s Syndicate 1945 (“Syndicate 1945”), several subsidiaries of International Medical Group Acquisition, Inc. (“IMG”), and the Canadian reinsurance operations of Sirius America Insurance Company (“Sirius America”). Sirius Group also invests in securities denominated in foreign currencies. Assets and liabilities recorded in these foreign currencies are translated into U.S. dollars at exchange rates in effect at the balance sheet date, and revenues and expenses are converted using the average exchange rates for the period. Net foreign exchange gains and losses arising from the translation of functional currencies are reported in shareholder’s equity, in Accumulated other comprehensive (loss). As of December 31, 2018 and 2017, Sirius Group had Net unrealized foreign currency translation losses of \$202.4 million and \$140.5 million, respectively, recorded in Accumulated other comprehensive (loss) on its Consolidated Balance Sheets.

Assets and liabilities relating to foreign operations are remeasured into the functional currency using current exchange rates; revenues and expenses are remeasured into the functional currency using the weighted average exchange rate for the period. The resulting exchange gains and losses are reported as a component of net income in the period in which they arise within Net realized investment gains (losses), Net unrealized investment (losses), and Net foreign exchange gains (losses).

The following rates of exchange for the U.S. dollar have been used for translation of assets and liabilities for subsidiaries whose functional currency is not the U.S. dollar at December 31, 2018 and 2017:

Currency	Closing Rate 2018	Closing Rate 2017
Swedish kronor	8.9397	8.2051
British pound	0.7850	0.7398
Euro	0.8734	0.8339
Canadian dollar	1.3614	1.2556

Goodwill and intangible assets

Goodwill represents the excess of the purchase price of an acquisition over the fair value of the identifiable net assets acquired and is assigned to the applicable reporting unit at acquisition. Goodwill is evaluated for impairment on an annual basis. Sirius Group initially evaluates goodwill using a qualitative approach to determine whether it is more likely than not that the fair value of goodwill is greater than its carrying value. If the results of the qualitative evaluation indicate that it is more likely than not that the carrying value of goodwill exceeds its fair value, Sirius Group performs the quantitative test for impairment.

Indefinite-lived intangible assets are evaluated for impairment similar to goodwill. Finite-lived intangible are amortized on a straight-line basis over their estimated useful lives. The amortization periods approximate the period over which Sirius Group expects to generate future net cash inflows from the use of these assets. All of these assets are subject to impairment testing for the impairment or disposal of long-lived assets when events or conditions indicate that the carrying value of an asset may not be fully recoverable from future cash flows.

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If goodwill or intangible assets are impaired, such assets are written down to their fair values with the related expense recorded in Sirius Group's results of operations. (See **Note 10**.)

Non-controlling interests

Non-controlling interests consist of the ownership interests of non-controlling shareholders in consolidated subsidiaries, and are presented separately on the balance sheet.

Mezzanine equity

In connection with significant transactions the Company has entered into, the Company has issued preference shares. (See **Note 3**.) At the date of issuance, Sirius Group evaluates the conversion and redemption features associated with the preference shares in order to determine the balance sheet classification of the instrument. The preference shares are classified outside of permanent equity (as Mezzanine equity) when the preference shares are redeemable at a fixed or determinable price on a fixed or determinable date, at the option of the shareholder or upon the occurrence of an event that is not solely within the control of Sirius Group. Sirius Group accounts for the Series B preference shares outside of permanent equity as Mezzanine equity in the Consolidated Balance Sheets as the ability to settle in common shares cannot be assured.

Variable interest entities

Sirius Group consolidates a VIE when it has both the power to direct the activities of the VIE that most significantly impact its economic performance and either the obligation to absorb losses or the right to receive returns from the VIE that could potentially be significant to the VIE.

An entity in which Sirius Group holds a variable interest is a VIE if any of the following conditions exist: (a) the total equity investment at risk is not sufficient to permit the entity to finance its activities without additional subordinated financial support, (b) as a group, the holders of equity investment at risk lack either the direct or indirect ability through voting rights or similar rights to make decisions about an entity's activities that most significantly impact the entity's economic performance or the obligation to absorb the expected losses or right to receive the expected residual returns, or (c) the voting rights of some investors are disproportionate to their obligation to absorb the expected losses of the entity, their rights to receive the expected residual returns of the entity, or both, and substantially all of the entity's activities either involve or are conducted on behalf of an investor with disproportionately few voting rights. The primary beneficiary is defined as the variable interest holder that is determined to have the controlling financial interest as a result of having both (a) the power to direct the activities of a VIE that most significantly impact the economic performance of the VIE and (b) the obligation to absorb losses or right to receive benefits from the VIE that could potentially be significant to the VIE. At inception of the VIE, as well as following an event that requires reassessment, Sirius Group determines whether it is the primary beneficiary based on the facts and circumstances surrounding each entity. (See **Note 20**.)

Recently adopted changes in accounting principles

Definition of a business

Effective January 1, 2018, Sirius Group adopted Accounting Standards Update ("ASU") 2017-01, *Business Combinations: Clarifying the Definition of a Business* (ASC 805), which clarifies the definition of a business and affects the determination of whether acquisitions or disposals are accounted for as assets or as a business. Under the new guidance, when substantially all of the fair value of the assets is concentrated in a single identifiable asset or a group of similar identifiable assets, it is not a business. Sirius Group has applied the guidance in the update when determining the accounting treatment for transactions that have occurred during the year ended December 31, 2018. (See **Note 3**.)

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Financial instruments - recognition and measurement

Effective January 1, 2018, Sirius Group adopted ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities* (ASC 825-10). The new guidance modifies the guidance for financial instruments, including investments in equity securities. Under the new guidance, all equity securities with readily determinable fair values are required to be measured at fair value with changes therein recognized through current period earnings. In addition, the new guidance requires a qualitative assessment for equity securities without readily determinable fair values to identify impairment, and for impaired equity securities to be measured at fair value. Sirius Group measures its portfolio of investment securities at fair value with changes therein recognized through current period earnings and, accordingly, adoption did not have any impact on its consolidated financial statements.

Revenue recognition

Effective January 1, 2018, Sirius Group adopted ASU 2014-09, *Revenue from Contracts with Customers* (ASC 606), which modifies the guidance for revenue recognition. The scope of the new guidance excludes insurance contracts but is applicable to certain fee arrangements as well as commissions and other non-insurance revenues. This guidance impacts the timing of service fee recognition by IMG and ArmadaCorp Capital, LLC (“Armada”). Sirius Group used the modified retrospective transition approach to adopt this guidance, which resulted in the recognition of a cumulative effect of adoption as an adjustment to the beginning balance of retained earnings at the date of initial application of \$1.6 million, net of tax.

Recent accounting pronouncements

Premium amortization on callable debt securities

In March 2017, the Financial Accounting Standards Board (“FASB”) issued ASU 2017-08, *Premium Amortization on Purchased Callable Debt Securities* (ASC 310-20), which changes the amortization period for certain purchased callable debt securities. Under the new guidance, for investments in callable debt securities held at a premium, the premium will be amortized over the period to the earliest call date. The new guidance does not change the amortization period for callable debt securities held at a discount. The new guidance is effective for annual and interim periods beginning after December 15, 2018. We plan to adopt the standard on its effective date of January 1, 2019. We do not expect the standard to have a material impact on our reported consolidated financial condition, results of operations, cash flows or required disclosures.

Credit losses

In June 2016, the FASB issued ASU 2016-13, *Measurement of Credit Losses on Financial Instruments* (ASC 326), which establishes new guidance for the recognition of credit losses for financial assets measured at amortized cost. The new guidance, which applies to financial assets that have the contractual right to receive cash, including reinsurance receivables, requires reporting entities to estimate the credit losses expected over the life of a credit exposure using historical information, current information and reasonable and supportable forecasts that affect the collectability of the financial asset. The new guidance is effective for annual and interim periods beginning after December 15, 2019. We plan to adopt the standard on its effective date of January 1, 2020. We do not expect the standard to have a material impact on our reported consolidated financial condition, results of operations, cash flows or required disclosures.

Leases

In February 2016, the FASB issued ASU 2016-02, *Leases* (ASC 842). The new guidance requires lessees to recognize lease assets and liabilities on the balance sheet for both operating and financing leases, with the exception of leases with an original term of 12 months or less. Under existing guidance, recognition of lease assets and liabilities is not required for operating leases. The new guidance requires that lease assets and liabilities to be recognized and measured initially based on the present value of the lease payments. The new guidance is effective for annual and interim periods beginning after December 15, 2018. Sirius Group will adopt this guidance as of January 1, 2019. We estimate adoption of this standard will result in recognition of additional net lease assets and lease liabilities of approximately \$37.7 million. We do not believe this standard will materially affect our consolidated net earnings.

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Note 3. Significant transactions

Easterly Acquisition Corp.

On November 5, 2018, the Company completed the transactions contemplated by the definitive Agreement and Plan of Merger (“Merger Agreement”). Under the terms of the Merger Agreement, Easterly Acquisition Corp. (“Easterly”) merged with Sirius Acquisitions Holding Company III and became a wholly-owned subsidiary of the Company (the “Merger”). Upon the closing of the Merger, Easterly’s common stock was exchanged for the Company’s common shares at an exchange ratio (the “Exchange Ratio”) calculated as (i) the amount of cash per public share of Easterly common stock in Easterly’s trust account (the “Trust Account”) immediately prior to the closing of the Merger divided by (ii) (x) 1.05 multiplied by (y) Sirius Group’s adjusted diluted book value per common share as of September 30, 2018 (“Sirius Group September 30 Adjusted DBVPS”). Based on the Sirius Group September 30 Adjusted DBVPS, estimated as of September 30, 2018, and funds in the Trust Account on November 5, 2018, the Exchange Ratio was equal to 0.609. Following the Merger, the Company’s common shares are traded on the Nasdaq Global Select Market under the symbol “SG.”

Easterly held a special meeting of Easterly stockholders on November 2, 2018 to approve the completion of the transactions contemplated by the Merger Agreement. Easterly Acquisition Sponsor, LLC (the “Sponsor”) and Easterly’s other stockholders approved each of the proposals presented at the special meeting. After the special meeting, but prior to the consummation of the Merger, certain Easterly public stockholders exercised their redemption rights as provided for by Easterly’s charter. In total, out of the Trust Account balance of \$149.0 million, there were \$109.7 million of redemptions by Easterly public stockholders, which decreased the amount of cash in the Trust Account available for general corporate purposes following the Merger. After the redemption of shares held by Easterly’s public stockholders, there was \$39.3 million in the Trust Account. This resulted in the issuance of 2,280,241 common shares to Easterly public stockholders.

Pursuant to the letter agreement among Easterly, the Sponsor and the Company (the “Sponsor Letter”), the private placement warrants issued to the Sponsor at the closing of the Merger were cancelled. Pursuant to the Merger Agreement, each issued and outstanding public warrant was converted into a warrant exercisable for Company common shares. The number of Company common shares subject to converted warrants was equal to the number of shares of Easterly common stock subject to each Easterly warrant immediately prior to the closing of the Merger multiplied by the Exchange Ratio, and each converted warrant had an exercise price per Company common share equal to the exercise price per share of Easterly common stock subject to such Easterly warrant immediately prior to the closing of the Merger divided by the Exchange Ratio. This resulted in the issuance of 6,088,535 converted warrants.

Sirius Group Private Placement

In connection with the closing of the Merger, the Company completed a private placement of Series B preference shares, common shares, and warrants (the “Sirius Group Private Placement”) at a price per share equal to (i) 1.05 multiplied by (ii) the Sirius Group September 30 Adjusted DBVPS, or \$17.22447. Investors in the Sirius Group Private Placement included affiliated funds of Gallatin Point Capital, The Carlyle Group, Centerbridge Partners, L.P. and Bain Capital Credit (the “Preference Share Investors”), together with certain employees, directors and “friends & family.” The Sirius Group Private Placement raised proceeds of \$226.1 million, resulting in the purchase of:

- 11,901,670 Series B preference shares with a cost basis of \$195.8 million,
- 1,225,954 of Common shares with a cost basis of \$20.8 million,
- 5,418,434 warrants that are exercisable for common shares for a period of five years after the Merger at a strike price equal to 125% of the per share purchase price, or \$21.53 with a cost basis of \$9.6 million.
- Issuance costs of \$2.0 million

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ESPP

In connection with the Merger, Sirius Group implemented the Employee Share Purchase Plan (“ESPP”), which provided all employees of Sirius Group with a one-time opportunity to purchase between 100 and 1,000 Company common shares at a price equal to 85% of market value for the first 100 shares and 100% of market value for the next 900 shares. For this purpose, market value of the Company common shares was equal to 1.05 times the Sirius Group September 30 Adjusted DBVPS. Employees had the option of paying for the shares upfront or, in the case of employees who are not executive officers, through a loan that is repaid over a two-year period through payroll deductions. Through the ESPP, 405 employees purchased 149,236 Company common shares prior to the consummation of the Merger, with a cost basis of \$2.6 million. (See **Note 14.**)

Gross proceeds of the cash in the Easterly Trust Account assumed by Sirius Group upon the closing of the Merger, the Sirius Group Private Placement, and the ESPP sum to \$268.0 million.

Common shares redemption agreement

In connection with the Merger, the Company and CM Bermuda Ltd. (“CM Bermuda”), the sole holder of the Company’s common shares prior to the Merger, entered into a redemption agreement, dated November 2, 2018 (the “CM Bermuda Redemption Agreement”), pursuant to which, effective as of the closing of the Merger, the Company redeemed 9,519,280 of the Company’s common shares at a price per share equal to \$17.22447 for \$164.0 million, which were paid on November 16, 2018.

Also in connection with the Merger, on November 16, 2018 the Company completed a post-closing adjustment of \$1.6 million that was settled in cash with CM Bermuda based on the reported book value per share of \$16.44 as of September 30, 2018, pursuant to the Merger Agreement.

Sirius Group incurred certain contractual costs associated with the Merger of \$9.0 million and \$7.1 million of various legal, advisory, and other consulting costs for the Merger and the Private Placement that were charged to Additional paid-in surplus.

Series A preference shares redemption agreement

In connection with the Merger, the Company, IMG Acquisition Holdings, LLC (“IMGAH”) and Sirius Acquisitions Holding Company II completed the transactions contemplated by its previously announced redemption agreement and the Company redeemed all of the outstanding Series A redeemable preference shares, which were held by IMGAH, for \$95.0 million in cash. Effective as of the completion of the redemption, the parties terminated the registration rights agreement and the shareholder’s agreement between the Company and IMGAH. In addition, the parties agreed that any remaining contingent consideration in respect of the IMG acquisition, will be paid in cash, not in Series A redeemable preference shares as previously contemplated in the agreement in respect of the IMG acquisition. (See “**IMG**”) below.

WRM America Indemnity Company, Inc.

On August 16, 2018, Sirius Group acquired 100% ownership of WRM America Indemnity Company, Inc. (“WRM America”) from WRM America Indemnity Holding Company, LLC for \$16.9 million in cash. WRM America is a New York-domiciled insurer with a run-off book of business mainly comprised of general liability, educator’s legal liability, automobile liability and physical damage, property and excess catastrophe liability. As part of the purchase of WRM America, Sirius Group acquired \$3.1 million of indefinite lived intangible assets related to insurance licenses.

The Phoenix Holdings Ltd.

On July 2, 2018, Sirius Group terminated its share purchase agreement to acquire a controlling interest in The Phoenix Holdings Ltd. As a result of the termination, Sirius Group recognized an income statement charge for the \$4.5 million call option it held during 2018.

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IMG

On May 26, 2017, Sirius Group acquired 100% ownership of IMG and its subsidiaries, a leading provider of global travel medical insurance products and assistance services. The purchase of IMG was undertaken to expand on Sirius Group's existing Global Accident and Health ("Global A&H") platform and to accelerate the growth strategy of the Global A&H international insurance business, to add service fee revenues to Sirius Group's existing risk-transfer based insurance revenues, and to gain access to IMG's distribution networks and client base. Total consideration consisted of \$250.8 million of cash, \$100.0 million of Series A redeemable preference shares that are convertible into common shares (as explained further below), and up to \$50.0 million of contingent consideration ("IMG Earnout"), payable in Series A redeemable preference shares, which was stated as \$43.1 million at fair value at acquisition date, resulting in a total enterprise value of \$393.9 million. Sirius Group assumed certain IMG debt of \$129.5 million ("Debt Assumption"), reducing its cash consideration by that amount and resulting in a total equity consideration of \$264.4 million. Concurrently with the transaction, IMG's subsidiary International Medical Group – Stop-Loss, Inc. ("IMG – Stop Loss") was sold to Certus Management Group, Inc. ("Certus"). As part of the sale of IMG – Stop Loss, Sirius Group issued a secured promissory note of \$9.0 million to Certus.

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The following table summarizes the fair value of net assets acquired and allocation of purchase price of IMG, measured as of the acquisition date:

<i>(Millions)</i>	Total	Useful Life
Purchase price		
Cash paid	\$ 250.8	
Series A redeemable preference shares	100.0	
Contingent consideration	43.1	
Total enterprise value	393.9	
Less: Debt assumed	(129.5)	
Total purchase price (a)	\$ 264.4	
Assets acquired		
Total investments	\$ 41.0	
Cash	10.5	
Accrued investment income	0.2	
Insurance and reinsurance premiums receivable	1.6	
Deferred acquisition costs	2.9	
Other assets	12.9	
Intangible asset – distribution relationships	91.0	13.0 years
Intangible asset – customer relationships	17.0	12.5 years
Intangible asset – trade names	27.0	
Intangible asset – technology	10.0	5.0 years
Total assets acquired	214.1	
Liabilities assumed		
Loss and loss adjustment expense reserves	14.3	
Unearned insurance and reinsurance premiums	9.8	
Deferred tax liability	55.9	
Debt	129.5	
Other liabilities	18.2	
Total liabilities assumed	227.7	
Net assets acquired (b)	(13.6)	
Goodwill (a)-(b)	\$ 278.0	

The goodwill balance is primarily attributed to IMG's assembled workforce and access to the supplemental healthcare and medical travel insurance market. None of the goodwill recognized is expected to be deductible for income tax purposes.

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The IMG Earnout is payable, if earnings before interest expense, taxes, depreciation and amortization (“EBITDA”) of IMG exceed amounts defined in the purchase agreement for each year during the three year period ending December 31, 2019. As part of the Series A preference shares redemption agreement, the parties agreed that any remaining contingent consideration in respect of the IMG acquisition, will be paid in cash, not in Series A redeemable preference shares, following the redemption, as previously contemplated in the agreement in respect of the IMG acquisition. On November 8, 2018, the Company paid \$3.5 million to IMGAH for the contingent payment for the 2017 calendar year. At December 31, 2018 the IMG Earnout liability was remeasured at a fair value of \$19.9 million and is reflected within Other liabilities. As a result of the remeasurement of the IMG Earnout, Sirius Group recorded \$6.1 and \$13.6 million in Gain on revaluation of contingent consideration in 2018 and 2017, respectively.

During 2018, Sirius Group obtained \$136.0 million, or 7%, of its gross written premiums through IMG. During 2017 and 2016, Sirius Group received 11% and 14% of its gross written premiums through IMG, respectively.

During 2017, IMG’s revenues and net income after acquisition, inclusive of intangible asset amortization expenses, were \$79.6 million and \$13.3 million, respectively.

Series A Redeemable Preference Shares

As a part of the IMG acquisition, Sirius Group issued Series A redeemable preference shares, with 150,000 shares authorized and 100,000 issued at issuance date, with liquidation preference of \$1,000 per preference share (“Liquidation Preference”). Up to 50,000 Series A redeemable preference shares were available pursuant to the IMG Earnout. The Series A redeemable preference shares participated in dividends on an as-converted basis with common shares and other shares junior to the Series A redeemable preference shares.

On November 5, 2018, the Company, redeemed all of the outstanding Series A redeemable preference shares, which were held by IMGAH, for \$95.0 million in cash. Effective as of the completion of the redemption, the parties terminated the registration rights agreement and the shareholder’s agreement between the Company and IMGAH.

The Liquidation Preference of the Series A redeemable preference shares was reflected as Mezzanine equity in the balance sheet as at December 31, 2017. It was not subject to fair value or remeasurement, except for accrued dividends. At December 31, 2017, the Series A redeemable preference shares are carried at \$106.1 million.

Supplemental Pro Forma Information

The following table presents unaudited pro forma consolidated information for the years ended December 31, 2017 and 2016 and assumes the IMG acquisition occurred on January 1, 2016. The pro forma financial information is presented for informational purposes only and does not necessarily reflect the results that would have occurred had the acquisition taken place on January 1, 2016, nor is it necessarily indicative of future results. It does not consider the impact of possible revenue enhancements, expense efficiencies, or synergies that may result from the acquisition of IMG.

<i>(Millions)</i>	Unaudited Pro Forma for the Years Ended December 31,	
	2017	2016
Total revenues	\$ 1,176.8	\$ 1,096.0
Net income	\$ (173.2)	\$ (4.6)

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Armada

On April 3, 2017, Sirius Group purchased 100% of Armada and its subsidiaries from Armada Enterprises LLC (“Seller”). Armada is an insurance services and health care technology business that creates specialty employee benefit products and serves to strengthen health care coverage and access. The purchase of Armada was undertaken to expand and accelerate the growth of Sirius Group’s Global A&H platform in the United States, to diversify Sirius Group’s revenues to include fee based revenues, and to gain access to Armada’s distribution networks. Total consideration for the acquisition consisted of (1) the purchase of 50% of Armada by Sirius Group for \$123.4 million, and (2) the redemption by Armada of the remaining 50% held by Seller for a redemption price based on a three year contingent earn-out mechanism that could result in an additional payment to Seller of up to \$125.0 million (“Armada Earnout”), with fair value of \$79.1 million at acquisition date, resulting in a total enterprise value of \$202.5 million.

The following table summarizes the fair value of net assets acquired and allocation of purchase price of Armada, measured as of the acquisition date:

<i>(Millions)</i>	Total	Useful Life
Purchase price		
Cash paid	\$ 123.4	
Contingent consideration	79.1	
Total purchase price (a)	\$ 202.5	
Assets acquired		
Restricted cash	\$ 10.4	
Other assets	1.2	
Intangible asset – distribution relationships	60.0	22.5 years
Intangible asset – trade name	16.0	7.5 years
Intangible asset – technology	5.5	9.0 years
Total assets acquired	93.1	
Liabilities assumed		
Other liabilities	13.3	
Total liabilities assumed	13.3	
Net assets acquired (b)	79.8	
Goodwill (a)-(b)	\$ 122.7	

The goodwill balance is primarily attributed to Armada’s assembled workforce and access to the supplemental healthcare insurance market, and additional synergies to be realized in the future. The goodwill recognized is expected to be deductible for income tax purposes in the future. The contingent consideration is payable if EBITDA of Armada exceeds amounts defined in the redemption agreement. The Armada Earnout can be settled in the Company’s common shares, subject to certain criteria. The Armada Earnout is subject to fair value measurement, which is a component of net income and reflected in Gain on revaluation of contingent consideration. In December 2017, Sirius Group settled approximately 82% of the Armada Earnout with the Seller for \$30.6 million. At December 31, 2017, the remaining Armada Earnout liability was remeasured at a fair value of \$13.3 million and is reflected in Other liabilities. As a result of the settlement and remeasurement of the Armada Earnout, Sirius Group recorded a \$35.2 million gain in Gain on revaluation of contingent consideration in 2017. During 2018, Sirius Group settled \$0.9 million of the Armada Earnout. At December 31, 2018 the Armada Earnout was remeasured at a fair value of \$8.9 million and is reflected within Other liabilities. As a result of the remeasurement of the Armada Earnout, Sirius Group recorded a \$3.5 million Gain on revaluation of contingent consideration in 2018.

During 2017, Armada’s revenues and net income after acquisitions, inclusive of intangible asset amortization expenses, were \$24.7 million and \$9.7 million, respectively.

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The following table presents unaudited pro forma consolidated information for the years ended December 31, 2017 and 2016 and assumes the Armada acquisition occurred on January 1, 2016. The pro forma financial information is presented for informational purposes only and does not necessarily reflect the results that would have occurred had the acquisition taken place on January 1, 2016, nor is it necessarily indicative of future results. It does not consider the impact of possible revenue enhancements, expense efficiencies, or synergies that may result from the acquisition of Armada.

<i>(Millions)</i>	Unaudited Pro Forma for the Years Ended December 31,	
	2017	2016
Total revenues	\$ 1,144.6	\$ 1,032.6
Net income	\$ (155.1)	\$ 45.9

Mount Beacon

On May 17, 2016, Sirius Global Solutions Holding Company (“Sirius Global Solutions”) and Florida Specialty Insurance Company partnered to form Florida Specialty Acquisition LLC (“FSA”). Sirius Global Solutions provided \$15.8 million to acquire 100% of FSA’s common shares. FSA acquired Mount Beacon Holdings, LLC and its subsidiaries including Mount Beacon Insurance Company (“Mount Beacon”). FSA was dissolved on September 21, 2017.

OneBeacon

On April 18, 2016, Sirius Group sold its investment in OneBeacon Insurance Group, Ltd. (“OneBeacon”) at fair value to White Mountains Insurance Group (“White Mountains” or “former parent”) for proceeds of \$178.3 million in connection with the sale of Sirius Group to CM International Holding Pte. Ltd (“CMIG International”) and recorded \$22.1 million of Additional paid-in surplus for the excess of fair value over the equity method carrying value of OneBeacon. (See **Note 19**.)

Ashmere

On April 18, 2016, Sirius Global Solutions sold Ashmere Insurance Company to White Mountains for proceeds of \$18.5 million in connection of the sale of Sirius Group by White Mountains.

Symetra

On February 1, 2016, Sirius Group sold its investment in Symetra Financial Corporation (“Symetra”) for proceeds of \$559.8 million, or \$32.00 per share.

Note 4. Segment information

Sirius Group classifies its business into four reportable segments – Global Property, Global A&H, Specialty and Casualty (“Specialty & Casualty”), and Runoff and Other (“Runoff & Other”). The accounting policies of the reportable segments are the same as those used for the preparation of the Company’s consolidated financial statements.

The Company’s Global Property, Global A&H, Specialty & Casualty, and Runoff & Other reportable segments each have managers who are responsible for the overall profitability of their respective segments and who are directly accountable to the Company’s chief operating decision maker, the Chief Executive Officer (“CEO”) of the Company. The CEO assesses segment operating performance, allocates capital, and makes resource allocation decisions based on Technical profit (loss), Underwriting profit (loss), and Underwriting profit (loss), including net service fee revenue.

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Segment results are shown prior to corporate eliminations. Corporate eliminations are shown to reconcile to consolidated Technical profit (loss), consolidated Underwriting profit (loss) and consolidated Underwriting profit (loss), including net service fee revenue.

Sirius Group does not allocate its assets by segment, with the exception of goodwill and intangible assets, and, accordingly, investment income is not allocated to each segment.

Global Property

Global Property consists of Sirius Group's underwriting lines of business which offer other property insurance and reinsurance, property catastrophe excess reinsurance, and agriculture reinsurance on a worldwide basis:

Other Property—Sirius Group participates in the broker market for property reinsurance treaties written on a proportional and excess of loss basis. For Sirius Group's international business, the book consists of treaty, written on both a proportional and excess of loss basis, facultative, and primary business, primarily in Europe, Asia and Latin America. In the United States, the book predominantly centers on significant participations on proportional and excess of loss treaties mostly in the excess and surplus lines segment of the market.

Property Catastrophe Excess—Property catastrophe excess of loss reinsurance treaties cover losses from catastrophic events. Sirius Group writes a worldwide book with the largest concentration of exposure in Europe and the United States. The U.S. book written in Bermuda has a national account focus supporting principally the lower and/or middle layers of large capacity programs. Additionally, Stockholm writes a U.S. book mainly consisting of select small regional and standard lines carriers. The exposures written in the international book are diversified across many countries, regions, perils and layers.

Agriculture—Sirius Group provides stop-loss reinsurance coverage to companies writing U.S. government-sponsored multi-peril crop insurance ("MPCI"). Sirius Group's participation is net of the government's stop-loss reinsurance protection. Sirius Group also provides coverage for crop-hail and certain named perils when bundled with MPCI business. Sirius Group also writes agriculture business outside of the United States.

Global A&H

The Global A&H operating segment consists of Sirius Group's insurance, reinsurance, and managing general underwriting ("MGU") units (which include Armada and IMG) that offer accident and health products on a worldwide basis:

Accident and Health insurance and reinsurance—Sirius Group is an insurer of accident and health insurance business in the United States, either on an admitted or surplus lines basis, as well as international business written through wholly-owned IMG. Armada business is written on an admitted basis. Sirius Group also writes proportional and excess reinsurance treaties covering employer medical stop-loss for per person (specific) and per employer (aggregate) exposures. In addition, Sirius Group writes some medical, health, travel and personal accident coverages written on a treaty, facultative and primary basis.

Specialty & Casualty

Specialty & Casualty consists of Sirius Group's insurance and reinsurance underwriting units which offer specialty & casualty product lines on a worldwide basis. Specialty lines represent unique risks where the more difficult and unusual risks are underwritten. Because specialty lines tend to be the more unusual or higher risks, much of the market is characterized by a high degree of specialization:

Aviation & Space provides aviation insurance that covers loss of or damage to an aircraft and the aircraft operations' liability to passengers, cargo and hull as well as to third parties. Additionally, liability arising out of non-aircraft operations such as hangars, airports and aircraft products can be covered. Space insurance primarily covers loss of or damage to a satellite during launch and in orbit. The book consists of treaty, written on both a proportional and excess of loss basis, facultative, and primary business.

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Marine provides marine reinsurance, primarily written on an excess of loss and proportional basis. Coverage offered includes damage to ships and goods in transit, marine liability lines, and offshore energy industry insurance. Sirius Group also writes yacht business, both on reinsurance and a primary basis. The marine portfolio is diversified across many countries and regions.

Trade Credit writes credit and bond reinsurance worldwide. The bulk of the business is traditional short-term commercial credit insurance, covering pre-agreed domestic and export sales of goods and services with typical coverage periods of 60 to 120 days. Losses under these policies are correlated to adverse changes in a respective country's gross national product.

Contingency underwrites contingency insurance for event cancellation and non-appearance, primarily on a primary policy and facultative reinsurance basis. Additionally, coverage for liabilities arising from contractual bonus, prize redemption and over-redemption is also offered. The contingency portfolio is diversified across many countries and regions.

Casualty underwrites a cross section of all casualty lines, including general liability, umbrella, auto, workers compensation, professional liability, and other specialty classes, written on a proportional, excess of loss, and primary basis.

Surety underwrites commercial surety bonds, including non-construction contract bonds, in a broad range of business segments in the United States.

Environmental underwrites a pure environmental insurance book in the United States consisting of four core products that revolve around pollution coverage, which are premises pollution liability, contractor's pollution liability, contractor's pollution and professional liability.

Runoff & Other

Runoff & Other consists of asbestos risks, environmental risks and other long-tailed liability exposures, and underwriting results from Sirius Global Solutions Holding Company ("Sirius Global Solutions") and its subsidiaries. Sirius Global Solutions is a Connecticut-based division of Sirius Group specializing in the acquisition and management of runoff liabilities for insurance and reinsurance companies, both in the United States and internationally.

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The following tables summarize the segment results for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	For the year ended December 31, 2018					
	Global Property	Global A&H	Specialty & Casualty	Runoff & Other	Corporate Elimination	Total
Gross written premiums	\$ 962.4	\$ 500.6	\$ 325.1	\$ 32.9	\$ -	\$ 1,821.0
Net written premiums	\$ 655.0	\$ 379.8	\$ 292.7	\$ 29.6	\$ -	\$ 1,357.1
Net earned insurance and reinsurance premiums	\$ 636.0	\$ 357.6	\$ 239.5	\$ 29.2	\$ -	\$ 1,262.3
Loss and allocated LAE ⁽¹⁾	(518.2)	(189.0)	(142.9)	(13.0)	-	(863.1)
Insurance and reinsurance acquisition expenses	(121.1)	(109.7)	(65.5)	(2.8)	43.7	(255.4)
Technical profit (loss)	(3.3)	58.9	31.1	13.4	43.7	143.8
Unallocated LAE ⁽²⁾	(10.5)	(5.9)	(5.9)	(1.6)	(13.0)	(36.9)
Other underwriting expenses	(68.2)	(27.4)	(28.2)	(6.3)	(16.1)	(146.2)
Underwriting (loss) income	(82.0)	25.6	(3.0)	5.5	14.6	(39.3)
Service fee revenue ⁽³⁾	-	115.7	-	-	(44.7)	71.0
Managing general underwriter unallocated LAE ⁽⁴⁾	-	(14.0)	-	-	14.0	-
Managing general underwriter other underwriting expenses ⁽⁵⁾	-	(16.1)	-	-	16.1	-
General and administrative expenses, MGU + Runoff & Other ⁽⁶⁾	-	(53.6)	-	(3.1)	-	(56.7)
Underwriting (loss) income, including net service fee income	(82.0)	57.6	(3.0)	2.4	-	(25.0)
Net investment income						71.4
Net realized investment gains (losses)						2.3
Net unrealized investment (losses) gains						(23.2)
Net foreign exchange gains (losses)						22.7
Gain on revaluation of contingent consideration						9.6
Other revenue ⁽⁷⁾						41.7
General and administrative expenses ⁽⁸⁾						(21.2)
Intangible asset amortization expenses						(15.8)
Impairment of intangible assets						(8.0)
Interest expense on debt						(30.8)
Pre-tax income (loss)						\$ 23.7
Underwriting Ratios						
Loss ratio	83.1%	54.5%	62.1%	NM	NM	71.3%
Acquisition expense ratio	19.0%	30.7%	27.3%	NM	NM	20.2%
Other underwriting expense ratio	10.7%	7.7%	11.8%	NM	NM	11.6%
Combined ratio ⁽⁹⁾	112.8%	92.9%	101.2%	NM	NM	103.1%
Goodwill and intangible assets ⁽¹⁰⁾	\$ -	\$ 588.1	\$ -	\$ 8.1	\$ -	\$ 596.2

⁽¹⁾Loss and allocated LAE are part of Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income (the sum of Loss and allocated LAE and Unallocated LAE is equal to Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income).

⁽²⁾Unallocated LAE are part of Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income (the sum of Loss and allocated LAE and Unallocated LAE is equal to Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income).

⁽³⁾Service fee revenue is part of Other revenue on the Consolidated Statements of (Loss) Income (the sum of Service fee revenue and Other revenue is equal to Other revenue on the Consolidated Statements of (Loss) Income).

⁽⁴⁾Managing general underwriter unallocated LAE represents IMG and Armada generated operating expenses following their integration with the Accident and Health insurance and reinsurance underwriting unit, representing costs associated with the claims process. In prior periods, all Armada and IMG expenses were disclosed within General and administrative expenses, MGU + Runoff & Other.

⁽⁵⁾Managing general underwriter other underwriting expenses represent IMG and Armada generated operating expenses following their integration with the Accident and Health insurance and reinsurance underwriting unit, representing costs associated with the underwriting process. In prior periods, all Armada and IMG expenses were disclosed within General and administrative expenses, MGU + Runoff & Other.

⁽⁶⁾General and administrative expenses, MGU + Runoff & Other is part of General and administrative expenses on the Consolidated Statements of (Loss) Income (the sum of General and administrative expenses, MGU + Runoff & Other and General and administrative expenses is equal to General and administrative expenses on the Consolidated Statements of (Loss) Income).

⁽⁷⁾Other revenue is presented net of Service fee revenue and is comprised mainly of the right of indemnification, gains (losses) from derivatives (see Note 13), and the termination of the call option to purchase The Phoenix Holdings, Ltd. (the sum of Service fee revenue and Other revenue is equal to Other revenue on the Consolidated Statements of (Loss) Income).

⁽⁸⁾General and administrative expenses are presented net of General and administrative expenses, MGU + Runoff & Other (the sum of General and administrative expenses, MGU + Runoff & Other and General and administrative expenses is equal to General and administrative expenses on the Consolidated Statements of (Loss) Income).

⁽⁹⁾Ratios considered not meaningful ("NM") to Runoff & Other and Corporate Elimination.

⁽¹⁰⁾Sirius Group does not allocate its assets by segment, with the exception of goodwill and intangible assets.

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(Millions)	For the year ended December 31, 2017					
	Global Property	Global A&H	Specialty & Casualty	Runoff & Other	Corporate Elimination	Total
Gross written premiums	\$ 732.1	\$ 494.6	\$ 218.1	\$ (5.5)	\$ -	\$ 1,439.3
Net written premiums	\$ 556.2	\$ 341.5	\$ 193.0	\$ (0.5)	\$ -	\$ 1,090.2
Net earned insurance and reinsurance premiums	\$ 564.4	\$ 306.8	\$ 163.2	\$ 0.9	\$ -	\$ 1,035.3
Loss and allocated LAE ⁽¹⁾	(499.5)	(175.0)	(99.6)	(11.0)	-	(785.1)
Insurance and reinsurance acquisition expenses	(112.9)	(89.6)	(41.1)	3.5	42.9	(197.2)
Technical profit (loss)	(48.0)	42.2	22.5	(6.6)	42.9	53.0
Unallocated LAE ⁽²⁾	(12.9)	(4.8)	(5.3)	(3.1)	-	(26.1)
Other underwriting expenses	(63.3)	(23.4)	(16.5)	(2.9)	-	(106.1)
Underwriting (loss) income	(124.2)	14.0	0.7	(12.6)	42.9	(79.2)
Service fee revenue ⁽³⁾	-	65.9	-	-	(42.9)	23.0
Managing general underwriter unallocated LAE ⁽⁴⁾	-	-	-	-	-	-
Managing general underwriter other underwriting expenses ⁽⁵⁾	-	-	-	-	-	-
General and administrative expenses, MGU + Runoff & Other ⁽⁶⁾	-	(44.8)	-	(4.0)	-	(48.8)
Underwriting (loss) income, including net service fee income	(124.2)	35.1	0.7	(16.6)	-	(105.0)
Net investment income						56.8
Net realized investment gains (losses)						(27.2)
Net unrealized investment (losses) gains						(10.5)
Net foreign exchange gains (losses)						9.2
Gain on revaluation of contingent consideration						48.8
Other revenue ⁽⁷⁾						(1.3)
General and administrative expenses ⁽⁸⁾						(43.1)
Intangible asset amortization expenses						(10.2)
Impairment of intangible assets						(5.0)
Interest expense on debt						(22.4)
Pre-tax income (loss)						\$ (109.9)
Underwriting Ratios						
Loss ratio	90.8%	58.6%	64.3%	NM	NM	78.4%
Acquisition expense ratio	20.0%	29.2%	25.2%	NM	NM	19.0%
Other underwriting expense ratio	11.2%	7.6%	10.1%	NM	NM	10.2%
Combined ratio ⁽⁹⁾	122.0%	95.4%	99.6%	NM	NM	107.6%
Goodwill and intangible assets ⁽¹⁰⁾	\$ -	\$ 612.3	\$ -	\$ 5.0	\$ -	\$ 617.3

⁽¹⁾Loss and allocated LAE are part of Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income (the sum of Loss and allocated LAE and Unallocated LAE is equal to Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income).

⁽²⁾Unallocated LAE are part of Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income (the sum of Loss and allocated LAE and Unallocated LAE is equal to Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income).

⁽³⁾Service fee revenue is part of Other revenue on the Consolidated Statements of (Loss) Income (the sum of Service fee revenue and Other revenue is equal to Other revenue on the Consolidated Statements of (Loss) Income).

⁽⁴⁾Managing general underwriter unallocated LAE represents IMG and Armada generated operating expenses following their integration with the Accident and Health insurance and reinsurance underwriting unit, representing costs associated with the claims process. In prior periods, all Armada and IMG expenses were disclosed within General and administrative expenses, MGU + Runoff & Other.

⁽⁵⁾Managing general underwriter other underwriting expenses represent IMG and Armada generated operating expenses following their integration with the Accident and Health insurance and reinsurance underwriting unit, representing costs associated with the underwriting process. In prior periods, all Armada and IMG expenses were disclosed within General and administrative expenses, MGU + Runoff & Other.

⁽⁶⁾General and administrative expenses, MGU + Runoff & Other is part of General and administrative expenses on the Consolidated Statements of (Loss) Income (the sum of General and administrative expenses, MGU + Runoff & Other and General and administrative expenses is equal to General and administrative expenses on the Consolidated Statements of (Loss) Income).

⁽⁷⁾Other revenue is presented net of Service fee revenue and is comprised mainly of gains (losses) from derivatives (see Note 13) (the sum of Service fee revenue and Other revenue is equal to Other revenue on the Consolidated Statements of (Loss) Income).

⁽⁸⁾General and administrative expenses are presented net of General and administrative expenses, MGU + Runoff & Other (the sum of General and administrative expenses, MGU + Runoff & Other and General and administrative expenses is equal to General and administrative expenses on the Consolidated Statements of (Loss) Income).

⁽⁹⁾Ratios considered not meaningful ("NM") to Runoff & Other and Corporate Elimination.

⁽¹⁰⁾Sirius Group does not allocate its assets by segment, with the exception of goodwill and intangible assets.

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<i>(Millions)</i>	For the year ended December 31, 2016					
	Global Property	Global A&H	Specialty & Casualty	Runoff & Other	Corporate Elimination	Total
Gross written premiums	\$ 634.9	\$ 436.1	\$ 170.7	\$ 27.3	\$ -	\$ 1,269.0
Net written premiums	\$ 514.2	\$ 277.6	\$ 137.4	\$ 8.9	\$ -	\$ 938.1
Net earned insurance and reinsurance premiums	\$ 481.8	\$ 272.2	\$ 135.2	\$ 0.9	\$ -	\$ 890.1
Loss and allocated LAE ⁽¹⁾	(256.6)	(164.8)	(71.2)	(2.6)	-	(495.2)
Insurance and reinsurance acquisition expenses	(100.3)	(71.7)	(37.7)	(0.6)	-	(210.3)
Technical profit (loss)	124.9	35.7	26.3	(2.3)	-	184.6
Unallocated LAE ⁽²⁾	(11.9)	(6.8)	(4.4)	(1.0)	-	(24.1)
Other underwriting expenses	(65.1)	(23.3)	(15.1)	(3.8)	-	(107.3)
Underwriting (loss) income	47.9	5.6	6.8	(7.1)	-	53.2
Service fee revenue ⁽³⁾	-	-	-	4.3	-	4.3
Managing general underwriter unallocated LAE ⁽⁴⁾	-	-	-	-	-	-
Managing general underwriter other underwriting expenses ⁽⁵⁾	-	-	-	-	-	-
General and administrative expenses, MGU + Runoff & Other ⁽⁶⁾	-	-	-	(6.2)	-	(6.2)
Underwriting (loss) income, including net service fee income	47.9	5.6	6.8	(9.0)	-	51.3
Net investment income						56.2
Net realized investment gains (losses)						288.3
Net unrealized investment (losses) gains						(238.2)
Net foreign exchange gains (losses)						(11.0)
Gain on revaluation of contingent consideration						-
Other revenue ⁽⁷⁾						4.8
General and administrative expenses ⁽⁸⁾						(78.9)
Intangible asset amortization expenses						-
Impairment of intangible assets						-
Interest expense on debt						(34.6)
Pre-tax income (loss)						\$ 37.9
Underwriting Ratios						
Loss ratio	55.7%	63.0%	55.9%	NM	NM	58.3%
Acquisition expense ratio	20.8%	26.3%	27.9%	NM	NM	23.6%
Other underwriting expense ratio	13.5%	8.6%	11.2%	NM	NM	12.1%
Combined ratio ⁽⁹⁾	90.0%	97.9%	95.0%	NM	NM	94.0%
Goodwill and intangible assets ⁽¹⁰⁾	\$ -	\$ -	\$ -	\$ 5.0	\$ -	\$ 5.0

⁽¹⁾Loss and allocated LAE are part of Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income (the sum of Loss and allocated LAE and Unallocated LAE is equal to Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income).

⁽²⁾Unallocated LAE are part of Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income (the sum of Loss and allocated LAE and Unallocated LAE is equal to Loss and loss adjustment expenses on the Consolidated Statements of (Loss) Income).

⁽³⁾Service fee revenue is part of Other revenue on the Consolidated Statements of (Loss) Income (the sum of Service fee revenue and Other revenue is equal to Other revenue on the Consolidated Statements of (Loss) Income).

⁽⁴⁾Managing general underwriter unallocated LAE represents IMG and Armada generated operating expenses following their integration with the Accident and Health insurance and reinsurance underwriting unit, representing costs associated with the claims process. In prior periods, all Armada and IMG expenses were disclosed within General and administrative expenses, MGU + Runoff & Other.

⁽⁵⁾Managing general underwriter other underwriting expenses represent IMG and Armada generated operating expenses following their integration with the Accident and Health insurance and reinsurance underwriting unit, representing costs associated with the underwriting process. In prior periods, all Armada and IMG expenses were disclosed within General and administrative expenses, MGU + Runoff & Other.

⁽⁶⁾General and administrative expenses, MGU + Runoff & Other is part of General and administrative expenses on the Consolidated Statements of (Loss) Income (the sum of General and administrative expenses, MGU + Runoff & Other and General and administrative expenses is equal to General and administrative expenses on the Consolidated Statements of (Loss) Income).

⁽⁷⁾Other revenue is presented net of Service fee revenue and is comprised mainly of gains (losses) from derivatives (see Note 13) (the sum of Service fee revenue and Other revenue is equal to Other revenue on the Consolidated Statements of (Loss) Income).

⁽⁸⁾General and administrative expenses are presented net of General and administrative expenses, MGU + Runoff & Other (the sum of General and administrative expenses, MGU + Runoff & Other and General and administrative expenses is equal to General and administrative expenses on the Consolidated Statements of (Loss) Income).

⁽⁹⁾Ratios considered not meaningful ("NM") to Runoff & Other and Corporate Elimination.

⁽¹⁰⁾Sirius Group does not allocate its assets by segment, with the exception of goodwill and intangible assets.

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The following tables provide summary information regarding net premiums written by client location and underwriting location by reportable segment for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	For the year ended December 31, 2018				
	Global Property	Global A&H	Specialty & Casualty	Runoff & Other	Total
Net written premiums by client location:					
United States	\$ 284.4	\$ 307.7	\$ 173.4	\$ 29.2	\$ 794.7
Europe	171.3	30.4	74.8	-	276.5
Canada, the Caribbean, Bermuda and Latin America	78.3	12.5	12.8	-	103.6
Asia and Other	121.0	29.2	31.7	0.4	182.3
Total net written premium by client location	\$ 655.0	\$ 379.8	\$ 292.7	\$ 29.6	\$ 1,357.1
Net written premiums by underwriting location:					
United States	\$ 31.6	\$ 109.5	\$ 9.8	\$ 29.2	\$ 180.1
Europe	304.9	224.9	162.3	-	692.1
Canada, the Caribbean, Bermuda and Latin America	270.6	44.7	118.5	-	433.8
Asia and Other	47.9	0.7	2.1	0.4	51.1
Total written premiums by underwriting location	\$ 655.0	\$ 379.8	\$ 292.7	\$ 29.6	\$ 1,357.1

<i>(Millions)</i>	For the year ended December 31, 2017				
	Global Property	Global A&H	Specialty & Casualty	Runoff & Other	Total
Net written premiums by client location:					
United States	\$ 220.8	\$ 284.5	\$ 59.0	\$ (1.2)	\$ 563.1
Europe	142.4	28.2	91.7	-	262.3
Canada, the Caribbean, Bermuda and Latin America	93.0	9.5	8.7	0.2	111.4
Asia and Other	100.0	19.3	33.6	0.5	153.4
Total net written premium by client location	\$ 556.2	\$ 341.5	\$ 193.0	\$ (0.5)	\$ 1,090.2
Net written premiums by underwriting location:					
United States	\$ 54.4	\$ 98.2	\$ (1.0)	\$ (1.1)	\$ 150.5
Europe	239.4	196.4	147.5	-	583.3
Canada, the Caribbean, Bermuda and Latin America	225.2	46.4	43.9	-	315.5
Asia and Other	37.2	0.5	2.6	0.6	40.9
Total written premiums by underwriting location	\$ 556.2	\$ 341.5	\$ 193.0	\$ (0.5)	\$ 1,090.2

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<i>(Millions)</i>	For the year ended December 31, 2016				
	Global Property	Global A&H	Specialty & Casualty	Runoff & Other	Total
Net written premiums by client location:					
United States	\$ 214.8	\$ 211.7	\$ 28.4	\$ 8.1	\$ 463.0
Europe	146.0	34.0	78.9	-	258.9
Canada, the Caribbean, Bermuda and Latin America	67.4	9.4	11.3	0.2	88.3
Asia and Other	86.0	22.5	18.8	0.6	127.9
Total net written premium by client location	\$ 514.2	\$ 277.6	\$ 137.4	\$ 8.9	\$ 938.1
Net written premiums by underwriting location:					
United States	\$ 192.9	\$ 111.6	\$ 6.5	\$ 8.3	\$ 319.3
Europe	238.3	164.2	128.8	-	531.3
Canada, the Caribbean, Bermuda and Latin America	50.1	1.4	-	-	51.5
Asia and Other	32.9	0.4	2.1	0.6	36.0
Total written premiums by underwriting location	\$ 514.2	\$ 277.6	\$ 137.4	\$ 8.9	\$ 938.1

Note 5. Reserves for unpaid losses and loss adjustment expenses

Sirius Group establishes loss and LAE reserves that are estimates of future amounts needed to pay claims and related expenses for events that have already occurred. Sirius Group also obtains reinsurance whereby another reinsurer contractually agrees to indemnify Sirius Group for all or a portion of the reinsurance risks underwritten by Sirius Group. Such arrangements, where one reinsurer provides reinsurance to another reinsurer, are usually referred to as “retrocessional reinsurance” arrangements. Sirius Group establishes estimates of amounts recoverable from retrocessional reinsurance in a manner consistent with the loss and LAE liability associated with reinsurance contracts offered to its customers (the “ceding companies”), net of an allowance for uncollectible amounts. Net reinsurance loss reserves represent loss and LAE reserves reduced by retrocessional reinsurance recoverable on unpaid losses.

In addition to those factors which give rise to inherent uncertainties in establishing loss and LAE reserves, the inherent uncertainties of estimating such reserves are even greater for the reinsurer, due primarily to: (1) the claim-tail for reinsurers and insurers working through MGUs being further extended because claims are first reported to either the original primary insurance company or the MGU and then through one or more intermediaries to reinsurers, (2) the diversity of loss development patterns among different types of reinsurance treaties, facultative contracts or direct insurance contracts, (3) the necessary reliance on the ceding companies, intermediaries, and MGUs for information regarding reported claims and (4) the differing reserving practices among ceding companies and MGUs.

As with insurance reserves, the process of estimating reinsurance reserves involves a considerable degree of judgment by management and, as of any given date, is inherently uncertain. Based on the above, such uncertainty may be larger relative to the reserves for a company that principally writes reinsurance compared to an insurance company, and certainty may take a longer time to emerge.

Upon notification of a loss from an insured (typically a ceding company), Sirius Group establishes case reserves, including LAE reserves, based upon Sirius Group’s share of the amount of reserves reported by the insured and Sirius Group’s independent evaluation of the loss. In cases where available information indicates that reserves reported by a ceding company are inadequate or excessive, Sirius Group establishes case reserves or incurred but not reported (“IBNR”) in excess of or below its share of the reserves reported by the ceding company. Also, in certain instances, Sirius Group may decide not to establish case reserves or IBNR, when the information available indicates that reserves established by ceding companies are not adequately supported. In addition, specific claim information reported by insureds or obtained through claim audits can alert management to emerging trends such as changing legal interpretations of coverage and liability, claims from unexpected sources or classes of business, and significant changes in the frequency or severity of individual claims where customary. Generally, ceding company audits are not customary outside the United States. This information is often used to supplement estimates of IBNR.

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Generally, initial actuarial estimates of IBNR reserves not related to a specific event are based on the loss ratio method applied to each class of business. Sirius Group regularly reviews the adequacy of its recorded reserves by using a variety of generally accepted actuarial methods, including historical incurred and paid loss development methods. Estimates of the initial expected ultimate losses involve management judgment and are based on historical information for that class of business, which includes loss ratios, market conditions, changes in pricing and conditions, underwriting changes, changes in claims emergence, and other factors that may influence expected ultimate losses. If actual loss activity differs substantially from expectations, an adjustment to recorded reserves may be warranted. As time passes, loss reserve estimates for a given year will rely more on actual loss activity and historical patterns than on initial loss ratio assumptions.

The actuarial methods are used to calculate a point estimate of loss and LAE reserves for each company within Sirius Group. These point estimates are then aggregated to produce an actuarial point estimate for Sirius Group. Once a point estimate is established, Sirius Group's actuaries estimate loss reserve ranges to measure the sensitivity of the actuarial assumptions used to set the point estimates. These ranges are calculated from historical variations in loss ratios, payment, and reporting patterns by class and type of business. Management then establishes an estimate for the carried loss and LAE reserves shown in the financial statement. The management selection is within the range of loss reserve estimates provided by Sirius Group's actuaries.

Loss and Loss Adjustment Expense Reserve Summary

The following table summarizes the loss and LAE reserve activities of Sirius Group for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018	2017	2016
Gross beginning balance	\$ 1,898.5	\$ 1,620.1	\$ 1,644.4
Less beginning reinsurance recoverable on unpaid losses	(319.7)	(291.5)	(283.1)
Net loss and LAE reserve balance	1,578.8	1,328.6	1,361.3
Loss and LAE reserves acquired ⁽¹⁾	0.2	14.3	9.8
Losses and LAE incurred relating to:			
Current year losses	907.3	811.8	583.0
Prior years losses	(7.3)	(0.6)	(63.7)
Total net incurred losses and LAE	900.0	811.2	519.3
Accretion of fair value adjustment to net loss and LAE reserves	0.1	0.1	0.5
Foreign currency translation adjustment to net loss and LAE reserves	(20.9)	36.8	(14.0)
Loss and LAE paid relating to:			
Current year losses	251.4	222.8	207.6
Prior years losses	540.3	389.5	340.7
Total loss and LAE payments	791.7	612.3	548.3
Net ending balance	1,666.5	1,578.8	1,328.6
Plus ending reinsurance recoverable on unpaid losses	350.2	319.7	291.5
Gross ending balance	\$ 2,016.7	\$ 1,898.5	\$ 1,620.1

⁽¹⁾ Loss and LAE reserves acquired in 2018 relate to Sirius Group's purchase of WRM America; 2017 relate to Sirius Group's purchase of IMG; 2016 relates to Sirius Group's purchase of Mount Beacon.

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Loss and LAE development - 2018

During the year ended December 31, 2018, Sirius Group had net favorable prior year loss reserve development of \$7.3 million. During 2018, Sirius Group strengthened its Global Property loss reserves by \$43.6 million in Other Property (\$34.9 million) and Property Catastrophe Excess (\$13.2 million), resulting from higher than expected loss reporting from recent accident years, including \$21.4 million from Hurricanes Harvey, Irma, and Maria. Specialty & Casualty had net favorable loss reserve development of \$18.3 million, primarily driven by Aviation & Space (\$7.9 million) and Marine (\$6.8 million). The net favorable prior year loss reserve development of \$17.6 million for Runoff & Other included reductions in World Trade Center claims in response to revised information received by the Company and runoff Casualty reserves. Global A&H recorded \$15.0 million of net favorable loss reserve development due to lower than expected claims activity.

Loss and LAE development - 2017

During the year ended December 31, 2017, Sirius Group had net favorable prior year loss reserve development of \$0.6 million. During 2017, Sirius Group strengthened its asbestos loss reserves by \$59.0 million, which was offset by reductions of other runoff claims reserves of \$45.7 million, which is reflected in the Runoff & Other segment. The Specialty & Casualty segment had net favorable prior year loss development of \$12.1 million, which is comprised of the Marine (\$5.4 million), Trade credit (\$4.2 million), Aviation & Space (\$1.7 million), and Contingency (\$0.8 million) operating segments.

Loss and LAE development - 2016

During the year ended December 31, 2016, Sirius Group had net favorable prior year loss reserve development of \$63.7 million. The major reductions in loss reserve estimates were recognized in the Global Property (\$26.8 million) and Specialty & Casualty (\$24.8 million) segments. The decrease in Global Property was driven by Other Property (\$23.4 million) due primarily to reductions in the ultimate loss estimates for natural catastrophes that occurred between 2010 and 2015 due to lower than expected claims activity. The decrease in Specialty & Casualty was mainly due to Aviation & Space and Marine with decreases of \$11.5 million and \$7.2 million, respectively. Asbestos losses of \$13.6 million in 2016 were offset by other long tail favorable loss reserve development in Runoff & Other.

Fair value adjustment to loss and LAE reserves

In connection with purchase accounting for acquisitions, Sirius Group is required to adjust loss and LAE reserves and the related reinsurance recoverables to fair value on their respective acquired balance sheets. The net reduction to loss and LAE reserves is being recognized through an income statement charge ratably with and over the period the claims are settled and is recorded within General and administrative expenses. Sirius Group recognized \$0.1 million, \$0.1 million, and \$0.5 million of such charges during 2018, 2017, and 2016, respectively. As of December 31, 2018, the pre-tax un-accreted adjustment was \$2.7 million.

Asbestos and Environmental Loss and Loss Adjustment Expense Reserve Activity

In the Runoff & Other segment, Sirius Group's reserves include provisions made for claims that assert damages from asbestos and environmental ("A&E") related exposures primarily at Sirius America. Asbestos claims relate primarily to injuries asserted by those who came in contact with asbestos or products containing asbestos. Environmental claims relate primarily to pollution and related clean-up cost obligations, particularly as mandated by U.S. federal and state environmental protection agencies. In addition to the factors described above regarding the reserving process, Sirius Group estimates its A&E reserves based upon, among other factors, facts surrounding reported cases and exposures to claims, such as policy limits and deductibles, current law, past and projected claim activity, and past settlement values for similar claims, as well as analysis of industry studies and events, such as recent settlements and asbestos-related bankruptcies. The cost of administering A&E claims, which is an important factor in estimating loss reserves, tends to be higher than in the case of non-A&E claims due to the higher legal costs typically associated with A&E claims.

Sirius Group's A&E exposure is primarily from reinsurance contracts written between 1974 through 1985 by acquired companies, mainly MONY Reinsurance Company, which was acquired in 1991, and Christiania General Insurance Company, which was acquired in 1996. The exposures are mostly higher layer excess of loss treaty and facultative coverages with relatively low limits exposed for each claim.

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The acquisition of companies having modest portfolios of A&E exposure has been typical of several prior Sirius Global Solutions transactions and is likely to be an element of at least some future acquisitions. However, the acquisition of new A&E liabilities is undertaken only after careful due diligence and utilizing conservative reserving assumptions in relation to industry benchmarks. In the case of portfolios acquired previously by Sirius Global Solutions, the exposures arise almost entirely from old assumed reinsurance contracts having small limits of liability.

Sirius Group recorded a decrease of \$6.9 million, an increase of \$59.0 million, and an increase of \$13.6 million of asbestos-related incurred losses and LAE on its asbestos reserves in 2018, 2017, and 2016, respectively. The 2018 decrease was driven by favorable loss reserve development primarily due to benign claims activity on the Sirius Global Solutions portfolio. The 2017 increase was primarily a result of an in-depth analysis of Sirius Group's loss reserves undertaken in the second quarter of 2017. The 2016 increase was primarily the result of management's monitoring of a variety of metrics including actual paid and reported claims activity.

Sirius Group recorded \$4.0 million, \$6.1 million, and \$0.4 million of environmental losses in 2018, 2017, and 2016, respectively, on its already existing reserves.

Sirius Group's net reserves for A&E losses were \$200.3 million and \$220.6 million as of December 31, 2018 and 2017, respectively. Sirius Group's asbestos three-year net paid survival ratio was approximately 10.2 years as of December 31, 2018 and 2017. Sirius Group's environmental three-year net paid survival ratio was approximately 4.2 years and 4.3 years as of December 31, 2018 and 2017, respectively.

Sirius Group's reserves for A&E losses as of December 31, 2018 represent management's best estimate of its ultimate liability based on information currently available. However, as case law expands, medical and clean-up costs increase, and industry settlement practices change, Sirius Group may be subject to asbestos and environmental losses beyond currently estimated amounts. Sirius Group cannot reasonably estimate at the present time loss reserve additions arising from any such future adverse developments and cannot be sure that allocated loss reserves will be sufficient to cover additional liability arising from any such adverse developments.

The following table summarizes reported A&E loss and LAE reserve activities (gross and net of reinsurance) for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018		2017		2016	
	Gross	Net	Gross	Net	Gross	Net
Asbestos:						
Beginning balance	\$ 259.2	\$ 204.6	\$ 187.0	\$ 166.4	\$ 193.5	\$ 172.9
Incurred losses and LAE	(6.9)	(6.9)	96.9	59.0	15.3	13.6
Paid losses and LAE	(15.5)	(13.3)	(24.7)	(20.8)	(21.8)	(20.1)
Ending balance	236.8	184.4	259.2	204.6	187.0	166.4
Environmental:						
Beginning balance	16.7	16.0	18.5	13.9	21.5	16.8
Incurred losses and LAE	4.0	4.0	2.9	6.1	0.4	0.4
Paid losses and LAE	(4.0)	(4.1)	(4.7)	(4.0)	(3.4)	(3.3)
Ending balance	16.7	15.9	16.7	16.0	18.5	13.9
Total asbestos and environmental:						
Beginning balance	275.9	220.6	205.5	180.3	215.0	189.7
Incurred losses and LAE	(3.0)	(2.9)	99.8	65.1	15.7	14.0
Paid losses and LAE	(19.5)	(17.4)	(29.4)	(24.8)	(25.2)	(23.4)
Ending balance	\$ 253.4	\$ 200.3	\$ 275.9	\$ 220.6	\$ 205.5	\$ 180.3

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Net loss reserves by type

The following tables present Sirius Group's loss and LAE reserves, net of reinsurance, by type as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018	2017
Case Reserve	\$ 924.5	\$ 833.9
IBNR Reserve	742.0	744.9
Loss and loss adjustment expense reserves, net of reinsurance	\$ 1,666.5	\$ 1,578.8

Reconciliation of liabilities for unpaid loss and LAE

The following table summarizes the ending liabilities for unpaid loss and LAE, net of reinsurance for each of Sirius Group's segments as of December 31, 2018:

<i>(Millions)</i>	As of December 31, 2018
Liabilities for unpaid loss and LAE, net of reinsurance	
Unpaid and allocated LAE reserves, net of reinsurance	
Other Property	\$ 450.8
Property Catastrophe Excess	245.7
Agriculture	40.9
Global Accident & Health	148.2
Aviation & Space	86.6
Trade credit	42.1
Environmental	0.4
Marine	58.9
Surety	4.5
Contingency	13.7
Casualty	65.4
Runoff & Other	473.7
Total unpaid and allocated LAE reserves, net of reinsurance	1,631.0
Unallocated LAE	35.5
Total unpaid loss and LAE reserves, net of reinsurance	1,666.5
Reinsurance recoverable on unpaid losses	
Other Property	104.6
Property Catastrophe Excess	53.4
Agriculture	0.5
Global Accident & Health	45.0
Aviation & Space	18.6
Trade credit	10.9
Environmental	0.4
Marine	8.9
Surety	0.5
Contingency	4.9
Casualty	-
Runoff & Other	102.5
Total reinsurance recoverable on unpaid losses	350.2
Total unpaid loss and LAE reserves	\$ 2,016.7

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The following table groupings, reflecting the Other Property, Property Catastrophe Excess, Agriculture, Accident & Health, Aviation & Space, Trade credit, Environmental, Marine, Surety, Contingency, Casualty, and Runoff & Other lines of business include three sections.

The first table (top section of grouping) presents, for each of the previous 10 accident years (1) cumulative total undiscounted incurred loss and allocated LAE, net of reinsurance, as of each of the previous 10 year-end evaluations, (2) total IBNR plus expected development on reported claims as of December 31, 2018, and (3) the cumulative number of reported claims as of December 31, 2018. The net loss reserves for losses and loss expenses related to the acquisitions described in **Note 3** have been incorporated within the ten year short duration tables on a prospective basis. Sirius Group provides treaty reinsurance for a significant portion and across all lines of its business. Sirius Group does not receive, and as such does not maintain claims count information associated with many of its reinsurance contracts, especially proportional covers. As such, Sirius Group has determined that it is impracticable to provide this information.

The second table (middle section grouping) presents cumulative paid loss and allocated LAE, net of reinsurance for each of the previous 10 accident years, as of each of the previous 10 year-end evaluations. Also included in this table is a calculation of the liability for loss and allocated LAE as of December 31, 2018 which is then included in the reconciliation to the consolidated balance sheet presented above. The liability as of December 31, 2018 is calculated as the cumulative incurred loss and allocated LAE from the first table less the cumulative paid loss and allocated from the second table, plus any outstanding liabilities from accident years prior to 2009.

The third table (bottom section of grouping) is supplementary information about the average historical claims duration as of December 31, 2018. It shows the weighted average annual percentage payout of incurred loss and allocated LAE by accident year as of each age. For example, the first column is calculated as the incremental paid loss and allocated LAE in the first calendar year for each given accident year (e.g. calendar year 2010 for accident year 2010, calendar year 2011 for accident year 2011) divided by the cumulative incurred loss and allocated LAE as of December 31, 2018 for that accident year. The resulting ratios are weighted together using cumulative incurred loss and allocated LAE as of December 31, 2018.

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Other Property
(Millions)

Incurring losses and allocated loss adjustment expenses, net of reinsurance												December 31, 2018	
Year ended December 31,													
Accident	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total IBNR liabilities plus expected	Cumulative	
Year	Unaudited	development on reported claims	number of reported claims										
2009	118.3	108.7	98.3	94.2	94.1	93.1	95.8	94.6	92.8	93.1	0.2	NA	
2010		156.1	153.4	144.7	145.3	140.4	139.5	138.8	137.2	136.9	1.4	NA	
2011			163.5	150.9	141.7	133.7	131.8	132.5	132.8	131.6	0.1	NA	
2012				163.4	150.0	144.8	140.4	135.7	133.7	133.6	1.6	NA	
2013					131.2	127.4	116.6	113.0	112.7	112.2	(0.2)	NA	
2014						115.0	117.6	115.1	115.3	113.0	1.0	NA	
2015							141.2	133.3	135.6	135.5	0.6	NA	
2016								196.2	215.2	219.8	0.6	NA	
2017									334.2	370.9	46.5	NA	
2018										273.1	97.4	NA	
										Total	1,719.7		

Other Property
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance												
Year ended December 31,												
Accident	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Year	Unaudited	2018										
2009	22.6	59.5	78.7	85.4	89.4	90.5	90.2	90.9	90.9	90.1		
2010		31.2	88.7	115.6	123.3	128.2	130.3	130.8	130.9	130.7		
2011			26.9	79.5	103.3	116.2	122.3	124.7	127.4	127.1		
2012				20.1	85.4	108.2	116.5	119.8	125.1	126.0		
2013					27.5	72.0	96.3	102.7	106.0	106.6		
2014						19.0	69.4	96.2	104.5	106.7		
2015							31.0	93.7	115.2	124.9		
2016								31.5	128.9	181.8		
2017									58.8	223.5		
2018										55.7		
										Total	1,273.1	
											All outstanding liabilities before 2009, net of reinsurance	4.2
											Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	450.8

Other Property

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	18.9%	43.7%	20.3%	7.0%	3.3%	1.9%	0.7%	0.1%	(0.1)%	(0.9)%

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Property Catastrophe Excess
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance												
Accident Year	Year ended December 31,										December 31, 2018	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims
	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited		
2009	48.2	49.0	47.7	46.7	45.9	45.1	44.8	44.9	44.9	44.9	(0.1)	NA
2010		136.1	133.6	131.0	130.2	122.8	121.9	121.4	120.7	121.3	(0.2)	NA
2011			148.6	153.2	142.7	121.0	117.4	116.6	116.6	116.6	0.1	NA
2012				70.8	59.2	52.6	50.6	51.1	46.3	46.5	0.5	NA
2013					71.6	78.2	75.3	74.7	73.9	73.6	0.0	NA
2014						56.2	57.7	54.9	54.9	54.8	0.3	NA
2015							27.6	29.6	27.2	26.2	0.0	NA
2016								50.6	48.2	42.8	1.8	NA
2017									106.3	124.4	20.3	NA
2018										157.3	60.6	NA
									Total	808.4		

Property Catastrophe Excess
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance												
Accident Year	Year ended December 31,											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited		
2009	7.4	31.4	39.8	42.7	43.7	44.0	44.1	44.2	44.2	44.2		
2010		49.8	90.0	102.5	107.6	111.1	113.6	117.5	117.5	118.0		
2011			15.7	54.1	95.6	114.7	115.0	115.4	116.4	116.5		
2012				2.8	26.2	35.8	40.5	41.5	43.3	44.5		
2013					11.1	49.4	62.1	67.1	68.4	69.6		
2014						9.4	36.1	42.3	47.9	49.5		
2015							1.8	9.5	16.9	20.2		
2016								10.4	25.7	31.9		
2017									13.3	67.9		
2018										2.8		
										Total	565.1	
										All outstanding liabilities before 2009, net of reinsurance	2.4	
										Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	245.7	

Property Catastrophe Excess

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	15.4%	41.3%	19.8%	9.4%	1.9%	1.6%	1.9%	0.1%	0.3%	0.0%

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Agriculture
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance												
Accident Year	Year ended December 31,										December 31, 2018	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims
2009	11.9	10.0	8.7	8.7	8.5	8.6	8.6	8.6	8.6	8.6	-	NA
2010		12.8	10.8	10.9	10.7	10.7	10.7	10.7	10.7	10.7	(0.3)	NA
2011			21.5	21.6	21.7	21.7	21.7	21.7	21.7	21.7	-	NA
2012				41.0	45.8	45.8	45.7	46.9	46.9	46.9	(0.3)	NA
2013					9.1	10.8	12.9	13.0	12.8	12.8	(0.1)	NA
2014						9.6	8.1	8.4	8.8	8.8	0.2	NA
2015							7.0	9.2	9.5	9.5	-	NA
2016								33.5	30.8	29.9	0.2	NA
2017									50.5	47.0	2.5	NA
2018										39.4	33.8	NA
									Total	235.3		

Agriculture
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance											
Accident Year	Year ended December 31,										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
2009	2.2	9.0	8.6	8.6	8.4	8.4	8.4	8.4	8.4	8.4	
2010		0.5	10.7	10.8	10.6	10.6	10.7	10.7	10.7	10.7	
2011			1.0	21.3	21.6	21.6	21.6	21.6	21.6	21.6	
2012				19.0	45.4	45.7	45.6	46.9	46.9	46.9	
2013					7.1	10.6	12.8	13.0	12.8	12.8	
2014						6.5	8.1	8.8	8.8	8.9	
2015							1.5	7.8	9.0	9.3	
2016								10.1	28.1	29.6	
2017									9.2	43.7	
2018										2.6	
									Total	194.5	
										All outstanding liabilities before 2009, net of reinsurance	0.1
										Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	40.9

Agriculture

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	25.4%	65.2%	3.8%	0.3%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%

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Global Accident & Health
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance											December 31, 2018	
Year ended December 31,												
Accident	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total IBNR liabilities plus expected	Cumulative
Year	Unaudited	development on reported claims	number of reported claims									
2009	86.6	84.3	81.3	79.2	78.9	79.0	78.9	79.0	79.0	79.0	-	NA
2010		118.4	125.4	122.9	122.1	121.8	121.8	121.8	121.7	121.6	(0.1)	NA
2011			161.3	176.7	172.3	171.7	171.7	171.6	171.5	171.4	0.1	NA
2012				163.4	160.1	147.8	147.1	146.8	146.7	146.6	(0.1)	NA
2013					125.6	123.2	118.7	118.2	117.6	116.8	-	NA
2014						131.1	132.2	130.6	130.6	129.6	0.2	NA
2015							153.5	149.5	146.1	144.8	0.7	NA
2016								176.7	190.9	186.7	5.0	NA
2017									176.4	168.3	13.2	NA
2018										202.8	52.3	NA
										Total		

Global Accident & Health
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance												
Year ended December 31,												
Accident	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Year	Unaudited											
2009	27.7	67.7	76.1	77.7	78.5	78.6	78.7	78.8	78.8	78.8		
2010		53.1	102.2	119.2	121.4	121.7	121.8	121.9	121.9	121.9		
2011			71.2	139.2	166.1	171.1	171.5	171.6	171.6	171.6		
2012				72.1	136.0	146.0	146.4	146.6	146.6	146.6		
2013					54.4	103.6	114.1	115.5	116.7	116.2		
2014						59.3	111.3	124.8	126.6	126.6		
2015							75.7	130.3	141.8	143.4		
2016								97.7	131.9	143.7		
2017									95.7	146.0		
2018										128.1		
										Total		
											1,322.9	
											All outstanding liabilities before 2009, net of reinsurance	3.5
											Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	148.2

Global Accident & Health

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	50.1%	36.5%	10.0%	1.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%

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Aviation & Space
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance												
Accident Year	Year ended December 31,										December 31, 2018	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims
	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited		
2009	30.9	34.0	35.0	36.9	35.3	35.1	34.2	31.9	31.9	35.8	0.2	NA
2010		42.5	47.5	47.2	44.7	43.2	42.3	42.1	41.6	41.9	(0.5)	NA
2011			46.9	42.3	37.9	35.9	34.7	34.5	35.8	35.1	(0.2)	NA
2012				35.6	34.3	30.2	28.2	28.4	29.5	29.6	(0.2)	NA
2013					40.6	36.4	33.4	32.0	32.9	33.0	(0.1)	NA
2014						35.7	38.2	35.0	34.2	34.3	-	NA
2015							39.5	35.9	40.0	39.0	0.1	NA
2016								32.1	32.6	33.6	1.3	NA
2017									34.0	43.0	5.9	NA
2018										48.0	19.8	NA
										Total	373.3	

Aviation & Space
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance												
Accident Year	Year ended December 31,											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited		
2009	7.9	16.6	21.4	26.4	27.6	28.5	31.7	31.2	32.0	35.9		
2010		12.0	22.1	31.5	36.2	37.8	38.8	39.7	39.9	41.0		
2011			10.2	22.7	28.6	31.5	32.7	34.1	34.8	34.7		
2012				7.6	18.4	22.6	24.6	27.3	28.2	28.7		
2013					13.5	19.9	24.0	26.7	28.5	29.2		
2014						8.0	17.9	23.6	26.2	28.2		
2015							10.5	21.1	27.1	33.5		
2016								7.8	19.7	26.9		
2017									9.0	23.7		
2018										14.3		
										Total	296.1	
										All outstanding liabilities before 2009, net of reinsurance	9.4	
										Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	86.6	

Aviation & Space

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	27.0%	29.4%	16.8%	10.5%	5.0%	2.8%	3.7%	(0.4)%	2.4%	10.9%

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Trade credit
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance											December 31, 2018	
Accident Year	Year ended December 31,										Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
2009	9.4	10.0	9.8	9.7	9.4	9.4	9.3	9.3	9.4	10.1	(0.1)	NA
2010		14.1	12.3	9.6	9.7	9.8	9.7	9.6	9.8	9.8	(0.3)	NA
2011			29.2	29.0	27.4	27.1	27.1	26.5	26.5	26.3	(0.2)	NA
2012				34.5	34.3	32.5	32.8	32.4	32.4	32.0	(0.3)	NA
2013					29.5	28.4	27.5	27.3	27.9	27.4	0.2	NA
2014						22.8	22.7	23.5	21.4	21.1	0.3	NA
2015							20.2	19.7	19.2	18.4	-	NA
2016								15.3	13.2	12.5	0.6	NA
2017									19.2	20.1	6.2	NA
2018										25.0	13.3	NA
										Total		202.7

Trade credit
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance											
Accident Year	Year ended December 31,										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
2009	3.4	7.7	8.5	8.8	8.9	9.0	9.1	9.1	9.1	10.0	
2010		1.8	5.2	7.7	8.6	9.0	9.1	9.3	9.4	9.5	
2011			6.5	17.5	23.5	24.8	25.7	26.0	25.7	25.8	
2012				14.7	26.8	31.0	31.8	32.1	31.9	31.9	
2013					11.6	19.8	22.8	24.0	24.4	24.5	
2014						7.8	13.7	17.7	19.2	19.7	
2015							4.5	12.2	15.7	16.6	
2016								4.6	8.9	10.6	
2017									3.0	8.8	
2018										7.7	
										Total	165.1
										All outstanding liabilities before 2009, net of reinsurance	4.5
										Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	42.1

Trade credit

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	32.3%	35.3%	16.4%	4.6%	2.1%	0.4%	0.0%	0.3%	1.0%	8.2%

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Environmental

(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance												December 31, 2018	
Accident Year	Year ended December 31,										Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018			
	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	2018		
2009	-	-	-	-	-	-	-	-	-	-	-	-	NA
2010		-	-	-	-	-	-	-	-	-	-	-	NA
2011			-	-	-	-	-	-	-	-	-	-	NA
2012				-	-	-	-	-	-	-	-	-	NA
2013					-	-	-	-	-	-	-	-	NA
2014						-	-	-	-	-	-	-	NA
2015							-	-	-	-	-	-	NA
2016								-	-	-	-	-	NA
2017									-	-	-	-	NA
2018											0.4	0.4	NA
											Total	0.4	

Environmental

(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance												
Accident Year	Year ended December 31,										2018	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited
2009	-	-	-	-	-	-	-	-	-	-	-	-
2010		-	-	-	-	-	-	-	-	-	-	-
2011			-	-	-	-	-	-	-	-	-	-
2012				-	-	-	-	-	-	-	-	-
2013					-	-	-	-	-	-	-	-
2014						-	-	-	-	-	-	-
2015							-	-	-	-	-	-
2016								-	-	-	-	-
2017									-	-	-	-
2018											-	-
											Total	-
												-
												-
												0.4

All outstanding liabilities before 2009, net of reinsurance

Liabilities for loss and allocated loss adjustment expenses, net of reinsurance **0.4**

Environmental

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

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Marine
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance											December 31, 2018	
Accident Year	Year ended December 31,										Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
2009	27.9	25.8	24.8	24.4	24.0	24.1	24.2	23.8	24.1	24.0	(0.1)	NA
2010		32.3	35.1	32.7	32.4	33.3	32.9	31.6	31.3	31.1	-	NA
2011			36.6	32.8	30.6	31.1	32.1	31.5	31.6	31.5	(0.3)	NA
2012				27.3	33.4	36.1	37.5	37.9	36.8	36.3	1.2	NA
2013					23.3	20.5	19.3	18.3	18.1	18.0	-	NA
2014						23.3	21.6	19.5	18.2	17.9	-	NA
2015							29.5	31.5	29.2	28.8	0.1	NA
2016								28.3	29.2	28.4	1.1	NA
2017									37.5	35.1	6.3	NA
2018										23.3	9.3	NA
									Total	274.4		

Marine
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance												
Accident Year	Year ended December 31,										2018	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
2009	3.6	12.5	17.5	19.8	21.7	22.6	22.8	23.0	23.1	23.2		
2010		5.0	12.2	17.1	19.5	21.3	26.7	27.5	28.5	28.7		
2011			4.3	14.3	21.6	25.1	27.9	28.7	29.1	29.6		
2012				5.2	14.7	24.2	27.1	29.1	31.0	32.6		
2013					2.8	9.3	12.6	14.0	14.4	14.9		
2014						4.1	10.3	13.7	15.0	15.8		
2015							4.3	11.8	21.8	26.2		
2016								6.8	17.5	21.4		
2017									7.2	18.2		
2018										5.3		
									Total	215.9		
											All outstanding liabilities before 2009, net of reinsurance	0.4
											Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	58.9

Marine

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	17.8%	30.7%	22.0%	9.7%	6.1%	6.7%	2.4%	1.9%	0.6%	0.4%

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Surety

(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance											December 31, 2018		
Accident Year	Year ended December 31,										Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018			
2009	-	-	-	-	-	-	-	-	-	-	-	-	NA
2010		0.1	0.1	0.2	0.4	0.4	0.3	0.3	0.1	0.1	0.1	0.1	NA
2011			0.3	0.5	0.6	0.6	0.4	0.4	0.2	0.2	0.2	0.2	NA
2012				0.5	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.3	NA
2013					1.0	0.9	0.7	0.5	0.7	0.9	0.9	0.7	NA
2014						1.2	1.1	1.0	1.1	1.3	1.1	1.1	NA
2015							1.0	1.2	1.0	0.8	0.8	0.8	NA
2016								-	-	0.5	0.4	0.4	NA
2017									0.6	0.4	0.3	0.3	NA
2018										0.9	0.9	0.9	NA
										Total	5.4		

Surety

(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance											
Accident Year	Year ended December 31,										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
2009	-	-	-	-	-	-	-	-	-	-	-
2010		-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2011			0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2012				0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
2013					0.1	0.1	0.2	0.3	0.5	0.6	0.6
2014						-	0.2	0.4	0.7	0.9	0.9
2015							0.1	0.2	0.3	0.4	0.4
2016								-	-	0.3	0.3
2017									-	-	-
2018										-	-
										Total	2.7
										All outstanding liabilities before 2009, net of reinsurance	1.8
										Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	4.5

Surety

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	8.5%	9.4%	17.7%	15.2%	14.6%	11.6%	3.5%	0.9%	1.7%	0.0%

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Contingency
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance											December 31, 2018	
Year ended December 31,											Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims
Accident Year	2009 Unaudited	2010 Unaudited	2011 Unaudited	2012 Unaudited	2013 Unaudited	2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018 Unaudited		
2009	6.9	6.4	6.3	6.2	6.2	6.2	6.3	6.3	6.4	6.3	-	NA
2010		5.6	6.0	4.5	4.4	4.3	4.1	4.1	4.1	4.2	-	NA
2011			7.8	7.1	6.6	6.5	6.5	6.6	6.6	6.6	0.1	NA
2012				9.5	8.5	8.6	8.4	8.2	8.0	8.0	-	NA
2013					5.4	4.2	3.6	3.5	3.5	3.5	0.1	NA
2014						4.2	7.0	5.2	4.7	4.7	-	NA
2015							10.0	9.7	9.0	8.9	0.1	NA
2016								18.0	18.4	17.4	0.3	NA
2017									9.8	10.7	1.2	NA
2018										9.5	4.2	NA
										Total	79.8	

Contingency
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance											
Year ended December 31,											
Accident Year	2009 Unaudited	2010 Unaudited	2011 Unaudited	2012 Unaudited	2013 Unaudited	2014 Unaudited	2015 Unaudited	2016 Unaudited	2017 Unaudited	2018 Unaudited	
2009	4.9	5.9	6.1	6.1	6.1	6.2	6.2	6.2	6.3	6.4	
2010		1.9	3.4	3.5	3.5	3.9	4.1	4.1	4.1	4.1	
2011			2.1	5.7	6.4	6.4	6.4	6.5	6.5	6.5	
2012				5.2	7.1	8.4	8.4	8.2	8.0	8.0	
2013					1.8	3.0	3.2	3.3	3.3	3.3	
2014						1.6	3.7	4.4	4.5	4.5	
2015							2.8	7.2	7.8	7.8	
2016								12.1	15.6	16.4	
2017									3.0	7.1	
2018										1.9	
									Total	66.0	
										All outstanding liabilities before 2009, net of reinsurance	(0.1)
										Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	13.7

Contingency

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	46.7%	33.0%	8.0%	0.4%	0.8%	0.0%	0.4%	0.5%	1.3%	0.6%

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Casualty
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance											December 31, 2018	
Accident Year	Year ended December 31,										Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
2009	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.2	-	NA
2010		1.7	1.5	1.6	1.4	1.1	0.9	0.6	0.6	0.5	-	NA
2011			0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	-	NA
2012				0.2	0.2	0.4	0.5	0.5	0.5	0.5	0.1	NA
2013					0.4	0.4	0.4	0.4	0.5	0.5	-	NA
2014						0.4	0.4	0.5	0.5	0.5	-	NA
2015							0.5	0.8	0.6	0.5	-	NA
2016								0.2	0.3	0.3	0.1	NA
2017									9.7	9.7	6.8	NA
2018										53.4	44.6	NA
									Total	66.3		

Casualty
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance											
Accident Year	Year ended December 31,										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
2009	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	
2010		-	-	0.1	0.1	0.2	0.4	0.3	0.4	0.4	
2011			-	-	0.1	0.1	0.2	0.2	0.2	0.2	
2012				-	-	0.1	0.2	0.1	0.2	0.2	
2013					0.1	0.1	0.2	0.3	0.4	0.4	
2014						0.1	0.2	0.4	0.4	0.4	
2015							0.2	0.4	0.4	0.4	
2016								-	0.1	0.1	
2017									-	0.6	
2018										2.0	
									Total	4.9	
										All outstanding liabilities before 2009, net of reinsurance	4.0
										Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	65.4

Casualty

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	3.7%	9.7%	14.4%	10.8%	8.1%	11.9%	3.4%	3.4%	3.0%	2.8%

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Runoff & Other
(Millions)

Incurred losses and allocated loss adjustment expenses, net of reinsurance												
Accident Year	Year ended December 31,										December 31, 2018	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total IBNR liabilities plus expected development on reported claims	Cumulative number of reported claims
	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited		
2009	527.0	520.5	510.0	509.6	510.0	510.7	511.6	512.7	511.9	512.2	7.9	NA
2010		389.1	390.4	390.6	391.1	392.3	393.8	394.8	394.8	394.1	3.8	NA
2011			306.4	307.6	308.7	309.4	309.9	310.8	310.3	309.8	5.5	NA
2012				3.6	4.0	4.1	4.2	4.1	4.1	3.9	1.3	NA
2013					1.2	0.2	0.2	0.2	0.1	0.2	-	NA
2014						0.2	0.2	0.3	0.4	0.5	-	NA
2015							9.5	15.7	17.5	18.0	0.6	NA
2016								11.8	12.1	11.7	0.6	NA
2017									0.6	0.9	-	NA
2018										30.3	6.6	NA
										Total	1,281.6	

Runoff & Other
(Millions)

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance											
Accident Year	Year ended December 31,										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	Unaudited	
2009	289.1	402.5	480.3	483.8	488.3	492.1	495.1	496.5	498.9	499.6	
2010		225.7	370.4	372.7	376.8	380.0	383.6	385.5	387.4	388.1	
2011			291.8	293.8	296.1	297.8	299.5	301.6	303.1	303.6	
2012				0.3	1.3	1.8	2.2	2.4	2.4	2.5	
2013					0.7	0.1	0.1	0.1	0.1	0.1	
2014						-	-	0.1	0.2	0.3	
2015							5.2	10.0	15.3	16.6	
2016								6.2	10.1	10.9	
2017									0.4	0.5	
2018										7.9	
										Total	1,230.1
										All outstanding liabilities before 2009, net of reinsurance	422.2
										Liabilities for loss and allocated loss adjustment expenses, net of reinsurance	473.7

Runoff & Other

Average annual percentage payout of incurred losses and allocated LAE by age, net of reinsurance										
Years	1	2	3	4	5	6	7	8	9	10
	64.5%	21.5%	7.1%	0.9%	0.8%	0.8%	0.5%	0.3%	0.3%	0.1%

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Note 6. Third party reinsurance

In the normal course of business, Sirius Group seeks to protect its businesses from losses due to concentration of risk and losses arising from catastrophic events by reinsuring with third-party reinsurers. Sirius Group remains liable for risks reinsured in the event that the reinsurer does not honor its obligations under reinsurance contracts. The effects of reinsurance on Sirius Group's written and earned premiums and on losses and LAE were as follows:

<i>(Millions)</i>	2018	2017	2016
Written premiums:			
Direct	\$ 454.5	\$ 450.2	\$ 368.5
Assumed	1,366.5	989.1	900.5
Gross written premiums	1,821.0	1,439.3	1,269.0
Ceded	(463.9)	(349.1)	(330.9)
Net written premiums	\$ 1,357.1	\$ 1,090.2	\$ 938.1
Earned premiums:			
Direct	\$ 432.6	\$ 405.7	\$ 351.6
Assumed	1,236.2	942.2	877.7
Gross earned premiums	1,668.8	1,347.9	1,229.3
Ceded	(406.5)	(312.6)	(339.2)
Net earned premiums	\$ 1,262.3	\$ 1,035.3	\$ 890.1
Losses and LAE:			
Direct	\$ 260.5	\$ 294.9	\$ 216.9
Assumed	819.1	701.3	463.8
Gross losses and LAE	1,079.6	996.2	680.7
Ceded	(179.6)	(185.0)	(161.4)
Net losses and LAE	\$ 900.0	\$ 811.2	\$ 519.3

Sirius Group's reinsurance protection primarily consists of pro-rata and excess of loss protections that protect all of its reportable segments. Attachment points and coverage limits vary by region around the world.

Sirius Group's core proportional property reinsurance programs provide protection for parts of the non proportional treaty accounts written in Europe, the Americas, Caribbean, Asia, the Middle East and Australia. These reinsurance protections are designed to increase underwriting capacity where appropriate, and to reduce exposure both to large catastrophe losses and to a frequency of smaller loss events.

Sirius Group has in place excess of loss retrocessional coverage for its worldwide earthquake related exposures. This coverage was renewed for one year at May 1, 2018, providing \$40.0 million of reinsurance protection in excess of Sirius Group's retention of \$35.0 million and a further \$35.0 million of coverage in excess of \$75.0 million.

Sirius Group periodically purchases industry loss warranties ("ILW") contracts to augment its overall retrocessional program. The following ILW contracts are currently in force:

Scope	Limit	Trigger	Expiration Date
United States excluding North East, all natural perils	\$5.0 million	\$40.0 billion	July 5, 2019
Europe, wind	\$5.0 million	\$7.5 billion	April 30, 2019

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Sirius Group purchases excess of loss reinsurance protection for its facultative and primary insurance property books. The protection was renewed at January 1, 2019 for business written in Stockholm, Hamburg and Singapore, providing \$32.5 million of protection in excess of \$2.5 million. For the business written by Syndicate 1945, an excess of loss reinsurance protection of \$10.0 million in excess of retention of \$5.0 million on a per risk basis was placed for 12 months at June 30, 2018. Due to reduced exposures, this was cancelled December 31, 2018 and not replaced. For catastrophe losses from business written by Syndicate 1945, Sirius Group has 50% of a \$12.0 million protection in excess of retention of \$3.0 million placed for 12 months at January 1, 2019.

Almost all of Sirius Group’s excess of loss reinsurance protections, excluding ILWs which tend to only cover one loss event, include provisions that reinstate coverage at a cost of 100% or more of the original reinsurance premium.

In connection with the CMIG International acquisition, White Mountains required Sirius Group to purchase ILWs, referred to as the WTM Covers, to mitigate the potential impact of major natural catastrophe events on Sirius Group’s balance sheet pending the close of the sale to CMIG International. The cost and potential economic benefit provided by the WTM Covers inure to White Mountains. All but one of these contracts expired in May or June 2016; the other was a United States second event cover for an industry loss at \$15 billion with a limit of \$5 million that expired on July 15, 2016. Under the Stock Purchase Agreement (“SPA”) between CMIG International and White Mountains, shortly after the sale of the Company, White Mountains paid the Company \$16.5 million on an after-tax basis, which the Company recorded as paid-in surplus. The costs of these programs are part of the Runoff & Other reportable segment.

The following table summarizes the WTM Covers purchased in connection with the CMIG International acquisition that expired in 2016:

Scope	Limit	Industry Loss Trigger
United States first event	\$75.0 million	\$40.0 billion
United States first event	\$22.5 million	\$50.0 billion
United States second event	\$45.0 million	\$15.0 billion
Japan first event	\$25.0 million	\$12.5 billion

At December 31, 2018, Sirius Group had reinsurance recoverables on paid losses of \$55.0 million and reinsurance recoverables of \$350.2 million on unpaid losses. At December 31, 2017, Sirius Group had reinsurance recoverables on paid losses of \$17.5 million and reinsurance recoverables of \$319.7 million on paid unpaid losses. Because retrocessional reinsurance contracts do not relieve Sirius Group of its obligation to its insureds, the collectability of balances due from Sirius Group’s reinsurers is important to its financial strength. Sirius Group monitors the financial strength and ratings of retrocessionaires on an ongoing basis. Uncollectible amounts historically have not been significant.

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The following tables provide a listing of Sirius Group's gross and net recoverable amounts by the reinsurer's Standard & Poor's Financial Services LLC ("Standard & Poor's") rating and the percentage of total recoverables as of December 31, 2018 and 2017. With certain reinsurers if Standard & Poor's rating was not available, an A.M. Best rating was used.

December 31, 2018				
Rating ⁽¹⁾	Gross	Collateral	Net	% of Net Total
AA	\$ 115.1	\$ 1.5	\$ 113.6	35%
A	212.9	45.4	167.5	52%
BBB+	-	-	-	0%
BBB or lower	19.5	13.3	6.2	2%
Not rated	57.7	23.2	34.5	11%
Total	\$ 405.2	\$ 83.4	\$ 321.8	100%

⁽¹⁾Standard & Poor's ratings as detailed above are: "AA" (Very strong), "A" (Strong), and "BBB+" and "BBB" (Adequate).

December 31, 2017				
Rating ⁽¹⁾	Gross	Collateral	Net	% of Net Total
AA	\$ 116.9	\$ 1.0	\$ 115.9	43%
A	153.9	27.9	126.0	46%
BBB+	-	-	-	0%
BBB or lower	13.4	12.5	0.9	1%
Not rated	53.0	23.9	29.1	10%
Total	\$ 337.2	\$ 65.3	\$ 271.9	100%

⁽¹⁾Standard & Poor's ratings as detailed above are: "AA" (Very strong), "A" (Strong), and "BBB+" and "BBB" (Adequate).

The following tables provide a listing of the five highest gross recoverable amounts by reinsurer, along with percentage of total recoverable amount, the reinsurer's Standard & Poor's reinsurer rating, and the percentage that the recoverable is collateralized as of December 31, 2018 and 2017:

December 31, 2018				
(Millions)	Balance	% of Total	S&P rating	% Collateralized
Reinsurer:				
General Insurance Corporation of India ⁽¹⁾	\$ 82.7	20%	A-	97%
Swiss Reinsurance Company Ltd.	44.1	11%	AA-	0%
Berkshire Hathaway, Inc.	39.3	10%	AA+	1%
Argo Capital Group Ltd.	16.7	4%	A-	87%
Lloyd's of London	13.4	3%	A+	5%

⁽¹⁾Reflects an A.M. Best rating of "A-" (Excellent).

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<i>(Millions)</i>	December 31, 2017			
	Balance	% of Total	S&P rating	% Collateralized
Reinsurer:				
Swiss Reinsurance Company Ltd.	\$ 45.5	13%	AA-	0%
Berkshire Hathaway, Inc.	41.1	12%	AA+	0%
Lloyd's of London	19.4	6%	A+	16%
Argo Capital Group Ltd.	18.2	5%	A-	78%
General Insurance Corporation of India ⁽¹⁾	17.3	5%	A-	11%

⁽¹⁾Reflects an A.M. Best rating of "A-" (Excellent).

Note 7. Deferred acquisition costs

The following table presents a rollforward of Deferred acquisition costs for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018	2017	2016
Deferred acquisition costs - balance, beginning of the year	\$ 120.9	\$ 84.7	\$ 74.6
Acquisition costs deferred ⁽¹⁾	202.6	220.7	137.7
Amortization expense	(180.4)	(186.7)	(126.7)
Other, including foreign exchange	(1.5)	2.2	(0.9)
Deferred acquisition costs – balance, end of the year	\$ 141.6	\$ 120.9	\$ 84.7

⁽¹⁾2017 amount includes \$2.9 from Acquisition of IMG. (See Note 3.)

Note 8. Investment securities

Net Investment Income

Sirius Group's net investment income is comprised primarily of interest income along with associated amortization of premium and accretion of discount on Sirius Group's fixed maturity investments, dividend income from its equity investments, and interest income from its short-term investments.

Net investment income for the years ended December 31, 2018, 2017, and 2016 consisted of the following:

<i>(Millions)</i>	2018	2017	2016
Fixed maturity investments	\$ 53.2	\$ 51.5	\$ 58.0
Short-term investments	5.1	1.5	0.9
Equity securities	16.5	5.1	4.1
Other long-term investments	8.4	8.5	4.9
Interest on funds held under reinsurance treaties	(0.5)	-	(0.5)
Total investment income	82.7	66.6	67.4
Investment expenses	(11.3)	(9.8)	(11.2)
Net investment income	\$ 71.4	\$ 56.8	\$ 56.2

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Net Realized and Unrealized Investment (Losses) Gains

Net realized and unrealized investment gains (losses) for the years ended December 31, 2018, 2017, and 2016 consisted of the following:

<i>(Millions)</i>	2018	2017	2016
Gross realized gains	\$ 42.3	\$ 24.4	\$ 310.8
Gross realized (losses)	(40.0)	(51.6)	(22.5)
Net realized gains (losses) on investments⁽¹⁾⁽²⁾	2.3	(27.2)	288.3
Net unrealized (losses) on investments ⁽³⁾	(23.2)	(10.5)	(238.2)
Net realized and unrealized investment (losses) gains on investments	\$ (20.9)	\$ (37.7)	\$ 50.1

⁽¹⁾Includes 17.3, \$(19.1), and \$50.0 of realized gains (losses) due to foreign currency during 2018, 2017, and 2016, respectively.

⁽²⁾Includes net realized gains of \$222.5 related to Symetra in 2016. (See Note 3.)

⁽³⁾Includes \$35.7, \$(51.7), and \$(7.7) of unrealized gains (losses) due to foreign currency during 2018, 2017, and 2016, respectively.

Net realized investment gains (losses)

Net realized investment gains (losses) for the years ended December 31, 2018, 2017, and 2016 consisted of the following:

<i>(Millions)</i>	2018	2017	2016
Fixed maturity investments	\$ 3.6	\$ (19.1)	\$ 57.4
Equity securities	(6.4)	0.1	231.9
Other long-term investments	5.1	(8.2)	(1.0)
Net realized investment gains (losses)	\$ 2.3	\$ (27.2)	\$ 288.3

Net unrealized investment (losses)

The following table summarizes the net unrealized investment (losses) and changes in fair value for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018	2017	2016
Fixed maturity investments	\$ 14.1	\$ (41.3)	\$ (25.0)
Equity securities	(51.1)	25.2	(214.5)
Other long-term investments	13.8	5.6	1.3
Net unrealized investment (losses)	\$ (23.2)	\$ (10.5)	\$ (238.2)

The following table summarizes the amount of total gains (losses) included in earnings attributable to unrealized investment gains (losses) for Level 3 investments for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018	2017	2016
Fixed maturity investments	\$ (6.1)	\$ (0.2)	\$ (0.1)
Equity securities	-	0.1	-
Other long-term investments	4.0	(0.6)	1.2
Total unrealized investment (losses) gains - Level 3 investments	\$ (2.1)	\$ (0.7)	\$ 1.1

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Investment Holdings

Fixed maturity investments

The cost or amortized cost, gross unrealized investment gains (losses), net foreign currency gains (losses), and fair value of Sirius Group's fixed maturity investments as of December 31, 2018 and 2017, were as follows:

<i>(Millions)</i>	2018				
	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Net foreign currency gains (losses)	Fair value
Corporate debt securities	\$ 694.1	\$ 1.4	\$ (7.3)	\$ 7.6	\$ 695.8
Asset-backed securities	496.3	0.1	(3.8)	1.9	494.5
Residential mortgage-backed securities	413.0	1.7	(7.1)	5.9	413.5
U.S. government and government agency	163.9	0.3	(0.5)	4.2	167.9
Commercial mortgage-backed securities	117.7	0.2	(2.7)	0.7	115.9
Non-U.S. government and government agency	50.6	-	(0.2)	(0.1)	50.3
Preferred stocks	14.5	0.6	(6.8)	0.2	8.5
U.S. States, municipalities and political subdivision	2.8	-	-	-	2.8
Total fixed maturity investments	\$ 1,952.9	\$ 4.3	\$ (28.4)	\$ 20.4	\$ 1,949.2

<i>(Millions)</i>	2017				
	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Net foreign currency gains (losses)	Fair value
Corporate debt securities	\$ 1,017.0	\$ 3.1	\$ (4.8)	\$ (0.8)	\$ 1,014.5
Asset-backed securities	478.1	0.4	(0.6)	(2.5)	475.4
Residential mortgage-backed securities ⁽¹⁾	300.7	0.1	(5.6)	(1.7)	293.5
U.S. government and government agency	85.8	-	(0.8)	(0.2)	84.8
Commercial mortgage-backed securities ⁽¹⁾	193.8	0.8	(3.6)	-	191.0
Non-U.S. government and government agency	106.8	0.1	(0.9)	1.2	107.2
Preferred stocks	9.3	0.3	-	0.2	9.8
U.S. States, municipalities and political subdivision	3.8	-	-	-	3.8
Total fixed maturity investments	\$ 2,195.3	\$ 4.8	\$ (16.3)	\$ (3.8)	\$ 2,180.0

⁽¹⁾2017 figures have been revised to correct for a misclassification in prior disclosure of subcategories within residential mortgage-backed securities. Cost or amortized cost and fair value balances increased by \$41.4 for residential mortgage-backed securities and decreased by the same amounts for commercial mortgage-backed securities. Gross unrealized losses and net foreign currency gains (losses) increased by \$0.3 for residential mortgage-backed securities and decreased by the same amounts for commercial mortgage-backed securities.

The weighted average duration of Sirius Group's fixed income portfolio as of December 31, 2018 was approximately 1.7 years, including short-term investments, and approximately 2.2 years excluding short-term investments.

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The cost or amortized cost and fair value of Sirius Group's fixed maturity investments as of December 31, 2018 and 2017 are presented below by contractual maturity. Actual maturities could differ from contractual maturities because borrowers may have the right to call or prepay certain obligations with or without call or prepayment penalties.

<i>(Millions)</i>	2018		2017	
	Cost or amortized cost	Fair value	Cost or amortized cost	Fair value
Due in one year or less	\$ 249.6	\$ 254.6	\$ 106.3	\$ 106.5
Due after one year through five years	635.6	636.4	1,009.0	1,006.4
Due after five years through ten years	26.2	25.7	71.2	70.8
Due after ten years	0.1	0.1	26.9	26.6
Mortgage-backed and asset-backed securities	1,026.9	1,023.9	972.6	959.9
Preferred stocks	14.5	8.5	9.3	9.8
Total	\$ 1,952.9	\$ 1,949.2	\$ 2,195.3	\$ 2,180.0

The following table summarizes the ratings and fair value of fixed maturity investments held in Sirius Group's investment portfolio as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018	2017
AAA	\$ 602.0	\$ 689.4
AA	818.0	635.2
A	290.5	416.4
BBB	167.4	333.8
Other	71.3	105.2
Total fixed maturity investments⁽¹⁾	\$ 1,949.2	\$ 2,180.0

⁽¹⁾Credit ratings are assigned based on the following hierarchy: 1) Standard & Poor's and 2) Moody's Investor Service.

At December 31, 2018, the above totals included \$42.6 million of sub-prime securities. Of this total, \$17.1 million was rated AAA, \$9.8 million rated AA, \$6.0 million rated A, \$4.7 million rated BBB and \$5.0 million classified as other. At December 31, 2017, the above included \$93.0 million of sub-prime securities. Of this total, \$53.0 million was rated AAA, \$25.7 million rated AA, \$1.3 million rated A, \$8.4 million rated BBB and \$4.6 million classified as other.

Mortgage-backed, Asset-backed Securities

Sirius Group purchases commercial mortgage-backed securities ("CMBS") and residential mortgage-backed securities ("RMBS") and asset-backed securities with the goal of maximizing risk adjusted returns in the context of a diversified portfolio. Sirius Group considers sub-prime securities as those that have underlying loan pools that exhibit weak credit characteristics, or those that are issued from dedicated sub-prime shelves or dedicated second-lien shelf registrations (i.e., Sirius Group considers investments backed primarily by second-liens to be sub-prime risks). Given the tranching nature of mortgage-backed and asset-backed securities, Sirius Group relies primarily on rating agency credit ratings (i.e., S&P and Moody's) to evaluate credit worthiness of these securities and to a lesser extent on credit scores such as FICO.

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The following table summarizes the total mortgage and asset-backed securities held at fair value in Sirius Group's investment portfolio as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018	2017⁽¹⁾
Mortgage-backed securities:		
Agency:		
Federal national mortgage association	\$ 185.0	\$ 159.8
Federal home loan mortgage corporation	166.9	62.0
Government national mortgage association	59.4	57.2
Total agency⁽²⁾	411.3	279.0
Non-agency:		
Commercial	85.5	148.3
Residential	32.6	57.2
Total non-agency	118.1	205.5
Total mortgage-backed securities	529.4	484.5
Asset-backed securities:		
Collateralized loan obligations	373.0	-
Vehicle receivables	63.8	314.6
Credit card receivables	10.7	53.0
Other	47.0	107.8
Total asset-backed securities	494.5	475.4
Total mortgage and asset-backed securities⁽³⁾	\$ 1,023.9	\$ 959.9

⁽¹⁾2017 figures have been revised to correct for a misclassification in prior disclosure of subcategories within agency and non-agency mortgage-backed securities: total agency balances increased by \$39.7 and total non-agency balances decreased by the same amount.

⁽²⁾Represents publicly traded mortgage-backed securities which carry the full faith and credit guaranty of the U.S. government (i.e., GNMA) or are guaranteed by a government-sponsored entity (i.e., FNMA, FHLMC).

⁽³⁾At December 31, 2018 and 2017, all mortgage- and asset-backed securities held by Sirius Group were classified as Level 2 investments.

Equity securities and Other long-term investments

The cost or amortized cost, gross unrealized investment gains and losses, net foreign currency gains and losses, and fair values of Sirius Group's equity securities and other long-term investments as of December 31, 2018 and 2017, were as follows:

<i>(Millions)</i>	2018				Fair value
	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Net foreign currency gains (losses)	
Equity securities	\$ 409.4	\$ 17.8	\$ (50.8)	\$ 3.6	\$ 380.0
Other long-term investments	\$ 337.6	\$ 32.6	\$ (13.5)	\$ 8.3	\$ 365.0

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<i>(Millions)</i>	2017				Fair value
	Cost or amortized cost	Gross unrealized gains	Gross unrealized losses	Net foreign currency gains (losses)	
Equity securities	\$ 275.1	\$ 29.3	\$ (5.1)	\$ (0.1)	\$ 299.2
Other long-term investments	\$ 255.5	\$ 14.2	\$ (4.1)	\$ 3.9	\$ 269.5

Other long-term investments at fair value consist of the following as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018	2017
Hedge funds and private equity funds	\$ 301.4	\$ 205.3
Limited liability companies and private equity securities	63.6	64.2
Total other long-term investments	\$ 365.0	\$ 269.5

Hedge Funds and Private Equity Funds

Sirius Group holds investments in hedge funds and private equity funds, which are included in other long-term investments. The fair value of these investments has been estimated using the net asset value of the funds. As of December 31, 2018, Sirius Group held investments in 9 hedge funds and 27 private equity funds. The largest investment in a single fund was \$54.8 million as of December 31, 2018 and \$31.4 million as of December 31, 2017.

The following table summarizes investments in hedge funds and private equity interests by investment objective and sector as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018		2017	
	Fair value	Unfunded commitments	Fair value	Unfunded commitments
Hedge funds:				
Long/short multi-sector	\$ 41.0	\$ -	\$ 31.5	\$ -
Distressed mortgage credit	54.8	-	25.5	-
Private credit	20.0	-	-	-
Other	2.5	-	3.2	-
Total hedge funds	118.3	-	60.2	-
Private equity funds:				
Energy infrastructure & services	93.7	54.2	73.5	56.4
Multi-sector	9.0	0.7	9.5	1.0
Healthcare	31.7	15.6	23.4	28.6
Life settlement	23.7	-	21.5	-
Manufacturing/Industrial	23.6	10.4	15.9	5.1
Private equity secondaries	1.1	1.1	1.1	1.0
Real estate	0.3	-	0.2	-
Total private equity funds	183.1	82.0	145.1	92.1
Total hedge and private equity funds included in other long-term investments	\$ 301.4	\$ 82.0	\$ 205.3	\$ 92.1

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Redemption of investments in certain hedge funds is subject to restrictions including lock-up periods where no redemptions or withdrawals are allowed, restrictions on redemption frequency, and advance notice periods for redemptions. Amounts requested for redemptions remain subject to market fluctuations until the redemption effective date, which generally falls at the end of the defined redemption period.

The following summarizes the December 31, 2018 fair value of hedge funds subject to restrictions on redemption frequency and advance notice period requirements for investments in active hedge funds:

Redemption Frequency (Millions)	Notice Period				Total
	30-59 days notice	60-89 days notice	90-119 days notice	120+ days notice	
Monthly	\$ -	\$ 25.4	\$ -	\$ -	\$ 25.4
Quarterly	0.8	-	-	-	0.8
Semi-annual	-	0.8	-	-	0.8
Annual	-	15.6	55.7	20.0	91.3
Total	\$ 0.8	\$ 41.8	\$ 55.7	\$ 20.0	\$ 118.3

Certain of the hedge fund and private equity fund investments in which Sirius Group is invested are no longer active and are in the process of disposing of their underlying investments. Distributions from such funds are remitted to investors as the fund's underlying investments are liquidated. As of December 31, 2018, no distributions were outstanding from these investments.

Investments in private equity funds are generally subject to a "lock-up" period during which investors may not request a redemption. Distributions prior to the expected termination date of the fund may be limited to dividends or proceeds arising from the liquidation of the fund's underlying investments. In addition, certain private equity funds provide an option to extend the lock-up period at either the sole discretion of the fund manager or upon agreement between the fund and the investors.

As of December 31, 2018, investments in private equity funds were subject to lock-up periods as follows:

(Millions)	1 – 3 years	3 – 5 years	5 – 10 years	Total
Private Equity Funds – expected lock up period remaining	\$ 17.2	\$ 4.6	\$ 161.3	\$ 183.1

Investments Held on Deposit or as Collateral

As of December 31, 2018 and 2017, investments of \$792.4 million and \$548.2 million, respectively, were held in trusts required to be maintained in relation to various reinsurance agreements. Sirius Group's consolidated reinsurance operations are required to maintain deposits with certain insurance regulatory agencies in order to maintain their insurance licenses. The fair value of such deposits which are included within total investments totaled \$801.2 million and \$548.4 million as of December 31, 2018 and 2017, respectively.

As of December 31, 2018, Sirius Group held \$0.3 million of collateral in the form short-term investments associated with Interest Rate Cap agreements. (See **Note 13.**)

Unsettled investment purchases and sales

As of December 31, 2018 and 2017, Sirius Group reported \$3.2 million and \$0.3 million, respectively, in Accounts payable on unsettled investment purchases.

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As of December 31, 2018 and 2017, Sirius Group reported \$5.0 million and \$0.3 million, respectively, in Accounts receivable on unsettled investment sales.

Note 9. Fair value measurements

Fair value measurements

Fair value measurements are categorized into a hierarchy that distinguishes between inputs based on market data from independent sources (“observable inputs”) and a reporting entity’s internal assumptions based upon the best information available when external market data is limited or unavailable (“unobservable inputs”). Quoted prices in active markets for identical assets or liabilities have the highest priority (“Level 1”), followed by observable inputs other than quoted prices, including prices for similar but not identical assets or liabilities (“Level 2”), and unobservable inputs, including the reporting entity’s estimates of the assumptions that market participants would use, having the lowest priority (“Level 3”).

The availability of observable inputs can vary from financial instrument to financial instrument and is affected by a wide variety 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 instrument. 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 instruments categorized in Level 3. In periods of market dislocation, the observability of prices and inputs may be reduced for many instruments. This may lead the Company to change the selection of the valuation technique (for example, from market to cash flow approach) or to use multiple valuation techniques to estimate the fair value of a financial instrument. These circumstances could cause an instrument to be reclassified between levels within fair value hierarchy. Investments valued using Level 1 inputs include fixed maturity investments, primarily investments in U.S. Treasuries Bills and Notes, equity securities, and short-term investments. Investments valued using Level 2 inputs are primarily comprised of fixed maturity investments, which have been disaggregated into classes, including U.S. government and government agency, corporate debt securities, mortgage-backed and asset-backed securities, non-U.S. government and government agency, U.S. state and municipalities and political sub division and preferred stocks. Investments valued using Level 2 inputs also include certain ETFs that track U.S. stock indices such as the S&P 500 but are traded on foreign exchanges. Fair value estimates for investments that trade infrequently and have few or no observable market prices are classified as Level 3 measurements. Sirius Group determines when transfers between levels have occurred as of the beginning of the period.

Valuation techniques

Sirius Group uses outside pricing services to assist in determining fair values for its investments. For investments in active markets, Sirius Group uses the quoted market prices provided by outside pricing services to determine fair value. The outside pricing services Sirius Group uses have indicated that they will only provide prices where observable inputs are available. In circumstances where quoted market prices are unavailable or are not considered reasonable, Sirius Group estimates the fair value using industry standard pricing models and observable inputs such as benchmark yields, reported trades, broker-dealer quotes, issuer spreads, benchmark securities, bids, offers, prepayment speeds, reference data including research publications, and other relevant inputs. Given that many fixed maturity investments do not trade on a daily basis, the outside pricing services evaluate a wide range of fixed maturity investments by regularly drawing parallels from recent trades and quotes of comparable securities with similar features. The characteristics used to identify comparable fixed maturity investments vary by asset type and take into account market convention.

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The valuation process above is generally applicable to all of Sirius Group's fixed maturity investments. The techniques and inputs specific to asset classes within Sirius Group's fixed maturity investments for Level 2 securities that use observable inputs are as follows:

U.S. government and government agency

U.S. government and government agency securities consist primarily of debt securities 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. Fixed maturity investments included in U.S. government and government agency securities are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources and integrate other observations from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The fair value of each security is individually computed using analytical models which incorporate option adjusted spreads and other daily interest rate data.

Non-U.S. government and government agency

Non-U.S. government and government agency securities consist of debt securities issued by non-U.S. governments and their agencies along with supranational organizations (also known as sovereign debt securities). Securities held in these sectors are primarily priced by pricing services who employ proprietary discounted cash flow models to value the securities. Key quantitative inputs for these models are daily observed benchmark curves for treasury, swap, and high issuance credits. The pricing services then apply a credit spread for each security which is developed by in-depth and real time market analysis. For securities in which trade volume is low, the pricing services utilize data from more frequently traded securities with similar attributes. These models may also be supplemented by daily market and credit research for international markets.

Corporate debt securities

Corporate debt securities consist primarily of investment-grade debt of a wide variety of U.S. and non-U.S. corporate issuers and industries. The corporate fixed maturity investments are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources regarding the issuer of the security and obtain credit data, as well as other observations, from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The pricing services also consider the specific terms and conditions of the securities, including any specific features which may influence risk.

Mortgage-backed and asset-backed securities

The fair value of mortgage and asset-backed securities is primarily priced by pricing services using a pricing model that uses information from market sources and leveraging similar securities. Key inputs include benchmark yields, reported trades, underlying tranche cash flow data, collateral performance, plus new issue data, as well as broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including issuer, vintage, loan type, collateral attributes, prepayment speeds, default rates, recovery rates, cash flow stress testing, credit quality ratings, and market research publications.

U.S. states, municipalities, and political subdivisions

The U.S. states, municipalities, and political subdivisions portfolio contains debt securities issued by U.S. domiciled state and municipal entities. These securities are generally priced by independent pricing services using the techniques for U.S. government and government agency securities.

Preferred stocks

The fair value of preferred stocks is generally priced by independent pricing services using an evaluated pricing model that calculates the appropriate spread over a comparable security for each issue. Key inputs include exchange prices (underlying and common stock of same issuer), benchmark yields, reported trades, broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including sector, coupon, credit quality ratings, duration, credit enhancements, early redemption features, and market research publications.

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Level 3 Investments

Level 3 valuations are generated from techniques that use assumptions not observable in the market. These unobservable assumptions reflect Sirius Group's assumptions, that market participants would use in valuing the investment. Generally, certain securities may start out as Level 3 when they are originally issued but as observable inputs become available in the market, they may be reclassified to Level 2.

Sirius Group employs a number of procedures to assess the reasonableness of the fair value measurements for its other long-term investments, including obtaining and reviewing the audited annual financial statements of hedge funds and private equity funds and periodically discussing each fund's pricing with the fund manager. However, since the fund managers do not provide sufficient information to evaluate the pricing inputs and methods for each underlying investment, the inputs are considered to be unobservable.

The fair values of Sirius Group's investments in private equity securities and private debt instruments have been classified as Level 3 measurements. They are carried at fair value and are initially valued based on transaction price and their valuation is subsequently estimated based on available evidence such as a market transaction in similar instruments and other financial information for the issuer.

Investments measured using Net Asset Value

The fair value of Sirius Group's investments in hedge funds and private equity funds has been determined using net asset value. The hedge fund's administrator provides quarterly updates of fair value in the form of Sirius Group's proportional interest in the underlying fund's net asset value (collectively "NAV"), which is deemed to approximate fair value, generally with a three month delay in valuation. The fair value of investment in hedge funds is measured using the NAV practical expedient and therefore has been not categorized within the fair value hierarchy. The private equity funds provide quarterly or semi-annual partnership capital statements with a three or six month delay which are used as a basis for valuation. These private equity investments vary in investment strategies and are not actively traded in any open markets. The fair value of these investments are measured using NAV practical expedient and therefore have not been categorized with the fair value hierarchy. Due to a lag in reporting, some of the fund managers, fund administrators, or both, are unable to provide final fund valuations as of the Company's reporting date. In these circumstances, Sirius Group estimates the return of the current period and uses all credible information available. This includes utilizing preliminary estimates reported by its fund managers and using other information that is available to Sirius Group with respect to the underlying investments, as necessary.

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Fair Value Measurements by Level

The following tables summarize Sirius Group's financial assets and liabilities measured at fair value as of December 31, 2018 and 2017 by level:

<i>(Millions)</i>	2018			
	Fair value	Level 1 inputs	Level 2 inputs	Level 3 inputs
Assets measured at fair value				
Fixed maturity investments:				
U.S. Government and government agency	\$ 167.9	\$ 164.7	\$ 3.2	\$ -
Corporate debt securities	695.8	-	695.8	-
Asset-backed securities	494.5	-	494.5	-
Residential mortgage-backed securities	413.5	-	413.5	-
Commercial mortgage-backed securities	115.9	-	115.9	-
Non-U.S. government and government agency	50.3	42.9	7.4	-
Preferred stocks	8.5	-	3.1	5.4
U.S. States, municipalities, and political subdivision	2.8	-	2.8	-
Total fixed maturity investments	1,949.2	207.6	1,736.2	5.4
Short-term investments	715.5	679.3	36.2	-
Equity securities	380.0	380.0	-	-
Other long-term investments ⁽¹⁾	63.6	-	-	63.6
Total investments	\$ 3,108.3	\$ 1,266.9	\$ 1,772.4	\$ 69.0
Derivative instruments	4.1	-	-	4.1
Total assets measured at fair value	\$ 3,112.4	\$ 1,266.9	\$ 1,772.4	\$ 73.1
Liabilities measured at fair value				
Contingent consideration liabilities	\$ 28.8	\$ -	\$ -	\$ 28.8
Derivative instruments	5.1	0.5	-	4.6
Total liabilities measured at fair value	\$ 33.9	\$ 0.5	\$ -	\$ 33.4

⁽¹⁾ Excludes fair value of \$301.4 associated with hedge funds and private equity funds which fair value is measured at net asset value using the practical expedient.

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(Millions)	2017			
	Fair value	Level 1 inputs	Level 2 inputs	Level 3 inputs
Assets measured at fair value				
Fixed maturity investments:				
U.S. Government and government agency	\$ 84.8	\$ 83.2	\$ 1.6	\$ -
Corporate debt securities	1,014.5	-	1,014.5	-
Asset-backed securities	475.4	-	475.4	-
Residential mortgage-backed securities ⁽¹⁾	293.5	-	293.5	-
Commercial mortgage-backed securities ⁽¹⁾	191.0	-	191.0	-
Non-U.S. government and government agency	107.2	94.8	12.4	-
Preferred stocks	9.8	-	1.8	8.0
U.S. States, municipalities, and political subdivision	3.8	-	3.8	-
Total fixed maturity investments	2,180.0	178.0	1,994.0	8.0
Short-term investments	625.0	566.2	58.8	-
Equity securities	299.2	298.6	0.6	-
Other long-term investments ⁽²⁾	64.2	-	-	64.2
Total investments	\$ 3,168.4	\$ 1,042.8	\$ 2,053.4	\$ 72.2
Derivative instruments	4.5	-	-	4.5
Total assets measured at fair value	\$ 3,172.9	\$ 1,042.8	\$ 2,053.4	\$ 76.7
Liabilities measured at fair value				
Contingent consideration liabilities	\$ 42.8	\$ -	\$ -	\$ 42.8
Derivative instruments	10.6	-	-	10.6
Total liabilities measured at fair value	\$ 53.4	\$ -	\$ -	\$ 53.4

⁽¹⁾ 2017 figures have been revised to correct for a misclassification in prior disclosure of subcategories within residential mortgage-backed securities and commercial mortgage-backed securities. Fair value and Level 2 input balances increased by \$41.4 for residential mortgage-backed securities and decreased by the same amount for commercial mortgage-backed securities.

⁽²⁾ Excludes fair value of \$205.3 associated with hedge funds and private equity funds which fair value is measured at net asset value using the practical expedient.

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Rollforward of Level 3 Fair Value Measurements

The following tables present changes in Level 3 for financial instruments measured at fair value for the years ended December 31, 2018 and 2017:

<i>(Millions)</i>	2018			
	Fixed maturities	Other long-term investments⁽¹⁾	Derivative instruments assets & (liabilities)	Contingent consideration (liabilities)
Balance at January 1, 2018	\$ 8.0	\$ 64.2	\$ (6.1)	\$ (42.8)
Fair value of contingent consideration liabilities at date of purchase (See Note 3)	-	-	-	-
Total realized and unrealized gains	(6.1)	6.8	12.0	9.6
Foreign currency losses through Other Comprehensive Income	-	(4.4)	-	-
Purchases	4.0	1.2	-	-
Sales/settlements	(0.5)	(4.2)	(6.4)	4.4
Transfers out	-	-	-	-
Balance at December 31, 2018	\$ 5.4	\$ 63.6	\$ (0.5)	\$ (28.8)

⁽¹⁾ Excludes fair value of \$301.5 associated with hedge funds and private equity funds which fair value is measured at net asset value using the practical expedient.

<i>(Millions)</i>	2017			
	Fixed maturities	Other long-term investments⁽¹⁾	Derivative instruments assets & (liabilities)	Contingent consideration (liabilities)
Balance at January 1, 2017	\$ 27.7	\$ 29.1	\$ 12.7	\$ -
Fair value of contingent consideration liabilities at date of purchase (See Note 3)	-	-	-	(122.2)
Total realized and unrealized gains	(4.9)	(0.5)	(14.6)	48.8
Foreign currency losses through Other Comprehensive Income	(0.1)	1.0	-	-
Purchases	4.7	36.0	-	-
Sales/settlements	(1.0)	(1.4)	(4.2)	30.6
Transfers out ⁽²⁾	(18.4)	-	-	-
Balance at December 31, 2017	\$ 8.0	\$ 64.2	\$ (6.1)	\$ (42.8)

⁽¹⁾ Excludes fair value of \$205.3 associated with hedge funds and private equity funds which fair value is measured at net asset value using the practical expedient.

⁽²⁾ Transfer from Level 3 to Level 2.

Fair Value Measurements – transfers between levels

There were no transfers between Level 3 and Level 2 measurements for the year ended December 31, 2018.

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During 2017, two fixed maturity securities classified as Level 3 measurements in the prior period were recategorized as a Level 2 measurement because quoted market prices for similar securities that were considered reliable and could be validated against an alternative source were available as of December 31, 2017. These measurements comprise “Transfers out” of Level 3 and “Transfers in” to Level 2 of \$18.4 million for the period ended December 31, 2017.

Significant Unobservable Inputs

The table below presents information about the significant unobservable inputs used for recurring fair value measurements for certain Level 3 instruments as of December 31, 2018 and 2017, and includes only those instruments for which information about the inputs is reasonably available to Sirius Group, such as data from independent third-party valuation service providers and from internal valuation models.

<i>(Millions)</i>		2018	
Description	Valuation technique(s)	Fair value	Unobservable input
Private equity securities ⁽¹⁾	Share price of recent transaction	\$ 32.5	Purchase share price \$ 40.63
Private equity securities ⁽¹⁾	Multiple of GAAP book value	\$ 14.7	Book value multiple 0.9X
Private debt instrument ⁽¹⁾	Purchase price of recent transaction	\$ 9.0	Purchase price \$ 9.0
Private debt instrument ⁽¹⁾	Purchase price of recent transaction	\$ 6.0	Purchase price \$ 6.0
Preferred stock ⁽¹⁾	Share price of recent transaction	\$ 4.6	Purchase price \$ 1.88
Weather derivatives ⁽²⁾	Third party appraisal	\$ 3.9	Broker quote \$ 3.9
Common stock ⁽¹⁾	Purchase price of recent transaction	\$ 0.9	Purchase price \$ 1.88
Preferred stock ⁽¹⁾	Share price of recent transaction	\$ 0.8	Purchase price \$ 0.8
Common stock ⁽¹⁾	Share price of recent transaction	\$ 0.3	Purchase price \$ 10.0
Private debt instrument ⁽¹⁾	Purchase price of recent transaction	\$ 0.2	Purchase price \$ 0.2
Interest rate cap ⁽²⁾	Third party appraisal	\$ 0.2	Broker quote \$ 0.2
Currency swaps ⁽²⁾	Third party appraisal	\$ (4.6)	Broker quote \$ (4.6)
Contingent consideration	External valuation model	\$ (28.8)	Discounted future payments \$ (28.8)

⁽¹⁾ As of December 31, 2018, each asset type consists of one security.

⁽²⁾ See Note 13 for discussion of derivative instruments.

<i>(Millions)</i>		2017	
Description	Valuation technique(s)	Fair value	Unobservable input
Private equity securities ⁽¹⁾	Share price of recent transaction	\$ 25.0	Purchase share price \$ 31.25
Private equity securities ⁽¹⁾	Multiple of GAAP book value	\$ 17.2	Book value multiple 1.0X
Private debt instrument ⁽¹⁾	Purchase price of recent transaction	\$ 9.0	Purchase price \$ 9.0
Private debt instrument ⁽¹⁾	Purchase price of recent transaction	\$ 9.0	Purchase price \$ 9.0
Preferred stock ⁽¹⁾	Purchase price of recent transaction	\$ 6.0	Average share price \$ 0.6
Weather derivatives ⁽²⁾	Third party appraisal	\$ 4.2	Broker quote \$ 4.2
Private debt instrument ⁽¹⁾	Internal valuation model	\$ 2.5	Purchase price less pay down \$ 2.5
Preferred stock ⁽¹⁾	Share price of recent transaction	\$ 2.0	Average share price \$ 11.79
Private debt instrument ⁽¹⁾	Purchase price of recent transaction	\$ 1.5	Purchase price \$ 1.5
Interest rate cap ⁽²⁾	Third party appraisal	\$ 0.3	Broker quote \$ 0.3
Currency swaps ⁽²⁾	Third party appraisal	\$ (10.6)	Broker quote \$ (10.6)
Contingent consideration	External valuation model	\$ (42.8)	Discounted future payments \$ (42.8)

⁽¹⁾ As of December 31, 2017, each asset type consists of one security.

⁽²⁾ See Note 13 for discussion of derivative instruments.

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Financial instruments disclosed, but not carried at fair value

Sirius Group uses various financial instruments in the normal course of its business. The carrying values of Cash, Accrued investment income, certain other assets, Accounts payable on unsettled investment purchases, certain other liabilities, and other financial instruments not included in the table below approximated their fair values at December 31, 2018 and 2017, due to their respective short maturities. As these financial instruments are not actively traded, their respective fair values are classified within Level 3. The following table includes financial instruments for which the carrying value differs from the estimated fair values at December 31, 2018 and 2017:

<i>(Millions)</i>	2018		2017	
	Fair value ⁽¹⁾	Carrying value	Fair value ⁽¹⁾	Carrying value
Liabilities, Mezzanine equity, and				
Non-controlling interest:				
2017 SEK Subordinated Notes	\$ 309.5	\$ 303.6	\$ 341.4	\$ 330.7
2016 SIG Senior Notes	\$ 347.6	\$ 393.2	\$ 392.3	\$ 392.5
Series B preference shares	\$ 191.7	\$ 232.2	\$ -	\$ -
Series A redeemable preference shares	\$ -	\$ -	\$ 90.0	\$ 106.1

⁽¹⁾Fair value estimated by internal pricing and considered a Level 3 measurement.

Fair Value Measurements on a Non-Recurring Basis

Sirius Group measures the fair value of certain assets on a non-recurring basis, generally quarterly, annually, or when events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. These include goodwill, indefinite-lived intangible assets, and long-lived assets. Sirius Group uses a variety of techniques to measure the fair value of these assets when appropriate, as described below:

Goodwill and Indefinite-Lived Intangible Assets: The preliminary fair value of the goodwill and indefinite-lived intangible asset acquired as part of the acquisitions of both IMG and Armada (see **Note 3**) was determined using the income valuation and market valuation methodologies. The income approach determines value for an asset based on the present value of cash flows projected to be generated over the remaining economic life of the asset being measured. The net cash flows are discounted to present value using a discount rate that reflects the relative risk of achieving the cash flow and the time value of money. The market approach is a valuation technique that uses prices and other relevant information generated by market transactions involving identical or comparable assets or group of assets.

Determining the fair value goodwill and indefinite-lived intangible assets acquired requires the exercise of significant judgment, including the amount and timing of expected future cash flows, long-term growth rates and discount rates. The cash flows employed in the valuation are based on Sirius Group's best estimates of future sales, earnings, and cash flows after considering factors such as general market conditions, changes in working capital, long term business plans, and recent operating performance. Use of different estimates and judgments could yield different results.

Sirius Group tests goodwill and indefinite-lived intangible assets for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. When Sirius Group determines goodwill and indefinite-lived intangible assets may be impaired, Sirius Group uses techniques, including discounted expected future cash flows, to measure fair value. Sirius Group used Level 3 inputs to measure and record an \$8.0 million and \$5.0 million impairment of Trade Names indefinite-lived intangible asset during 2018 and 2017, respectively, that were recorded in Impairment of Intangible Assets in the Consolidated Statements of (Loss) Income. (See **Note 10**).

Long-Lived Assets: Sirius Group tests its long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of a long-lived asset may not be recoverable.

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Note 10. Goodwill and intangible assets

Goodwill represents the excess of the amount paid to acquire subsidiaries over the fair value of identifiable net assets at the date of acquisition. Intangible assets consist primarily of distribution relationships, trade names, customer relationships, technology, and insurance licenses. Finite-life intangible assets are measured at their acquisition date fair values, are amortized over their economic lives, and presented net of accumulated amortization on the balance sheet.

Goodwill is not amortized, but rather is evaluated for impairment on an annual basis, or whenever indications of potential impairment exist. In the absence of any indications of potential impairment, the evaluation of goodwill is performed during the fourth quarter of each year. Sirius Group uses widely accepted valuation techniques to determine the fair value of its reporting units used in its annual goodwill impairment analysis. Sirius Group's valuation is primarily based on qualitative and quantitative assessments regarding the fair value of the reporting unit relative to its carrying value. Sirius Group models the fair value of the reporting unit based on projected earnings and cash flows of the reporting unit.

Intangible assets with indefinite lives are evaluated for impairment at least annually and when events or changes in circumstances indicate that it is more likely than not that the asset is impaired.

The following table shows the change in goodwill, intangible assets with an indefinite life, and intangible assets with a finite life during the years ended December 31, 2018 and 2017:

<i>(Millions)</i>	Goodwill	Intangible assets with an indefinite life	Intangible assets with a finite life	Total
Net balance at December 31, 2016⁽¹⁾	\$ -	\$ 5.0	\$ -	\$ 5.0
Additions ⁽²⁾	400.7	27.0	199.5	627.2
Foreign currency translation ⁽²⁾	0.3	-	-	0.3
Impairments ⁽²⁾	-	(5.0)	-	(5.0)
Amortization	-	-	(10.2)	(10.2)
Net balance at December 31, 2017⁽²⁾	401.0	27.0	189.3	617.3
Additions ⁽³⁾	-	3.1	-	3.1
Foreign currency translation ⁽²⁾	(0.4)	-	-	(0.4)
Impairments ⁽²⁾	-	(8.0)	-	(8.0)
Amortization ⁽²⁾	-	-	(15.8)	(15.8)
Net balance at December 31, 2018	\$ 400.6	\$ 22.1	\$ 173.5	\$ 596.2

⁽¹⁾Net balance at December 31, 2016 for Intangible assets with an indefinite life relate to insurance licenses allocated to the Runoff & Other segment.

⁽²⁾Foreign currency translation, impairments, and amortization in 2017 and 2018 relate to Armada and IMG and are allocated to the Global A&H segment.

⁽³⁾Additions in 2018 relate to insurance licenses allocated to the Runoff & Other segment.

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For the years ended December 31, 2018 and 2017, Sirius Group recognized an impairment of Intangible assets with an indefinite life that relate to a trade name intangible asset acquired as part of the acquisition of IMG. The impairments resulted from lower than anticipated growth when comparing the forecasted results against a reforecast of results at year end. A quantitative impairment review of the IMG trade name intangible asset was performed by applying the royalty replacement method to determine the asset's fair value as of December 31, 2018 and 2017, respectively. Under the royalty replacement method, the fair value of IMG's trade names intangible asset was determined based on a market participant's view of the royalty that would be paid to license the right to use the trade name. This quantitative analysis incorporated several assumptions including forecasted future revenues and cash flows, estimated royalty rate, based on similar licensing transactions and market royalty rates, and discount rate, which incorporates assumptions such as weighted-average cost of capital and risk premium. As a result of the impairment testing, the carrying value of IMG's trade names intangible asset exceeded its estimated fair value and an impairment of \$ 8.0 million and \$5.0 million was recorded as Impairment of intangible assets on the Consolidated Statements of (Loss) Income for the years ended December 31, 2018 and 2017, respectively. For the year ended December 31, 2016, Sirius Group did not recognize any impairments on Intangible assets with an indefinite life.

The following tables presents the components of goodwill and intangible assets as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018				
	Gross balance	Accumulated amortization	Impairments	Foreign currency translation	Net balance
Customer relationships – finite life ⁽¹⁾	\$ 17.0	\$ (2.2)	\$ -	\$ -	\$ 14.8
Distribution relationships – finite life ⁽¹⁾	151.0	(15.8)	-	-	135.2
Goodwill – infinite life ⁽¹⁾	400.7	-	-	(0.1)	400.6
Insurance licenses – infinite life ⁽²⁾	8.1	-	-	-	8.1
Technology – finite life ⁽¹⁾	15.5	(4.3)	-	-	11.2
Trade names – finite life ⁽¹⁾	16.0	(3.7)	-	-	12.3
Trade names – infinite life ⁽¹⁾	27.0	-	(13.0)	-	14.0
Net balance at December 31, 2018	\$ 635.3	\$ (26.0)	\$ (13.0)	\$ (0.1)	\$ 596.2

⁽¹⁾Allocated to the Global A&H segment.

⁽²⁾Allocated to the Runoff & Other segment.

<i>(Millions)</i>	2017				
	Gross balance	Accumulated amortization	Impairments	Foreign currency translation	Net balance
Customer relationships – finite life ⁽¹⁾	\$ 17.0	\$ (0.8)	\$ -	\$ -	\$ 16.2
Distribution relationships – finite life ⁽¹⁾	151.0	(6.2)	-	-	144.8
Goodwill – infinite life ⁽¹⁾	400.7	-	-	0.3	401.0
Insurance licenses – infinite life ⁽²⁾	5.0	-	-	-	5.0
Technology – finite life ⁽¹⁾	15.5	(1.6)	-	-	13.9
Trade names – finite life ⁽¹⁾	16.0	(1.6)	-	-	14.4
Trade names – infinite life ⁽¹⁾	27.0	-	(5.0)	-	22.0
Net balance at December 31, 2017	\$ 632.2	\$ (10.2)	\$ (5.0)	\$ 0.3	\$ 617.3

⁽¹⁾Allocated to the Global A&H segment.

⁽²⁾Allocated to the Runoff & Other segment.

The amortization of intangibles assets for the year ended December 31, 2018 and 2017 was \$15.8 million and \$10.2 million, respectively. There was no amortization of intangible assets during the year ended December 31, 2016.

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The estimated remaining amortization expense for Sirius Group's intangible assets with finite lives is as follows:

<i>(Millions)</i>	
2019	\$ 15.8
2020	15.8
2021	15.8
2022	14.6
2023	13.8
2024 and thereafter	97.7
Total remaining amortization expense	\$173.5

The estimated remaining useful lives of these intangible assets range from 3.3 to 20.9 years.

Note 11. Debt and standby letters of credit facilities

Sirius Group's debt outstanding as of December 31, 2018 and 2017 consisted of the following:

<i>(Millions)</i>	December 31, 2018	Effective rate ⁽¹⁾	December 31, 2017	Effective rate ⁽¹⁾
2017 SEK Subordinated Notes, at face value	\$ 307.6	3.8%	\$ 335.2	3.5%
Unamortized issuance costs	(4.0)		(4.5)	
2017 SEK Subordinated Notes, carrying value	303.6		330.7	
2016 SIG Senior Notes, at face value	400.0	4.7%	400.0	4.7%
Unamortized discount	(2.6)		(2.9)	
Unamortized issuance costs	(4.2)		(4.6)	
2016 SIG Senior Notes, carrying value	393.2		392.5	
Total debt	\$ 696.8		\$ 723.2	

⁽¹⁾Effective rate considers the effect of the debt issuance costs.

A schedule of contractual repayments of Sirius Group's debt as of December 31, 2018 follows:

<i>(Millions)</i>	December 31, 2018
Due in one year or less	\$ -
Due in one to three years	-
Due in three to five years	-
Due after five years	707.6
Total	\$ 707.6

2017 SEK Subordinated Notes

On September 22, 2017, Sirius Group issued floating rate callable subordinated notes denominated in Swedish kronor ("SEK") in the amount of SEK 2,750.0 million (or \$346.1 million on date of issuance) at a 100% issue price ("2017 SEK Subordinated Notes"). The 2017 SEK Subordinated Notes were issued in an offering that was exempt from the registration requirements of the Securities Act of 1933. The 2017 SEK Subordinated Notes bear interest on their principal amount at a floating rate equal to the applicable Stockholm Interbank Offered Rate ("STIBOR") for the relevant interest period plus an applicable margin, payable quarterly in arrears on March 22, June 22, September 22, and December 22 in each year commencing on December 22, 2017, until maturity in September 2047.

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Beginning on September 22, 2022, the 2017 SEK Subordinated Notes may be redeemed, in whole or in part, at Sirius Group's option. In addition, within 90 days following the occurrence of a Specified Event (as defined below), the 2017 SEK Subordinated Notes may be redeemed, in whole but not in part, at Sirius Group's option. "Specified Event" means (a) an "Additional Amounts Event" in connection with a change in laws, rules or regulations as a result of which Sirius Group is obligated to pay additional amounts on the notes in respect of any withholding or deduction for taxes, (b) a "Tax Event" in connection with a change in laws, rules or regulations as a result of which interest on the notes is no longer fully deductible by Sirius Group for income tax purposes in the applicable jurisdiction (to the extent that such interest was so deductible as of the time of such Tax Event), (c) a "Rating Methodology Event" in connection with a change in, or clarification to, the rating methodology of Standard & Poor's or Fitch that results in a materially unfavorable capital treatment of the notes, or (d) a "Regulatory Event" in connection with a change in, or clarification to, applicable supervisory regulations that results in the notes no longer qualifying as Tier 2 Capital.

Sirius Group incurred \$4.6 million in expenses related to the issuance of the 2017 SEK Subordinated Notes (including SEK 27.5 million, or \$3.5 million, in underwriting fees), which have been deferred and are being recognized into interest expense over the life of the 2017 SEK Subordinated Notes.

A portion of the proceeds were used to fully redeem the outstanding \$250.0 million Sirius International Group, Ltd. Preference Shares. (See **Note 15**).

Taking into effect the amortization of all underwriting and issuance expenses, and applicable STIBOR, the 2017 SEK Subordinated Notes yielded an effective rate of approximately 3.8% and 3.5% for the years ended December 31, 2018 and 2017, respectively. Sirius Group recorded \$11.7 million and \$3.3 million of interest expense, inclusive of amortization of issuance costs, on the 2017 SEK Subordinated Notes for the years ended December 31, 2018 and 2017, respectively.

2016 SIG Senior Notes

On November 1, 2016, Sirius Group issued \$400.0 million face value of senior unsecured notes ("2016 SIG Senior Notes") at an issue price of 99.209% for net proceeds of \$392.4 million after taking into effect both deferrable and non-deferrable issuance costs. The SIG Senior Notes were issued in an offering that was exempt from the registration requirements of the Securities Act of 1933. The 2016 SIG Senior Notes bear an annual interest rate of 4.6%, payable semi-annually in arrears on May 1 and November 1, in each year commencing on May 1, 2017, until maturity in November 2026.

Sirius Group incurred \$5.1 million in expenses related to the issuance of the 2016 SIG Senior Notes (including \$3.4 million in underwriting fees), which have been deferred and are being recognized into interest expense over the life of the 2016 SIG Senior Notes.

Taking into effect the amortization of the original issue discount and all underwriting and issuance expenses, the 2016 SIG Senior Notes yield an effective rate of approximately 4.7% per annum. Sirius Group recorded \$19.1 million, \$19.1 million, and \$3.2 million of interest expense, inclusive of amortization of issuance costs on the 2016 SIG Senior Notes for the years ended December 31, 2018, 2017, and 2016, respectively.

2007 SIG Senior Notes

During 2016, using the funds received from the issuance of the 2016 SIG Senior Notes, Sirius Group retired the \$400.0 million face value of senior unsecured notes that were issued in 2007 ("2007 SIG Senior Notes"). The retirement of the 2007 SIG Senior Notes resulted in a \$5.7 million loss recorded in interest expense, which includes the write-off of the remaining \$0.1 million in unamortized deferred costs and original issue discount at the time of retirement.

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In anticipation of the issuance of the 2007 SIG Senior Notes, Sirius Group entered into an interest rate lock agreement to hedge its interest rate exposure from the date of the agreement until the pricing of the 2007 SIG Senior Notes. The agreement was terminated on March 15, 2007 with a loss of \$2.4 million, which was recorded in other comprehensive income. The loss was reclassified from accumulated other comprehensive income over the life of the 2007 SIG Senior Notes using the interest method and was included in interest expense until it was retired in 2016. When the 2007 SIG Senior Notes were retired, the \$0.1 million loss remaining in accumulated other comprehensive income was reclassified to interest expense.

Prior to retirement, taking into effect the amortization of the original issue discount and all underwriting and issuance expenses, including the interest rate lock agreement, the 2007 SIG Senior Notes yielded an effective rate of approximately 6.5% per annum. Sirius Group recorded \$31.2 million of interest expense, inclusive of loss on repurchase, amortization of issuance costs and the interest rate lock agreement, on the 2007 SIG Senior Notes for each of the year ended December 31, 2016.

Old Lyme Note

On April 25, 2017, Sirius Group made a payment of \$3.8 million to retire the Old Lyme Note that was originally issued as part of the acquisition of the runoff loss reserve portfolio of Old Lyme Insurance Company Ltd. As part of the acquisition in 2011, Sirius Group entered into a five-year \$2.1 million note that was subject to upward adjustments for favorable loss reserve development (up to 50% of \$6.0 million) and downward adjustments for any adverse loss reserve development. From inception, Sirius Group had favorable loss reserve development of \$3.4 million on the Old Lyme loss reserve position that resulted in an increase of \$1.7 million on the Old Lyme Note.

Standby Letter of Credit Facilities

On November 9, 2018, Sirius International renewed two standby letter of credit facility agreements totaling \$160 million to provide capital support for Lloyd's Syndicate 1945. The first letter of credit is a renewal of a \$125 million facility with Nordea Bank Finland Abp, London Branch, which is issued on an unsecured basis. The second letter of credit is a \$35 million facility with DNB Bank ASA, Sweden Branch, \$25 million of which is issued on an unsecured basis. Each facility is renewable annually. The above referenced facilities are subject to various affirmative, negative and financial covenants that the Company considers to be customary for such borrowings, including certain minimum net worth and maximum debt to capitalization standards.

Sirius International has other secured letter of credit and trust arrangements with various financial institutions to support its insurance operations. As of December 31, 2018 and 2017, respectively, these secured letter of credit and trust arrangements were collateralized by pledged assets and assets in trust of SEK 2.9 billion and SEK 2.1 billion, or \$321.3 million and \$261.2 million (based on the December 31, 2018 and December 31, 2017 SEK to USD exchange rates). As of December 31, 2018 and 2017, respectively, Sirius America's trust arrangements were collateralized by pledged assets and assets in trust of \$56.2 million and \$55.8 million. As of December 31, 2018 and 2017, respectively, Sirius Bermuda Insurance Company's ("Sirius Bermuda") trust arrangements were collateralized by pledged assets and assets in trust of \$319.7 million and \$123.3 million.

Revolving Credit Facility

In February 2018, Sirius Group, through its indirectly wholly-owned subsidiary Sirius International Group, Ltd., entered into a three-year, \$300 million senior unsecured revolving credit facility (the "Facility"). The Facility provides access to loans for working capital and general corporate purposes, and letters of credit to support obligations under insurance and reinsurance agreements and retrocessional agreements. The Facility is subject to various affirmative, negative and financial covenants that Sirius Group considers to be customary for such borrowings, including certain minimum net worth, maximum debt to capitalization and financial strength rating standards. As of December 31, 2018, there were no outstanding borrowings under the Facility.

Debt and Standby Letter of Credit Facility Covenants

As of December 31, 2018, Sirius Group was in compliance with all of the covenants under the 2017 SEK Subordinated Notes, the 2016 SIG Senior Notes, the Nordea Bank Finland Abp, London Branch facility, and the DNB Bank ASA, Sweden Branch facility. In addition, as of December 31, 2018, Sirius Group was in compliance with all of the covenants under the Facility.

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Interest

Total interest expense incurred by Sirius Group for its indebtedness was \$30.8 million, \$22.4 million, and \$34.6 million in 2018, 2017, and 2016. Total interest paid by Sirius Group for its indebtedness was \$30.0 million, \$22.0 million, and \$31.6 million in 2018, 2017, and 2016, respectively.

Note 12. Income taxes

The Company and its Bermuda domiciled subsidiaries are not subject to Bermuda income tax under current Bermuda law. In the event there is a change in the current law such that taxes are imposed, the Company and its Bermuda domiciled subsidiaries would be exempt from such tax until March 31, 2035, pursuant to the Bermuda Exempted Undertakings Tax Protection Act of 1966. The Company has subsidiaries and branches that operate in various other jurisdictions around the world that are subject to tax in the jurisdictions in which they operate. The jurisdictions in which the Company's subsidiaries and branches are subject to tax are Australia, Belgium, Canada, Denmark, Germany, Gibraltar, Hong Kong (China), Luxembourg, Malaysia, the Netherlands, Shanghai (China), Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

Sirius Group's net income (loss) before income taxes for the years ended December 31, 2018, 2017, and 2016 was generated in the following domestic and foreign jurisdictions:

<i>(Millions)</i>	2018	2017	2016
Domestic:			
Bermuda	\$ 62.7	\$ (95.0)	\$ (4.9)
Foreign:			
U.S.	(10.1)	(22.4)	(25.3)
U.K.	(14.9)	(27.0)	(7.0)
Sweden	(74.2)	(26.1)	(29.5)
Luxembourg	60.3	43.4	105.3
Netherlands	(0.1)	18.2	(0.1)
Other	-	(1.0)	(0.6)
Total income (loss) before income taxes	\$ 23.7	\$ (109.9)	\$ 37.9

The total income tax (expense) benefit for the years ended December 31, 2018, 2017, and 2016 consisted of the following:

<i>(Millions)</i>	2018	2017	2016
Current tax (expense):			
U.S. Federal	\$ (7.0)	\$ (0.9)	\$ 2.1
State	(2.2)	(2.0)	(1.7)
Non-U.S.	(19.8)	(3.6)	(11.4)
Total current tax (expense)	(29.0)	(6.5)	(11.0)
Deferred tax (expense) benefit:			
U.S. Federal	14.5	(10.7)	16.0
State	-	-	-
Non-U.S.	(25.9)	(9.2)	2.3
Total deferred tax (expense) benefit	(11.4)	(19.9)	18.3
Total income tax (expense) benefit	\$ (40.4)	\$ (26.4)	\$ 7.3

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Effective Rate Reconciliation

A reconciliation of taxes calculated using the 22% Swedish statutory rate (the rate at which the majority of Sirius Group's worldwide operations are taxed) to the income tax (expense) benefit on pre-tax income follows:

<i>(Millions)</i>	2018	2017	2016
Tax (expense) benefit at the statutory rate	\$ (5.2)	\$ 24.2	\$ (8.3)
Differences in taxes resulting from:			
Tax reserve adjustments	(42.0)	(0.7)	(6.0)
Tax rate change enacted in Sweden	15.4	-	-
Tax on Safety Reserve	(15.3)	-	-
Foreign tax credits	10.8	2.2	6.9
Section 197 Intangible as result of internal restructuring	6.9	-	-
Non-Sweden earnings	2.3	(18.4)	(6.9)
Gain on internal restructuring	(9.1)	-	-
State taxes expense	(2.9)	(0.7)	(1.1)
Change in valuation allowance	2.3	1.4	55.0
Withholding taxes	(1.9)	(0.8)	(1.4)
Tax rate change—other	0.1	(29.7)	-
Tax rate change enacted in Luxembourg	-	0.4	(30.6)
Other, net	(1.8)	(4.3)	(0.3)
Total income tax (expense) benefit on pre-tax earnings	\$ (40.4)	\$ (26.4)	\$ 7.3

The non-Sweden component of pre-tax (loss) income was \$97.9 million, \$(83.8) million, and \$67.3 million for the years ended December 31, 2018, 2017, and 2016, respectively.

Effective January 1, 2019, Sweden enacted reductions in its corporate tax rate from 22% to 21.4% from 2019 and then to 20.6% from 2021. This resulted in a reduction in the net deferred tax liability for Sirius Group's Swedish entities as of December 31, 2018 in the amount of \$15.4 million. Further, as part of the same enacted tax legislation, Sweden introduced a standard taxable yield on property and casualty insurance companies' safety reserves. Insurers recognizing a safety reserve must recognize an annual standard yield on safety reserve as taxable income. The standard income is equal to the government bond rate at the end of November the year before the year during which the insurers income year ends multiplied by the opening balance of the safety reserve for that year. In addition, an insurer with a safety reserve opening balance on January 1, 2021 is required to recognize notional taxable income equal to 6% of the safety reserve at the start of that income year. As a result of this newly enacted one-time tax determined by reference to the future safety reserve balance, Sirius Group has recorded a deferred tax expense of \$15.3 million as of December 31, 2018.

The Company previously applied Staff Accounting Bulletin 118 ("SAB 118"), which provided guidance on accounting for the tax effects of the TCJA which was enacted into law in the U.S. in December 2017. SAB 118 addresses situations where accounting for certain income tax effects of the TCJA under ASC 740, Income Taxes ("ASC 740"), may be incomplete upon issuance of an entity's financial statements and provides a one-year measurement period from the enactment date to complete the accounting under ASC 740. The Company has completed its accounting for all material tax effects of the TCJA and has recognized adjustments as of December 31, 2018 as described below.

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The TCJA includes a new 21% corporate tax rate, the impacts of which (including on Sirius Group's deferred tax assets) were already taken into account in Sirius Group's financial results for the year ended December 31, 2017. The TCJA also includes a new BEAT provision, which is essentially a minimum tax that is potentially applicable to certain otherwise deductible payments made by U.S. entities to non-U.S. affiliates, including cross-border interest payments and reinsurance premiums. The statutory BEAT rate is 5% in 2018 and will rise to 10% in 2019-2025 and then 12.5% in 2026 and thereafter. The TCJA also includes provisions for GILTI under which taxes on foreign income are imposed on the excess of a deemed return on tangible assets of certain foreign subsidiaries. Consistent with accounting guidance, Sirius Group will treat BEAT as an in period tax charge when incurred in future periods for which no deferred taxes need to be provided and has made an accounting policy election to treat GILTI taxes in a similar manner. No provision for income taxes related to BEAT or GILTI was recorded as of December 31, 2018. Sirius Group has completed its accounting for loss reserves based on the new discounting methodology prescribed by the TCJA and recognized an adjustment of \$3.5 million without a net impact on total taxes since an offsetting deferred tax asset would also be recorded.

Sirius Group has capital and liquidity in many of its subsidiaries, some of which may reflect undistributed earnings. If such capital or liquidity were to be paid or distributed to the Company or Sirius Group's subsidiaries, as dividends or otherwise, they may be subject to income or withholding taxes. Sirius Group generally intends to operate, and manage its capital and liquidity, in a tax-efficient manner. However, the applicable tax laws in relevant countries are still evolving, including in response to guidance from the Organisation for Economic Cooperation and Development. Accordingly, such payments or earnings may be subject to income or withholding tax in jurisdictions where they are not currently taxed or at higher rates of tax than currently taxed, and the applicable tax authorities could attempt to apply income or withholding tax to past earnings or payments.

Tax Payments and Receipts

Net income tax payments to national, state, and local governments totaled \$19.1 million, \$16.7 million, and \$8.3 million for the years ended December 31, 2018, 2017, and 2016, respectively.

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Deferred Tax Inventory

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for tax purposes. An outline of the significant components of Sirius Group's deferred tax assets and liabilities follows:

<i>(Millions)</i>	2018	2017
Deferred income tax assets related to:		
Non-U.S. net operating loss carry forwards	\$ 249.8	\$ 305.1
U.S. federal net operating loss and capital carry forwards	33.8	34.7
Tax credit carry forwards	28.7	18.3
Loss reserve discount	7.3	8.9
Unearned premiums	3.1	1.5
Deferred interest	2.1	0.2
Incentive compensation and benefits accruals	1.9	2.0
Allowance for doubtful accounts	1.4	1.4
Foreign currency translations on investments and other assets	0.8	-
Net unrealized investment losses	-	1.8
Other items	2.7	3.6
Total gross deferred income tax assets	331.6	377.5
Valuation allowance	(64.3)	(71.8)
Total adjusted deferred tax asset	267.3	305.7
Deferred income tax liabilities related to:		
Safety reserve (See Note 18)	261.1	286.6
Intangible assets	28.7	42.0
Deferred acquisition costs	3.1	1.2
Purchase accounting	3.0	2.4
Investment basis differences	2.4	1.1
Net unrealized investment gains	0.3	-
Foreign currency translations on investments and other assets	-	7.3
Other items	3.6	3.2
Total deferred income tax liabilities	302.2	343.8
Net deferred tax (liability) asset	\$ (34.9)	\$ (38.1)

Sirius Group's deferred tax assets are net of U.S. federal and non-U.S. valuation allowances and, to the extent they relate to non-U.S. jurisdictions, they are shown at year-end exchange rates.

Of the \$34.9 million net deferred tax liability as of December 31, 2018, \$32.8 million relates to net deferred tax assets in U.S. subsidiaries, \$155.8 million relates to net deferred tax assets in Luxembourg subsidiaries, \$12.6 million relates to net deferred tax assets in United Kingdom subsidiaries and \$236.1 million relates to net deferred tax liabilities in Sweden subsidiaries.

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Net Operating Loss and Capital Loss Carryforwards

Net operating loss and capital loss carryforwards as of December 31, 2018, the expiration dates, and the deferred tax assets thereon are as follows:

<i>(Millions)</i>	2018				
	United States	Luxembourg	Sweden	U.K.	Total
2019-2023	\$ 8.7	\$ -	\$ -	\$ -	\$ 8.7
2024-2038	151.9	0.1	-	-	152.0
No expiration date	-	871.5	273.0	72.0	1,216.5
Total	160.6	871.6	273.0	72.0	1,377.2
Gross deferred tax asset	33.8	226.7	10.8	12.3	283.6
Valuation allowance	-	(64.6)	-	-	(64.6)
Net deferred tax asset	\$ 33.8	\$ 162.1	\$ 10.8	\$ 12.3	\$ 219.0

Sirius Group expects to utilize net operating loss carryforwards in Luxembourg of \$668.9 million but does not expect to utilize the remainder as they belong to companies that are not expected to have sufficient taxable income in the future. Included in the U.S. net operating loss carryforwards are losses of \$102.2 million subject to an annual limitation on utilization under Internal Revenue Code Section 382 and \$11.0 million are subject to separately return limitation year (“SRLY”) provisions of the consolidated return regulations. Of the Section 382 limited loss carryforwards, \$9.6 million will expire between 2022 and 2025 and \$92.6 million will expire between 2030 and 2032. The SRLY limited losses will expire between 2036 and 2037. Sirius Group expects to utilize all of the U.S. net operating loss carryforwards.

As of December 31, 2018, there are U.S. foreign tax credits carryforwards available of \$16.7 million, of which an insignificant amount expires in 2019, and the remaining, which Sirius Group expects to use, will begin to expire in 2022. As of December 31, 2018, there are alternative minimum tax credit carryforwards of \$0.1 million which do not expire and are expected to become fully refundable beginning in the 2022 tax year under the TCJA. Further, there are Swedish foreign tax credits carryforwards available of \$11.9 million, which Sirius Group expects to use, and will expire between 2021 and 2023.

Valuation Allowance

Sirius Group records a valuation allowance against deferred tax assets if it becomes more likely than not that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances from period to period are included in income tax expense in the period of change. In determining whether or not a valuation allowance, or change therein, is warranted, Sirius Group considers factors such as prior earnings history, expected future earnings, carryback and carryforward periods, and strategies that if executed would result in the realization of a deferred tax asset. It is possible that certain planning strategies or projected earnings in certain subsidiaries may not be feasible to utilize the entire deferred tax asset, which could result in material changes to Sirius Group’s deferred tax assets and tax expense.

Of the \$64.6 million valuation allowance as of December 31, 2018, \$64.6 million relates to net operating loss carryforwards in Luxembourg subsidiaries and an insignificant amount relates to other deferred tax assets in Swedish and United States subsidiaries.

Foreign Tax Credits

Sirius Re Holdings, Inc. (“SReHi”) has an immaterial valuation allowance on foreign tax credits, which will expire in 2019. SReHi has an additional \$16.7 million of foreign tax credits that will expire between the years 2020 and 2027, which are expected to be fully utilized. Sirius International Insurance Corporation (publ.) has \$11.9 million of foreign tax credits that will expire between 2021 and 2023 and are expected to be fully utilized.

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Uncertain Tax Positions

Recognition of the benefit of a given tax position is based upon whether a company determines that it is more likely than not that a tax position will be sustained upon examination based upon the technical merits of the position. In evaluating the more likely than not recognition threshold, Sirius Group must presume that the tax position will be subject to examination by a taxing authority with full knowledge of all relevant information. If the recognition threshold is met, then the tax position is measured at the largest amount of benefit that is more than 50% likely of being realized upon ultimate settlement.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

<i>(Millions)</i>	Permanent differences⁽¹⁾	Temporary differences⁽²⁾	Interest and penalties⁽³⁾	Total
Balance at January 1, 2016	\$ 19.8	\$ 6.6	\$ -	\$ 26.4
Changes in prior year tax positions	-	-	-	-
Tax positions taken during the current year	4.4	(2.5)	0.2	2.1
Lapse in statute of limitations	-	-	-	-
Settlements with tax authorities	-	-	-	-
Balance at December 31, 2016	\$ 24.2	\$ 4.1	\$ 0.2	\$ 28.5
Changes in prior year tax positions	0.2	(0.1)	0.1	0.2
Tax positions taken during the current year	3.8	(2.2)	-	1.6
Lapse in statute of limitations	(0.5)	-	-	(0.5)
Settlements with tax authorities	(0.3)	-	(0.2)	(0.5)
Balance at December 31, 2017	\$ 27.4	\$ 1.8	\$ 0.1	\$ 29.3
Changes in prior year tax positions	1.4	-	0.1	1.5
Tax positions taken during the current year	36.2	(1.7)	-	34.5
Lapse in statute of limitations	-	-	-	-
Settlements with tax authorities	(0.1)	-	-	(0.1)
Balance at December 31, 2018	\$ 64.9	\$ 0.1	\$ 0.2	\$ 65.2

⁽¹⁾Represents the amount of unrecognized tax benefits that, if recognized, would impact the effective tax rate.

⁽²⁾Represents the amount of unrecognized tax benefits that, if recognized, would create a temporary difference between the reported amount of an item in the Consolidated Balance Sheets and its tax basis.

⁽³⁾Net of tax benefit.

If Sirius Group determines in the future that its reserves for unrecognized tax benefits on permanent differences and interest and penalties are not needed, the reversal of \$64.9 million of such reserves as of December 31, 2018 would be recorded as an income tax benefit and would impact the effective tax rate. If Sirius Group determines in the future that its reserves for unrecognized tax benefits on temporary differences are not needed, the reversal of \$0.1 million of such reserves as of December 31, 2018 would not impact the effective tax rate due to deferred tax accounting but would accelerate the payment of cash to the taxing authority. Most of Sirius Group's reserves for unrecognized tax benefits on permanent differences relate to interest deductions denied by the Swedish Tax Authority ("STA"), as described further below.

Sirius Group classifies all interest and penalties on unrecognized tax benefits as part of income tax expense. During the years ended December 31, 2018, 2017, and 2016, Sirius Group recognized \$0.1 million, \$(0.1) million, and \$0.2 million in interest income (expense), respectively, net of any tax benefit. The balance of accrued interest as of December 31, 2018 and 2017 is \$0.2 million and \$0.1 million, respectively, net of any tax benefit.

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Tax Examinations

The STA has denied deductions claimed by two of the Company’s Swedish subsidiaries in certain tax years for interest paid on intra-group debt instruments. Sirius Group has challenged the STA’s denial in court based on the technical merits. In October 2018, one of the Swedish subsidiaries received an adverse decision from Sweden’s Administrative Court, which Sirius Group has appealed. Sirius Group has taken into account this and other relevant developments in applicable Swedish tax law and has established a reserve for this uncertain tax position. As of December 31, 2018, the total amount of such reserve was \$62.2 million.

In connection with this matter, Sirius Group has also taken into account the SPA by which Sirius Group was sold to CMIG International in 2016 and has recorded an indemnification asset. Pursuant to the SPA, the seller agreed to indemnify the buyer and Sirius Group for, among other things, (1) any additional tax liability in excess of Sirius Group’s accounting for uncertain tax positions for tax periods prior to the sale of Sirius Group to CMIG International, and (2) an impairment in Sirius Group’s net deferred tax assets resulting from a final determination by a tax authority. While Sirius Group is continuing to challenge the STA’s denial based on the technical merits by appealing the adverse court decision received in October 2018, the ultimate resolution of these tax disputes is uncertain and no assurance can be given that there will be no material changes to Sirius Group’s operating results or balance sheet in connection with these uncertain tax positions or the related indemnification.

With few exceptions, Sirius Group is no longer subject to U.S. federal, state or non-U.S. income tax examinations by tax authorities for years before 2014.

Note 13. Derivatives

Interest Rate Cap

Sirius Group entered into an interest rate swap (“Interest Rate Cap”) with two financial institutions where it paid an upfront premium and in return receives a series of quarterly payments based on the 3-month London Interbank Offered Rate (“LIBOR”) at the time of payment. The Interest Rate Cap does not qualify for hedge accounting. Changes in fair value are recognized as unrealized gains or losses and are presented within Other revenue. The fair value of the interest rate cap has been estimated using a non-binding single broker quote and, accordingly, has been classified as a Level 3 measurement as of December 31, 2018 and 2017. Collateral held is recorded within short-term investments with an equal amount recognized as a liability to return collateral. Sirius Group’s liability to return that collateral is based on the amounts provided by the counterparties and investment earnings thereon. The following table summarizes the Interest Rate Cap collateral balances held by Sirius Group and ratings by counterparty:

<i>(Millions)</i>	2018	
	Collateral Balances Held	S&P Rating ⁽¹⁾
Barclays Bank Plc	\$ 0.2	A
Nordea Bank Finland Abp	0.1	AA-
Total	\$ 0.3	

⁽¹⁾Standard & Poor’s ratings as detailed above are: “AA –” (Very Strong, which is the fourth highest of twenty-three creditworthiness ratings) and “A” (Strong, which is the sixth highest of twenty-three credit worthiness ratings).

Foreign Currency Swaps

Sirius Group executes foreign currency swaps to manage foreign currency exposure. The foreign currency swaps have not been designated or accounted for under hedge accounting. Changes in fair value are recognized as unrealized gains or losses and are presented within Net foreign exchange gains (losses). The fair value of the foreign currency swaps has been estimated using a non-binding single broker quote and accordingly, has been classified as a Level 3 measurement as of December 31, 2018 and 2017. Sirius Group does not provide or hold any collateral associated with the swaps.

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Foreign Currency Forward

During 2016, Sirius Group executed a foreign currency forward to manage currency exposure against a foreign currency investment. During 2017, the foreign currency forward expired and was not renewed. The foreign currency forward was not designated or accounted for under hedge accounting. Changes in fair value are presented within Net foreign exchange gains (losses). The fair value of the foreign currency forward was estimated using a non-binding single broker quote and, accordingly, was classified as a Level 3 measurement. Sirius Group did not provide or hold any collateral associated with the forwards.

Weather Derivatives

Sirius Group holds assets and assumes liabilities related to weather and weather contingent risk management products. Weather and weather contingent derivative contracts are entered into with the objective of generating profits in normal climatic conditions. Accordingly, Sirius Group's weather and weather contingent derivatives are not designed to meet the criteria for hedge accounting under GAAP. Sirius Group receives payment of premium at the contract inception in exchange for bearing the risk of variations in a quantifiable weather index. Changes in fair value are recognized as unrealized gains or losses and are presented within Other revenue. Management uses available market data and internal pricing models based upon consistent statistical methodologies to estimate the fair value. Because of the significance of the unobservable inputs used to estimate the fair value of Sirius Group's weather risk contracts, the fair value measurements of the contracts are deemed to be Level 3 measurements in the fair value hierarchy as at December 31, 2018 and 2017. Sirius Group does not provide or hold any collateral associated with the weather derivatives.

Equity Futures Contracts

During 2018, Sirius Group executed trades in equity futures contracts to hedge against a long position in Common equities. During 2018, the equity futures contracts were exited and were not renewed. The equity futures contracts were not designated or accounted for under hedge accounting. Changes in fair value are presented within Net realized investment gains (losses). The fair value of the equity put options is widely available and have quoted prices in active markets and accordingly, were classified as a Level 1 measurement.

Equity Put Options

During 2018, Sirius Group sold equity put options to hedge against a long position in Common equities. The equity put options were not designated or accounted for under hedge accounting. Changes in fair value are presented within Net unrealized investment (losses) gains. The fair value of the equity put options is widely available and have quoted prices in active markets and accordingly, were classified as a Level 1 measurement.

The following tables summarize information on the classification and amount of the fair value of derivatives not designated as hedging instruments within the Company's Consolidated Balance Sheets as at December 31, 2018 and 2017:

<i>(Millions)</i>	2018			2017		
	Notional value	Asset derivative at fair value ⁽¹⁾	Liability derivative at fair value ⁽²⁾	Notional value	Asset derivative at fair value ⁽¹⁾	Liability derivative at fair value ⁽²⁾
Derivatives not designated as hedging instruments						
Interest rate cap	\$ 250.0	\$ 0.2	\$ -	\$ 250.0	\$ 0.3	\$ -
Foreign currency swaps	\$ 45.0	\$ -	\$ 4.6	\$ 45.0	\$ -	\$ 10.6
Weather derivatives	\$ 150.5	\$ 3.9	\$ -	\$ 113.3	\$ 4.2	\$ -
Equity put options	\$ 6.2	\$ -	\$ 0.5	\$ -	\$ -	\$ -

⁽¹⁾Asset derivatives are classified within Other assets within the Company's Consolidated Balance Sheets at December 31, 2018 and 2017.

⁽²⁾Liability derivatives are classified within Other liabilities within the Company's Consolidated Balance Sheets at December 31, 2018 and 2017.

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The following table summarizes information on the classification and net impact on earnings, recognized in the Company's Consolidated Statements of (Loss) Income relating to derivatives during the years ended December 31, 2018, 2017 and 2016:

<i>(Millions)</i>				
Derivatives not designated as hedging instruments	Classification of gains (losses) recognized in earnings	2018	2017	2016
Interest rate cap	Other revenues	\$ 0.1	\$ (1.5)	\$ (0.2)
Foreign currency swaps	Net foreign exchange gains (losses)	\$ 6.9	\$ (11.3)	\$ 6.6
Foreign currency forwards ⁽¹⁾	Net foreign exchange gains (losses)	\$ -	\$ (0.3)	\$ -
Weather derivatives	Other revenues	\$ 5.2	\$ (1.5)	\$ 5.2
Equity futures contracts ⁽²⁾	Net realized investment gains (losses)	\$ 1.7	\$ -	\$ -

⁽¹⁾There were no Foreign currency forwards at December 31, 2017 and an insignificant amount at December 31, 2016 on the Consolidated Balance Sheets.

⁽²⁾There were no Equity futures contracts at December 31, 2018.

Note 14. Employee benefit plans and compensation plans

Employee Benefit Plans

Sirius Group operates several retirement plans in accordance with the local regulations and practices. These plans cover substantially all Sirius Group employees and provide benefits to employees in event of death, disability, or retirement.

Defined benefit plans

Swedish and German employees of Sirius International can participate in defined benefit plans which are based on the employees' pension entitlements and length of employment. In Sweden, where a defined benefit pension plan is mandated by the government, Sirius International's employees participate in collective agreements funded by Sirius International. These collective agreements are managed by third party trustees who calculate the pension obligation, invoice Sirius International for additional funding, and invest the funds. All employees in Germany are covered by defined benefit pension plans sponsored by Sirius International called Sirius Rückversicherungs Service GmbH Pension Plan. Paid pension premiums are invested with Skandia Liv for employees in Sweden and with Allianz for employees in Germany. Skandia Liv held 94% and 94% of total plan assets in 2018 and 2017, respectively. Allianz held 6% and 6% of total plan assets in 2018 and 2017, respectively. Skandia manages the portfolio to be able to pay a guaranteed amount and a favorable return over time with the goal of getting the highest possible return along with well-balanced risk. The average return for the period 2016 through 2018 was 6.4%. The investment directive is decided by the Skandia Liv board of directors. To achieve the goals the portfolio is diversified with the asset allocation shown below.

The breakdown of the investment of plan assets for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
International equities	11.4%	18.1%
Swedish equities	7.5%	9.8%
Swedish nominal bonds	40.3%	32.7%
Real estate	11.2%	11.3%
Private equity	10.4%	9.7%
Other	19.2%	18.4%

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The assumptions used to determine Swedish benefit obligations for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Discount rate	2.5%	2.5%
Increase in compensation levels rate	3.2%	3.2%
Turnover rate	3.0%	3.0%

The Swedish actuaries follow the Swedish industry DUS14 mortality rate. The discount rate used to calculate the Swedish benefit obligation was derived from the expected return of an investment in Swedish covered mortgage bonds with a duration in accordance with the duration of the pension obligation. The duration of the Swedish pension liability is approximately 20 years.

The assumptions used to determine German benefit obligations for the years ended December 31, 2018 and 2017 are as follows:

	2018	2017
Discount rate	1.7%	1.7%
Increase in compensation levels rate	2.0%	2.0%

The German actuaries follow the Germany industry Richttafeln 2018 G mortality rates and standard turnover values for the years ended December 31, 2018 and 2017. The discount rate used to calculate the German benefit obligation was derived from markets yields on high quality corporate bonds with durations consistent with plan obligations. The duration of the German pension liability is approximately 18 years. The following tables present a reconciliation of the beginning and ending funded status and the net amounts recognized for the defined benefit plans for the years ended December 31, 2018 and 2017:

<i>(Millions)</i>	2018	2017
Change in benefit obligation		
Projected benefit obligation, beginning of year	\$ 17.4	\$ 14.9
Service cost	1.0	0.8
Interest cost	0.4	0.3
Actuarial losses	0.6	0.4
Benefit payments	(0.4)	(0.5)
Tax payments	(0.2)	(0.2)
Currency revaluation effect	(1.3)	1.7
Projected benefit obligation, end of year	17.5	17.4
Change in plan assets		
Fair value of plan assets, beginning of year	16.1	11.6
Employer contributions	1.2	0.9
Benefit payments	(0.3)	(0.3)
Interest income	0.8	2.5
Currency revaluation effect	(1.4)	1.4
Fair value of plan assets, end of year	16.4	16.1
Funded status at end of year⁽¹⁾	\$ (1.1)	\$ (1.3)

⁽¹⁾At December 31, 2018, the Swedish plan had a funding status of \$3.0 and the German plan had a funding status of \$(4.1). At December 31, 2017, the Swedish plan had a funding status of \$3.1 and the German plan had a funding status of \$(4.4).

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Under the Swedish plan, a 100 basis point discount rate decrease would increase the 2019 defined benefit obligation by \$2.3 million, with all other items remaining the same. Under the German plan, a 50 basis point decrease in the discount rate would increase the benefit obligation by \$0.5 million, with all other items remaining the same. Conversely, a 50 basis point increase in the discount rate would decrease the benefit obligation by \$0.4 million.

The accumulated benefit obligation for the years ended December 31, 2018 and 2017 was \$17.5 million and \$17.4 million, respectively.

The components of net periodic pension expense for the years ended December 31, 2018, 2017, and 2016 are as follows:

<i>(Millions)</i>	2018	2017	2016
Service cost	\$ (1.2)	\$ (0.8)	\$ (0.9)
Interest cost	0.1	2.2	-
Actuarial (loss)	(0.8)	(0.3)	(0.9)
Net periodic pension expense	\$ (1.9)	\$ 1.1	\$ (1.8)

The employer benefit payments/settlements for the years ended December 31, 2018 and 2017 were \$0.4 million and \$0.2 million, respectively. As at December 31, 2018, the projected benefit payments required for the defined pension benefits plans are as follows:

<i>(Millions)</i>	December 31, 2018
2019	\$ 0.4
2020	0.4
2021	0.4
2022	0.4
2023	0.4
2024-2028	2.9
Total benefit payments required	\$ 4.9

Defined contributions plans

Non-U.S.

In the United Kingdom, Sirius International contributes 12% of the employee's salary. Contributed funds are invested into an annuity of the employee's choice. In Belgium, Sirius International contributes 6.5%-8.5% of the employee's salary. Employees in Switzerland are eligible to participate in the industry-sponsored Swisscanto pension plan ("Swisscanto plan"). The Swisscanto plan is a combination of a defined contribution and a defined benefit plan. For the Swisscanto plan, Sirius International incurs 60%-70% of the total premium charges and the employees incur the remaining 30-40%. As of December 31, 2018 and 2017, the projected benefit obligation of Sirius International's various benefit plans was \$17.5 million and \$17.4 million, and the funded status was \$(1.1) million and \$(1.3) million, respectively. Sirius International recognized expenses related to these various plans of \$7.6 million, \$4.9 million, and \$7.3 million in 2018, 2017, and 2016, respectively.

Sirius Bermuda sponsors defined contribution plans, which cover substantially all of the employees of Sirius Bermuda. Under these plans, Sirius Bermuda is required to contribute 10% of each participant's salary into an individual account maintained by an independent pension administrator. Employees become vested in the Sirius Bermuda contributions after two years of service. Sirius Bermuda recognized expenses of \$0.5 million and \$0.4 million during the years ended December 31, 2018 and 2017, respectively. In previous years, employees of Sirius Bermuda were covered by Sirius International sponsored plans and Sirius International incurred expenses of \$0.5 million during the year ended December 31, 2016.

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U.S.

Sirius International Holding Company, Inc. (“SIHC”) sponsors a defined contribution plan (the “SIHC 401(k) Plan”) which offers participants the ability to invest their balances in several different investment options. The SIHC 401(k) Plan provides qualifying employees with matching contributions of 100% up to the first 2% and 50% of the next 4% of salary (subject to U.S. federal limits on allowable contributions in a given year). Total expense for matching contributions to the plan was \$0.8 million, \$1.3 million, and \$0.7 million in 2018, 2017, and 2016, respectively. Additionally, all participants in the SIHC 401(k) Plan can earn a variable contribution of up to 7% of their salary, subject to the applicable IRS annual covered compensation limits (\$0.3 million for 2018) and contingent upon Sirius Group’s performance. During 2018, there were no variable contributions to the SIHC 401(k) Plan. Total expense for variable contributions to the SIHC 401(k) Plan was \$0.3 million and \$0.4 million in 2017 and 2016, respectively.

IMG sponsors a 401(k) retirement savings plan (the “IMG 401(k) Plan”). IMG 401(k) Plan participants may elect to have a percentage of their salaries contributed to the IMG 401(k) Plan on a pre-tax basis subject to annual limits prescribed under the Internal Revenue Code. IMG makes safe harbor matching contributions to the IMG 401(k) Plan equal to 100% of participants’ deferrals up to the first 1% of eligible compensation and 50% of participants’ deferrals between 1% and 6% of eligible compensation. IMG may also elect to make discretionary contributions to the IMG 401(k) Plan which are allocated based on compensation. IMG made matching contributions to the IMG 401(k) Plan of \$0.6 million during 2018 and \$0.3 million from the date of acquisition to December 31, 2017.

Armada maintains a qualified 401(k) plan (the “Armada 401(k) Plan”). Under provisions of the Armada 401(k) Plan, Armada may make discretionary, matching contributions. Matching contributions into the Armada 401(k) Plan totaled \$0.2 million during 2018 and \$0.1 million from the date of acquisition to December 31, 2017.

Share-Based and Other Long-Term Incentive Compensation Plans

Starting in 2018, the Company has issued equity incentives for certain employees under the Employee Share Purchase Plan and the 2018 Omnibus Plan and for other non-employee independent directors. For the year ended December 31, 2018, the Company recorded \$2.5 million of share-based compensation expense under these plans.

Employee Share Purchase Plan

Effective August 22, 2018, the Company established an Employee Share Purchase Plan (“ESPP”) which allowed all employees of the Company and its subsidiaries to purchase up to 1,000, but no less than 100 shares of Sirius Group in connection with the transaction with Easterly. The purchase price of each common share purchased by a participant is equal to 85% of market value for the first 100 shares and 100% of market value for any additional shares purchased. Participants can either purchase the shares in cash or be issued a full-recourse promissory note by the Company, secured by the shares, payable via payroll deductions. A maximum of 1,000,000 shares have been made available for purchase under the Plan.

As of December 31, 2018, 149,236 shares have been purchased under the Plan and net promissory notes total \$0.9 million.

2016 Long Term Incentive Plan

Sirius Group has historically awarded long-term incentive compensation in the form of three-year, cliff-vested, performance units or phantom performance shares that can be paid in cash, or upon Sirius Group becoming public, Sirius Group common shares, at the discretion of the Compensation Committee. A new long-term incentive award is granted each year so that there are three different performance cycles outstanding at any given time.

The Company’s 2016 Long Term Incentive Plan (the “LTIP”), amended and restated in August 2018, provides for the issuance of Performance Units or Performance Share awards to an eligible employee. Only performance shares were awarded for the three outstanding cycles.

Performance shares compound through the end of the three-year award period based on the weighted average underwriting return on capital (“UROC”), return on equity (“ROE”) produced by the Company and other performance metrics during the period. The performance goals are determined by the Compensation Committee of the Board of Directors upon granting of awards.

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For the years ended December 31, 2018, 2017, and 2016, under the SPA, White Mountains paid Sirius Group for certain incentive awards that the Company paid to its employees, with \$1.4 million, \$2.5 million, and \$5.4 million, respectively, recorded as Additional paid-in surplus.

As of December 31, 2018, the total number of shares reserved for issuance under the LTIP are 5,614,904. Sirius Group has recorded compensation expense of \$1.0 million, \$3.9 million, and \$16.6 million for the years ended December 31, 2018, 2017, and 2016, respectively.

IPO Incentive Awards

In connection with the Company's 2018 Omnibus Incentive Plan, the Company granted incentive compensation awards ("IPO Incentive Awards") on August 6, 2018 which provides for certain employees to purchase fully-vested common shares and be issued performance share units. Participants can purchase shares on or before December 31, 2018 at a pre-determined strike price or choose to purchase the total shares over three years at pre-determined strike prices. While the shares are fully vested upon purchase, participants are required to hold the shares for three years.

As of December 31, 2018, 203,589 shares were purchased up front and 552,594 shares were pledged to be purchased over three years under the 2018 Omnibus Incentive Plan. Share-based compensation expense of \$0.6 million was recognized during the year ended December 31, 2018 related to these purchases.

Under the 2018 Omnibus Incentive Plan, participants are awarded Performance Share Units one-for-one against any shares purchased through the 2018 Omnibus Incentive Plan, the Sirius Group Private Placement, or the ESPP up to their award amount.

Performance Share Units vest over three years, 25% based on ROE performance during each of the 2019, 2020, and 2021 fiscal years and 25% based on the average ROE performance during the 2019 through 2021 period subject to participants purchasing and holding 1/3 of pledged shares in 2019, 2/3 in 2020, and 100% in 2021. Payouts begin at 0% of awarded shares for a 4.5% ROE, 100% at a 9.0% ROE and 150% at a 13.5% ROE with linear interpolation in between. The employee must remain employed through the end of the applicable performance period to vest in the shares earned in that performance period.

The total pool of shares granted, at target level of performance, is \$13.0 million which is based on the acceptance of the employees, in addition to the final per share value of a common share of Sirius Group exchanged for Easterly common stock at the closing of the Merger.

Sirius Group recorded compensation expense for the year ended December 31, 2018 of \$1.5 million related to the Performance Share Units.

On February 27, 2019, Sirius Group terminated the obligation that requires participants to purchase shares through the 2018 Omnibus Incentive Plan.

Non-Employee Compensation

Certain non-employee independent directors received share-based compensation in the form of common shares which vest after one year of issuance. During 2018, Sirius Group granted non-employee directors 24,475 shares and recognized share-based compensation expense of \$0.4 million.

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Transaction and Retention Bonuses

Under the SPA, bonus arrangements for certain employees of Sirius Group were granted. Certain of these bonus arrangements were paid to bonus recipients as compensation for services performed before the sale date (“transaction bonuses”). In addition, certain employees received additional bonus payments under the bonus arrangements after the 12th month and 20th month anniversary of the sale date (“retention bonuses”). Under the SPA, White Mountains agreed to pay the Company an amount equal to the transaction bonuses plus the employer-paid portion of employment or similar taxes less tax benefits attributable to the payment. In addition, White Mountains also agreed to pay the Company for the retention bonuses under the same terms as the transaction bonuses shortly after Sirius Group paid those amounts to the employees. During 2016, Sirius Group recorded \$36.9 million in General and administrative expenses in connection with the transaction bonuses. The Company was paid \$25.3 million and \$30.5 million in 2017, and 2016, respectively, from its former parent for the transaction and retention bonuses after employment costs and taxes, which was recorded as Additional paid-in surplus. During 2018, the Company was not paid any amount from its former parent for the transaction and retention bonuses. During 2017 and 2016, Sirius Group recorded \$13.3 million and \$17.6 million, respectively, in General and administrative expenses in connection with the retention bonuses. During 2018, Sirius Group did not record any General and administrative expenses in connection with the retention bonuses.

Note 15. Common shareholders’ equity, mezzanine equity, and non-controlling interests

Common shareholder’s equity

The authorized share capital of the Company consists of 500,000,000 Common shares, \$0.01 par value per share, and 15,000,000 Series B preference shares, \$0.01 par value per share.

The following table presents changes in the Company’s issued and outstanding Common shares for the years ended December 31, 2018, 2017, and 2016, respectively:

	2018	2017	2016
Common shares:			
Shares issued and outstanding, beginning of year	120,000,000	120,000,000	12,000
Issuance of shares (See Note 3)	4,670,531	-	-
Shares redeemed (See Note 3)	(9,519,280)	-	-
Stock split ⁽¹⁾	-	-	119,988,000
Shares issued and outstanding, end of year	115,151,251	120,000,000	120,000,000

⁽¹⁾On April 27, 2016, the Company split its common shares by a multiple of 10,000 resulting in 120,000,000 common shares issued and outstanding and changed the par value of the common shares from \$1.00 per share to \$0.01 per share.

Redeemed shares

On November 5, 2018, the Company repurchased 9,519,280 common shares from CM Bermuda in connection with the Merger (“redeemed shares”) for \$164.0 million. (See Note 3.) The redeemed shares were canceled and the cost of the redeemed shares are included as a reduction to Additional paid-in surplus.

Dividends

The Company did not pay any dividends during the years ended December 31, 2018 and 2017, respectively. The Company paid common dividends of \$27.0 million in cash and investments during the year ended December 31, 2016.

Mezzanine equity

Series B Preference Shares

On November 5, 2018, in connection with the closing of the Merger, Sirius Group issued 11,901,670 of the 15,000,000 authorized Series B preference shares, with a par value of \$0.01 per share, as part of the Sirius Group Private Placement. (See Note 3.)

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The Series B preference shares rank senior to common shares with respect to dividend rights, rights of liquidation, winding-up, or dissolution of the Company and junior to all of the Company's existing and future policyholder obligations and debt obligations. Without the consent of the holders of the Series B preference shares, the Company may not issue any class or series of shares that rank senior or pari passu with the Series B preference shares as to the payment of dividends or as to distribution of assets upon any voluntary or involuntary liquidation, winding-up or dissolution of the Company, if the aggregate gross proceeds from the issuance of all such senior or pari passu shares equals or exceeds \$100 million.

The Company adjusts the carrying value of the Series B preference shares to equal the redemption value at the end of each reporting period. At December 31, 2018, the balance of the Series B preference shares was \$232.2 million.

Series A Redeemable Preference Shares

In connection with the acquisition of IMG, the Company issued mandatorily convertible stock in the form of Series A redeemable preference shares as a portion of the consideration paid. (See **Note 3**.) The Company issued 100,000 of the 150,000 authorized Series A redeemable preference shares to the seller of IMG. Each Series A redeemable preference share has a liquidation preference per share of \$1,000.

On November 5, 2018, in connection with the closing of the Merger, the Company redeemed the 100,000 outstanding shares of Series A redeemable preference shares for \$95.0 million. (See **Note 3**.) Sirius Group recorded a \$13.8 million gain on the redemption of the Series A redeemable preference shares.

At December 31, 2017, the balance of the Series A redeemable preference shares with accrued dividends was \$106.1 million.

Non-controlling interests

Non-controlling interests consist of the ownership interests of non-controlling shareholders in consolidated entities and are presented separately on the balance sheet. At December 31, 2018 and 2017, Sirius Group's balance sheet included \$1.7 million and \$0.2 million, respectively, in non-controlling interests.

The following table shows the change in non-controlling interest for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	Total
Non-controlling interests as of December 31, 2015	\$ 250.1
Net income attributable to non-controlling interests	19.3
Dividends to non-controlling interests	(18.8)
Other, net	0.7
Non-controlling interests as of December 31, 2016	\$ 251.3
Net income attributable to non-controlling interests	13.7
Dividends to non-controlling interests	(14.1)
Other, net	(250.7)
Non-controlling interests as of December 31, 2017	\$ 0.2
Net income attributable to non-controlling interests	1.4
Dividends to non-controlling interests	-
Other, net	0.1
Non-controlling interests as of December 31, 2018	\$ 1.7

SIG Preference Shares

On October 25, 2017, the Company's indirect wholly-owned subsidiary, Sirius International Group, Ltd., redeemed all of its outstanding 250,000 Fixed/Floating Perpetual Non-Cumulative Preference Shares ("SIG Preference Shares"). The redemption price equaled the \$1,000 liquidation preference per preference share. Sirius Group accounted for the SIG Preference Shares as a conditionally redeemable instrument within Non-controlling interests.

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Alstead Re

As of December 31, 2018 and 2017, Sirius Group recorded non-controlling interest of \$1.7 million and \$0.2 million, respectively, in Alstead Re Insurance Company (“Alstead Re”). (See **Note 20.**)

Note 16. Earnings per share

Basic earnings (loss) per share is computed by dividing net income (loss) available to Sirius Group common shareholders by the weighted-average number of common shares outstanding during the period. Diluted earnings per share is computed by dividing net income available to Sirius Group common shareholders by the weighted-average number of common shares outstanding adjusted to give effect to potentially dilutive securities.

The Series A redeemable preference shares qualify as participating securities which requires the application of the two-class method to compute both basic and diluted earnings per share. The two-class method is an earnings allocation formula that treats participating securities as having rights to earnings that would otherwise have been available to common shareholders. The Series A redeemable preference shares have no obligation to absorb losses of the Company in periods of net loss.

The following table sets forth the computation of basic and diluted earnings per common share for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions, except share and per share information)</i>	2018	2017	2016
Numerator:			
Net (loss) income	\$ (16.7)	\$ (136.3)	\$ 51.8
Less: Income attributable to non-controlling interests	(1.4)	(13.7)	(19.3)
Less: Accrued dividends on Series A redeemable preference shares	(2.6)	(6.1)	-
Less: Change in carrying value of Series B preference shares	(36.4)	-	-
Add: Redemption of Series A redeemable preference shares	13.8	-	-
Net (loss) income attributable to Sirius Group common shareholders	<u>\$ (43.3)</u>	<u>\$ (156.1)</u>	<u>\$ 32.5</u>
Denominator:			
Weighted average shares outstanding for basic and diluted earnings per share ⁽¹⁾⁽²⁾	<u>119,253,924</u>	<u>120,000,000</u>	<u>120,000,000</u>
Earnings (loss) per share			
Basic earnings per share	<u>\$ (0.36)</u>	<u>\$ (1.30)</u>	<u>\$ 0.27</u>
Diluted earnings per share	<u>\$ (0.36)</u>	<u>\$ (1.30)</u>	<u>\$ 0.27</u>

⁽¹⁾On April 27, 2016, the Company split its common shares by a multiple of 10,000 resulting in 120,000,000 common shares. The stock split has been applied retroactively to January 1, 2016.

⁽²⁾Due to the net loss incurred during the year ended December 31, 2018, all potentially dilutive securities have been excluded from Diluted earnings per share as they would be anti-dilutive. As of December 31, 2018, there were a total of 23,433,114 potentially dilutive securities excluded from the calculation of Diluted earnings per share. As of both December 31, 2017 and 2016, there were no potentially dilutive securities.

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Note 17. Accumulated other comprehensive (loss)

The changes in accumulated other comprehensive (loss), by component, for the years ended December 31, 2018, 2017, and 2016 are as follows:

<i>(Millions)</i>	For the year ended December 31, 2018		
	Foreign currency translation adjustment	Other, net	Total
Balance, beginning of year	\$ (140.5)	\$ -	\$ (140.5)
Other comprehensive (loss)	(61.9)	-	(61.9)
Balance, end of year	\$ (202.4)	\$ -	\$ (202.4)

<i>(Millions)</i>	For the year ended December 31, 2017		
	Foreign currency translation adjustment	Other, net	Total
Balance, beginning of year	\$ (212.2)	\$ -	\$ (212.2)
Other comprehensive (loss)	71.7	-	71.7
Balance, end of year	\$ (140.5)	\$ -	\$ (140.5)

<i>(Millions)</i>	For the year ended December 31, 2016		
	Foreign currency translation adjustment	Other, net ⁽¹⁾	Total
Balance, beginning of year	\$ (144.9)	\$ (1.2)	\$ (146.1)
Other comprehensive (loss)	(67.3)	1.2	(66.1)
Balance, end of year	\$ (212.2)	\$ -	\$ (212.2)

⁽¹⁾Other, net consists of accumulated other comprehensive income related to balances arising from Sirius Group's share in OneBeacon's Pension Liability (See Note 19) and from amortization of hedge related to the 2007 SIG Senior Notes.

Note 18. Statutory capital and surplus

Sirius Group's insurance and reinsurance operations are subject to regulation and supervision in each of the jurisdictions where they are domiciled and licensed to conduct business. Generally, regulatory authorities have broad supervisory and administrative powers over such matters as licenses, standards of solvency, premium rates, policy forms, investments, security deposits, methods of accounting, form and content of financial statements, reserves for unpaid loss and LAE, reinsurance, minimum capital and surplus requirements, dividends and other distributions to shareholders, periodic examinations, and annual and other report filings. In general, such regulation is for the protection of policyholders rather than shareholders.

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Non-U.S.

The Insurance Act 1978 of Bermuda and related regulations, as amended (“Insurance Act”), regulates the insurance business of Bermuda-domiciled insurers and reinsurers. The Insurance Act imposes solvency and liquidity standards on Bermuda insurance companies, as well as auditing and reporting requirements. The Bermuda Monetary Authority (“BMA”), a Solvency II-equivalent regulatory regime, has confirmed that it will act as the primary group supervisor effective July 1, 2016 and has designated Sirius Bermuda as the designated insurer. Therefore, Sirius Group is subject to the BMA’s group supervision and solvency rules. Under the Insurance Act, insurers and reinsurers are required to maintain minimum statutory capital and surplus at a level equal to the greater of a minimum solvency margin (“MSM”) and the Enhanced Capital Requirement (“ECR”) which is established by reference to either a Bermuda Solvency Capital Requirement (“BSCR”) model or an approved internal capital model. The BSCR model is a risk-based capital model that provides a method for determining an insurer’s minimum required capital taking into account the risk characteristics of different aspects of the company’s business. As of December 31, 2018, the eligible capital for Sirius Group exceeded the required capital as measured by the BSCR model.

Management has also evaluated the group and principal operating subsidiaries’ ability to maintain adequate levels of statutory capital, liquidity, and rating agency capital and believes they will be able to do so. In performing this analysis, management has considered the most recent statutory capital position of each of the principal operating subsidiaries as well as the group overall, through its holding companies as a result of BMA group regulation. In addition, management has evaluated the ability of the holding companies to allocate capital and liquidity around the group as and when needed.

Sirius Group has two Bermuda based insurance subsidiaries: Sirius Bermuda, a Class 4 insurer, and Alstead Re, a Class 3A insurer. Each of these Bermuda insurance subsidiaries are registered under the Insurance Act and are subject to regulation and supervision of the BMA. The BSCR for Sirius Bermuda and Alstead Re as at December 31, 2018 has not been determined as of the filing of this Annual Report on Form 10-K. The BSCR for Sirius Bermuda and Alstead Re as at December 31, 2017 was \$902 million and \$3 million, respectively. Actual statutory capital and surplus of the Bermuda based insurance subsidiaries as at December 31, 2018 was \$2.2 billion. In addition, the Bermuda based insurance subsidiaries are required to maintain a minimum liquidity ratio. As of December 31, 2018, all liquidity ratio requirements were met.

Sirius International is subject to regulation and supervision by the Swedish Financial Supervisory Authority (“SFSA”). Sirius International’s total regulatory capital as of December 31, 2018 was \$1.7 billion. In accordance with SFSA regulations, Sirius International holds restricted equity of \$1.3 billion as a component of Swedish regulatory capital. This restricted equity cannot be paid as dividends. Under Solvency II, the SFSA also acts as the European Economic Area group supervisor, with Sirius International UK Holding Ltd. (“SIUK”) serving as the highest European entity subject to the SFSA’s group supervision. Solvency II regulation in Europe gives the SFSA the option to waive European-level group supervision if certain legal requirements are met. As of December 31, 2018, the SFSA has not exercised this option.

The financial services industry in the United Kingdom is dual-regulated by the Financial Conduct Authority and the Prudential Regulation Authority (collectively, the “U.K. Regulators”). The U.K. Regulators regulate insurers, insurance intermediaries and Lloyd’s. The U.K. Regulators and Lloyd’s have common objectives in ensuring that the Lloyd’s market is appropriately regulated. Lloyd’s is required to implement certain rules prescribed by the U.K. Regulators by the powers it has under the Lloyd’s Act of 1982 relating to the operation of the Lloyd’s market. In addition, each year the U.K. Regulators require Lloyd’s to satisfy an annual solvency test that measures whether Lloyd’s has sufficient assets in the aggregate to meet all the outstanding liabilities of its members.

Lloyd’s permits its corporate and individual members (“Members”) to underwrite insurance risks through Lloyd’s syndicates. Members of Lloyd’s may participate in a syndicate for one or more underwriting years by providing capital to support the syndicate’s underwriting. All syndicates are managed by Lloyd’s approved managing agents. Managing agents receive fees and profit commissions in respect of the underwriting and administrative services they provide to the syndicates. Lloyd’s prescribes, in respect of its managing agents and Members, certain minimum standards relating to their management and control, solvency and various other requirements.

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Sirius Group participates in the Lloyd's market through the 100% ownership of Sirius International Corporate Member Ltd., a Lloyd's corporate member, which in turn provides underwriting capacity to Syndicate 1945. Sirius Group has its own Lloyd's managing agent, Sirius International Managing Agency, which manages Syndicate 1945. Lloyd's approved net capacity for 2019 is £80.8 million, or approximately \$103.0 million (based on the December 31, 2018 GBP to USD exchange rate). Stamp capacity is a measure of the amount of net premium (premiums written less acquisition costs) that a syndicate is authorized by Lloyd's to write.

U.S.

Sirius America and the insurance subsidiaries of Sirius Global Solutions are subject to regulation and supervision by the National Association of Insurance Commissioners ("NAIC") and the department of insurance in the state of domicile. The NAIC uses risk-based capital ("RBC") standards for U.S. property and casualty insurers as a means of monitoring certain aspects affecting the overall financial condition of insurance companies. As of December 31, 2018, the available capital of Sirius Group's U.S. insurance and reinsurance operating subsidiaries exceeded their respective RBC requirements.

Sirius America's policyholders' surplus, as reported to regulatory authorities as of December 31, 2018 and 2017, was \$522.2 million and \$521.8 million. Sirius America's statutory net (loss) income for the years ended December 31, 2018, 2017, and 2016 was \$(9.9) million, \$(6.4) million, and \$82.7 million, respectively. The principal differences between Sirius America's statutory amounts and the amounts reported in accordance with GAAP include deferred acquisition costs, deferred taxes, gains recognized under retroactive reinsurance contracts, and market value adjustments for debt securities. The minimum policyholders' surplus necessary to satisfy Sirius America's regulatory requirements was \$93.4 million as of December 31, 2018, which equals the authorized control level of the NAIC risk-based capital based on Sirius America's policyholders' surplus.

Oakwood Insurance Company ("Oakwood") policyholders' surplus, as reported to regulatory authorities as of December 31, 2018 and 2017 was \$40.5 million and \$41.4 million, respectively. Oakwood's statutory net (loss) income for the years ended December 31, 2018, 2017, and 2016 was \$(1.1) million, \$0.5 million and \$(12.0) million, respectively. The minimum policyholders' surplus necessary to satisfy Oakwood's regulatory requirements was \$5.0 million as of December 31, 2018, which equals the authorized control level of the NAIC risk-based capital based on Oakwood's policyholders' surplus. During 2017, Mount Beacon was merged into Oakwood.

Empire Insurance Company ("Empire") policyholders' surplus, as reported to regulatory authorities as of December 31, 2018 and 2017 was \$10.7 million and \$10.5 million, respectively. Empire's statutory net income (loss) for the years ended December 31, 2018, 2017, and 2016 was \$0.1 million, \$(0.3) million and \$0.0 million, respectively. The minimum policyholders' surplus necessary to satisfy Empire's regulatory requirements was \$8.8 million as of December 31, 2018, and the NAIC risk-based capital authorized control level was \$1.0 million.

WRM America policyholders' surplus, as reported to regulatory authorities as of December 31, 2018 was \$13.9 million. WRM America's statutory net (loss) for the year ended December 31, 2018 was \$(0.6) million. The minimum policyholders' surplus necessary to satisfy WRM America's regulatory requirements was \$9.8 million as of December 31, 2018, and the NAIC risk-based capital authorized control level was \$0.1 million.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
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Dividend Capacity

Sirius Group's top tier regulated insurance and reinsurance operating subsidiary is Sirius Bermuda. Sirius Bermuda's ability to pay dividends is limited under Bermuda law and regulations. Under the Insurance Act, Sirius Bermuda is restricted with respect to the payment of dividends. Sirius Bermuda is prohibited from declaring or paying in any financial year dividends of more than 25% of its total statutory capital and surplus (as shown on its previous financial year's statutory balance sheet) unless it files, at least seven days before payment of such dividends, with the BMA an affidavit stating that it will continue to meet the required margins following the declaration of those dividends. Accordingly, Sirius Bermuda can pay approximately \$539.3 million to its parent company, Sirius International Group, Ltd., during 2019 without providing an affidavit to the BMA. Sirius Bermuda indirectly owns Sirius International Insurance Corporation, Sirius America Insurance Company and Sirius Group's other insurance and reinsurance operating companies, each of which are limited in their ability to pay dividends by the insurance laws of their relevant jurisdictions.

Sirius International has the ability to pay dividends up to Sirius Bermuda subject to the availability of unrestricted equity, calculated in accordance with the Swedish Act on Annual Accounts in Insurance Companies and the FSA. Unrestricted equity is calculated on a consolidated group account basis and on a parent account basis. Differences between the two include but are not limited to accounting for goodwill, subsidiaries (with parent accounts stated at original foreign exchange rates), taxes and pensions. Sirius International's ability to pay dividends is limited to the "lower of" unrestricted equity as calculated within the group and parent accounts. As of December 31, 2018, Sirius International had \$373.4 million (based on the December 31, 2018 SEK to USD exchange rate) of unrestricted equity on a parent account basis (the lower of the two approaches) available to pay dividends in 2019. The amount of dividends available to be paid by Sirius International in any given year is also subject to cash flow and earnings generated by Sirius International's business, the maintenance of adequate solvency capital ratios for Sirius International and the consolidated SIUK group, as well as to dividends received from its subsidiaries, including Sirius America. Earnings generated by Sirius International's business that are allocated to the Safety Reserve are not available to pay dividends (see "**Safety Reserve**" below). During 2018, Sirius International did not declare a dividend and paid \$20.3 million of dividends declared in 2017.

Under the normal course of business, Sirius America has the ability to pay dividends to its immediate parent during any twelve-month period without the prior approval of regulatory authorities in an amount set by a formula based on the lesser of net investment income, as defined by statute, or 10% of statutory surplus, in both cases as most recently reported to regulatory authorities, subject to the availability of earned surplus and subject to dividends paid in prior periods. Based on this formula, Sirius America does not have any dividend capacity as of December 31, 2018, without prior regulatory approval. As of December 31, 2018, Sirius America had \$522.2 million of statutory surplus and \$108.4 million of earned surplus. During 2018, Sirius America did not pay any dividends to its immediate parent.

During 2018 and 2017, the Company did not pay any dividends to its shareholders. The Company paid \$27.0 million in dividends to its former parent on April 18, 2016. As of December 31, 2018, Sirius Group had \$52.1 million of net unrestricted cash, short-term investments, and fixed maturity investments outside of its regulated and unregulated insurance and reinsurance operating subsidiaries.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
For the years ended December 31, 2018, 2017, and 2016

Capital Maintenance

There is a capital maintenance agreement between Sirius International and Sirius America, which obligates Sirius International to make contributions to Sirius America's surplus in order for Sirius America to maintain surplus equal to at least 125% of the company action level risk-based capital as defined in the National Association of Insurance Commissioners' Property/Casualty Risk-Based Capital Report. The agreement provides for a maximum contribution to Sirius America of \$200 million. During 2018, Sirius International did not make any contributions to the surplus of Sirius America. In 2017, Sirius International provided Sirius America with an accident year stop-loss cover, with an attachment point in excess of 83% and a limit of \$27 million. This accident year stop-loss reinsurance was not renewed in 2018. In addition, at November 1, 2016, Sirius America and Sirius International entered into a quota share agreement whereby Sirius America ceded Sirius International 75% of its reinsurance business on an accident year basis. This quota share agreement was in force through March 31, 2018. For the year ended December 31, 2018 and 2017, Sirius America ceded \$9 million and \$115 million, respectively, of premiums earned to Sirius International under this quota share agreement. In the third quarter of 2018, Sirius America entered into a commutation agreement with Sirius International and commuted all outstanding balances related to the accident year stop-loss and the 75% quota share.

Safety Reserve

Subject to certain limitations under Swedish law, Sirius International is permitted to transfer pre-tax income amounts into an untaxed reserve referred to as a Safety Reserve. As of December 31, 2018, Sirius International's Safety Reserve amounted to SEK 10.7 billion, or \$1.2 billion (based on the December 31, 2018 SEK to USD exchange rate). Under GAAP, an amount equal to the Safety Reserve, net of a related deferred tax liability established at the Swedish tax rate of 22%, is classified as shareholder's equity. Generally, this deferred tax liability is only required to be paid by Sirius International if it fails to maintain prescribed levels of premium writings and loss reserves in future years. As a result of the indefinite deferral of these taxes, Swedish regulatory authorities apply no taxes to the Safety Reserve when calculating solvency capital under Swedish insurance regulations. Accordingly, under local statutory requirements, an amount equal to the deferred tax liability on Sirius International's Safety Reserve (\$261.1 million as of December 31, 2018) is included in solvency capital. Access to the Safety Reserve is restricted to coverage of insurance and reinsurance losses. Access for any other purpose requires the approval of Swedish regulatory authorities. Similar to the approach taken by Swedish regulatory authorities, most major rating agencies generally include the \$1.2 billion balance of the Safety Reserve, without any provision for deferred taxes, in Sirius International's regulatory capital when assessing Sirius International and Sirius Group's financial strength. Subject to certain limitations under Swedish law, Sirius International is permitted to transfer certain portions of its pre-tax income to its Swedish parent companies to minimize taxes (referred to as a group contribution). During 2018, Sirius International did not transfer any of its 2017 pre-tax income via group contributions to its Swedish parent companies.

Note 19. Investments in unconsolidated entities

Sirius Group's investments in unconsolidated entities are included within Other long-term investments and consist of investments in common equity securities or similar instruments, which give Sirius Group the ability to exert significant influence over the investee's operating and financial policies ("equity method eligible unconsolidated entities"). Such investments may be accounted for under either the equity method or, alternatively, Sirius Group may elect to account for them under the fair value option.

The following table presents the components of Other long-term investments as of December 31, 2018 and 2017:

<i>(Millions)</i>	2018	2017
Equity method eligible unconsolidated entities, at fair value	\$ 169.4	\$ 121.2
Other unconsolidated investments, at fair value ⁽¹⁾	195.6	148.3
Total Other long-term investments⁽²⁾	\$ 365.0	\$ 269.5

⁽¹⁾Includes Other long-term investments that are not equity method eligible.

⁽²⁾There were no investments accounted for using the equity method as of December 31, 2018 and 2017.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
For the years ended December 31, 2018, 2017, and 2016

Equity method eligible unconsolidated entities, at fair value

Sirius Group has elected the Fair Value Option to account for its equity method eligible investments accounted for as part of Other long-term investments for consistency of presentation with rest of its investment portfolio. The following table presents Sirius Group's investments in equity method eligible unconsolidated entities as of December 31, 2018 and 2017 with ownership interest greater than 20%:

Investee	Ownership interest at December 31,		
	2018	2017	Instrument Held
BE Reinsurance Limited	25.0%	25.0%	Common shares
BioVentures Investors (Offshore) IV LP	73.0%	73.0%	Units
Camden Partners Strategic Fund V (Cayman), LP	36.4%	36.5%	Units
NEC Cypress Buyer LLC ⁽¹⁾	13.3%	23.5%	Units
New Energy Capital Infrastructure Credit Fund LP	22.9%	23.3%	Units
New Energy Capital Infrastructure Offshore Credit Fund LP	54.9%	56.2%	Units
Scion G7, LP	28.8%	N/A	Units
Tuckerman Capital V LP	47.6%	48.3%	Units
Tuckerman Capital V Co-Investment I LP	47.7%	49.5%	Units

⁽¹⁾The ownership percentage of NEC Cypress Buyer LLC was greater than 20% at December 31, 2017 but was less than 20% at December 31, 2018 and is included in the table for comparative purposes.

The following tables present aggregated summarized financial information for Sirius Group's investments in equity method eligible unconsolidated entities:

(Millions)	As of December 31,	
	2018	2017
Balance sheet data:		
Total assets	\$ 503.5	\$ 336.7
Total liabilities	\$ 71.6	\$ 31.2

(Millions)	For the years ended December 31,		
	2018	2017	2016
Income statement data:			
Revenues	\$ 42.8	\$ 38.1	\$ 21.6
Expenses	\$ (14.9)	\$ (12.2)	\$ (14.1)

Equity method eligible affiliates, accounted for using the equity method

OneBeacon

On April 18, 2016, Sirius Group sold its investment in OneBeacon at fair value to its former parent for proceeds of \$178.3 million in connection with the sale of Sirius Group to CMIG International and recorded \$22.1 million of additional paid-in surplus for the excess of fair value over the equity method carrying value of OneBeacon. (See **Note 3.**)

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
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The following table summarizes amounts recorded by Sirius Group under the equity method relating to its investment in OneBeacon for the period January 1, 2016 until April 18, 2016:

<i>(Millions)</i>	Total
Equity method carrying value of investment in OneBeacon as of December 31, 2015	\$ 151.9
Equity in earnings of OneBeacon	6.6
Dividends received	(3.0)
Other, net	0.7
Proceeds received for the sale of OneBeacon	(178.3)
Excess of fair value received over equity method carrying value of OneBeacon	22.1
Equity method carrying value of investment in OneBeacon as of April 18, 2016	\$ -

The following table presents financial information for OneBeacon as of March 31, 2016:

<i>(Millions)</i>	March 31, 2016
OneBeacon balance sheet data:	
Total investments	\$ 2,562.1
Total assets	3,529.0
Unpaid loss and loss adjustment expense reserves	1,343.8
Long-term debt	272.9
Total liabilities	2,509.2
Total non-controlling interests	3.2
Common shareholders' equity	1,016.6

The following table presents financial information for OneBeacon for the three months ended March 31, 2016:

<i>(Millions)</i>	Three months ended March 31, 2016
OneBeacon income statement data:	
Net premiums earned	\$ 278.6
Net investment income	14.4
Total revenues	310.5
Loss and loss adjustment expenses	158.8
Total expenses	272.3
Net income	46.4

Note 20. Variable interest entities

Sirius Group consolidates the results of operations and financial position of every voting interest entity (“VOE”) in which it has a controlling financial interest and VIEs in which it is considered to be the primary beneficiary. The consolidation assessment, including the determination as to whether an entity qualifies as a VOE or VIE, depends on the facts and circumstances surrounding each entity.

Sirius International Insurance Group, Ltd.
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Sirius Group has determined that Alstead Re is a VIE for which Sirius Group is the primary beneficiary and is required to consolidate it. The following table presents Alstead Re's assets and liabilities, as classified in the Consolidated Balance Sheets as at December 31, 2018 and 2017:

<i>(Millions)</i>	2018	2017
Assets:		
Fixed maturity investments	\$ 4.0	\$ -
Short-term investments	0.3	-
Cash	0.2	4.5
Total investments	4.5	4.5
Accrued investment income	0.1	-
Insurance and reinsurance premiums receivable	3.7	4.1
Funds held by ceding companies	5.2	2.7
Deferred acquisition costs	0.9	1.3
Total assets	\$ 14.4	\$ 12.6
Liabilities		
Loss and loss adjustment expense reserves	\$ 4.6	\$ 3.5
Unearned insurance and reinsurance premiums	3.7	4.3
Total liabilities	\$ 8.3	\$ 7.8

Sirius Group is a passive investor in certain third-party-managed hedge and private equity funds, some of which are VIEs. Sirius Group is not involved in the design or establishment of these VIEs, nor does it actively participate in the management of the VIEs. The exposure to loss from these investments is limited to the carrying value of the investments at the balance sheet date.

Sirius Group calculates maximum exposure to loss to be (i) the amount invested in the debt or equity of the VIE, (ii) the notional amount of VIE assets or liabilities where Sirius Group has also provided credit protection to the VIE with the VIE as the referenced obligation, and (iii) other commitments and guarantees to the VIE. Sirius Group does not have any VIEs that it sponsors nor any VIEs where it has recourse to it or has provided a guarantee to the VIE interest holders.

The following table presents total assets of unconsolidated VIEs in which Sirius Group holds a variable interest, as well as the maximum exposure to loss associated with these VIEs:

<i>(Millions)</i>	Total VIE Assets	Maximum Exposure to Loss		Total
		On-Balance Sheet	Off-Balance Sheet	
December 31, 2018				
Other long-term investments ⁽¹⁾	\$ 209.1	\$ 103.1	\$ 32.0	\$ 135.1
Total at December 31, 2018	\$ 209.1	\$ 103.1	\$ 32.0	\$ 135.1
December 31, 2017				
Other long-term investments ⁽¹⁾	\$ 1,378.1	\$ 108.2	\$ 57.4	\$ 165.6
Total at December 31, 2017	\$ 1,378.1	\$ 108.2	\$ 57.4	\$ 165.6

⁽¹⁾Comprised primarily of hedge funds and private equity funds.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
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Note 21. Transactions with related parties

(Re)insurance contracts

In the normal course of business, Sirius Group enters into insurance and reinsurance contracts with certain of its insurance and MGU affiliates, or their subsidiaries. During the year ended December 31, 2018 and 2017, these contracts with related parties resulted in gross written premiums of \$67.9 million and \$3.5 million, respectively. During the year ended December 31, 2016, Sirius Group did not have any contracts with related parties that resulted in any gross written premiums. As at December 31, 2018 and 2017, Sirius Group had total receivables due from related parties of \$14.3 million and \$10.4 million, respectively. At December 31, 2018, Sirius Group did not have any payables due to related parties. At December 31, 2017, Sirius Group had total payables due to related parties of \$0.5 million.

White Mountains Advisors

White Mountains Advisors (“WMA”), an indirect wholly-owned subsidiary of Sirius Group’s former parent, provided investment advisory and management services to Sirius Group and its subsidiaries under an Investment Advisory Services Agreement. During 2016, Sirius Group terminated this agreement. Sirius Group incurred \$3.1 million of investment fees during 2016.

Other

On August 16, 2016, the Company announced that Meyer “Sandy” Frucher was added as an independent director to its board of directors. Mr. Frucher is Vice Chairman of Nasdaq, Inc. The Company is traded on the Nasdaq Global Select Market and has business transactions that are related to its listing on the exchange under the normal course of business. (See Note 3.)

Note 22. Commitments and contingencies

Concentrations of credit risk

Sirius Group underwrites a significant amount of its reinsurance business through reinsurance intermediaries that represent the ceding company. There is credit risk associated with payments of (re)insurance balances to Sirius Group in regards to these brokers’ ability to fulfill their contractual obligations. These intermediaries are fairly large and well established, and there are no indications they are financially distressed.

During the years ended December 31, 2018, 2017, and 2016, Sirius Group received its gross reinsurance premiums written from three major, third-party reinsurance intermediaries as detailed in the following table:

Gross written premium by intermediary	2018	2017	2016
AON Corporation and subsidiaries	26%	22%	22%
Guy Carpenter & Company and subsidiaries	18%	18%	18%
WT Butler and Co. Ltd.	10%	10%	8%
Total	54%	50%	48%

Geographic Concentration

The following table shows Sirius Group’s net written premiums by geographic region based on the location of the ceding company for the years ended December 31, 2018, 2017, and 2016:

<i>(Millions)</i>	2018	2017	2016
United States	\$ 794.7	\$ 563.1	\$ 463.0
Europe	276.5	262.3	258.9
Canada, the Caribbean, Bermuda and Latin America	103.6	111.4	88.3
Asia and Other	182.3	153.4	127.9
Total	\$ 1,357.1	\$ 1,090.2	\$ 938.1

Sirius International Insurance Group, Ltd.
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Sirius Group conducts a significant portion of its business outside of the United States. As a result, a significant portion of Sirius Group’s assets, liabilities, revenues, and expenses are denominated in currencies other than the U.S. dollar and are therefore subject to foreign currency risk. Sirius Group’s foreign currency risk cannot be eliminated entirely and significant changes in foreign exchange rates may adversely affect Sirius Group’s results of operations and financial condition.

Sirius Group’s foreign operations are subject to legal, political, and operational risks that may be greater than those present in the United States. As a result, certain of Sirius Group’s operations at these foreign locations could be temporarily or permanently disrupted.

Lloyd’s Central Fund

The Lloyd’s Central Fund is available to satisfy claims if a member of Lloyd’s is unable to meet its obligations to policyholders. Sirius Group has an obligation to pay contributions to the Lloyd’s Central Fund each year based on gross written premium. For 2019, Sirius Group estimates the Lloyd’s Central Fund contributions to be \$0.6 million (based on the December 31, 2018 GBP to USD exchange rate) which is 0.35% of gross written premium. The Council of Lloyd’s have the power to levy an additional contribution on members if it considered necessary, and the maximum additional contribution is currently 3% of capacity.

Leases

Sirius Group leases certain office space under non-cancellable operating leases that expire on various dates. The future annual minimum rental payments required under non-cancellable leases for office space are as follows:

<i>(Millions)</i>	Future Payments
2019	\$ 10.4
2020	9.2
2021	7.6
2022	6.8
2023 and after	6.1
Total	\$ 40.1

Total rental expense for the years ended December 31, 2018, 2017, and 2016 was \$11.7 million, \$10.2 million, and \$6.2 million, respectively. Sirius Group also has various other lease obligations, which are not significant in the aggregate.

Legal Proceedings

Sirius Group, and the insurance and reinsurance industry in general, are routinely subject to claims related litigation and arbitration in the normal course of business, as well as litigation and arbitration that do not arise from, or are directly related to, claims activity. Sirius Group estimates of the costs of settling matters routinely encountered in claims activity are reflected in the reserves for unpaid loss and LAE. (See **Note 5.**)

Sirius Group considers the requirements of ASC 450, *Contingencies* (“ASC 450”), when evaluating its exposure to non-claims related litigation and arbitration. ASC 450 requires that accruals be established for litigation and arbitration if it is probable that a loss has been incurred and it can be reasonably estimated. ASC 450 also requires that litigation and arbitration be disclosed if it is probable that a loss has been incurred or it there is a reasonable possibility that a loss may have been incurred.

Sirius International Insurance Group, Ltd.
Notes to Consolidated Financial Statements
For the years ended December 31, 2018, 2017, and 2016

Note 23. Unaudited condensed quarterly financial data

<i>(Expressed in millions of U.S. dollars, except per share amounts)</i>	December 31, 2018	September 30, 2018	June 30, 2018	March 31, 2018
	<i>Unaudited</i>	<i>Unaudited</i>	<i>Unaudited</i>	<i>Unaudited</i>
Total revenues	\$ 336.8	\$ 351.7	\$ 441.8	\$ 327.5
Total expenses	\$ 482.3	\$ 386.3	\$ 292.4	\$ 273.1
Net (loss) income attributable to Sirius Group's common shareholders	\$ (153.6)	\$ (28.0)	\$ 97.8	\$ 40.5
Basic earnings per common share and common share equivalent	\$ (1.31)	\$ (0.23)	\$ 0.78	\$ 0.32
Diluted earnings per common share and common share equivalent	\$ (1.31)	\$ (0.23)	\$ 0.78	\$ 0.32

<i>(Expressed in millions of U.S. dollars, except per share amounts)</i>	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017
	<i>Unaudited</i>	<i>Unaudited</i>	<i>Unaudited</i>	<i>Unaudited</i>
Total revenues	\$ 362.6	\$ 293.0	\$ 252.6	\$ 225.9
Total expenses	\$ 305.8	\$ 478.1	\$ 240.2	\$ 219.9
Net (loss) income attributable to Sirius Group's common shareholder	\$ 16.0	\$ (179.0)	\$ (0.8)	\$ 7.7
Basic earnings per common share and common share equivalent	\$ 0.13	\$ (1.49)	\$ (0.01)	\$ 0.06
Diluted earnings per common share and common share equivalent	\$ 0.13	\$ (1.49)	\$ (0.01)	\$ 0.06

Item 9. Changes In and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of December 31, 2018, our disclosure controls and procedures were effective to provide reasonable assurance that the information required to be disclosed by us in reports filed or submitted under the Exchange Act was (a) recorded, processed, summarized and reported within the time periods specified by SEC rules and forms, and (b) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Evaluation of Internal Control over Financial Reporting

This Annual Report on Form 10-K does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of our registered public accounting firm due to a transition period established by rules of the SEC for newly public companies.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2018 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Item 9B. Other Information

On March 12, 2019, the Company and certain of its executive officers entered into a Restrictive Covenant Agreement. The Restrictive Covenant Agreement provides that, as a condition to participation in and receipt of severance-related benefits under the Company's Severance and Change in Control Plan and the receipt of severance-related benefits under equity compensation awards granted under the Sirius Group 2018 Omnibus Incentive Plan, the executive will agree to certain confidentiality, non-competition, non-solicitation, non-disparagement and other covenants customary for agreements of this type. The form of Restrictive Covenant Agreement is filed as Exhibit 10.20 to this Annual Report on Form 10-K and is incorporated herein by reference.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The Company has adopted a Code of Business Conduct that applies to all executive officers, employees and directors of the Company. The Code of Business Conduct is available on www.ir.siriusgroup.com. We intend to disclose any amendment to, or waiver from, a provision of the Code of Business Conduct that applies to our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions, and relates to any element of the definition of code of ethics set forth in Item 406(b) of Regulation S-K, by posting such information on our website at www.siriusgroup.com.

All additional information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

Item 11. Executive Compensation

The information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

Item 14. Principal Accountant Fees and Services

The information required by this item is incorporated by reference to our Proxy Statement for the 2019 Annual Meeting of Shareholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2018.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Financial Statements, Financial Statement Schedules and Exhibits

1. Financial Statements

The financial statements filed as part of this Annual Report on Form 10-K are listed in the index to the financial statements, which is included in “Item 8. Financial Statements and Supplementary Data.”

2. Financial Statement Schedules

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3. Exhibits

- 2.1 Agreement and Plan of Merger, dated as of June 23, 2018, by and among Sirius International Insurance Group, Ltd., Easterly Acquisition Corp. and Sirius Acquisitions Holding Company III (incorporated by reference to Annex A to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on October 11, 2018).*
- 2.2 First Amendment to the Agreement and Plan of Merger and Sponsor Letter, dated as of August 29, 2018, by and among Sirius International Insurance Group, Ltd., Easterly Acquisition Corp., Sirius Acquisitions Holding Company III, CM Bermuda Ltd. and Easterly Acquisition Sponsor, LLC (incorporated by reference to Annex C to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on October 11, 2018).
- 3.1 Memorandum of Association of Sirius International Insurance Group, Ltd, as amended.
- 3.2 Bye-Laws of Sirius International Insurance Group, Ltd. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).
- 3.3 Certificate of Designation of Series B Preference Shares of Sirius International Insurance Group, Ltd. (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).
- 4.1 Warrant Agreement, dated July 29, 2015, between Continental Stock Transfer & Trust Company and Easterly Acquisition Corp. (including form of public warrant certificate) (incorporated by reference to Exhibit 4.3 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on August 6, 2018).
- 4.2 Form of Assignment, Assumption and Amendment Agreement to Warrant Agreement among Easterly Acquisition Corp., Sirius International Insurance Group, Ltd. and Continental Stock Transfer & Trust Company (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).
- 10.1 Shareholders Agreement, dated as of November 5, 2018, by and among Sirius International Insurance Group, Ltd., CM Bermuda Ltd. and the shareholders named therein (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).
- 10.2 Registration Rights Agreement, dated as of November 5, 2018, by and among Sirius International Insurance Group, Ltd., CM Bermuda Ltd. and Easterly Acquisition Corp. (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).
- 10.3 Redemption Agreement, dated as of November 2, 2018, by and between Sirius International Insurance Group, Ltd. and CM Bermuda Ltd. (incorporated by reference to Exhibit 10.4 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).
- 10.4 Redemption Agreement, dated as of July 14, 2018, by and between Sirius International Insurance Group, Ltd. and IMG Acquisition Holdings, LLC (incorporated by reference to Exhibit 10.5 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).
- 10.5 Form of Subscription Agreement among Sirius International Insurance Group, Ltd. and the investors named therein (incorporated by reference to Exhibit 10.2 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).
- 10.6 Promissory Note, dated as of June 23, 2018, made by Easterly Acquisition Corp. in favor of Sirius International Insurance Group, Ltd. (incorporated by reference to Annex D to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on October 11, 2018).

- 10.7 Letter Agreement, dated as of June 23, 2018, among Easterly Acquisition Corp., Easterly Acquisition Sponsor, LLC and Sirius International Insurance Group, Ltd. (incorporated by reference to Annex B to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on October 11, 2018).
- 10.8 Form of Lock-up Agreement among CM Bermuda Ltd., Easterly Acquisition Sponsor, LLC and Sirius International Insurance Group, Ltd. (incorporated by reference to Annex F to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on October 11, 2018).
- 10.9 Form of Sirius Group Private Placement Warrant (incorporated by reference to Exhibit 3.3 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).
- 10.10 Indenture, dated November 1, 2016, by and between Sirius International Group, Ltd. and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 10.12 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).
- 10.10.1 First Supplemental Indenture, dated November 1, 2016, by and between Sirius International Group, Ltd. and The Bank of New York Mellon, as Trustee, including form of 4.600% Senior Notes due 2026 (incorporated by reference to Exhibit 10.13 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).
- 10.11 Subordinated Indenture, dated September 22, 2017, by and among Sirius International Group, Ltd., The Bank of New York Mellon, as Trustee, and The Bank of New York Mellon London Branch, as Paying Agent, including form of Floating Rate Callable Subordinated Notes due 2047 (incorporated by reference to Exhibit 10.14 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).
- 10.12 Credit Agreement, dated as of February 8, 2018, by and among Sirius International Insurance Group, Ltd., as Parent, Sirius International Group, Ltd., as Borrower, certain subsidiaries of the Borrower from time to time party thereto, certain lenders from time to time party thereto, and Wells Fargo Bank, National Association, as Administrative Agent (incorporated by reference to Exhibit 10.15 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).
- 10.12.1 First Amendment to the Credit Agreement, dated as of July 30, 2018, by and among Sirius International Insurance Group, Ltd., Sirius International Group, Ltd., certain subsidiaries of the Borrower party thereto, certain lenders party thereto, and Wells Fargo Bank, National Association, as Administrative Agent (incorporated by reference to Exhibit 10.16 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).
- 10.13 Sirius International Insurance Group, Ltd. 2018 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.6 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on August 6, 2018).†
- 10.13.1 Amendment 1 to the Sirius International Insurance Group, Ltd. 2018 Omnibus Incentive Plan.†
- 10.13.2 Sirius International Insurance Group, Ltd. 2018 Omnibus Incentive Plan – Form of Tandem Award Notice† (incorporated by reference to Exhibit 10.14.1 to the Quarterly Report on Form 10-Q filed by Sirius International Insurance Group, Ltd. on November 16, 2018).†
- 10.13.3 Sirius International Insurance Group, Ltd. 2018 Omnibus Incentive Plan – Form of Tandem Award Notice, as Amended and Restated.†
- 10.13.4 Sirius International Insurance Group, Ltd. 2018 Omnibus Incentive Plan – Form of Performance Share Unit Award Notice.†
- 10.13.5 Sirius International Insurance Group, Ltd. 2018 Omnibus Incentive Plan – Form of Restricted Share Unit Award Notice.†

- 10.13.6 Sirius International Insurance Group, Ltd. 2018 Omnibus Incentive Plan – Form of 2019 Supplemental Restricted Share Unit Award Notice.†
 - 10.14 Amended and Restated Sirius Group Long Term Incentive Plan (incorporated by reference to Exhibit 10.7 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on August 6, 2018).†
 - 10.14.1 First Amendment to the Sirius Group Long Term Incentive Plan (incorporated by reference to Exhibit 10.8 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on August 6, 2018).†
 - 10.14.2 Second Amendment to the Sirius Group Long Term Incentive Plan (incorporated by reference to Exhibit 10.7.2 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).†
 - 10.15 Sirius Group Severance and Change in Control Plan (incorporated by reference to Exhibit 10.8 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).†
 - 10.16 Sirius International Insurance Group, Ltd. Employee Share Purchase Plan (incorporated by reference to Exhibit 10.6 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on November 6, 2018).†
 - 10.17 Employment Agreement dated as of July 24, 2015 between Sirius International Insurance Group, Ltd. and Allan L. Waters (incorporated by reference to Exhibit 10.9 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).†
 - 10.18 Employment Agreement dated as of July 24, 2015 between Sirius International Försäkringsaktiebolag (publ) and Monica Cramér Manhem (incorporated by reference to Exhibit 10.10 to the Registration Statement on Form S-4 filed by Sirius International Insurance Group, Ltd. on September 10, 2018).†
 - 10.19 Employment Agreement, dated as of January 30, 2019, between Sirius International Insurance Group, Ltd. And Kernan V. Oberting (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by Sirius International Insurance Group, Ltd. on January 30, 2019).†
 - 10.20 Form of Restrictive Covenant Agreement.†
 - 21.1 Subsidiaries of Sirius International Insurance Group, Ltd.
 - 23.1 Consent of Independent Registered Accounting Firm.
 - 24.1 Powers of Attorney (included on signature page).
 - 31.1 Certification of Kernan “Kip” V. Oberting, Chief Executive Officer of Sirius International Insurance Group, Ltd., pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934.
 - 31.2 Certification of Ralph Salamone, Chief Financial Officer of Sirius International Insurance Group, Ltd., pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934.
 - 32.1 Certification of Kernan “Kip” V. Oberting, Chief Executive Officer of Sirius International Insurance Group, Ltd., pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
 - 32.2 Certification of Ralph Salamone, Chief Financial Officer of Sirius International Insurance Group, Ltd., pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 101.INS XBRL Instance Document
101.SCH XBRL Taxonomy Extension Schema Document
101.CAL XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

* The exhibits and schedules to this Exhibit have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Company hereby agrees to furnish supplementally to the SEC a copy of any omitted exhibits and schedules upon request.

† Management contract or compensatory plan or arrangement.

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.

SIRIUS GROUP INTERNATIONAL INSURANCE, LTD.

By: /s/ Ralph A. Salamone

Name: Ralph A. Salamone

Title: Chief Financial Officer

Date: March 14, 2019

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Ralph A. Salamone and Gene Boxer, and each of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes, may lawfully do or cause to be done by virtue thereof.

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

Signature	Title	Date
<u>/s/ Kernan V. Oberting</u> Kernan V. Oberting	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 14, 2019
<u>/s/ Ralph A. Salamone</u> Ralph A. Salamone	Chief Financial Officer (Principal Financial Officer & Principal Accounting Officer)	March 14, 2019
<u>/s/ Robert L. Friedman</u> Robert L. Friedman	Director	March 14, 2019
<u>/s/ Meyer (Sandy) Frucher</u> Meyer (Sandy) Frucher	Director	March 14, 2019
<u>/s/ Alain Maurice Karaoglan</u> Alain Maurice Karaoglan	Director	March 14, 2019
<u>/s/ Rachelle C. Keller</u> Rachelle C. Keller	Director	March 14, 2019
<u>/s/ Laurence Liao</u> Laurence Liao	Director	March 14, 2019
<u>/s/ James Beeland Rogers Jr.</u> James Beeland Rogers, Jr.	Director	March 14, 2019

Sirius International Insurance Group, Ltd.
Schedule I
Summary of Investments – Other Than Investments in Related Parties
As at December 31, 2018

<i>(Expressed in millions of U.S. dollars)</i>	Cost or amortized cost	Fair value	Amount shown on the balance sheet
Corporate debt securities	\$ 694.1	\$ 695.8	\$ 695.8
Asset-backed securities	496.3	494.5	494.5
Residential mortgage-backed securities	413.0	413.5	413.5
Commercial mortgage-backed securities	163.9	167.9	167.9
U.S. government and government agency	117.7	115.9	115.9
Non-U.S. government and government agency	50.6	50.3	50.3
Preferred stocks	14.5	8.5	8.5
U.S. States, municipalities and political subdivision	2.8	2.8	2.8
Total fixed maturities	\$ 1,952.9	\$ 1,949.2	\$ 1,949.2
Total short-term investments	716.1	715.5	715.5
Total equity securities	409.4	380.0	380.0
Total other long-term investments	337.6	365.0	365.0
Total	\$ 3,416.0	\$ 3,409.7	\$ 3,409.7

Sirius International Insurance Group, Ltd.
Schedule II
Condensed Financial Information of Registrant
Balance Sheets
As at December 31, 2018 and 2017

<i>(Expressed in millions of U.S. dollars, except share and per share information)</i>	2018	2017
Assets		
Fixed maturity investments, at fair value	\$ 2.8	\$ 3.9
Short-term investments, at fair value <i>(Amortized cost 2018: \$5.3; 2017: \$30.8)</i>	5.3	30.8
Total investments	8.1	34.7
Cash	-	0.1
Investments in unconsolidated affiliates	1,911.2	2,030.4
Other assets	42.5	1.1
Total assets	\$ 1,961.8	\$ 2,066.3
Liabilities		
Other liabilities	\$ 25.1	\$ 43.2
Total liabilities	25.1	43.2
Commitments and Contingencies		
Mezzanine equity		
Series B preference shares	232.2	-
Series A redeemable preference shares	-	106.1
Total mezzanine equity	232.2	106.1
Common shareholders' equity		
Common shares <i>(shares issued and outstanding: 2018: 115,151,251; 2017: 120,000,000)</i>	1.2	1.2
Additional paid-in surplus	1,089.1	1,197.9
Retained earnings	816.6	858.4
Accumulated other comprehensive (loss)	(202.4)	(140.5)
Total common shareholders' equity	1,704.5	1,917.0
Total liabilities, mezzanine equity, and common shareholders' equity	\$ 1,961.8	\$ 2,066.3

See Notes to Condensed Financial Information of Registrant

Sirius International Insurance Group, Ltd.
Schedule II
Condensed Financial Information of Registrant
Statements of (Loss) Income
For the years ended December 31, 2018, 2017, and 2016

<i>(Expressed in millions of U.S. dollars)</i>	2018	2017	2016
Revenues			
Net investment income (losses)	\$ 0.5	\$ 0.3	\$ (0.2)
Net realized investment gains	-	0.2	0.3
Net unrealized investment gains (losses)	-	12.8	(0.1)
Net foreign exchange (losses)	-	(0.2)	-
Gain on revaluation of contingent consideration	6.1	13.6	-
Other revenue	41.4	0.9	-
Total revenues	48.0	27.6	-
Expenses			
Other underwriting expenses	-	(0.2)	-
General and administrative expenses	13.6	13.0	36.6
Total expenses	13.6	12.8	36.6
Income (loss) before equity earnings of unconsolidated affiliates, net of tax	34.4	14.8	(36.6)
Equity in earnings of unconsolidated affiliates, net of tax	(52.5)	(164.8)	69.1
Net (loss) income attributable to Sirius Group	(18.1)	(150.0)	32.5
Less: Accrued dividends on Series A redeemable preference shares	(2.6)	(6.1)	-
Less: Change in carrying value of Series B preference shares	(36.4)	-	-
Add: Redemption of Series A redeemable preference shares	13.8	-	-
Net (loss) income attributable to Sirius Group's common shareholders	\$ (43.3)	\$ (156.1)	\$ 32.5

See Notes to Condensed Financial Information of Registrant

Sirius International Insurance Group, Ltd.
Schedule II
Condensed Financial Information of Registrant
Statements of Comprehensive (Loss) Income
For the years ended December 31, 2018, 2017, and 2016

<i>(Expressed in millions of U.S. dollars)</i>	2018	2017	2016
Comprehensive (loss) income			
Net (loss) income attributable to Sirius Group	\$ (18.1)	\$ (150.0)	\$ 32.5
Other comprehensive (loss) income			
Change in foreign currency translation, net of tax	(61.9)	71.7	(67.3)
Net change in other, net of tax	-	-	1.2
Comprehensive (loss) income attributable to Sirius Group	\$ (80.0)	\$ (78.3)	\$ (33.6)

See Notes to Condensed Financial Information of Registrant

Sirius International Insurance Group, Ltd.
Schedule II
Condensed Financial Information of Registrant
Statements of Cash Flows
For the years ended December 31, 2018, 2017, and 2016

<i>(Expressed in millions of U.S. dollars)</i>	2018	2017	2016
Cash flows from operations:			
Net (loss) income attributable to Sirius Group	\$ (18.1)	\$ (150.0)	\$ 32.5
Adjustments to reconcile net income to net cash provided from (used for) operations:			
Equity in earnings of subsidiaries	52.5	164.8	(69.1)
Dividends received from subsidiaries	150.0	110.0	20.0
Net realized and unrealized investment (losses)	-	(13.0)	(0.2)
Amortization of premium on fixed maturity investments	(0.3)	(0.1)	-
Share-based compensation	2.0	-	-
Revaluation of contingent consideration	(6.1)	(13.6)	-
Other operating items:			
Net change in other assets and liabilities, net	(57.5)	12.6	(6.8)
Net cash provided from (used for) operations	122.5	110.7	(23.6)
Cash flows from investing activities:			
Net change in short-term investments	25.6	2.5	(4.5)
Sales of fixed maturities and convertible fixed maturity investments	65.9	1.1	16.3
Sales of common equity securities	-	59.6	3.2
Purchases of common equity securities	-	(54.4)	(8.0)
Purchases of fixed maturities and convertible fixed maturity investments	(64.9)	-	(6.3)
Contributions to subsidiaries	(143.5)	(132.7)	(42.1)
Net cash (used for) provided from investing activities	(116.9)	(123.9)	(41.4)
Cash flows from financing activities:			
Capital contribution from former parent	1.4	13.3	89.6
Proceeds from issuance of common shares, net of expenses	61.2	-	-
Proceeds from issuance of Series B preference shares	195.8	-	-
Redemption of common shares from CM Bermuda	(164.0)	-	-
Return of capital to CM Bermuda	(1.6)	-	-
Redemption of Series A redeemable preference shares	(95.0)	-	-
Payment of contingent consideration	(3.5)	-	-
Cash dividends paid to former parent	-	-	(27.0)
Net cash (used for) provided from financing activities	(5.7)	13.3	62.6
Net (decrease) increase in cash during year	(0.1)	0.1	(2.4)
Cash balance at beginning of year	0.1	-	2.4
Cash balance at end of year	\$ -	\$ 0.1	\$ -

See Notes to Condensed Financial Information of Registrant

Notes to Condensed Financial Information of Registrant

Sirius International Insurance Group, Ltd. (the Registrant) investments in consolidated subsidiaries are stated at cost plus equity in income of consolidated subsidiaries. The accompanying condensed financial statements of the Registrant should be read in conjunction with the Consolidated Financial Statements and Notes thereto of Sirius International Insurance Group, Ltd. included in the Annual Report on Form 10-K

Sirius International Insurance Group, Ltd.
Schedule III
Supplementary Insurance Information
As at and for the years ended December 31, 2018, 2017, and 2016

(Millions)

As at and for the year ended December 31, 2018								
	Deferred Acquisition Costs	Loss and Loss Adjustment Expense Reserves	Unearned Insurance and Reinsurance Premiums	Net Earned Insurance and Reinsurance Premiums	Loss and Loss Adjustment Expenses	Insurance and Reinsurance Acquisition Expenses	Other Underwriting Expenses	Net Written Insurance and Reinsurance Premiums
Global Property	\$ 44.1	\$ 910.6	\$ 252.0	\$ 636.0	\$ 528.7	\$ 121.1	\$ 68.2	\$ 655.0
Global A&H	54.0	197.9	224.8	357.6	194.9	109.7	27.4	379.8
Specialty & Casualty	43.5	323.4	170.4	239.5	148.8	65.5	28.2	292.7
Runoff & Other	-	584.8	-	29.2	14.6	2.8	6.3	29.6
Corporate Elimination	-	-	-	-	13.0	(43.7)	16.1	-
Total	\$ 141.6	\$ 2,016.7	\$ 647.2	\$ 1,262.3	\$ 900.0	\$ 255.4	\$ 146.2	\$ 1,357.1

(Millions)

As at and for the year ended December 31, 2017								
	Deferred Acquisition Costs	Loss and Loss Adjustment Expense Reserves	Unearned Insurance and Reinsurance Premiums	Net Earned Insurance and Reinsurance Premiums	Loss and Loss Adjustment Expenses	Insurance and Reinsurance Acquisition Expenses	Other Underwriting Expenses	Net Written Insurance and Reinsurance Premiums
Global Property	\$ 43.5	\$ 759.6	\$ 195.7	\$ 564.4	\$ 512.4	\$ 112.9	\$ 63.3	\$ 556.2
Global A&H	49.1	206.2	195.8	306.8	179.8	89.6	23.4	341.5
Specialty & Casualty	28.2	304.5	115.0	163.2	104.9	41.1	16.5	193.0
Runoff & Other	0.1	628.2	0.3	0.9	14.1	(3.5)	2.9	(0.5)
Corporate Elimination	-	-	-	-	-	(42.9)	-	-
Total	\$ 120.9	\$ 1,898.5	\$ 506.8	\$ 1,035.3	\$ 811.2	\$ 197.2	\$ 106.1	\$ 1,090.2

(Millions)

As at and for the year ended December 31, 2016								
	Deferred Acquisition Costs	Loss and Loss Adjustment Expense Reserves	Unearned Insurance and Reinsurance Premiums	Net Earned Insurance and Reinsurance Premiums	Loss and Loss Adjustment Expenses	Insurance and Reinsurance Acquisition Expenses	Other Underwriting Expenses	Net Written Insurance and Reinsurance Premiums
Global Property	\$ 43.5	\$ 506.6	\$ 171.3	\$ 481.8	\$ 268.5	\$ 100.3	\$ 65.1	\$ 514.2
Global A&H	24.4	158.3	122.5	272.2	171.6	71.7	23.3	277.6
Specialty & Casualty	18.3	314.0	85.3	135.2	75.6	37.7	15.1	137.4
Runoff & Other	(1.5)	641.2	18.9	0.9	3.6	0.6	3.8	8.9
Corporate Elimination	-	-	-	-	-	-	-	-
Total	\$ 84.7	\$ 1,620.1	\$ 398.0	\$ 890.1	\$ 519.3	\$ 210.3	\$ 107.3	\$ 938.1

Sirius International Insurance Group, Ltd.
Schedule IV
Reinsurance
For the years ended December 31, 2018, 2017, and 2016

(Millions)

	Direct gross	Ceded to other companies	Assumed from other companies	Net amount	Percentage of amount assumed to net
Year ended December 31, 2018	\$ 454.5	\$ 463.9	\$ 1,366.5	\$ 1,357.1	101%
Year ended December 31, 2017	450.2	349.1	989.1	1,090.2	91%
Year ended December 31, 2016	368.5	330.9	900.5	938.1	96%

Sirius International Insurance Group, Ltd.
Schedule V
Valuation and Qualifying Accounts
As at and for the years ended December 31, 2018, 2017, and 2016

(Millions)

	Balance at beginning of period	Additions (Subtractions)			Balance at the end of period
		Charged to costs and expenses	Charged to other accounts	Deductions described ⁽¹⁾	
Years ended:					
December 31, 2018					
Reinsurance on recoverable paid losses:					
Allowance for reinsurance balances	\$ 5.8	-	(0.1)	-	\$ 5.7
Property and casualty insurance and reinsurance premiums receivable:					
Allowance for uncollectible accounts	\$ 4.6	-	(0.2)	(0.1)	\$ 4.3
December 31, 2017					
Reinsurance on recoverable paid losses:					
Allowance for reinsurance balances	\$ 5.8	-	-	-	\$ 5.8
Property and casualty insurance and reinsurance premiums receivable:					
Allowance for uncollectible accounts	\$ 5.3	(0.5)	(0.5)	0.3	\$ 4.6
December 31, 2016					
Reinsurance on recoverable paid losses:					
Allowance for reinsurance balances	\$ 5.4	-	-	0.4	\$ 5.8
Property and casualty insurance and reinsurance premiums receivable:					
Allowance for uncollectible accounts	\$ 4.0	1.1	-	0.2	\$ 5.3

⁽¹⁾ Represents net collections (charge-offs) of receivable balances and foreign currency translation.

Sirius International Insurance Group, Ltd.
Schedule VI
Insurance Operations
As at and for the years ended December 31, 2018, 2017, and 2016

(Millions)

Affiliation with registrant	Deferred acquisition costs	Loss and loss adjustment expense reserves	Unearned insurance and reinsurance premiums	Net earned insurance and reinsurance premiums	Net investment income	Losses and loss expenses incurred related to current year	Losses and loss expenses incurred related to prior year	Net paid losses and loss expenses	Insurance and reinsurance acquisition costs	Net premiums written
Consolidated Subsidiaries										
2018	\$ 141.6	\$ 2,016.7	\$ 647.2	\$ 1,262.3	\$ 71.4	\$ 907.3	\$ (7.3)	\$ 791.7	\$ 255.4	\$ 1,357.1
2017	120.9	1,898.5	506.8	1,035.3	56.8	811.8	(0.6)	612.3	197.2	1,090.2
2016	84.7	1,620.1	398.0	890.1	56.2	583.0	(63.7)	548.3	210.3	938.1