SOMPO INTERNATIONAL

Audited Consolidated Financial Statements

Endurance Specialty Insurance Ltd.

For the years ended December 31, 2019 and 2018

With Independent Auditor's Report

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Independent Auditor's Report

The Audit Committee
Endurance Specialty Insurance Ltd.

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the Consolidated Financial Statements of Endurance Speciality Insurance Ltd. (the "Company"), which comprise the Consolidated Balance Sheets as at December 31, 2019, December 31, 2018 and January 1, 2018, and the Consolidated Statements of Profit and Comprehensive Income (Loss), Consolidated Statements of Changes in Shareholder's Equity and Consolidated Statements of Cash Flows for the years ended December 31, 2019 and December 31, 2018, and notes to the Consolidated Financial Statements, including a summary of significant accounting policies.

In our opinion, the accompanying Consolidated Financial Statements present fairly, in all material respects, the consolidated financial position of the Company as at December 31, 2019, December 31, 2018 and January 1, 2018, its consolidated financial performance and its consolidated cash flows for the years ended December 31, 2019 and December 31, 2018 in accordance with International Financial Reporting Standards ("IFRS").

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing ("ISAs"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Company in accordance with the *International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (including International Independence Standards)* ("IESBA Code") together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements in Bermuda and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and the Board of Directors for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the Consolidated Financial Statements in accordance with IFRSs, and for such internal control as management determines is necessary to enable the preparation of Consolidated Financial Statements that are free from material misstatement, whether due to fraud or error.

In preparing the Consolidated Financial Statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Consolidated Financial Statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Consolidated Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the Consolidated Financial Statements, including the disclosures, and whether the Consolidated Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Ernst + Young Ltd.

Hamilton, Bermuda
April 27, 2020

ENDURANCE SPECIALITY INSURANCE LTD.
CONSOLIDATED BALANCE SHEETS
(In thousands of United States dollars)

	Notes	December 31, 2019	December 31, 2018	January 1, 2018
ASSETS				
Cash and cash equivalents	5	$ 1,610,924	$ 1,591,021	$ 1,195,472
Accrued investment income		58,299	50,418	47,189
Investments	6, 7	9,582,235	8,779,247	8,782,310
Investment in associate		14,149	10,856	—
Premiums receivable, net		2,498,920	2,072,584	1,829,702
Other insurance and reinsurance balances receivable		98,861	103,793	108,000
Receivables on investments sold		34,823	70,001	100,537
Prepaid reinsurance premiums	13	1,252,486	1,106,978	948,549
Derivative assets	8	114,953	201,250	269,418
Reinsurance recoverable on unpaid losses	12	3,332,238	3,274,568	2,593,603
Reinsurance recoverable on paid losses		1,044,425	944,577	518,818
Deferred acquisition costs gross	9	638,278	545,526	462,508
Current tax asset	21	1,309	4,746	824
Deferred tax asset	21	132,169	80,760	103,008
Property and equipment	14	221,826	230,859	225,481
Goodwill and intangible assets	11	422,770	459,591	396,520
Due from affiliates	19	6,683	4,817	804
Other assets		158,146	126,828	57,398
Total assets		$ 21,223,494	$ 19,658,420	$ 17,640,141
LIABILITIES				
Reserve for losses and loss expenses	12	$ 8,370,699	$ 7,975,924	$ 7,002,757
Reserve for unearned premiums	13	3,363,116	2,878,167	2,430,598
Insurance and reinsurance balances payable		1,961,042	1,537,243	974,783
Due to affiliates	19	1,212,803	1,294,541	448,690
Payables on purchases of investments		89,942	155,628	310,043
Payables under repurchase agreements		—	80,883	—
Derivative liabilities	8	66,810	143,689	143,800
Deferred acquisition costs ceded	9	189,665	176,708	147,028
Current tax liability	21	85,863	16,127	(3,798)
Deferred tax liability	21	10,315	10,562	10,935
Other liabilities		346,925	309,148	304,165
Loans and borrowings		185,874	182,255	167,365
Total liabilities		$ 15,883,054	$ 14,760,875	$ 11,936,366
SHAREHOLDER'S EQUITY				
Common shares	18	$ 12,000	$ 12,000	$ 12,000
Contributed surplus		4,835,931	4,822,072	4,732,018
Accumulated other comprehensive loss		(44,469)	(46,172)	—
Retained earnings		536,992	109,642	959,757
Equity attributable to owners of company		5,340,454	4,897,542	5,703,775
Non-controlling interests		(14)	3	—
Total shareholder's equity		5,340,440	4,897,545	5,703,775
Total liabilities and shareholder's equity		$ 21,223,494	$ 19,658,420	$ 17,640,141

See accompanying notes to the Consolidated Financial Statements.

ENDURANCE SPECIALITY INSURANCE LTD.
CONSOLIDATED STATEMENTS OF PROFIT AND COMPREHENSIVE INCOME (LOSS)
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(In thousands of United States dollars)

	Notes	2019	2018
REVENUES			
Gross premiums written		$ 6,787,918	$ 5,960,746
Ceded premiums written		(2,885,697)	(2,710,986)
Net premiums written		3,902,221	3,249,760
Change in unearned premiums		(468,494)	(356,107)
Change in unearned premiums on premiums ceded		149,717	124,577
Net premiums earned		3,583,444	3,018,230
Net investment income	6	305,894	211,128
Net realized gains (losses) on investments	6	42,086	(41,290)
Net unrealized gains (losses) on investments	6	250,314	(151,971)
Other underwriting income		6,387	5,971
Total revenues		4,188,125	3,042,068
EXPENSES			
Losses and loss adjustment expenses incurred	12	4,254,086	4,206,336
Losses and loss adjustment expenses recoverable	12	(1,895,796)	(2,201,475)
Net losses and loss adjustment expenses incurred		2,358,290	2,004,861
Acquisition expenses	9	728,596	606,259
General and administrative expenses		288,619	299,999
Corporate expenses		51	707
Amortization of intangible assets	11	50,555	78,890
Net foreign exchange gains (losses)		5,168	(19,672)
Loss on defined benefit scheme	16	—	10,546
Share of loss from investment in associate		707	144
Total expenses		3,431,986	2,981,734
Profit before tax and financing costs		756,139	60,334
Financing costs		(16,333)	(16,192)
Profit before tax		739,806	44,142
Tax expense	21	(68,639)	(19,151)
Profit		$ 671,167	$ 24,991
Net loss attributable to non-controlling interests		17	8
Profit attributable to Endurance Bermuda		$ 671,184	$ 24,999
OTHER COMPREHENSIVE INCOME (LOSS)			
Items that may be classified to profit or loss (net of tax):			
Exchange gain (loss) on translating foreign currency operations		1,703	(46,172)
Other comprehensive income (loss)		1,703	(46,172)
Comprehensive income (loss)		672,870	(21,181)
Comprehensive loss attributable to non-controlling interests		17	8
Comprehensive income (loss) attributable to Endurance Bermuda		$ 672,887	$ (21,173)

See accompanying notes to the Consolidated Financial Statements.

ENDURANCE SPECIALITY INSURANCE LTD.
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(In thousands of United States dollars)

		Attributable to the owners of the Company							
	Notes	**Share capital**	**Contributed surplus**	**Retained earnings**	Foreign currency translation reserve	**Accumulated other comprehensive loss**	**Total**	Non-controlling interests	**Total shareholder's equity**
Balance as at January 1, 2018	**23(d)**	$ 12,000	$ 4,732,018	$ 959,757	$ —	$ —	$ 5,703,775	$ —	$ 5,703,775
Profit (loss) for the year ended December 31, 2018		—	—	24,999	—	—	24,999	(8)	24,991
Other comprehensive income		—	—	—	(46,172)	(46,172)	(46,172)	—	(46,172)
Total comprehensive income (loss)		—	—	24,999	(46,172)	(46,172)	(21,173)	(8)	(21,181)
Contribution of capital received from parent		—	90,054		—	—	90,054	—	90,054
Dividends to parent				(875,114)			(875,114)	—	(875,114)
Non-controlling interest acquired through business combination		—	—	—	—	—	—	11	11
Balance as at December 31, 2018	**23(d)**	$ 12,000	$ 4,822,072	$ 109,642	$ (46,172)	$ (46,172)	$ 4,897,542	$ 3	$ 4,897,545
Profit (loss) for the year ended December 31, 2019		—	—	671,184	—	—	671,184	(17)	671,167
Other comprehensive income		—	—	—	1,703	1,703	1,703	—	1,703
Total comprehensive income (loss)		—	—	671,184	1,703	1,703	672,887	(17)	672,870
Contribution of capital received from parent		—	13,859	—	—	—	13,859	—	13,859
Dividends to parent		—	—	(243,834)	—	—	(243,834)	—	(243,834)
Balance as at December 31, 2019		$ 12,000	$ 4,835,931	$ 536,992	$ (44,469)	$ (44,469)	$ 5,340,454	$ (14)	$ 5,340,440

ENDURANCE SPECIALITY INSURANCE LTD
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(In thousands of United States dollars)

	Notes	2019	2018
Cash flows provided by operating activities:			
Profit before tax		$ 739,806	$ 44,142
Adjustments to profit before taxes for:			
Net taxes paid	21	(56,916)	(5,307)
Depreciation of property and equipment	14	42,888	34,128
Amortization of intangible assets	11	50,555	78,890
Amortization of investments	6	10,600	4,810
Net realized (gains) losses on sales of investments	6	(42,086)	41,290
Net unrealized (gains) losses on investments	6	(250,314)	151,971
Interest and dividend income	6	(290,723)	(267,853)
Equity in earnings of other investments	6	(28,141)	28,737
Interest expenses		16,333	16,192
Change in:			
Premiums receivable, net		(422,654)	(175,414)
Deferred acquisition costs gross		(90,936)	(78,719)
Prepaid reinsurance premiums		(144,141)	(112,098)
Reinsurance recoveries		(150,428)	(939,482)
Reserve for losses and loss adjustment expenses		371,817	725,041
Reserve for unearned premiums		478,299	337,731
Reinsurance balances payable		425,199	395,647
Deferred acquisition costs ceded		12,957	19,772
Due to affiliates		(83,604)	845,851
Others		(6,818)	28,073
Net cash flows provided by operating activities		581,693	1,173,402
Cash flows used in investing activities:			
Interest and dividend received	6	282,709	262,221
Purchases of investments	6	(5,793,921)	(5,007,176)
Proceeds from sales and maturities of investments	6	5,307,622	4,968,523
Purchases of properties and equipment	14	(9,803)	(10,882)
Purchase of intangible assets	11	(16,115)	(11,637)
Proceeds from sale of property and equipment	14	117	1,835
Net settlement of derivatives	8	1,271	(11,914)
Net cash received from (paid for) subsidiary acquisition	4	15,283	(207,598)
Net cash received from sale of subsidiary		(8,473)	—
Net cash flows used in investing activities		(221,310)	(16,628)
Cash flows used in financing activities:			
Interest paid		(6,119)	(5,643)
Issuance of common stock	18	—	80,000
Proceeds from issuance of repurchase agreements		154,225	(93,732)
Repayment of repurchase agreements		(235,108)	174,615
Repayments of lease liabilities	14	(20,242)	(10,573)
Proceeds from issuance of debt		40	20
Repayments of debt		(29)	(5,034)
Dividends on common shares		(243,834)	(875,114)
Net cash flows used in financing activities		(351,067)	(735,461)
Effect of exchange rate changes on cash and cash equivalents		10,587	(25,764)
Net increase in cash and cash equivalents		19,903	395,549
Cash and cash equivalents, beginning of year		1,591,021	1,195,472
Cash and cash equivalents, end of year		$ 1,610,924	$ 1,591,021

See accompanying notes to the Consolidated Financial Statements.

1. Organization

Endurance Specialty Insurance Ltd. ("Endurance Bermuda", together with its subsidiaries, the "Company") was organized in Bermuda on November 30, 2001, and is a wholly-owned subsidiary of Sompo International Holdings Ltd. ("Sompo International"). Sompo International is a Bermuda holding company and a wholly-owned subsidiary of Sompo Japan Nipponkoa Insurance Inc. ("SJNKI"). SJNKI is an insurer based in, and licensed under, the laws of Japan. SJNKI is a wholly-owned subsidiary of Sompo Holdings, Inc. ("Sompo Holdings"), a publicly-owned holding company, formed under the laws of Japan, whose capital stock is traded on the Tokyo Stock Exchange.

On March 28, 2017, Sompo Holdings completed its acquisition of Endurance Specialty Holdings Ltd. ("Endurance Holdings") following receipt of all shareholder and regulatory approvals. Pursuant to the agreement and plan of merger entered on October 5, 2016 (the "Merger Agreement"), Endurance Holdings ordinary shares ceased trading on the New York Stock Exchange and each Endurance Holdings issued and outstanding ordinary share was canceled and converted into the right to receive $93.00 per share. Under the terms of the Merger Agreement, the aggregate consideration for the acquisition was $6,288.7 million in cash.

On September 27, 2017, Sompo International entered into a Stock and Asset Purchase and Sale Agreement (the "Purchase and Sale Agreement") with Endurance Holdings. Pursuant to the terms of the Purchase and Sale Agreement, Endurance Holdings transferred substantially all of its assets and liabilities, including it's investment in Endurance Bermuda, to Sompo International,

On December 31, 2017, Endurance Bermuda undertook an internal restructuring and as a result, Endurance U.S. Holdings Corp. ("Endurance U.S. Holdings"), a wholly-owned subsidiary of Endurance Bermuda, merged with Sompo America Holdings Inc. ("Sompo America"), an affiliated wholly-owned subsidiary of SJNKI, at book value, with Endurance U.S. Holdings being the surviving entity. Consequently, three operating subsidiaries of Sompo America became wholly-owned subsidiaries of Endurance U.S. Holdings: Sompo America Insurance Company ("Sompo America Insurance"), Sompo America Fire & Marine Insurance Company ("Sompo America Fire & Marine"), and Sompo Seguros Mexico, S.A. de C.V. ("Sompo Mexico").

On May 1, 2018, Endurance Bermuda acquired Sompo Japan Nipponkoa Insurance Company of Europe Limited ("SJNKE") and Sompo Japan Nipponkoa Martin & Boulart SAS ("SJNK M&B"), affiliated wholly-owned subsidiaries of SJNKI. SJNKE was subsequently merged into SI Insurance (Europe), SA ("Sompo Europe") on January 1, 2019. For additional information, see Note 4, Business combinations. These transactions were considered as transactions with entities under common control and were recorded based on their carrying value as of January 1, 2018, in accordance with the Company's accounting policy. Furthermore, on October 22, 2019, Endurance Bermuda sold it's ownership of SJNK M&B.

On June 1, 2018 (the "Lexon Acquisition Date"), the Company completed the acquisition of the operating subsidiaries of Lexon Surety Group LLC, comprising Lexon Insurance Company ("Lexon Insurance"), Bond Safeguard Insurance Company ("Bond Safeguard"), and Fortress National Group LLC ("Fortress National") (collectively, "Lexon"), which offer a broad array of commercial and contract surety bonds, court and probate bonds, and U.S. Custom bonds through a network of agents in the United States. The Company's Consolidated Statements of Profit and Comprehensive Income (Loss) for the year ended December 31, 2018 includes the results of operations of Lexon from June 1, 2018. For additional information on the acquisition of Lexon, see Note 4, Business combinations.

1. Organization, cont'd.

Endurance Bermuda writes speciality lines of insurance and reinsurance business on a global basis through its wholly-owned operating subsidiaries:

Operating Subsidiaries	Domicile
Endurance Worldwide Insurance Limited ("Endurance U.K.")	England
Endurance at Lloyd's Limited, managing agent for Lloyd's Syndicate 5151	England
SI Insurance (Europe), SA ("Sompo Europe")	Luxembourg
Sompo Seguros Mexico, S.A. de C.V. ("Sompo Mexico")	Mexico
Endurance Assurance Corporation ("Endurance Assurance")	Delaware
Endurance American Insurance Company ("Endurance American")	Delaware
Endurance American Specialty Insurance Company ("Endurance American Specialty")	Delaware
Endurance Risk Solutions Assurance Co. ("Endurance Risk Solutions")	Delaware
Sompo America Insurance Company ("Sompo America Insurance")	New York
Sompo America Fire & Marine Insurance Company ("Sompo America Fire & Marine")	New York
Bond Safeguard Insurance Company ("Bond Safeguard")	South Dakota
American Agri-Business Insurance Company ("American Agri-Business"), managed by ARMtech Insurance Services, Inc. (together with American Agri-Business, "ARMtech")	Texas
Lexon Insurance Company ("Lexon Insurance")	Texas

2. Significant accounting policies

The following are significant accounting and reporting policies adopted by the Company:

(a) Basis of preparation

The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB").

These are the Company's first annual Consolidated Financial Statements reported under IFRS for the year ended December 31, 2019 with comparatives for the year ended December 31, 2018. IFRS 1, *First-time Adoption of IFRS* ("IFRS 1"), has been applied. An explanation of how the Company transitioned from its previous United States Generally Accepted Accounting Principles ("U.S. GAAP") basis to IFRS as at January 1, 2018 (the "Transition Date"), and impact on the reported financial position, financial performance and cash flows of the Company, including the mandatory exceptions and optional exemptions under IFRS, is provided in Note 23, Transition to IFRS.

These Consolidated Financial Statements were authorized for issuance by the Company's board of directors on April 27, 2020. When IFRS is silent, as it is in respect to the measurement of certain insurance products, the IFRS framework (IFRS 4, *Insurance Contracts* or "IFRS 4") allows reference to another comprehensive body of accounting principles. Accordingly, to the extent that IFRS does not specify the recognition or measurement of insurance contracts, transactions reported in these Consolidated Financial Statements have been prepared in accordance with another comprehensive body of accounting principles for insurance contracts, namely U.S. GAAP.

The Consolidated Financial Statements have been prepared on a historical cost basis, except for investments, derivative instruments, and contingent consideration held in escrow accounts in connection with a business combination which have been measured at fair value. The Consolidated Financial Statements are presented in United States dollars ("U.S. Dollars"), which is the Company's reporting currency, rounded to the nearest thousand, unless otherwise indicated.

(b) Basis of consolidation

The Consolidated Financial Statements are comprised of the Consolidated Balance Sheets of the Company and its subsidiaries as at December 31, 2019, December 31, 2018, and January 1, 2018, and the Consolidated Statements of Profit and Comprehensive Income (Loss), Consolidated Statements of Changes in Shareholder’s Equity and Consolidated

2. Significant accounting policies, cont'd.

(b) Basis of consolidation, cont'd.

Statements of Cash Flows for the years ended December 31, 2019 and 2018, and notes to the Consolidated Financial Statements.

A subsidiary is an entity that is controlled by the Company. Control is achieved when the Company is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Subsidiaries' accounting policies are generally consistent with the Company's accounting policies. Where they differ, adjustments are made on consolidation to bring accounting policies in line. Subsidiaries acquired through business combinations are fully consolidated from the date of acquisition, being the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases. All significant intercompany transactions and balances are eliminated on consolidation.

Business combinations

The Company accounts for business combinations using the acquisition method when control is transferred to the Company. The consideration transferred in an acquisition is generally measured at fair value, as are the identifiable net assets acquired. Any gain on a bargain purchase is recognized in the Consolidated Statements of Profit and Comprehensive Income (Loss) immediately. Transaction costs are expensed as they are incurred, except if they are related to the issuance of debt or equity securities.

Any contingent consideration is measured at fair value at the date of acquisition. If an obligation to pay contingent consideration that meets the definition of a financial instrument is classified as equity, then it is not remeasured and settlement is accounted for within equity. Other contingent consideration is remeasured at fair value at each reporting date and subsequent changes in the fair value of the contingent consideration are recognized in the Consolidated Statements of Profit and Comprehensive Income (Loss).

A business combination involving entities under common control is a business combination in which the combining entities or businesses are ultimately controlled by the same party or parties both before and after the business combination and the control is not transitory. Transactions between entities under common control are scoped out of IFRS 3, *Business Combinations* ("IFRS 3"), and there is no authoritative literature for these transactions under IFRS. As a result, the Company adopted accounting principles similar to the pooling-of-interest method based on the predecessor values. The assets and liabilities of the acquired entity are transferred at book value. No new goodwill is recognized as a result of a business combination involving entities under common control. Differences between any consideration paid and the book value of the net assets acquired are treated as a capital contribution or deemed dividend where applicable. Subsidiaries arising from a business combination under common control are consolidated for the full year during which the combination occurred.

Non-controlling interests

The Company initially measures non-controlling interests at their proportionate share of the acquiree's identifiable net assets at the date of acquisition in the shareholder's equity section of the Company's Consolidated Balance Sheets. Net loss attributable to non-controlling interests is presented separately in the Company's Consolidated Statement of Profit and Comprehensive Income (Loss).

Investment in associates

Associates are those entities in which the Company has significant influence over the operational and financial policies of the investee. Interests in associates are accounted for using the equity method. Under this method, the investment in an associate is initially recognized at cost. Subsequent to initial recognition, the carrying amount of the investment is adjusted to recognize changes in the Company's proportionate share of net assets of the associate since the acquisition date. Adjustments are made to the investee's accounting policies, where necessary, to be consistent with the Company's accounting policies.

(c) Use of estimates

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported and disclosed amounts at the balance sheet dates and the reported and disclosed amounts of revenues and expenses during the reporting periods. Actual results may differ materially from the estimates made.

2. Significant accounting policies, cont'd.

(c) Use of estimates, cont'd.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised.

The most significant estimate made by management is in relation to the reserves for losses and loss expenses. Estimates in relation to the reserves for losses and loss expenses are discussed in Note 2(d) and in Note 12, Reserve for losses and loss expenses.

Estimates are also made in determining the estimated fair value of certain financial instruments. The estimation of the fair value of financial instruments is discussed in Note 2(e) and in Note 7, Fair value measurement.

For goodwill and intangible assets that are recognized on the acquisition of a subsidiary, the fair value at the time of acquisition is largely based on the estimated expected cash flows of the business acquired and the contractual rights of that business. The Company determines whether its intangible assets with indefinite lives, including goodwill, are impaired on an annual basis. The assumptions made by management in performing impairment tests of goodwill and intangible assets are subject to estimation uncertainty. Details of the key assumptions required and used in the estimation impairment assessment are discussed in Note 2(h) and Note 11, Goodwill and intangible assets.

(d) Insurance contracts

Classification

Insurance contracts are those contracts that transfer significant insurance risk at the inception of the contract. Insurance risk is transferred when an insurer agrees to compensate a policyholder if a specified uncertain future event adversely affects the policyholder.

Certain contracts do not transfer sufficient insurance risk and are accounted for using the deposit method of accounting. Management exercises judgment in determining whether contracts contain sufficient risk to be accounted for as insurance contracts. Under the deposit method of accounting, the deposit asset or liability is initially measured based on the consideration paid or received. In subsequent periods, the deposit asset or liability is adjusted by calculating the effective yield on the deposit to reflect actual receipts or payments to date and future expected receipts or payments.

The Company earns fee income for the provision of these contracts. Fee income is based upon the terms of the contracts, with the unearned portion deferred on the Consolidated Balance Sheets as other liabilities. The revenues and expenses recorded for such contracts are included in other underwriting income.

Premiums and acquisition costs

The Company's direct insurance premiums are earned pro rata over the term of the applicable risk period specified in the insurance policy. The Company's insurance policies cover losses occurring or claims made during the term of the policy. Generally, the Company receives a fixed premium which is identified in the policy and is recorded on the inception date of the contract or when premiums are determinable and earned evenly over the policy term. This premium will only adjust if the underlying insured values adjust. Accordingly, the Company monitors the underlying insured values and records additional or returns premiums in the period in which amounts are reasonably determinable.

The Company's assumed reinsurance premiums are earned in proportion to the amount of reinsurance protection provided over the applicable risk period established in the reinsurance contract. Reinsurance contracts written on a losses occurring basis cover losses which occur during the term of the reinsurance contract, typically 12 months. Accordingly, the Company earns the premium on a losses occurring reinsurance contract evenly over the reinsurance contract term. Reinsurance contracts written on a policies attaching basis cover losses from the underlying insurance policies incepting during the terms of the reinsurance contracts. Losses under a policies attaching reinsurance contract may occur after the end date of the reinsurance contract, so long as they are losses from policies that began during the reinsurance contract period. The Company typically earns the premiums for policies attaching reinsurance contracts over a 24-month period in proportion to the amount of reinsurance protection provided to reflect the extension of the risk period past the term of the contract and the varying levels of reinsurance protection provided during the reinsurance contract period.

In addition to the applicable risk period, the Company's estimate of its assumed reinsurance premiums written is based on the type of reinsurance contracts underwritten. For excess of loss reinsurance contracts, the estimated premium income is

2. Significant accounting policies, cont'd.

(d) Insurance contracts, cont'd.

Premiums and acquisition costs, cont'd.

considered to be the best estimate of the reinsurance contract's written premium at inception. The Company earns reinstatement premiums upon the occurrence of a loss under the reinsurance contract. Reinstatement premiums are calculated in accordance with the contract terms based upon the ultimate loss estimate associated with each contract. For proportional reinsurance contracts, the Company estimates premium, commissions and related expenses based on broker and ceding company estimates and utilizes judgment in establishing proportional reinsurance contract estimates. As actual premiums are reported by the ceding companies, management evaluates the appropriateness of the original premium estimates and any adjustments to these estimates are recorded in the period in which they become known.

Acquisition expenses are costs that vary with and are directly related to the successful production of new and renewal business, and consist principally of commissions and brokerage expenses. Acquisition expenses are shown net of commissions, other fees and expense allowances associated with and earned on ceded business. These costs are deferred and amortized over the periods in which the related premiums are earned. Deferred acquisition costs are limited to their estimated realizable value based on the related unearned premiums. Anticipated net investment income is considered in determining the recoverability of deferred acquisition costs.

Reserve for losses and loss expenses

The Company’s reserve for losses and loss expenses includes case reserves and reserves for losses incurred but not reported (referred to as "IBNR reserves"). Case reserves are established for losses that have been reported, but not yet paid. IBNR reserves represent a provision for claims that have been incurred but not yet reported to the Company, as well as future loss development on losses already reported, in excess of the case reserves. Case reserves and IBNR reserves are established by management based on reports from reinsurance intermediaries, ceding companies and insureds, and consultations with independent legal counsel. In addition, reserves for IBNR losses and loss expenses are established by management based on reported losses and loss expenses, and actuarially determined estimates of ultimate losses and loss expenses, net of expected salvage and subrogation and recoveries, if any.

The Company uses a variety of actuarial methods to estimate the ultimate losses and loss expenses incurred by the Company. One actuarial method used by the Company to estimate reserves for losses and loss expenses is the expected loss ratio approach, which is based on expected results independent of current loss reporting activity. This approach is typically used for immature loss periods (i.e. the current accident year). Another actuarial method used by the Company to estimate reserves for losses and loss expenses is known as the Bornhuetter-Ferguson method. The Bornhuetter-Ferguson method uses an initial loss estimate (expected loss technique) for each accident year by business line and type of contract. Under this method, IBNR is set equal to the initial loss estimate multiplied by the expected percent of loss yet to be reported at each valuation date. In a given quarter, if reported losses are less than expected, then the difference would result in a decrease in estimated ultimate losses. If losses are greater than expected, then the difference would result in an increase in estimated ultimate losses. A third actuarial method used by the Company to estimate reserves for losses and loss expenses is known as the loss development method. The loss development method extrapolates the current value of reported losses to ultimate expected losses by using selected reporting patterns of losses over time. The selected reporting patterns are based on historical information (organized into loss development triangles) and are adjusted to reflect the changing characteristics of the book of business written by the Company. Management uses these multiple actuarial methods, supplemented with professional judgment, to establish the best estimate of reserves for losses and loss expenses.

The Company's losses and loss expense reserves are reviewed regularly, and adjustments, if any, are reflected in earnings in the period in which they become known. The establishment of new losses and loss expense reserves or the adjustment of previously recorded losses and loss expense reserves could result in significant positive or negative changes to the Company's financial condition for any particular period. While management believes the Company's estimate of losses and loss expense reserves is reasonable, the ultimate loss experience may not be reliably predicted, and it is possible that losses and loss expenses may be materially different than the total reserve for losses and loss expenses recorded by the Company.

2. Significant accounting policies, cont'd.

(d) Insurance contracts, cont'd.

Liability adequacy tests

At each balance sheet date, the Company performs a liability adequacy test using current best estimates of future cash outflows generated by its insurance contracts. If, as a result of these tests, the carrying amount of the Company's insurance liabilities is found to be inadequate, the deficiency is charged to income for the period, initially by writing off deferred acquisition costs and subsequently by establishing a provision.

Ceded reinsurance

Reinsurance premiums ceded comprise the cost of outwards reinsurance contracts entered into. Premiums ceded are recognized over the period of exposure to risk, with the unearned portion being deferred on the Consolidated Balance Sheets as prepaid reinsurance premiums.

Reinsurance recoverable on paid and unpaid losses represent estimates of losses and loss expenses that will be recovered from reinsurers. Amounts recoverable from reinsurers are estimated in a manner consistent with the provisions of the reinsurance agreements and consistent with the establishment of the Company's reserve for losses and loss expenses.

Ceding commissions earned on ceded business are classified as an offset to acquisition and general and administrative expenses.

(e) Financial instruments

Cash and cash equivalents

Cash equivalents include highly liquid, short-term deposits and securities with maturities of 90 days or less as at the time of acquisition. Cash equivalents are valued at amortized cost, which approximates fair value due to the short-term, liquid nature of these securities. Fixed maturity investments, bank deposits and investments in money market funds with maturities of greater than 90 days and less than one year are classified as short-term investments.

Investments

The Company designates its fixed maturity investments, short-term investments and equity securities as at fair value through profit or loss ("FVTPL") because they are managed on a fair value basis and their performance is monitored on this basis. Securities designated as FVTPL are carried at estimated fair value, with related net unrealized gains or losses recognized on the Consolidated Statements of Profit and Comprehensive Income (Loss). Investment transactions are recorded on a trade date basis.

The Company determines the fair value of its FVTPL investments in accordance with current accounting guidance, which defines fair value and establishes a fair value hierarchy based on inputs to the various valuation techniques used for each fair value measurement. The use of valuation techniques for any given investment requires a significant amount of judgment and consideration of factors specific to the underlying investment. Fair value measurements determined by the Company seek to maximize observable inputs and minimize the use of unobservable inputs.

Fair value measurements are established in accordance with the framework provided by IFRS 13, *Financial Instruments: Disclosures* ("IFRS 13"), which establishes a fair value hierarchy with the highest priority given to quoted prices in active markets and the lowest priority given to unobservable inputs.

The following are levels within the fair value hierarchy:

Level 1: Valuations based on quoted prices in active markets for identical assets or liabilities that the Company has the ability to access. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these instruments does not entail a significant degree of judgment.

Level 2: Valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, directly or indirectly. Level 2 inputs include quoted prices for similar assets and liabilities in active markets and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals, broker quotes and certain pricing indices.

Level 3: Valuations based on inputs that are unobservable and significant to the overall fair value measurement. These measurements include circumstances where there is little, if any, market activity for the asset or liability.

2. Significant accounting policies, cont'd.

(e) Financial instruments, con'd.

Investments cont'd.

In these cases, significant management assumptions can be used to establish management's best estimate of the assumptions used by other market participants in determining the fair value of the asset or liability.

The Company determines the estimated fair value of each individual security utilizing the highest level inputs available. Any transfers between the levels of the fair value hierarchy are deemed to have occurred at the end of the reporting period.

Other investments within the Company's investment portfolio are comprised of hedge funds, private investment funds and other investment funds that generally invest in senior secured bank debt, high-yield credit securities, distressed debt, macro strategies, multi-strategy, equity long/short strategies, distressed real estate, and energy sector private equity (collectively, "alternative funds"). These other investments are designated at FVTPL from the date of acquisition.

Derivative financial instruments

Derivatives are classified as trading and treated as FVTPL. On the date a contract is entered into, the derivatives are recognized at estimated fair value and are subsequently carried at estimated fair value. Derivative instruments with a positive estimated fair value are recorded as derivative assets and those with a negative estimated fair value are recorded as derivative liabilities on the Consolidated Balance Sheets.

The Company may use various derivative instruments such as foreign exchange forwards, future and option contracts; industry loss warranty swaps; interest rate futures, swaps, swaptions, and options; credit default swaps; LIBOR swaps; commodity futures and options; weather swaps and options; loss development covers; and to-be-announced mortgage-backed securities. These derivative instruments are used to manage exposure to interest rate and currency risk, enhance the efficiency of the Company's investment portfolio, and economically hedge certain risks. The derivative instruments also form part of the Company's weather risk management business. The derivative instruments derive their value from the underlying instrument and are subject to the same risks as that underlying instrument, including liquidity, credit and market risks. Estimated fair values are based on exchange or broker-dealer quotations, where available, or discounted cash flow models, which incorporate the pricing of the underlying instrument, yield curves and other factors. Changes in the estimated fair value of instruments are recognized on the Consolidated Statements of Profit and Comprehensive Income (Loss) within net realized and unrealized gains (losses) on investments.

Derivative assets and liabilities are derecognized when the Company has transferred substantially all of the risks and rewards of ownership or the liability is discharged, canceled or expired.

Receivables

The Company's receivables have fixed or determinable payments and are carried at cost less any provision for impairment in value. Premiums receivable from brokers, insureds and cedants are recognized on the accruals basis and recorded net of commissions, brokerage, premium taxes and other levies on premiums, unless the contract specifies otherwise. These balances are reviewed for impairment on a quarterly basis, with any impairment loss recognized as an expense in the period to the extent that repayment is unlikely or no longer expected in full. In addition, the Company considers known and emerging credit events to determine if impairment is necessary.

2. Significant accounting policies, cont'd.

(f) Property and equipment

Property and equipment are stated at cost less accumulated depreciation calculated on a straight-line basis over the estimated useful lives of the assets. The useful lives for the Company's significant asset classes are as follows:

Property and equipment asset classes	Depreciation period
Computer equipment	3-5 years
Furniture and fixtures	3-7 years
Buildings	49 years
Vehicles	3-5 years
Leasehold improvements	Over the term of the underlying lease
Right-of-use assets	Over the term of the underlying lease

(g) Leases

The Company adopted IFRS 16, *Leases* ("IFRS 16"), with a date of initial application of January 1, 2018.

At inception of a contract, the Company assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract involves the use of an identified asset and conveys the right to control the use of the asset for a period of time in exchange for consideration.

As a lessee, the Company recognizes a right-of-use asset and a lease liability at the commencement date of the lease. Subsequently, the right-of-use asset is depreciated using the straight-line method from the commencement date to the end of the lease term. In addition, the carrying amount of the right-of-use asset is reduced by any impairment losses and adjusted for certain remeasurement of the lease liability. The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the incremental borrowing rate. The lease liability is subsequently measured at amortized cost and is remeasured to reflect any lease modifications or reassessments.

When the Company is an intermediate lessor, or sub-lessor, it accounts for its interests in the head lease and the sub-lease separately. It assesses the lease classification of a sub-lease with reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset.

The Company presents its right-of-use assets within property and equipment and lease liabilities within loans and borrowings on the Consolidated Balance Sheets. Sub-lease payments received under operating leases as income are recognized on a straight-line basis over the lease term as part of general and administrative expenses on the Consolidated Statements of Profit and Comprehensive Income (Loss).

The Company elected not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets. The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term. If a head lease is a short-term lease to which the Company applies this exemption, then a corresponding sub-lease is also classified as an operating lease.

(h) Goodwill and intangible assets

Intangible assets acquired in a business combination are recognized at fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. The useful lives of intangible assets are assessed to be either finite or indefinite depending on the nature of the asset. Intangible assets with finite lives are amortized over their useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. Intangible assets with indefinite useful lives are tested for impairment at least annually at the cash generating unit ("CGU") level by comparing the net present value of the future earnings stream of the CGU to the carrying value of the intangible asset. Such intangible assets are not amortized. The useful life of an intangible asset with an indefinite life is reviewed annually to determine whether the indefinite life assessment continues to be supportable.

2. Significant accounting policies, cont'd.

(h) Goodwill and intangible assets, cont'd.

Goodwill is deemed to have an indefinite life and, after initial recognition, is measured at cost less any accumulated impairment losses. Goodwill is tested for impairment annually, or when events or changes in circumstances indicate that it might be impaired.

The estimated useful lives of each class of intangible asset and the amortization methods for the current and comparative periods are as follows:

Intangible asset classes	Amortization method
Agent, broker, and customer relationships	6-15 years using the accelerated method
Renewal rights	6-15 years using the accelerated method
Value of business acquired ("VOBA")	2-3 years using the accelerated method
Lloyd's syndicate capacity	Indefinite life
Insurance licenses	Indefinite life
Software	3 years using the straight-line method
Other intangible assets	5-10 years using either the accelerated or straight-line method

Amortization expense is recognized on the Consolidated Statements of Profit and Comprehensive Income (Loss) within amortization of intangible assets.

(i) Pension plan

The Company has defined contribution plans where the Company pays fixed contributions into third-party pension providers from which post-employment and other benefits are paid to employees of the Company. The Company has no legal or constructive obligation to pay further contributions if the plan does not hold sufficient assets to pay employees the benefits relating to employee service in the current and prior periods. Payments to the defined contribution plans are recognized as an expense when employees have rendered services entitling them to the contributions. This is generally in the year of contribution.

(j) Long-term incentive compensation plan

The Company has granted restricted cash awards to certain employees. The accounting for the compensation program is in accordance with IAS 19, *Employee Benefits* ("IAS 19").

(k) Foreign exchange

The functional currency, which is the currency of the primary economic environment in which operations are conducted, of the Company's Bermuda (including the Swiss and Singapore branches), U.S., and U.K. operations is in U.S. Dollars. The functional currency of Sompo Europe is Euros.

As of January 1, 2019, the Company changed the functional currency of Endurance U.K. from British Pound Sterling to U.S. Dollars following an assessment of the appropriate functional currency after the base currency of significant intercompany reinsurance agreements changed from British Pound Sterling to U.S. Dollars, effective January 1, 2019.

2. Significant accounting policies, cont'd.

(k) Foreign exchange, cont'd.

In translating the financial results of those entities whose functional currency is other than the U.S. Dollars, reporting currency, assets and liabilities are converted into U.S. Dollars using the rates of exchange in effect at the balance sheet dates, and revenues and expenses are converted using the average foreign exchange rates for the period. The effect of translation adjustments are reported on the Consolidated Balance Sheets and Consolidated Statements of Changes in Shareholder's Equity as a foreign currency translation adjustment, a separate component of accumulated other comprehensive loss.

Foreign currency transactions are recorded in the functional currency for each entity using the exchange rates prevailing at the dates of the transactions, or at the average rate for the period when this is a reasonable approximation. Monetary assets and liabilities denominated in foreign currencies are translated at period end exchange rates. The resulting exchange differences on translation are recorded in the Consolidated Statements of Profit and Comprehensive Income (Loss) within net foreign exchange gains. Non-monetary assets and liabilities carried at historical cost denominated in a foreign currency are translated at historic rates.

(l) Income taxes

Income tax represents taxes currently payable and any deferred taxes. Tax payable is calculated based on taxable profit for the period using tax rates and tax laws enacted or substantively enacted at the year end reporting date and any adjustments to tax payable in respect of prior periods. Taxable profit for the period can differ from that reported on the Consolidated Statements of Profit and Comprehensive Income (Loss) due to non-taxable income and certain items which are not tax deductible or which are deferred to subsequent periods.

Deferred tax is recognized on all temporary differences between the assets and liabilities on the Consolidated Balance Sheets and their tax base. Deferred tax assets or liabilities are accounted for using the balance sheet liability method. Deferred tax assets are recognized for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be used. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

The Company recognizes a tax benefit relating to uncertain tax positions only where the position is probable to be sustained assuming examination by tax authorities in accordance with IFRIC 23, *Uncertainty over Income Tax Treatments* ("IFRIC 23"). Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, using tax rates enacted or substantively enacted at the reporting date.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes relate to the same fiscal authority.

(m) Accounting standards and amendments issued but not yet adopted

Accounting standards issued and amendments to published standards that are not yet effective as of the date of issuance of the Company's Consolidated Financial Statements are listed below. The Company intends to adopt these standards when they become effective.

IFRS 17, Insurance contracts

In May 2017, the IASB published IFRS 17, *Insurance Contracts* ("IFRS 17"), a comprehensive new accounting standard for insurance contracts covering recognition and measurement, presentation and disclosure, which replaces IFRS 4. In contrast to the requirements in IFRS 4, which are largely based on grandfathering previous local accounting policies for measurement purposes, IFRS 17 provides a comprehensive model for insurance contracts, supplemented by the variable fee approach for contracts with direct participation features that are substantially investment-related service contracts, and the premium allocation approach mainly for short-duration contracts which typically applies to certain non-life insurance contracts.

2. Significant accounting policies, cont'd.

(m) Accounting standards and amendments issued but not yet adopted, cont'd.

IFRS 17, Insurance contracts, cont'd

IFRS 17 is effective for annual periods beginning on or after January 1, 2023, with comparative figures required. Earlier application is permitted if IFRS 15, *Revenue from Contracts with Customers* ("IFRS 15"), and IFRS 9, *Financial Instruments* ("IFRS 9"), are also applied. Retrospective application is required. However, if full retrospective application for a group of insurance contracts is impracticable, then the entity is required to choose either a modified retrospective approach or a fair value approach.

The Company will adopt IFRS 17 on its effective date, together with IFRS 9. The Company expects adoption of IFRS 17 will result in significant changes to the Company's measurement and disclosure of insurance contracts. The Company is in the process of analyzing the impact of this standard on its Consolidated Financial Statements.

IFRS 9, Financial instruments

In July 2014, the IASB published IFRS 9, which replaces IAS 39, *Financial Instruments: Recognition and Measurement* ("IAS 39"). IFRS 9 includes revised guidance on the classification and measurement of financial assets and liabilities, including a new expected credit loss model for calculating impairment of financial assets, and new general hedge accounting requirements. It also carries forward the guidance on recognition and derecognition of financial instruments from IAS 39.

IFRS 9 is effective for annual reporting periods beginning on or after January 1, 2018, with early adoption permitted. In 2016, the IASB issued an amendment to IFRS 4, which permits insurers to continue applying IAS 39, rather than IFRS 9, until annual periods beginning on or after January 1, 2023, provided certain preconditions are met. These preconditions, relating to insurance being the dominant activity of a reporting entity, are fulfilled by the Company and thus the Company has applied this temporary exemption from IFRS 9. Interdependencies with IFRS 17 must be considered for a final conclusion on the combined impact of these accounting standards.

The adoption of IFRS 9 will have an affect on the classification and measurement and impairment model applied to the Company's financial instruments. IFRS 9 also introduces expanded disclosure requirements and presentation changes which are expected to change the nature and extent of the Company's disclosures about its financial instruments. The Company is in the process of analyzing the impact of this standard on its Consolidated Financial Statements.

3. Risk disclosures

The Company, which is part of Sompo International's group risk management and governance structure, relies on Sompo International's established processes and controls to monitor and manage risk exposures. Enterprise risk management ("ERM") activities, as documented in Sompo International's ERM framework and ERM policy, are critical to the Company's sustained profitability and financial integrity. The objectives of the ERM framework and the ERM policy that drive the corporate risk management strategy are as follows:

- Protect the capital base and earnings by monitoring risks against the Company's stated risk appetite and limits;
- Promote a sound risk management culture through disciplined and informed risk taking;
- Satisfy legal and regulatory risk; and
- Safeguard the Company's reputation.

The ERM framework and ERM policy are part of a system of governance which includes responsibilities for identifying, managing, monitoring and accepting risk. The Company's risk appetite, as authorized by the Board of Directors, represents the risk that the Company is willing to accept. A system of quantitative and qualitative risk analysis is employed to limit key risk exposures both on an aggregate and individual basis to provide transparency and understanding of the Company's risk profile. Documented risk policies articulate roles and responsibilities for risk management throughout the Company. Key risks identified in the Company's risk register and associated controls are assigned ownership to various governance committees.

Sompo International's Board of Directors and the Company's Board of Directors oversee the Company's risks through semi-annual meetings of the Sompo International Risk Committee ("Board Risk Committee"), whose membership includes members of the Company's senior management. The Board Risk Committee members review the Company's ERM framework and risk register as well as related policies, processes and procedures.

The Board Risk Committee monitors the Company's:

- Capital position relative to internal requirements, as measured by the Company's economic capital model, and the requirements of regulators and rating agencies;
- Underwriting risk exposure relative to limits for loss arising from catastrophic natural peril and man-made events;
- Loss reserving risk through exposures to medium and long tailed lines of business;
- Investment risk, through a system of limits incorporating exposure to asset class, credit rating, duration and currency;
- Liquidity, by stressing cash outflow scenarios relative to available cash and cash equivalents and other forms of liquidity; and
- Counterparty exposure for ceded reinsurance and for non-reinsurance counterparties.

The Board Risk Committee reviews and monitors the Company's risk tolerances as well as the methods utilized by the Company to assess, quantify, monitor and manage these risks. The Board Risk Committee also evaluates the Company's business plans, projections and performance relative to the level of associated risk. The Board Risk Committee reviews and approves on a periodic basis:

- The ERM policy, including the definition of applicable categories of risk and risk management principles in relation to each category of risk and the appropriate risk tolerances;
- The ERM framework governing, which specifies the procedures and process in which the Company manages its risk; and
- The level of risk assumed by the Company in its underwriting, investment and operational activities, including the methods by which such risk is measured.

The following sections address the Company's method and procedures for managing its primary risk exposure areas:

- Underwriting risks including premium, catastrophe, and loss reserving risks;
- Market risks including interest rate, foreign exchange, equity price, and credit spread risks;
- Credit risks including accumulation risk;
- Liquidity risk; and
- Operational risks including group, strategic, reputational and legal risks.

3. Risk disclosures, cont'd

(a) Underwriting risks

Underwriting risks broadly encompass the risks of estimation error throughout pricing activities, which may be due to either the acceptance of risks that do not comply with the Company's underwriting guidelines and corporate strategy, or the acceptance of risks that result in losses and expenses greater than anticipated at the time of underwriting.

Internal underwriting controls are monitored by Sompo International's Risk Management Committee. The Risk Management Committee reviews, evaluates and, on certain matters, approves those aspects of the Company's operations and activities which have potential to have an impact on the Company's risk position. The Risk Management Committee reports on these activities to the Board Risk Committee.

Underwriting authority is delegated to the managers of lines of business and to underwriters in accordance with corporate risk tolerances, prudent practice and underwriting capabilities. Detailed letters of authority are issued to each of the Company's underwriters, which include, as appropriate, referral requirements specific to each line of business, terms, conditions, risk exposures, transactional situations, limits and premium capacity.

The Company's pricing guidelines are communicated to all business units and each individual underwriter and are stated in terms of maximum combined ratio targets and minimum returns on risk-based capital, by line of business, with exceptions permitted only upon approval of senior management as noted in the guidelines. The pricing guidelines are regularly reviewed by the Company's CEO; the CEO of Global Reinsurance; and the CEO, CRO and Group Actuary in order to ensure the guidelines reflect changes in market conditions, interest rates, capital requirements and market-expected returns.

Premium risk

Premium risk is the risk that the premium to be earned over the period of exposure to the risk from in-force, new or renewal insurance contracts is insufficient to cover the claim costs, claim adjustment expenses and the acquisition expenses to be incurred by those contracts over the same period.

In certain cases, the risks written and assumed by the Company are partially reinsured with third party reinsurers. The amount of outward reinsurance protection varies by segment and line of business based on a number of factors, including market conditions. The benefits of outward reinsurance include reducing exposure on individual risks, improving the balance of the Company's portfolio, protecting against catastrophic risks, maintaining acceptable capital ratios and enabling the writing of additional business. Outward reinsurance does not legally discharge the Company from its liabilities to the original policyholder in respect of the risk being reinsured. The Company will continue to utilize this important risk management tool when the pricing and risk mitigation impact justifies doing so.

The Company considers premium risk at an individual contract level, geographic level and segment level. This ensures careful risk selection, limits on concentration and appropriate portfolio diversification are accomplished. The following table presents the gross premiums written by the geographic location in which the risk originated for the years ended December 31, 2019 and 2018:

	2019		2018	
Asia	$ 81,707	1.2%	$ 135,507	2.3%
Australasia	87,915	1.3%	73,288	1.2%
Canada	23,103	0.3%	27,088	0.5%
Europe	554,380	8.2%	534,290	9.0%
Japan	59,620	0.9%	39,640	0.7%
United States	4,347,445	64.0%	3,881,191	65.1%
Worldwide	1,540,210	22.7%	1,191,951	20.0%
Other	93,538	1.4%	77,791	1.2%
Total gross premiums written	$ 6,787,918	100.0%	$ 5,960,746	100.0%

The Company is considered to be one cash-generating unit.

3. Risk disclosures, cont'd

(a) Underwriting risks, cont'd.

Catastrophe risk

Catastrophe risk is the risk that the premium to be earned over the next twelve-month period from catastrophe exposed insurance contracts (in-force, new or renewal) is insufficient to cover potential claim costs, claim adjustment expenses and the acquisition expenses associated with those contracts that may originate from extreme or exceptional catastrophic events during the same period. Catastrophe risks at the Company pertains to both natural catastrophe and man-made events, such as marine/aviation incidents, terrorism, credit default, or political upheaval. The major catastrophe exposures for the Company are U.S. hurricane, California earthquake, Pacific Northwest earthquake, U.S. tornado/hail, European windstorm, U.K. flood, Japanese wind, Japanese earthquake, and Australian earthquake. Catastrophe risk is classified as a separate and distinct class of underwriting risk mainly due to its low-frequency and high-severity characteristics and its potential to affect numerous contracts simultaneously and inflict significant erosion of the Company’s capital.

Catastrophe risk is the dominant contributor and driver of the Company’s total risk. The Company's catastrophe exposures are managed by limiting the amount of exposure in any one geographic area, diluting catastrophe exposures by optimizing business lines, and obtaining outward reinsurance cover. To achieve the catastrophe risk management objectives, the Company utilizes a variety of proprietary and commercially available tools to quantify and monitor the various risks.

The Company's catastrophe modeling tools, which include both proprietary and licensed software, use exposure data provided by insured and ceding company clients to simulate catastrophic losses. The Company uses modeling not only for the underwriting of individual transactions but also to optimize total return and manage the aggregate risk of the underwriting portfolio. Specific requirements are provided to clients as to the quality and levels of detailed exposure data to be provided and the Company has expressed a preference for data at the zip code or postal code level or finer. Data provided at more summary levels, such as counties or Catastrophe Risk Evaluation and Standardizing Target Accumulations ("CRESTA") zones, is surcharged for increased uncertainty, where appropriate.

Data output from both licensed and proprietary software models is used to estimate the amount of premium that is required to pay the long-term expected losses under the proposed contracts. The data output is also used to estimate correlation between both new business and our existing portfolio. The degree of correlation is used to estimate the incremental capital required to support our participation on each proposed risk, allowing us to calculate a return on consumed capital. Finally, the data output is used to monitor and control the Company's cumulative exposure to individual perils across all of its businesses.

Loss reserving risk

Loss reserving risk is the risk that the best estimate (or "point estimate") of unpaid loss and loss adjustment expense reserves is inadequate to cover all future payments for the full settlement of claims from all prior accident years (on or prior to the valuation date). Loss reserving risk is distinct from premium risk and is related to exposures that have already been earned and claims that have already been incurred but have not yet been reported or fully settled.

Establishing reserves for losses and loss expenses, in particular reserves for the Company's long-tail lines of business, constitutes a significant risk for the Company. Loss reserves do not represent an exact calculation of liability, but instead are estimates of what the Company expects the ultimate settlement and administration of claims will cost. To the extent the Company determines that losses and loss expenses are estimated to exceed the loss reserves recorded in the financial statements, the Company will be required to increase its reserve for losses and loss expenses, which in turn could cause a material reduction in the Company's profitability and capital.

The Company manages the risk inherent in estimating the Company's reserves for losses and loss expenses in a variety of ways. First, the Company underwrites a balanced and diversified portfolio of business, which reduces the Company's susceptibility to reserving errors that may be associated with any one line or type of business. Second, where loss development uncertainty exists, the Company may use purchased reinsurance to reduce the Company's exposure to such loss development uncertainty. Finally, for assumed reinsurance business, the Company conducts active, regular audits of its ceding company clients with the intent of quickly and thoroughly identifying losses assumed by the Company.

3. Risk disclosures, cont'd.

(a) Underwriting risks, cont'd.

Loss reserving risk, cont'd.

The Company's reserving process also serves to mitigate the risk associated with the Company's loss and loss expense reserve estimates. The Company seeks to base its loss reserve estimates upon actuarial and statistical projections derived from the most recently available data, as well as current information on future trends in claims severity and frequency, judicial theories of liability and other factors. The Company continually refines both its loss reserve estimates and the means by which its loss reserve estimates are derived, continually integrating developing loss experience, reported claims and claims settlements.

A full analysis of loss and loss adjustment expense reserves is performed on a quarterly basis. The reserve analysis is reviewed by and discussed with underwriters, actuaries, claims, finance and senior management prior to submission to Sompo International's Group Reserving Committee.

The Group Reserving Committee reviews the sufficiency of the estimated loss reserves and appraises the adequacy and effectiveness of the loss reserving practices of the Company.

Note 12, Reserve for losses and loss expenses, presents the gross and net development of the estimates of ultimate cumulative claims for the Company after the end of each accident year, illustrating how amounts estimated have changed from the initial estimates made, and a summary of changes in outstanding losses and loss expenses for the years ended December 31, 2019 and 2018, including outstanding losses recoverable from reinsurers.

The level of uncertainty with respect to the loss reserves varies significantly from class to class. The Company believes that the loss reserves established are adequate; however, a 1% improvement/deterioration in the total estimated gross losses would have an impact on profit before tax of $83.7 million gain/loss (2018 – $79.8 million gain/loss). There was no significant change to the Company's reserving methodology during the years ended December 31, 2019, December 31, 2018, and January 1, 2018.

(b) Market risks

Market risks encompasses the risk of loss in the Company's investment portfolio potentially caused by the adverse impact on its invested assets from fluctuations in market risk factors that affect the value of such assets. The Company believes that it is principally exposed to the following types of market risk: interest rate risk, foreign exchange risk, equity price risk, and credit spread risk.

The Company manages its investment risks through both a system of limits and a strategy to optimize expected risk and reward. To ensure diversification of the Company's investment portfolio and to avoid excessive aggregation of risks, limits on asset types, economic sector exposure, industry exposure and individual security exposure are placed on the Company's investment portfolio and monitored on an ongoing basis. The Company manages its interest rate risk through an asset liability management strategy that involves the selection of investments with appropriate characteristics, such as duration, yield, currency and liquidity that are tailored to the anticipated cash outflow characteristics of our liabilities and the anticipated interest rate environment. The Company manages foreign currency risk by seeking to match the Company's liabilities under insurance and reinsurance policies that are payable in foreign currencies with assets, such as cash and investments or currency options and forwards, that are denominated in such currencies. The Company manages equity risk by maintaining a diversified portfolio and limiting the overall size of its investment in equities. The Company acknowledges the risk of declining market values for the Company's fixed interest securities due to the widening of credit spreads, and the risk is managed through limits per portfolios as set out in the Company's investment policy.

3. Risk disclosures, cont'd.

(b) Market risks, cont'd.

The Company uses a number of capital-at-risk models, which include volatility-scenario based measures, value-at-risk ("VaR") and credit impairment calculations to evaluate its investment portfolio risk. Additionally, the Company's capital-at-risk models also include the measures of risk capital applied by Standard & Poor's ("S&P") and A.M. Best Company ("A.M. Best") in their risk-based capital assessments of the Company. Scenario-based analytics are used in order to stress test the portfolio for expected changes in specific market scenarios. VaR is a probabilistic method of measuring the potential loss in portfolio value over a given time period and for a given distribution of historical returns. Portfolio risk, as measured by VaR, is affected by four primary risk factors: asset concentration, asset volatility, asset correlation and systematic risk. The Company adjusts its market risk scenarios for a variety of extremes as well as expected outcomes. Management continuously evaluates the applicability and relevance of the models used and makes adjustments as necessary to reflect actual market conditions and performance over time.

Interest rate risk

The Company's fixed maturity portfolio is exposed to interest rate risk. Fluctuations in interest rates have a direct impact on the market valuation of these securities. As interest rates rise, the fair value of our fixed income investments generally decreases, and as interest rates fall, the fair value of the fixed income investments generally increases. The Company manages its interest rate risk through an asset liability matching strategy that involves the selection of investments with appropriate characteristics, such as duration, yield, currency and liquidity that are tailored to the anticipated cash outflow characteristics of our liabilities. The duration of the portfolio of assets comprising cash and cash equivalents and fixed income investments decreased during the 2019 calendar year from approximately 2.67 years at December 31, 2018 and 3.06 years at January 1, 2018 to 2.56 years at December 31, 2019. A significant portion of the investment portfolio matures each quarter, allowing for reinvestment at current market rates.

The following tables show the impact of interest rate shifts on the Company's cash and cash equivalents and fixed income investments as at December 31, 2019, December 31, 2018, and January 1, 2018:

	Interest Rate Shift in Basis Points				
December 31, 2019	**(100)**	**(50)**	**Amount**	**50**	**100**
Total fair value	$ 10,619,843	$ 10,498,851	$ 10,370,023	$ 10,233,360	$ 10,088,860
Market value change from base	2.41%	1.24%	—%	(1.32)%	(2.71)%
Change in unrealized value	$ 249,820	$ 128,828	$ —	$ (136,663)	$ (281,163)

	Interest Rate Shift in Basis Points				
December 31, 2018	**(100)**	**(50)**	**Amount**	**50**	**100**
Total fair value	$ 9,667,489	$ 9,549,307	$ 9,426,105	$ 9,297,882	$ 9,164,639
Market value change from base	2.56%	1.31%	—%	(1.36)%	(2.77)%
Change in unrealized value	$ 241,384	$ 123,202	$ —	$ (128,223)	$ (261,466)

	Interest Rate Shift in Basis Points				
January 1, 2018	**(100)**	**(50)**	**Amount**	**50**	**100**
Total fair value	$ 8,985,584	$ 8,858,549	$ 8,727,253	$ 8,591,696	$ 8,451,878
Market value change from base	2.96%	1.50%	—%	(1.55)%	(3.16)%
Change in unrealized value	$ 258,331	$ 131,296	$ —	$ (135,557)	$ (275,375)

3. Risk disclosures, cont'd.

(b) Market risks, cont'd.

Foreign currency risk

The Company operates internationally and enters into reinsurance and insurance contracts for which it is obligated to pay losses in currencies other than U.S. Dollars. The majority of the Company's operating foreign currency assets and liabilities are denominated in Euro, British Pound Sterling, Canadian Dollars, Japanese Yen, New Zealand Dollars, and Australian Dollars. The Company may, from time to time, experience losses from fluctuations in the values of these and other non-U.S. currencies, which could have a material adverse effect on its results of operations. The Company will attempt to manage its foreign currency risk by seeking to match its liabilities under insurance and reinsurance contracts that are payable in foreign currencies with cash and investments that are denominated in such currencies. The Company purchases assets which are matched in currency to its case reserves at or shortly after the time such reserves are established. The investment portfolio will at times have non-U.S. Dollar exposure which may or may not be hedged back to U.S. Dollars. As part of its asset-liability matching strategy, the Company may also consider the use of hedges when it becomes aware of probable significant losses that will be paid in non-U.S. Dollar currencies. For liabilities incurred in currencies other than those listed above, U.S. Dollars are converted to the currency of the loss at the time of claims payment. As a result, the Company may, from time to time, experience losses resulting from fluctuations in the value of foreign currencies.

3. Risk disclosures, cont'd.

(b) Market risks, cont'd.

Foreign currency risk, cont'd.

The Company's assets and liabilities, categorized at their translated U.S. Dollars carrying amounts as at December 31, 2019, December 31, 2018, and January 1, 2018, are as follows:

December 31, 2019	USD	EUR	GBP	Others	Total
Assets					
Cash and cash equivalents	$ 1,253,988	$ 91,474	$ 114,731	$ 150,731	$ 1,610,924
Accrued investment income	56,044	1,148	885	222	58,299
Investments	9,035,968	247,039	138,331	160,897	9,582,235
Investment in an associate	14,149	—	—	—	14,149
Premium receivable, net	1,683,756	279,541	241,660	293,963	2,498,920
Other insurance and reinsurance balances receivable	33,546	38,492	7,204	19,619	98,861
Receivables on investments sold	31,374	11	3,356	82	34,823
Prepaid reinsurance premiums	1,113,538	61,280	35,335	42,333	1,252,486
Derivative assets	88,573	768	320	25,292	114,953
Reinsurance recoverables on unpaid losses	2,708,294	156,343	238,274	229,327	3,332,238
Reinsurance recoverables on paid losses	807,678	158,579	23,400	54,768	1,044,425
Deferred acquisition costs gross	497,333	36,523	45,183	59,239	638,278
Current tax asset	1,747	(438)	—	—	1,309
Deferred tax asset	132,001	168	—	—	132,169
Property and equipment	197,993	315	18,048	5,470	221,826
Goodwill and intangible assets	412,148	10,622	—	—	422,770
Due from affiliates	6,683	—	—	—	6,683
Other assets	92,830	5,479	44,535	15,302	158,146
Total assets	$ 18,167,643	$ 1,087,344	$ 911,262	$ 1,057,245	$ 21,223,494
Liabilities					
Reserve for losses and loss expenses	$ 7,092,039	$ 455,754	$ 447,846	$ 375,060	$ 8,370,699
Reserve for unearned premiums	2,775,969	157,092	200,243	229,812	3,363,116
Insurance and reinsurance balances payable	1,493,142	292,275	42,146	133,479	1,961,042
Due to affiliates	1,212,803	—	—	—	1,212,803
Payables on purchases of investments	88,007	—	1,935	—	89,942
Derivative liabilities	14,728	12,192	6,851	33,039	66,810
Deferred acquisition costs ceded	165,951	14,012	(4,624)	14,326	189,665
Current tax liability	78,639	7,224	—	—	85,863
Deferred tax liability	10,315	—	—	—	10,315
Other liabilities	287,733	4,552	30,607	24,033	346,925
Loans and borrowings	160,296	—	20,192	5,386	185,874
Total liabilities	$ 13,379,622	$ 943,101	$ 745,196	$ 815,135	$ 15,883,054
Net exposure	$ 4,788,021	$ 144,243	$ 166,066	$ 242,110	$ 5,340,440

3. Risk disclosures, cont'd.

(b) Market risks, cont'd.

Foreign currency risk, cont'd.

December 31, 2018	USD	EUR	GBP	Others	Total
Assets					
Cash and cash equivalents	$ 1,179,793	$ 133,273	$ 100,153	$ 177,802	$ 1,591,021
Accrued investment income	45,281	1,566	3,292	279	50,418
Investments	8,097,972	232,154	379,206	69,915	8,779,247
Investments in associate	10,856	—	—	—	10,856
Premiums receivable, net	1,546,023	191,013	112,893	222,655	2,072,584
Other insurance and reinsurance balances receivable	34,493	38,326	9,459	21,515	103,793
Receivables on investments sold	70,001	—	—	—	70,001
Prepaid reinsurance premiums	965,207	47,577	57,131	37,063	1,106,978
Derivative assets	184,011	7,172	503	9,564	201,250
Reinsurance recoverables on unpaid losses	2,645,369	358,707	150,428	120,064	3,274,568
Reinsurance recoverables on paid losses	900,444	14,466	8,017	21,650	944,577
Deferred acquisition costs gross	413,865	35,626	47,042	48,993	545,526
Current tax asset	4,748	(4)	2	—	4,746
Deferred tax asset	74,927	47	5,786	—	80,760
Property and equipment	198,245	1,033	29,149	2,432	230,859
Goodwill and intangible assets	448,797	10,801	(7)	—	459,591
Due from affiliates	3,097	21	—	1,699	4,817
Other assets	96,370	480	26,653	3,325	126,828
Total assets	$ 16,919,499	$ 1,072,258	$ 929,707	$ 736,956	$ 19,658,420
Liabilities					
Reserve for losses and loss expenses	$ 6,890,589	$ 523,222	$ 350,028	$ 212,085	$ 7,975,924
Reserve for unearned premiums	2,326,310	148,586	201,408	201,863	2,878,167
Insurance and reinsurance balances payable	1,282,378	87,868	51,210	115,787	1,537,243
Due to affiliates	1,293,354	—	1,186	1	1,294,541
Payables on purchases of investments	155,143	—	485	—	155,628
Payables under repurchase agreements	80,650	—	233	—	80,883
Derivative liabilities	100,974	13,124	11,241	18,350	143,689
Deferred acquisition costs ceded	151,417	10,292	7,642	7,357	176,708
Current tax liability	17,565	790	(2,228)	—	16,127
Deferred tax liability	10,562	—	—	—	10,562
Other liabilities	265,138	1,859	35,546	6,605	309,148
Loans and borrowings	156,443	25	23,943	1,844	182,255
Total liabilities	$ 12,730,523	$ 785,766	$ 680,694	$ 563,892	$ 14,760,875
Net exposure	$ 4,188,976	$ 286,492	$ 249,013	$ 173,064	$ 4,897,545

3. Risk disclosures, cont'd.

(b) Market risks, cont'd.

Foreign currency risk, cont'd.

January 1, 2018	USD	EUR	GBP	Others	Total
Assets					
Cash and cash equivalents	$ 809,273	$ 66,571	$ 28,512	$ 291,116	$ 1,195,472
Accrued investment income	44,870	931	1,191	197	47,189
Investments	8,436,847	131,332	165,359	48,772	8,782,310
Premiums receivable, net	1,425,152	113,977	43,122	247,451	1,829,702
Other insurance and reinsurance balances receivable	42,591	35,193	4,397	25,819	108,000
Receivables on investments sold	99,121	20	—	1,396	100,537
Prepaid reinsurance premiums	868,852	16,099	22,392	41,206	948,549
Derivative assets	266,321	—	—	3,097	269,418
Reinsurance recoverables on unpaid losses	2,216,053	184,016	103,129	90,405	2,593,603
Reinsurance recoverables on paid losses	499,518	—	18,557	743	518,818
Deferred acquisition costs gross	379,552	24,884	15,018	43,054	462,508
Current tax asset	824	—	—	—	824
Deferred tax asset	93,802	—	9,206	—	103,008
Property and equipment	208,826	—	12,554	4,101	225,481
Goodwill and intangible assets	396,520	—	—	—	396,520
Other assets	43,529	2,492	2,705	8,672	57,398
Due from affiliates	(1,003)	108	—	1,699	804
Total assets	$ 15,830,648	$ 575,623	$ 426,142	$ 807,728	$ 17,640,141
Liabilities					
Reserve for losses and loss expenses	6,154,039	349,427	295,267	204,024	7,002,757
Reserve for unearned premiums	2,093,133	93,504	84,496	159,465	2,430,598
Insurance and reinsurance balances payable	760,125	37,790	68,271	108,597	974,783
Due to affiliates	447,581	—	1,108	1	448,690
Payables on purchases of investments	307,446	1,201	—	1,396	310,043
Derivative liabilities	149,526	2,247	(40)	(7,933)	143,800
Deferred acquisition costs ceded	126,319	4,728	4,043	11,938	147,028
Current tax liability	3,838	—	(7,636)	—	(3,798)
Deferred tax liability	10,935	—	—	—	10,935
Other liabilities	250,701	6,019	22,829	24,616	304,165
Loans and borrowings	155,454	—	8,187	3,724	167,365
Total liabilities	$ 10,459,097	$ 494,916	$ 476,525	$ 505,828	$ 11,936,366
Net exposure	$ 5,371,551	$ 80,707	$ (50,383)	$ 301,900	$ 5,703,775

Assuming all other variables are held constant and disregarding any tax effects, a 10% change in the U.S. Dollars relative to the other currencies above could result in a $55.2 million increase or decrease (December 31, 2018 - $70.9 million, January 1, 2018 - $33.2 million) in the net assets held by the Company at December 31, 2019.

3. Risk disclosures, cont'd.

(b) Market risks, cont'd.

Equity price risk

The Company invests a portion of its investment portfolio in marketable equity securities. These equity investments are exposed to equity price risk, defined as the potential that the Company incurs an economic loss due to a decline of equity prices. Beta analysis is used to measure the sensitivity of our equity portfolio to changes in the value of the S&P 500 Index (an index representative of the broad equity market). As of December 31, 2019, the Company's current equity portfolio has a beta of 0.40 (December 31, 2018 - 0.44, January 1, 2018 - 0.19) in comparison to the S&P 500 Index.

Using the beta, a sensitivity analysis can be used to assess equity price risk under varying conditions. The base sensitivity analysis below uses market scenarios of the S&P 500 Index increasing and declining both 10 percent and 20 percent to determine the impact on the value of the Company's equity securities.

	20% decrease	10% decrease	Amount	10% increase	20% increase
December 31, 2019	$ 179,981	$ 187,892	$ 195,802	$ 203,712	$ 211,623
December 31, 2018	224,040	234,742	245,443	256,144	266,846
January 1, 2018	536,979	547,642	558,306	568,970	579,633

The changes described above do not take into account any potential mitigating impact from the Company's fixed income or other investments portfolios or the impact of taxes.

Credit spread risk

The Company considers the effect of credit spread movements on the market value of its fixed maturity investments, short-term investments and certain other investments that invest in fixed maturity securities. As credit spreads widen, the market value of the Company's fixed maturity securities decreases, and as credit spreads tighten, the market value of the fixed maturity securities increases. The following table summarizes the effect that an immediate, parallel shift in credit spreads in a static interest rate environment would have had on the Company's cash and cash equivalents and fixed maturity portfolio at December 31, 2019, December 31, 2018, and January 1, 2018:

	Credit Spread Shift in Basis Points				
December 31, 2019	(100)	(50)	Amount	50	100
Total fair value	$ 10,655,795	$ 10,512,909	$ 10,370,023	$ 10,227,137	$ 10,084,251
Market value change from base	2.76%	1.38%	—%	(1.38)%	(2.76)%
Change in unrealized value	$ 285,772	$ 142,886	$ —	$ (142,886)	$ (285,772)

	Credit Spread Shift in Basis Points				
December 31, 2018	(100)	(50)	Amount	50	100
Total fair value	$ 9,693,596	$ 9,559,850	$ 9,426,105	$ 9,292,360	$ 9,158,614
Market value change from base	2.84%	1.42%	—%	(1.42)%	(2.84)%
Change in unrealized value	$ 267,491	$ 133,745	$ —	$ (133,745)	$ (267,491)

	Credit Spread Shift in Basis Points				
January 1, 2018	(100)	(50)	Amount	50	100
Total fair value	$ 8,999,693	$ 8,863,473	$ 8,727,253	$ 8,591,033	$ 8,454,813
Market value change from base	3.12%	1.56%	—%	(1.56)%	(3.12)%
Change in unrealized value	$ 272,440	$ 136,220	$ —	$ (136,220)	$ (272,440)

3. Risk disclosures, cont'd.

(c) Credit risks

The Company has exposure to credit risks primarily as a holder of fixed maturity investments, short-term investments, equity securities and other investments. The Company's risk management strategy and investment policy is to invest in debt instruments of high credit quality issuers and to limit the amount of credit exposure with respect to particular ratings categories and any one issuer. The Company attempts to limit its credit exposure by investing the fixed maturity portfolio primarily in investments rated BBB- or higher based on S&P or equivalent rating. In addition, through a tiered approach based on issuer ratings, the Company has limited its exposure to any single corporate issuer.

In addition, the Company has exposure to counterparty risk as it relates to losses recoverable on paid and unpaid losses where the Company has purchased ceded reinsurance and retrocessional coverages. For reinsurance recoverables related to ceded reinsurance agreements, the Company remains obligated for amounts ceded in the event that its reinsurers or retrocessionaires do not meet their obligations. Accordingly, when ceded reinsurance or retrocessional reinsurance is purchased, the Company requires its reinsurers to have strong financial strength ratings and, in certain cases, require posting collateral. At December 31, 2019, the Company held collateral of $1,072.1 million (December 31, 2018 - $1,082.5 million, January 1, 2018 - $1,049.7 million) related to its ceded reinsurance agreements. The Company evaluates the financial condition of its reinsurers and monitors its concentration of credit risk on an ongoing basis.

The following tables present an analysis of the Company's major exposures to counterparty credit risk, based on their rating at December 31, 2019, December 31, 2018, and January 1, 2018. The credit rating for each security was determined based on the highest rating assigned to the individual security by S&P, Moody's Investors Service, Inc. ("Moody's"), Fitch Ratings, Inc., or DBRS, Inc. The tables also include other monetary assets from the Consolidated Balance Sheets.

December 31, 2019	Cash and cash equivalents	Fixed income investments[1]	Other insurance and reinsurance balances receivable	Receivable on investments sold	Derivative assets	Reinsurance recoverables on unpaid and paid losses
AAA	$ —	$ 5,041,462	$ 296	$ 27,628	$ 75,577	$ 89,918
AA+, AA, AA-	147,089	676,149	9,186	90	—	325,329
A+, A, A-	1,389,040	1,357,363	19,971	1,058	—	3,294,556
BBB+, BBB, BBB-	64,181	721,104	9,793	2,141	—	134,370
Other / Not rated	10,614	963,021	59,615	3,906	39,376	532,490
Total	$ 1,610,924	$ 8,759,099	$ 98,861	$ 34,823	$ 114,953	$ 4,376,663

(1) Investments only include short-term and fixed maturity investments held at year-end as equity securities and alternative funds are not rated.

December 31, 2018	Cash and cash equivalents	Fixed income investments[1]	Other insurance and reinsurance balances receivable	Receivable on investments sold	Derivative assets	Reinsurance recoverables on unpaid and paid losses
AAA	$ —	$ 4,653,322	$ 392	$ 66,390	$ 136,219	$ 63,133
AA+, AA, AA-	58,765	883,341	11,449	—	—	621,645
A+, A, A-	1,500,629	1,215,081	18,695	—	—	2,814,404
BBB+, BBB, BBB-	25,541	519,118	—	357	—	60
Other / Not rated	6,086	564,222	73,257	3,254	65,031	719,903
Total	$ 1,591,021	$ 7,835,084	$ 103,793	$ 70,001	$ 201,250	$ 4,219,145

3. Risk disclosures, cont'd.

(c) Credit risks, cont'd.

January 1, 2018	Cash and cash equivalents	Fixed income investments[1]	Other insurance and reinsurance balances receivable	Receivable on investments sold	Derivative assets	Reinsurance recoverables on unpaid and paid losses
AAA	$ 815	$ 4,338,903	$ 384	$ 99,283	$ 208,090	$ 29,355
AA+, AA, AA-	52,915	964,894	9,741	64	—	1,579,894
A+, A, A-	1,132,302	1,240,200	34,769	—	—	1,215,712
BBB+, BBB, BBB-	34	469,188	3,424	—	—	89,617
Other / Not rated	9,406	518,595	59,682	1,190	61,328	197,843
Total	$ 1,195,472	$ 7,531,780	$ 108,000	$ 100,537	$ 269,418	$ 3,112,421

For credit risks related to assumed reinsurance premium receivables, the Company's largest credit-risk exposure is related to third-party agents, brokers, and other intermediaries. It arises where premiums are collected from customers to be paid to the Company, or to pay claims to customers on behalf of the Company. The Company has policies and standards to manage and monitor credit risk related to intermediaries. The Company requires intermediaries to maintain segregated cash accounts for policyholder money. The Company also requires intermediaries to satisfy minimum requirements of capitalization, reputation and experience, and provide short-dated business credit terms. Refer to accumulation risk below for concentration of gross premiums written with the largest brokers.

For direct premium receivable, the Company has no significant concentration of credit risk, as the Company has a large number of internationally dispersed debtors with unrelated operations.

The following table shows premiums receivable that are past due but not impaired at December 31, 2019, December 31, 2018, and January 1, 2018:

	December 31, 2019	December 31, 2018	January 1, 2018
Not yet due	$ 2,167,355	$ 1,887,795	$ 1,486,475
Less than 90 days past due	237,774	108,321	276,702
Between 91 and 180 days past due	29,923	39,142	28,951
Over 180 days past due	63,868	37,326	37,574
Total	$ 2,498,920	$ 2,072,584	$ 1,829,702

As at December 31, 2019, an allowance of $21.9 million (December 31, 2018 - $15.9 million, January 1, 2018 - $10.1 million) has been recorded as an estimate of impaired or irrecoverable premiums receivable balances, and $8.4 million (2018 - $3.4 million) was charged to the Consolidated Statements of Profit and Comprehensive Income (Loss) related to bad debts for the year ended December 31, 2019. The allowance is written off against the carrying amount of impaired balances when the aging and going concern analysis of the counterparty indicate that the non-payment of outstanding balances are virtually certain.

Accumulation risk

In accordance with industry practice, the Company frequently pays amounts owed on claims under insurance or reinsurance contracts to brokers, and these brokers, in turn, pay these amounts to the clients that have purchased insurance or reinsurance from us. If a broker fails to make such a payment, in a significant majority of business that the Company writes, it is highly likely that the Company will be liable to the client for the deficiency because of local laws or contractual obligations, notwithstanding the broker's obligation to make such payment. Likewise, when the client pays premiums for these policies to brokers for payment over to the Company, these premiums are considered to have been paid and, in most cases, the client will no longer be liable to the Company for those amounts, whether or not the Company has actually received the premiums. Consequently, the Company assumes a degree of credit risk associated with brokers around the world. To date we have not experienced any losses related to such credit risks.

3. Risk disclosures, cont'd.

(c) Credit risks, cont'd.

Accumulation risk, cont'd.

The following table shows the percentage of gross premiums written generated through the Company's largest brokers for the years ended December 31, 2019 and 2018:

	2019		2018	
Marsh & McLennan Companies, Inc.	$ 1,785,461	26.3%	$ 1,311,650	22.0%
Aon PLC	870,922	12.8%	864,977	14.5%
Willis Towers Watson PLC	601,034	8.9%	531,091	8.9%
Others[1]	3,530,501	52.0%	3,253,028	54.6%
Total gross premiums written	$ 6,787,918	100.0%	$ 5,960,746	100.0%

(1) Others include individual brokers with accumulation of less than five percent of the total gross premiums written.

(d) Liquidity risk

Liquidity risk is the risk that cash may not be available to pay obligations when they are due without incurring an unreasonable cost.

When financial markets experience a reduction in liquidity, the Company's ability to conduct orderly investment transactions may be limited and may result in declines in fair values of the securities in the investment portfolio. In addition, if the Company requires significant amounts of cash on short notice in excess of normal cash requirements (which could include claims following a major catastrophe event) in a period of market illiquidity, the Company may have difficulty selling our investments in a timely manner and may have to dispose of our investments for less than what may otherwise have been possible under other conditions.

Contractual maturities of the Company's fixed maturity and short-term investments are shown below as of December 31, 2019, December 31, 2018 and January 1, 2018. Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

	December 31, 2019	December 31, 2018	January 1, 2018
Less than one year	$ 509,054	$ 388,539	$ 402,996
Between one and five years	2,919,476	2,744,112	2,495,939
Between five and ten years	1,202,194	1,055,959	1,368,056
Over ten years	63,876	34,054	71,788
Residential mortgage-backed securities	2,339,020	1,866,947	1,607,264
Commercial mortgage-backed securities	725,376	733,298	611,419
Collateralized loan and debt obligations	433,615	396,226	375,964
Asset-backed securities	566,488	615,949	598,354
Total	$ 8,759,099	$ 7,835,084	$ 7,531,780

3. Risk disclosures, cont'd.

(d) Liquidity risk, cont'd

The tables below show the maturity profile of the Company's financial liabilities as at December 31, 2019, December 31, 2018 and January 1, 2018:

	Contractual undiscounted cash flows in years				
December 31, 2019	**Less than one**	**One to three**	**Three to five**	**Over five**	**Total**
Reserve for losses and loss expenses	$ 2,315,540	$ 2,859,811	$ 1,399,611	$ 1,795,737	$ 8,370,699
Insurance and reinsurance balances payable	1,777,796	183,228	9	9	1,961,042
Payables on purchases of investments	89,942	—	—	—	89,942
Derivative liabilities	66,810	—	—	—	66,810
Other liabilities	332,274	13,570	781	300	346,925
Total[(1)]	$ 4,582,362	$ 3,056,609	$ 1,400,401	$ 1,796,046	$ 10,835,418

(1) Loans and borrowings comprise only lease liabilities, which are disclosed in Note 14, Property and Equipment.

	Contractual undiscounted cash flows in years				
December 31, 2018	**Less than one**	**One to three**	**Three to five**	**Over five**	**Total**
Reserve for losses and loss expenses	$ 2,289,706	$ 2,802,337	$ 1,278,011	$ 1,605,870	$ 7,975,924
Insurance and reinsurance balances payable	1,416,885	120,358	—	—	1,537,243
Payables on purchases of investments	155,628	—	—	—	155,628
Payables under repurchase agreements	80,883	—	—	—	80,883
Derivative liabilities	143,689	—	—	—	143,689
Other liabilities	300,263	8,019	566	300	309,148
Total	$ 4,387,054	$ 2,930,714	$ 1,278,577	$ 1,606,170	$ 10,202,515

	Contractual undiscounted cash flows in years				
January 1, 2018	**Less than one**	**One to three**	**Three to five**	**Over five**	**Total**
Reserve for losses and loss expenses	$ 1,956,667	$ 2,484,515	$ 1,164,250	$ 1,397,325	$ 7,002,757
Insurance and reinsurance balances payable	974,783	—	—	—	974,783
Payables on purchases of investments	310,043	—	—	—	310,043
Derivative liabilities	143,800	—	—	—	143,800
Other liabilities	302,861	4	1,300	—	304,165
Total	$ 3,688,154	$ 2,484,519	$ 1,165,550	$ 1,397,325	$ 8,735,548

While the estimation of the ultimate liability for outstanding losses and loss expenses is complex and incorporates a significant amount of judgment, the timing of payment of outstanding losses and loss expenses is also uncertain. Actuarial and statistical techniques, past experience and management's judgment have been used to determine a likely settlement pattern.

3. Risk disclosures, cont'd.

(e) Operational risks

Operational risk represents the risk of loss as a result of inadequate or failed internal processes, system failures, human error, or external events. Operational risk includes employee or third-party fraud, business interruptions, inaccurate processes or transactions, IT failure, the loss of key employees without an appropriate successor and non-compliance with reporting obligations. Operational risk is difficult to quantify but can be controlled through appropriate corporate governance and internal control measures. The Company has developed a number of policies and procedures aimed to control or mitigate the negative impact that may potentially result from operational risk events.

The Company seeks to mitigate operational risks through ongoing training and the application of strong process controls throughout its business. Key process controls include underwriting letters of authorities, underwriting referral protocols, claims procedures guidelines, financial reporting controls and procedures, information technology procedures, succession planning, disaster recovery planning and business continuity planning. These controls are supplemented by the risk and control self-assessment framework which enables the core identification, documentation, and assessment of operational risk and risk controls across the organization. The Company's internal audit department tests the Company's policies and various process controls on a regular basis.

The use by the Company of the services of unaffiliated third parties exposes the Company to heightened operational risks, including the risk of information technology and physical security breaches, fraud, non-compliance with laws, regulations or internal guidelines and inadequate service to its clients. The Company mitigates the operational risk posed by the use of third-party vendors by verifying, among other items, a potential third-party vendor's financial stability, ability to provide on-going service, business continuity planning and its business reputation as well as monitoring any significant third party relationships.

4. Business combinations

Acquisition of A&A, S.r.l.

On March 27, 2018 (the "A&A Acquisition Date") the Company completed the acquisition of all the outstanding voting shares of A&A, S.r.l. ("A&A"), an Italian agriculture insurance broker. The acquisition of A&A supports the strategic objective of AgriSompo, Sompo International's global agriculture platform, to deliver innovative and coordinated risk management solutions tailored to local needs across the agri-business market.

The fair value of A&A's net assets was $0.9 million at the A&A Acquisition Date, and the total cash consideration paid was $12.6 million. No separately identifiable intangible assets were identified related to the acquisition of A&A. The Company recognized goodwill of $11.7 million, which represents future synergies expected to arise from the combined operations and the value of future business from introducing new products and technologies in Italy. The goodwill recognized is not expected to be deductible for income tax purposes.

The Company has completed the accounting for the acquisition of A&A.

Acquisition of Lexon

On the Lexon Acquisition Date, the Company completed the acquisition of the operating subsidiaries of Lexon, which offer a broad array of commercial and contract surety bonds, court and probate bonds, and U.S. Custom bonds through a nationwide network of agents. The acquisition of Lexon will contribute to the Company's strategic expansion in the U.S.

4. Business combinations, cont'd.

Acquisition of Lexon, cont'd.

The aggregate consideration for the transaction was $199.8 million, which consisted of $224.1 million of cash, offset by contingent consideration held in escrow accounts of $24.3 million. Cash and cash equivalents acquired with the acquisition of Lexon was $78.4 million. The contingent consideration is recorded on the Consolidated Balance Sheets as other assets and consists of the following escrow accounts:

- General escrow - $16.0 million escrow to recover any indemnification claim by the Company, which may be due to the inaccuracy of any representation or warranty of the sellers or certificate delivered by sellers. The fair value estimate of the general escrow is nil as at December 31, 2019 (December 31, 2018 - $5.4 million) as the general escrow account was closed in 2019 and the balances have moved to other escrows.
- Loss reserve escrow - $23.5 million escrow to recover any unfavorable loss reserve development within two years from the Lexon Acquisition Date. The fair value of the loss reserve escrow is $22.2 million as at December 31, 2019 (December 31, 2018 - $18.9 million), which is the discounted value of probability weighted scenarios between nil and $23.5 million of unfavorable loss reserve development.
- Bail bond escrow - $6.0 million escrow to satisfy any liabilities arising from the bail bond business, including costs and expenses incurred by the bail administrator after the Lexon Acquisition Date. The fair value of estimate of the bail bond escrow is $5.4 million as at December 31, 2019 (December 31, 2018 - nil), which is the discounted value of probability weighted scenarios between nil and $6.0 million.
- Specified indemnity escrow - $23.0 million escrow to satisfy any breach of covenant or agreement of the seller contained in the purchase and sale agreement. The fair value of the specified indemnity bond escrow is nil as at December 31, 2019 and 2018 as there are no expected recoveries.

The adjustments to the contingent consideration is recognized on the Consolidated Statements of Profit and Comprehensive Income (Loss). There have been no changes to the valuation techniques used as at December 31, 2019 and 2018.

In connection with the acquisition of Lexon, the Company incurred transaction-related expenses of $1.0 million for the year ended December 31, 2018, which were recognized on the Consolidated Statements of Profit and Comprehensive Income (Loss) as a component of corporate expenses.

The fair value of premium receivable was $31.8 million, and the gross amount of premiums receivable was $33.3 million at the Lexon Acquisition Date. None of the trade receivables were impaired as they are expected to be fully recoverable.

From the Lexon Acquisition Date, Lexon contributed $62.4 million of total net premiums earned and $4.0 million of profit for the year ended December 31, 2018. If the acquisition had taken place at the beginning of 2018, the total net premiums earned for the Company for the year ended December 31, 2018 would have been $111.2 million and profit for the year would have been $12.2 million.

The aggregate consideration was allocated to the acquired assets and liabilities of Lexon based on estimated fair values on the Lexon Acquisition Date, as detailed below. The allocation of the purchase price was based on information that was available to management at the time the Consolidated Financial Statements for the year ended December 31, 2018 were prepared. The fair value recorded for these items was not changed during the year ended December 31, 2019, other than the updates to the escrow accounts above.

The Company has completed the accounting for the acquisition of Lexon.

4. Business combinations, cont'd.

Acquisition of Lexon, cont'd.

The Company identified finite lived intangible assets of $63.1 million, indefinite lived intangible assets of $15.8 million, and certain other adjustments to the fair values of the assets acquired and liabilities assumed of Lexon at June 1, 2018 as summarized in the table below:

Lexon shareholder's equity attributable to controlling interest as of June 1, 2018	$	165,568
Adjustments for fair value, by applicable balance sheet caption:		
Assets:		
Deferred acquisition costs gross		(23,149)
Reinsurance recoverable on unpaid losses		(423)
Goodwill and intangible assets		(9,281)
Property and equipment		(1,616)
Liabilities:		
Deferred acquisition costs ceded		813
Reserve for losses and loss expenses		(32,784)
Deferred tax liability		(7,294)
Total adjustments for fair value by applicable balance sheet caption		(73,734)
Adjustments for fair value of the identifiable intangible assets:		
Identifiable indefinite lived intangible assets (insurance licenses)		15,757
Identifiable finite lived intangible assets (agent, broker and customer relationships, renewal rights, non-compete agreements and VOBA)		63,116
Total adjustments for fair value by applicable balance sheet caption and identifiable intangible assets		5,139
Estimated fair value of net assets acquired and identifiable intangible assets		170,707
Total consideration		199,798
Estimated total consideration over the fair value of net assets acquired assigned to goodwill	$	29,091

An explanation of the fair value adjustments is as follows:

- Deferred acquisition costs (gross and ceded) - To eliminate Lexon's deferred acquisition costs;
- Goodwill and intangible assets - To write off Lexon's goodwill and intangible assets;
- Property and equipment - To reflect the fair value of Lexon's fixed assets;
- Reserve for losses and loss expenses and reinsurance recoverable on unpaid losses - To reflect an increase in net losses and loss expenses due to the addition of a market based risk margin, which represents the cost of capital required by a market participant to assume the net losses and loss expenses of Lexon, offset by a deduction that represents the discount due to the present value calculation of the unpaid losses and loss expenses based on the expected payout of the net unpaid losses and loss expenses; and
- Deferred tax liability - To reflect the deferred tax liability on identifiable intangible assets.

The initial goodwill of $29.1 million represents future synergies expected to arise from the combined operations, the value of new business from internal agents, Lexon's assembled workforce and other future business not included in intangible assets. The goodwill recognized is not deductible for income tax purposes.

Transactions with entities under common control

On May 1, 2018, SJNKE and SJNK M&B were acquired by Endurance Bermuda. The SJNKE and SJNK M&B net assets of $199.8 million and $3.3 million, respectively, were transferred to Endurance Bermuda on May 1, 2018 at IFRS book value as of January 1, 2018.

5. Cash and cash equivalents

The components of cash and cash equivalents as at December 31, 2019, December 31, 2018, and January 1, 2018, are as follows:

	December 31, 2019	December 31, 2018	January 1, 2018
Cash at bank and in hand	$ 1,401,604	$ 1,472,531	$ 980,267
Cash equivalents	209,320	118,490	215,205
Total cash and cash equivalents	$ 1,610,924	$ 1,591,021	$ 1,195,472

Cash equivalents include highly liquid short-term deposits and securities with maturities of ninety days or less at the time of at the time of acquisition. Cash equivalents are valued at amortized cost, which approximates fair value due to the short-term, liquid nature of these securities.

6. Investments

The components of investments as at December 31, 2019, December 31, 2018, and January 1, 2018 are as follows:

	December 31, 2019	December 31, 2018	January 1, 2018
Short-term investments, at FVTPL (designated as such upon initial recognition)	$ 35,380	$ 80,805	$ 68,414
Equity securities, at FVTPL (designated as such upon initial recognition)	195,802	245,443	558,306
Alternative funds, at FVTPL (designated as such upon initial recognition)	627,334	698,720	692,224
Fixed maturity investments, at FVTPL (designated as such upon initial recognition)			
U.S. government and agencies securities	1,123,713	1,012,978	1,244,225
U.S. state and municipal securities	96,285	96,386	254,492
Foreign government securities	315,366	469,150	273,106
Government guaranteed corporate securities	23,978	59,582	15,842
Corporate securities	3,099,878	2,503,763	2,482,700
Residential mortgage-backed securities	2,339,020	1,866,947	1,607,264
Commercial mortgage-backed securities	725,376	733,298	611,419
Collateralized loan and debt obligations	433,615	396,226	375,964
Asset-backed securities	566,488	615,949	598,354
Total fixed maturity investments	8,723,719	7,754,279	7,463,366
Total investments	$ 9,582,235	$ 8,779,247	$ 8,782,310

(a) Composition of net investment income

The components of net investment income for the years ended December 31, 2019 and 2018 are as follows:

	2019	2018
Cash and cash equivalents	$ 22,719	$ 14,622
Fixed income investments[1] at FVTPL	266,663	235,797
Equity securities at FVTPL	6,625	9,012
Alternative funds at FVTPL	28,141	(28,737)
Sub-total	$ 324,148	$ 230,694
Investment management expenses	(18,254)	(19,566)
Net investment income	$ 305,894	$ 211,128

(1) Fixed income investments comprises of short-term investments and fixed maturity investments.

6. Investments, cont'd.

(b) Composition of net realized and unrealized gains and losses

The components of net realized and unrealized gains and losses for the years ended December 31, 2019 and 2018 are as follows:

	2019	2018
Fixed income investments at FVTPL	$ 29,310	$ (41,738)
Equity securities at FVTPL	13,617	3,471
Derivative financial instruments	118	(3,023)
Disposal of subsidiary	(959)	—
Net realized gains (losses) on investments	$ 42,086	$ (41,290)

	2019	2018
Fixed income investments at FVTPL	$ 239,420	$ (112,628)
Equity securities at FVTPL	11,829	(40,309)
Derivative financial instruments	(935)	966
Net unrealized gains (losses) on investments	$ 250,314	$ (151,971)

Net realized and unrealized gains and losses are recognized in earnings using the first in, first out method. For additional information on the Company's derivative financial instruments, see Note 8, Derivatives.

(c) Investment in associate

During the year ended December 31, 2018, the Company invested $11.0 million in an associate and made an additional investment of $4.0 million during the year ended December 31, 2019, which the Company had committed at the time of initial investment. The Investment in associate is classified as non-current.

(d) Investment commitments

As of December 31, 2019, the Company had pledged cash and cash equivalents and fixed maturity investments of $1,069.1 million (December 31, 2018 - $763.7 million; January 1, 2018 - $650.4 million), in favor of certain ceding companies to collateralize obligations. As of December 31, 2019, the Company had also pledged $38.9 million (December 31, 2018 - $31.4 million; January 1, 2018 - $44.9 million) of its cash and fixed maturity investments as required to meet collateral obligations for $31.9 million (December 31, 2018 - $26.1 million; January 1, 2018 - $44.3 million) in secured letters of credit outstanding under its credit facilities. In addition, at December 31, 2019, cash and fixed maturity investments with fair values of $188.4 million (December 31, 2018 - $167.6 million; January 1, 2018 - $308.9 million) were on deposit with U.S. state regulators.

In addition to the Company's short-term, fixed maturity, and equity investments, the Company invests in alternative funds. At December 31, 2019, the Company had invested, net of capital returned, a total of $542.7 million in alternative funds (December 31, 2018 - $623.9 million, January 1, 2018 - $562.5 million). The following tables summarize the unfunded commitments and redemption restrictions of alternative funds as at December 31, 2019, December 31, 2018 and January 1, 2018:

December 31, 2019	Fair value	Unfunded Commitments	Ineligible for Redemption in 2020
Hedge funds	$ 293,721	$ —	$ 77,967
Private investment funds	188,715	189,691	188,715
Other investment funds	144,898	—	90,572
Total alternative funds	$ 627,334	$ 189,691	$ 357,254

6. Investments, cont'd.

(d) Investment commitments, cont'd.

December 31, 2018	Fair value	Unfunded Commitments	Ineligible for Redemption in 2019
Hedge funds	$ 443,744	$ —	$ 115,622
Private investment funds	142,895	190,894	142,895
Other investment funds	112,081	—	54,291
Total alternative funds	$ 698,720	$ 190,894	$ 312,808

January 1, 2018	Fair value	Unfunded Commitments	Ineligible for Redemption in 2018
Hedge funds	$ 431,674	$ —	$ 5,445
Private investment funds	99,682	115,665	99,682
Other investment funds	160,868	—	33,731
Total alternative funds	$ 692,224	$ 115,665	$ 138,858

Hedge funds – The redemption frequency of the hedge funds range from monthly to every 5 years with notice periods from 60 to 90 days. Over one year, it is estimated that the Company can liquidate approximately 73.5% of the hedge fund portfolio, with the majority of the remainder over the following three years.

Private investment funds – The Company has no right to redeem certain of its interest in private investment funds in advance of dissolution of the applicable partnership. Instead, the nature of these investments is that distributions are received by the Company in connection with the distribution of income or the liquidation of the underlying assets of the applicable limited partnership. It is estimated that the majority of the underlying assets of the limited partnerships would liquidate over 5 to 10 years from inception of the limited partnership. A secondary market, with unpredictable liquidity, exists for limited partner interests in private investment funds.

Other investment funds – Other investment funds includes funds on deposit with Lloyd's, which are restricted, and the Company's investment in ordinary shares issued by Blue Capital Alternative Income Fund Limited ("BCAI"), a closed-ended mutual fund company whose shares were listed on the Specialist Fund Market of the London Stock Exchange and on the Bermuda Stock Exchange. On May 9, 2018, the BCAI Board of Directors announced its intent to recommend the liquidation of BCAI at a Special General Meeting of shareholders held on July 25, 2018; the liquidation was approved and BCAI was subsequently de-listed from all exchanges. Other investment funds also includes the Company's investment in the common stock of Blue Capital Reinsurance Holdings Ltd. ("BCRH"), a Bermuda-based exempted limited liability holding company whose shares are listed on the New York and Bermuda Stock Exchanges. On July 25, 2019, the BCRH Board of Directors announced its decision to cease active operations and pursue an orderly run-off of its liabilities and in-force portfolio and return capital to shareholders as it winds up operations. As and when capital becomes available after settlement of existing liabilities and expenses, and in accordance with all applicable regulatory requirements, BCRH expects to declare special distributions to shareholders as it winds up its affairs and operations. The common shares are expected to de-list from exchanges by July 31, 2020. Other investment funds also includes an investment in the preference stock of the Blue Capital Mid Vol Fund and the Blue Capital Low Vol Fund (collectively the "Blue Capital investments").

(e) Temporary exemption of IFRS 9

The Company has elected to defer the full implementation of IFRS 9 until IFRS 17 becomes effective on January 1, 2023. For further information on the Company's eligibility to the temporary exemption from IFRS 9, refer to Note 2, Significant accounting policies.

Under IFRS 9, the classification and measurement of all debt instruments will be driven by the business model in which these assets are held and by their contractual terms. The combined effect of the application of the business model and contractual cash flows characteristics determine whether the financial assets are measured at amortized cost, fair value with changes recognized in other comprehensive income ("FVOCI") or FVTPL. The business model is required to be assessed at the date of the initial application of IFRS 9.

Debt instruments with contractual terms that give rise to cash flows that are solely payment of principal and interest on the principal amount outstanding ("SPPI") will be measured at either amortized cost or at FVOCI, unless they are managed on

6. Investments, cont'd.

(e) Temporary exemption of IFRS 9, cont'd.

a fair value basis. The assessment of the features of the contractual terms is referred to as the SPPI test. Debt instruments that do not pass the SPPI test will be measured at FVTPL. The Company anticipates that all debt investments held by the Company will be classified as FVTPL, as they are managed on a fair value basis.

Equity instruments, including fund investments, will be accounted for at FVTPL. The Company does not intend to make use of the election to present changes in fair value of certain equity instruments that are not held for trading in other comprehensive income with no subsequent reclassification of realized gains or losses to the Consolidated Statements of Profit and Comprehensive Income (Loss).

IFRS 9 also introduces new classification and measurement requirements for financial instruments and an expected credit loss impairment model that replaces the IAS 39 incurred loss model. Financial instruments subject to impairment under IFRS 9 includes assets measured at amortized cost and those assets mandatorily measured at FVTOCI. Therefore, the new expected credit loss impairment model is not expected to have significant impact on the Company's investments. The Company's credit risk exposure inherent in financial assets is described in Note 3, Risk disclosures.

7. Fair value measurement

The Company determines the fair value of its fixed maturity investments, short-term investments, equity securities, derivative assets and liabilities, and alternative funds in accordance with current accounting guidance, which defines fair value and establishes a fair value hierarchy based on inputs to the various valuation techniques used for each fair value measurement. The Company determines the estimated fair value of each individual security utilizing the highest level inputs available. Valuation inputs by security type may include the following:

- Government and agencies fixed maturity securities – These securities are generally priced by pricing services or index providers. The pricing services or index providers may use current market trades for securities with similar quality, maturity and coupon. If no such trades are available, the pricing service typically uses analytical models which may incorporate option adjusted spreads, daily interest rate data and market/sector news. The Company generally classifies the fair values of government and agencies securities in Level 2. Current issue U.S. government securities are generally valued based on Level 1 inputs, which use the market approach valuation technique.
- Government guaranteed corporate fixed maturity securities – These securities are generally priced by pricing services or index providers. The pricing service or index providers may use current market trades for securities with similar quality, maturity and coupon. If no such trades are available, the pricing service typically uses analytical spread models which may incorporate inputs from the U.S. treasury curve or LIBOR. The Company generally classifies the fair values of its government guaranteed corporate securities in Level 2.
- Corporate fixed maturity securities – These securities are generally priced by pricing services or index providers. The pricing services or index providers typically use discounted cash flow models that incorporate benchmark curves for treasury, swap and high issuance credits. Credit spreads are developed from current market observations for like or similar securities. The Company generally classifies the fair values of its corporate securities in Level 2.
- Equity securities – These securities are generally priced by pricing services or index providers. Depending on the type of underlying equity security or equity fund, the securities are priced by pricing services or index providers based on quoted market prices in active markets or through a discounted cash flow model that incorporates benchmark curves for treasury, swap and credit for like or similar securities. The Company generally classifies the fair values of its equity securities in Level 1 or 2.
- Structured securities including agency and non-agency, residential and commercial mortgage, asset-backed securities and collateralized loan and debt obligations – These securities are generally priced by broker/dealers. Broker/dealers may use current market trades for securities with similar qualities. If no such trades are available, inputs such as bid and offer, prepayment speeds, the U.S. treasury curve, swap curve and cash settlement may be used in a discounted cash flow model to determine the fair value of a security. The Company generally classifies the fair values of its structured securities in Level 2.

7. Fair value measurement, cont'd.

- Derivative assets and liabilities – A variety of derivative instruments are used to enhance the efficiency of the investment portfolio and economically hedge certain risks. These instruments are generally priced by pricing services, broker/dealers and/or recent trading activity. The market value approach valuation technique is used to estimate the fair value for these derivatives based on significant observable market inputs. Certain derivative instruments are priced by pricing services based on quoted market prices in active markets. These derivative instruments are generally classified in Level 1. Other derivative instruments are priced using industry valuation models and are considered Level 2, as the inputs to the valuation model are based on observable market inputs. Also included in this line item are proprietary, non-exchange traded derivative-based risk management products primarily used to address weather and energy risks. The trading market for these weather derivatives are generally linked to energy and agriculture commodities, weather and other natural phenomena. In instances where market prices are not available, the Company uses industry or internally developed valuation techniques such as spread option, Black Scholes, quanto and simulation modeling to determine fair value and classifies these in Level 3. These models may reference prices for similar instruments.
- Alternative funds - These investments are generally priced on net asset values ("NAV") received from the fund managers or administrators. Due to the timing of the delivery of the final NAV by certain of the fund managers, valuations of certain alternative funds and specialty funds are estimated based on the most recently available information, including period end NAVs, period end estimates, or, in some cases, prior month or prior quarter NAVs. As this valuation technique incorporates both observable and significant unobservable inputs, the Company generally classifies the fair value of its alternative funds in Level 3.

The carrying values of cash and cash equivalents, accrued investment income, premiums receivable, other insurance and reinsurance balances receivable, receivable on investments sold, reinsurance recoverables on paid and unpaid losses, insurance and reinsurance balances payable, payables on purchases of investments, payables under repurchase agreements, loans and borrowings and other assets and liabilities approximated their fair values.

7. Fair value measurement, cont'd.

The following table sets forth the Company's short-term investments, fixed maturity investments, equity securities, alternative funds, derivative assets and liabilities, and other fair value disclosures categorized by the level within the hierarchy in which the fair value measurements fall as at December 31, 2019, December 31, 2018 and January 1, 2018:

	Total at December 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Short-term investments at FVTPL (designated as such upon initial recognition)	$ 35,380	$ —	$ 35,380	$ —
Equity securities at FVTPL (designated as such upon initial recognition)	195,802	83,340	112,462	—
Alternative funds, at FVTPL (designated as such upon initial recognition)	627,334	—	—	627,334
Fixed maturity investments at FVTPL (designated as such upon initial recognition)				
U.S. government and agencies securities	1,123,713	9,509	1,114,204	—
U.S. state and municipal securities	96,285	—	96,285	—
Foreign government securities	315,366	—	315,366	—
Government guaranteed corporate securities	23,978	—	23,978	—
Corporate securities	3,099,878	—	3,016,165	83,713
Residential mortgage-backed securities	2,339,020	—	2,339,020	—
Commercial mortgage-backed securities	725,376	—	725,376	—
Collateralized loan and debt obligations	433,615	—	433,615	—
Asset-backed securities	566,488	—	566,488	—
Total fixed maturity investments	8,723,719	9,509	8,630,497	83,713
Total investments measured at fair value	9,582,235	92,849	8,778,339	711,047
Derivative instruments at FVTPL (Note 8)				
Derivative assets	114,953	1,566	75,903	37,484
Derivative liabilities	(66,810)	(386)	(27,118)	(39,306)
Total derivative instruments	48,143	1,180	48,785	(1,822)
Total investments and derivative instruments measured at fair value	$ 9,630,378	$ 94,029	$ 8,827,124	$ 709,225

7. Fair value measurement, cont'd.

	Total at December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Short-term investments at FVTPL (designated as such upon initial recognition)	$ 80,805	$ —	$ 80,805	$ —
Equity securities at FVTPL (designated as such upon initial recognition)	245,443	72,640	172,803	—
Alternative funds, at FVTPL (designated as such upon initial recognition)	698,720	—	—	698,720
Fixed maturity investments at FVTPL (designated as such upon initial recognition)				
U.S. government and agencies securities	1,012,978	22,000	990,978	—
U.S. state and municipal securities	96,386	—	96,386	—
Foreign government securities	469,150	—	469,150	—
Government guaranteed corporate securities	59,582	—	59,582	—
Corporate securities	2,503,763	—	2,340,284	163,479
Residential mortgage-backed securities	1,866,947	—	1,866,947	—
Commercial mortgage-backed securities	733,298	—	733,298	—
Collateralized loan and debt obligations	396,226	—	396,226	—
Asset-backed securities	615,949	—	615,949	—
Total fixed maturity investments	7,754,279	22,000	7,568,800	163,479
Total investments measured at fair value	8,779,247	94,640	7,822,408	862,199
Derivative instruments at FVTPL (Note 8)				
Derivative assets	201,250	512	138,039	62,699
Derivative liabilities	(143,689)	(4)	(68,841)	(74,844)
Total derivative instruments	57,561	508	69,198	(12,145)
Total investments and derivative instruments measured at fair value	$ 8,836,808	$ 95,148	$ 7,891,606	$ 850,054

7. Fair value measurement, cont'd.

	Total at January 1, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Short-term investments at FVTPL (designated as such upon initial recognition)	$ 68,414	$ —	$ 68,414	$ —
Equity securities at FVTPL (designated as such upon initial recognition)	558,306	27,628	530,678	—
Alternative funds, at FVTPL (designated as such upon initial recognition)	692,224	—	—	692,224
Fixed maturity investments at FVTPL (designated as such upon initial recognition)				
U.S. government and agencies securities	1,244,225	34,672	1,209,553	—
U.S. state and municipal securities	254,492	—	254,492	—
Foreign government securities	273,106	—	273,106	—
Government guaranteed corporate securities	15,842	—	15,842	—
Corporate securities	2,482,700	—	2,308,739	173,961
Residential mortgage-backed securities	1,607,264	—	1,607,264	—
Commercial mortgage-backed securities	611,419	—	611,419	—
Collateralized loan and debt obligations	375,964	—	375,964	—
Asset-backed securities	598,354	—	598,354	—
Total fixed maturity investments	7,463,366	34,672	7,254,733	173,961
Total investments measured at fair value	8,782,310	62,300	7,853,825	866,185
Derivative instruments at FVTPL (Note 8)				
Derivative assets	269,418	2,099	208,549	58,770
Derivative liabilities	(143,800)	(1,259)	(98,571)	(43,970)
Total derivative instruments	125,618	840	109,978	14,800
Total investments and derivative instruments measured at fair value	$ 8,907,928	$ 63,140	$ 7,963,803	$ 880,985

During the year ended December 31, 2019, $13.1 million (December 31, 2018 - $7.4 million, January 1, 2018 - $12.1 million) of U.S. government and agencies securities were transferred from Level 1 to Level 2 as they no longer qualified as on the run U.S. treasury securities. There were no other transfers made between Levels 1, 2 and 3 of the fair value hierarchy during the years ended December 31, 2019 and 2018.

Financial instruments included in Level 3

Alternative funds measured at fair value included assets of $627.3 million (December 31, 2018 - $698.7 million, January 1, 2018 - $692.2 million) for which valuation techniques are not based on observable market data. The Company classifies alternative funds as Level 3 assets as the valuation techniques incorporate both observable and unobservable inputs. The estimated fair values of the Company's alternative funds are determined using a combination of the most recent NAVs provided by each alternative fund's independent administrator and the estimated performance provided by each fund manager. Independent administrators provide monthly reported NAVs with up to a three month delay in valuation. The most recent NAV available for each alternative fund is adjusted for the estimated performance, as provided by the fund manager, and cash flows between the NAV date and the reporting date. Historically, estimated fair values incorporating these performance estimates have not been significantly different from subsequent NAVs. Given the Company's knowledge of the underlying investments and the size of the Company's investment therein, we would not anticipate any material variance between estimated valuations and the final NAVs reported by the administrators.

7. Fair value measurement, cont'd.

Financial instruments included in Level 3, cont'd.

Derivative assets and liabilities measured at fair value included assets of $37.5 million (December 31, 2018 - $62.7 million, January 1, 2018 - $58.8 million) and liabilities of $39.3 million (December 31, 2018 - $74.8 million, January 1, 2018 - $44.0 million) related to proprietary, non-exchange traded derivative-based risk management products used in the Company's weather risk management business, and hedging and trading activities related to these risks. In instances where market prices are not available, the Company may use industry or internally developed valuation techniques such as historical analysis and simulation modeling to determine fair value, which are considered Level 3.

Observable and unobservable inputs to these valuation techniques vary by contract requirements and commodity type. These are validated using market-based or independently sourced parameters where applicable and may typically include the following:

- Observable inputs: contract price, notional, option strike, term to expiry, interest rate, contractual limits, temperature, rainfall, windspeed, wave height, snowfall, cyclone category; river flow; yield;
- Unobservable inputs: correlation, composite weather variable; and
- Both observable and unobservable: forward commodity price.

The Company's weather curves are determined by taking the average payouts for each transaction within its portfolio utilizing de-trended historical weather measurements. The Company's commodity curves are determined using historical market data scaled to currently observed market prices. The range of each unobservable input could vary based on the specific commodity, including, but not limited to natural gas, electricity, crude, liquids, temperature or precipitation. Due to the diversity of the portfolio, the range of unobservable inputs could be wide-spread as reflected in the below table. The unobservable inputs are validated at each reporting period and are only changed when corroborated by evidence such as similar market transactions, third-party pricing services and/or broker or dealer quotations or other empirical market data.

Changes in any or all of the unobservable inputs listed above may contribute positively or negatively to the overall portfolio fair value depending upon the underlying position. In general, movements in weather curves are the largest contributing factor that impacts fair value.

Below is a summary of quantitative information regarding the significant observable and unobservable inputs used in determining the fair value of the net weather and energy related derivative assets and liabilities classified in Level 3 that are measured at fair value on a recurring basis at December 31, 2019, December 31, 2018 and January 1, 2018:

	December 31, 2019				
				Range	
	Fair Value (Level 3)	Valuation Technique	Significant Unobservable Inputs	High	Low
			(Commodity curve in U.S. Dollars in thousands)		
Net weather and energy related derivatives liability	$ (1,822)	Historical Analysis and Simulation	Correlation	1	-1
			Temperature	115F	-15F
			Composite weather variable	45 deg	-25 deg
			Snowfall	65"	0"
			Rainfall	100"	0"
			Wind speed	25 m/s	0.01 m/s
			Wave height	18'	0'
			River flow	400,000 m^3/s	0 m^3/s
			Cyclone (category)	5	0
			Commodity curve	$14.5	$0

7. Fair value measurement, cont'd.

Financial instruments included in Level 3, cont'd.

	December 31, 2018				
				Range	
	Fair Value (Level 3)	Valuation Technique	Significant Unobservable Inputs	High	Low
			(Commodity curve in U.S. Dollars in thousands)		
Net weather and energy related derivatives liability	$ (12,145)	Historical Analysis and Simulation	Correlation	1	-1
			Temperature	115F	-15F
			Composite weather variable	45 deg	-25 deg
			Snowfall	65"	0"
			Rainfall	100"	0"
			Wind speed	25 m/s	0.01 m/s
			Wave height	18'	0'
			Cyclone (category)	5	0
			Commodity curve	$14.5	$0

	January 1, 2018				
				Range	
	Fair Value (Level 3)	Valuation Technique	Significant Unobservable Inputs	High	Low
			(Commodity curve in U.S. Dollars in thousands)		
Net weather and energy related derivatives asset	$ 14,800	Historical Analysis and Simulation	Correlation	1	-1
			Temperature	115F	-15F
			Composite weather variable	45 deg	-25 deg
			Rainfall	2"	0"
			Windspeed	25 m/s	0.01 m/s
			Wave height	18'	0'
			Cyclone (category)	5	0
			Commodity curve	$14.2	$0
			Yield	5 tons/acre	0 tons/acre

There are no interrelationships between unobservable inputs and other unobservable inputs used in the fair value measurements.

The Company performed sensitivity tests on simulated index values, shifting them up by 10% of standard deviation, where the index values are calculated from variables which included both observable and unobservable inputs. The result of the sensitivity test did not have a significant impact on the fair values as at December 31, 2019, December 31, 2018, and January 1, 2018.

7. Fair value measurement, cont'd.

Financial instruments included in Level 3, cont'd.

The following tables present a reconciliation of the beginning and ending balances for all assets and liabilities measured at fair value on a recurring basis using Level 3 inputs during for the years ended December 31, 2019 and 2018:

2019	Alternative funds	Fixed maturity investments	Derivative assets	Derivative liabilities
Level 3, beginning of year	$ 698,720	$ 163,479	$ 62,699	$ (74,844)
Total realized/unrealized gains included in earnings	29,220	3,830	—	—
Total income/losses included in other underwriting income	—	—	5,351	3,682
Acquisitions through business combinations	14,388	—	—	—
Purchases	113,522	33,824	—	—
Issues	—	—	29,963	(51,973)
Sales	(228,516)	(117,420)	—	—
Settlements	—	—	(60,350)	83,795
Transfers into Level 3	—	—	—	—
Transfers out of Level 3	—	—	(179)	34
Level 3, end of year	$ 627,334	$ 83,713	37,484	(39,306)

2018	Alternative funds	Fixed maturity investments	Derivative assets	Derivative liabilities
Level 3, beginning of year	$ 692,224	$ 173,961	$ 58,770	$ (43,970)
Total realized/unrealized gains included in earnings	(32,107)	(9,050)	—	—
Total income/losses included in other underwriting income	—	—	5,409	1,059
Purchases	112,632	77,370	—	—
Issues	—	—	37,874	(55,658)
Sales	(74,029)	(78,802)	—	—
Settlements	—	—	(39,354)	23,725
Transfers into Level 3	—	—	—	—
Transfers out of Level 3	—	—	—	—
Level 3, end of year	$ 698,720	$ 163,479	$ 62,699	$ (74,844)

8. Derivatives

The Company regularly transacts in certain derivative-based weather risk management products primarily to address weather and energy risks on behalf of third parties. The markets for these derivatives are generally linked to energy and agriculture commodities, weather and other natural phenomena. Generally, the Company's current portfolio of such derivative contracts is of short duration and such contracts are predominantly seasonal in nature. The Company also invests a portion of its investments with third party investment managers with investment guidelines that permit the use of derivative instruments. The Company may enter derivative transactions directly or as part of strategies employed by its external investment managers.

The Company's objectives for holding these derivatives are as follows:

Interest Rate Futures, Swaps, Swaptions and Options - to manage exposure to interest rate risk, which can include increasing or decreasing its exposure to this risk through modification of the portfolio composition and duration.

Foreign Exchange Forwards, Futures and Options - as part of its overall currency risk management and investment strategies.

8. Derivatives, cont'd.

Credit Default Swaps - to manage market exposures. The Company may assume or economically hedge credit risk through credit default swaps to replicate or hedge investment positions. The original term of these credit default swaps is generally five years or less.

To-Be-Announced Mortgage-backed Securities ("TBAs") - to enhance investment performance and as part of the overall investment strategy. TBAs represent commitments to purchase or sell a future issuance of agency mortgage-backed securities. For the period between the purchase of a TBA and issuance of the underlying securities, the Company's position is accounted for as a derivative.

Energy and Weather Contracts - to address weather and energy risks. The Company may purchase or sell contracts with financial settlements based on the performance of an index linked to a quantifiable weather element, such as temperature, precipitation, snowfall or windspeed, and structures with multiple risk triggers indexed to a quantifiable weather element and a weather sensitive commodity price, such as temperature and electrical power or natural gas. Generally, the Company's current portfolio of energy and weather derivative contracts is of comparably short duration and such contracts are predominantly seasonal in nature.

Loss Development Cover – as part of the sale of Montpelier U.S. Insurance Company ("MUSIC") to Selective Insurance Group, Inc. ("Selective"), Montpelier Reinsurance Ltd. (now Endurance Bermuda) entered into a loss development cover with MUSIC which ensures that MUSIC's reserve for losses and loss expenses relating to retained business written on or prior to December 31, 2011 remains adequate. Under the loss development cover, any future adverse development associated with such retained reserves will be protected by Endurance Bermuda and any future favorable development associated with such retained reserves will benefit Endurance Bermuda.

The following tables show the fair value of derivative financial instruments, recorded as derivative assets or liabilities, together with their notional amounts. The notional amount, shown gross, is the amount of a derivative's underlying assets, reference rate or index and is the basis upon which changes in the value of the derivatives are measured. The notional amounts indicate the volume of transactions outstanding and are indicative of neither the market risk nor the credit risk.

	December 31, 2019		December 31, 2018		January 1, 2018	
	Fair Value	Notional Principal Amount	Fair Value	Notional Principal Amount	Fair Value	Notional Principal Amount
Derivative assets						
Foreign exchange forward contracts	$ 113	$ 4,168	$ 182	$ 11,749	$ 210	$ 5,631
Credit default swaps	97	5,800	26	1,900	188	2,700
Interest rate swaps	—	—	685	25,900	45	6,651
Interest rate futures	116	8,200	927	219,600	60	19,514
TBAs	75,577	73,300	136,219	133,900	208,090	203,000
Energy and weather contracts	39,050	129,106	63,211	134,971	60,825	140,187
Total derivative assets	$ 114,953		$ 201,250		$ 269,418	
Derivative liabilities						
Foreign exchange forward contracts	$ 326	$ 19,078	$ 202	$ 13,091	$ 646	$ 32,020
Credit default swaps	15	900	161	3,500	—	—
Interest rate swaps	63	3,681	88	10,269	210	14,723
Interest rate swaptions	—	—	32	15,800	—	—
Interest rate futures	123	4,200	738	37,300	151	67,464
TBAs	25,671	24,900	66,782	65,600	96,657	94,400
Loss development cover	920	24,988	838	24,221	1,815	24,211
Energy and weather contracts	39,692	311,686	74,848	265,760	44,321	269,715
Total derivative liabilities	$ 66,810		$ 143,689		$ 143,800	

At December 31, 2019, derivative assets of $114.8 million (December 31, 2018 - $200.3 million, January 1, 2018 - $269.4 million) and liabilities of $66.7 million (December 31, 2018 - $143.0 million, January 1, 2018 - $143.6 million) were subject to

8. Derivatives, cont'd.

master netting agreements, which provide for the ability to settle the derivative asset and liability with each counterparty on a net basis. Interest rate futures are not subject to master netting agreements. The Company's derivative instruments were recorded on a gross basis in the Consolidated Balance Sheets.

9. Deferred acquisition costs

The following table shows a reconciliation of beginning and ending balances of gross and ceded deferred acquisition costs for the years ended December 31, 2019 and 2018:

	Gross	Ceded	Net
Balance at January 1, 2018	$ 462,508	$ 147,028	$ 315,480
Acquired through business combination under common control	4,299	9,908	(5,609)
Expense deferred	973,970	323,991	649,979
Amortization	(903,919)	(297,660)	(606,259)
Other	8,668	(6,559)	15,227
Balance at December 31, 2018	$ 545,526	$ 176,708	$ 368,818
Acquired through business combination under common control	1,816	—	1,816
Expense deferred	1,122,382	324,151	798,231
Amortization	(1,032,147)	(303,551)	(728,596)
Other	701	(7,643)	8,344
Balance at December 31, 2019	$ 638,278	$ 189,665	$ 448,613

10. Insurance, reinsurance and other assets

The following table shows premiums receivable, other insurance and reinsurance balances receivable, receivables on investments sold, derivative assets, reinsurance recoverables on unpaid and paid losses and other assets as at December 31, 2019, December 31, 2018 and January 1, 2018:

	December 31, 2019	December 31, 2018	January 1, 2018
Premiums receivable, net	$ 2,498,920	$ 2,072,584	$ 1,829,702
Other insurance and reinsurance balances receivable	98,861	103,793	108,000
Receivables on investments sold	34,823	70,001	100,537
Derivative assets	114,953	201,250	269,418
Reinsurance recoverable on unpaid losses	3,332,238	3,274,568	2,593,603
Reinsurance recoverable on paid losses	1,044,425	944,577	518,818
Due from affiliates	6,683	4,817	804
Other assets	158,146	126,828	57,398
Total	$ 7,289,049	$ 6,798,418	$ 5,478,280

The current and non-current portions of above balances at December 31, 2019, December 31, 2018 and January 1, 2018 are as follows:

	December 31, 2019	December 31, 2018	January 1, 2018
Current	$ 6,609,977	$ 6,182,244	$ 5,118,109
Non-current	679,072	616,174	360,171
Total	$ 7,289,049	$ 6,798,418	$ 5,478,280

The Company assesses its premiums receivable and reinsurance recoveries for impairment by reviewing counterparty payment history. The carrying value approximates fair value due to the short-term nature of the receivables.

10. Insurance, reinsurance and other assets, cont'd.

The Company purchases reinsurance to reduce its exposure to risk of loss in certain insurance and reinsurance lines of business. Reinsurance recoverables are recorded as assets if the reinsurer is deemed able to meet its obligations. Ceded reinsurance contracts do not relieve the Company from its obligations to policyholders. The Company remains primarily liable to its policyholders for the portion reinsured to the extent that any reinsurer does not meet the obligations assumed under the reinsurance agreements.

11. Goodwill and intangible assets

The following tables present the changes in the Company's gross goodwill and intangible assets for the years ended December 31, 2019 and 2018:

	Gross balance at December 31, 2018	Acquisitions - business combinations (Note 4)	Acquisitions - separately acquired	Foreign currency translation	Gross balance at December 31, 2019
Agent, broker and customer relationships	$ 210,136	$ —	$ —	$ —	$ 210,136
Renewal rights	67,431	—	—	—	67,431
VOBA	37,360	—	—	—	37,360
Lloyd's syndicate capacity	45,562	—	—	—	45,562
Insurance licenses	29,437	—	—	—	29,437
Computer software	83,335	—	14,390	—	97,725
Goodwill	193,611	(1,062)	—	(235)	192,314
Other intangible assets	20,036	674	—	—	20,710
	$ 686,908	$ (388)	$ 14,390	$ (235)	$ 700,675

	Gross balance at January 1, 2018	Acquisitions - business combinations (Note 4)	Acquisitions - separately acquired	Foreign currency translation	Gross balance at December 31, 2018
Agent, broker and customer relationships	$ 187,968	$ 22,168	$ —	$ —	$ 210,136
Renewal rights	66,500	931	—	—	67,431
VOBA	—	37,360	—	—	37,360
Lloyd's syndicate capacity	45,562	—	—	—	45,562
Insurance licenses	13,679	15,758	—	—	29,437
Computer software	61,219	3,161	18,955	—	83,335
Goodwill	152,640	41,964	—	(993)	193,611
Other intangible assets	17,379	2,657	—	—	20,036
	$ 544,947	$ 123,999	$ 18,955	$ (993)	$ 686,908

For the year ended December 31, 2019, acquisitions of separately acquired computer software amount included additions of internally developed software costs that were capitalized of $9.4 million (2018 - $12.9 million).

11. Goodwill and intangible assets, cont'd.

The following tables present changes in the Company's accumulated amortization on the goodwill and intangible assets for the years ended December 31, 2019 and 2018:

	Accumulated amortization and impairment loss at December 31, 2018	Acquisitions - business combinations (Note 4)	Amortization expense	Impairment loss	Foreign currency translation	Accumulated amortization and impairment loss at December 31, 2019
Agent, broker and customer relationships	$ 108,896	$ —	$ 16,329	$ —	$ —	$ 125,225
Renewal rights	35,844	—	7,051	—	—	42,895
VOBA	29,632	—	7,141	—	—	36,773
Computer software	40,632	—	14,404	—	33	55,069
Other intangible assets	12,313	—	5,630	—	—	17,943
	$ 227,317	$ —	$ 50,555	$ —	$ 33	$ 277,905

	Accumulated amortization and impairment loss at January 1, 2018	Amortization expense	Impairment loss	Foreign currency translation	Accumulated amortization and impairment loss at December 31, 2018
Agent, broker and customer relationships	$ 86,026	$ 22,870	$ —	$ —	$ 108,896
Renewal rights	27,153	8,691	—	—	35,844
VOBA	—	29,632	—	—	29,632
Computer software	28,070	12,562	—	—	40,632
Other intangible assets	7,178	5,135	—	—	12,313
	$ 148,427	$ 78,890	$ —	$ —	$ 227,317

The following table presents the net carrying amount of the Company’s goodwill and intangible assets as at December 31, 2019, December 31, 2018 and January 1, 2018:

	December 31, 2019	December 31, 2018	January 1, 2018
Agent, broker and customer relationships	$ 84,911	$ 101,240	$ 101,942
Renewal rights	24,536	31,587	39,347
VOBA	587	7,728	—
Lloyd's syndicate capacity	45,562	45,562	45,562
Insurance licenses	29,437	29,437	13,679
Computer software	42,656	42,703	33,149
Goodwill	192,314	193,611	152,640
Other intangible assets	2,767	7,723	10,201
	$ 422,770	$ 459,591	$ 396,520

An explanation of the identifiable intangible assets is as follows:

- Agent, broker and customer relationships - These relationships included the Company's agent, brokers and customer relationships and consideration was given to the expectation of the renewal of these relationships and the associated expenses. The remaining amortization period is 3 to 7 years as at December 31, 2019;

11. Goodwill and intangible assets, cont'd.

- Renewal rights - The value of policy renewal rights taking into consideration written premium on assumed retention ratios and the insurance cash flows and the associated equity cash flows from these renewal policies over the expected life of the renewals. The remaining amortization period is 5 to 10 years as at December 31, 2019;
- VOBA - The expected future losses and expenses associated with the policies that were in-force as of the closing date of a transaction were estimated and compared to the future premium remaining expected to be earned. The difference between the risk-adjusted future loss and expenses, discounted to present value and the unearned premium reserve, was estimated to be the VOBA. The remaining amortization period is less than 1 year as at December 31, 2019;
- Lloyd's syndicate capacity - The value of the syndicate capacity, which represents the Company's authorized premium income limit to write insurance business in the Lloyd's marketplace. Syndicate capacity is considered to have an indefinite economic useful life as a syndicate can continue to underwrite risks and generate value if it is registered with the Lloyd's marketplace and has sufficient funds maintained at Lloyd's;
- Insurance licenses - The value of insurance licenses providing the ability to write reinsurance in jurisdictions in the U.S. As there are no expiry to the licenses or they are expected to renew indefinitely, the insurance licenses are considered to have an indefinite useful economic life;
- Computer software - The value of computer softwares internally generated and separately acquired. The remaining amortization period is 3 to 15 years as at December 31, 2019; and
- Other intangible assets - Includes value of non-competition agreement and other intangible assets which are acquired through prior business combinations.

Goodwill arising from business combinations and intangible assets with indefinite lives are not amortized but are reviewed for impairment on an annual basis or more frequently if there are indicators that these assets may be impaired. Goodwill acquired in a business combination is allocated to groups of CGUs according to the level at which management of the Company monitors that goodwill. Intangible assets with indefinite lives are allocated to the CGU to which they relate. The net carrying amount of goodwill and intangible assets with indefinite lives allocated to the Company's one CGUs as at December 31, 2019, December 31, 2018 and January 1, 2018 is shown below.

	December 31, 2019	December 31, 2018	January 1, 2018
Goodwill	$ 192,314	$ 193,611	$ 152,640
Intangible assets with indefinite lives	74,999	74,999	59,241
Total	$ 267,313	$ 268,610	$ 211,881

When testing for impairment, the recoverable amount of each CGU is determined based on value in use. Value in use is calculated using projected cash flows based on the financial projections of the CGU. These are approved by management and cover a five-year period. The most significant assumptions used to derive the projected cash flows include an assessment of premium growth rate, projected loss ratios, outwards reinsurance expenditure and investment returns, which are based on past experiences and management's best estimate. A pre-tax risk-adjusted discount rate specific to the Company of 10.7% (December 31, 2018 - 9.5%, January 1, 2018 - 10.6%) is used to discount the projected cash flow as at December 31, 2019, which reflects a combination of factors including the Company's expected cost of equity. The growth rate used at December 31, 2019 to extrapolate the cash flows is 3.6% (December 31, 2018 - 3.0%, January 1, 2018 - 3.0%) based on historical growth rates and the management’s best estimate of future growth rates. The impairment review indicates that the recoverable amount exceeds the net carrying value for both the intangible assets with indefinite lives and goodwill and would not be sensitive to any reasonably possible change in the underlying assumptions.

12. Reserve for losses and loss expenses

Activity in the reserve for losses and loss expenses for the years ended December 31, 2019 and 2018 is summarized as follows:

	Gross reserve for losses and loss expenses	Reinsurance recoverables on unpaid losses	Net reserve for losses and loss expenses
Balance at January 1, 2018	$ 7,002,757	$ 2,593,603	$ 4,409,154
Incurred losses for:			
Current year	4,152,767	2,065,737	2,087,030
Prior years	53,569	135,738	(82,169)
Total incurred	4,206,336	2,201,475	2,004,861
Paid losses for:			
Current year	(1,042,496)	(551,063)	(491,433)
Prior years	(2,360,033)	(1,073,777)	(1,286,256)
Total paid	(3,402,529)	(1,624,840)	(1,777,689)
Acquired reserves from Lexon and SJNKE	248,126	129,793	118,333
Foreign currency translation and other	(78,766)	(25,463)	(53,303)
Balance at December 31, 2018	$ 7,975,924	$ 3,274,568	$ 4,701,356
Incurred losses for:			
Current year	4,122,952	1,803,430	2,319,522
Prior years	131,134	92,366	38,768
Total incurred	4,254,086	1,895,796	2,358,290
Paid losses for:			
Current year	(995,216)	(522,120)	(473,096)
Prior years	(2,906,324)	(1,323,389)	(1,582,935)
Total paid	(3,901,540)	(1,845,509)	(2,056,031)
Acquired reserves from Sompo Corporate Member	22,958	6,696	16,262
Foreign currency translation and other	19,271	687	18,584
Balance at December 31, 2019	$ 8,370,699	$ 3,332,238	$ 5,038,461

During 2019, the Company's estimated ultimate losses for prior accident years were increased by $38.8 million (2018 - reduced by $82.2 million) due to higher claims emergence than originally estimated by the Company.

Reserves for losses and loss expenses are based in part upon the estimation of losses resulting from catastrophic events. Estimation of these losses and loss expenses are based upon the Company's historical claims experience and is inherently difficult because of the Company's short operating history and the possible severity of catastrophe claims. Therefore, the Company uses both proprietary and commercially available models, as well as historical reinsurance industry catastrophe claims experience in addition to its own historical data for purposes of evaluating trends and providing an estimate of ultimate claims costs.

A significant portion of the Company's contracts and policies cover excess layers for high severity exposures. Underwriting results and ultimate claims payments for this type of coverage are therefore not typically reported to the Company until later in the contract and policy lives. As a result, the level of losses reported to date is not necessarily indicative of expected future results.

12. Reserve for losses and loss expenses, cont'd.

The Company incorporates a variety of actuarial methods and judgments in its reserving process. Two key inputs in the various actuarial methods employed by the Company are initial expected loss ratios and expected loss reporting patterns. These key inputs impact the potential variability in the estimate of the reserve for losses and loss expenses. The Company's loss and loss expense reserves consider and reflect, in part, deviations resulting from differences between expected loss and actual loss reporting as well as judgments relating to the weights applied to the reserve levels indicated by the actuarial methods. Expected loss reporting patterns are based upon internal and external historical data and assumptions regarding claims reporting trends over a period of time that extends beyond the Company's own operating history.

The Company establishes loss and loss expense reserves to provide for the estimated costs of paying claims under insurance policies and reinsurance contracts underwritten by the Company. These reserves include estimates for both claims that have been reported and those that have been incurred but not reported and include estimates of all expenses associated with processing and settling these claims. Estimating the ultimate cost of future claims and claim adjustment expenses is based on management judgment and thus, actual losses incurred may vary significantly from management's estimates.

The following tables illustrate the gross and net development of the estimates of ultimate cumulative claims for the Company after the end of each accident year, illustrating how amounts estimated have changed from the initial estimates made.

Estimate of gross ultimate liability[1]

For the years ended December 31,						
Accident Year	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
At end of accident year	$ 2,465,855	$ 2,653,005	$ 4,091,618	$ 4,249,308	$ 4,122,505	
One year later	2,427,066	2,679,209	4,256,319	4,557,820	—	
Two years later	2,443,615	2,661,617	4,243,089	—	—	
Three years later	2,463,568	2,574,354	—	—	—	
Four years later	2,449,859	—	—	—	—	
Gross ultimate liability 2015-2019	$ 2,449,859	$ 2,574,354	$ 4,243,089	$ 4,557,820	$ 4,122,505	$ 17,947,627
Gross ultimate liability pre-2015						23,397,409
Total gross ultimate liability						$ 41,345,036
Gross paid 2015-2019	(2,054,193)	(2,020,865)	(2,967,715)	(2,477,970)	(995,133)	(10,515,876)
Gross paid pre-2015						(22,458,461)
Total gross paid						$ (32,974,337)
Total gross liability as at December 31, 2019						$ 8,370,699

(1) Adjusted for revaluation of foreign currencies at the exchange rate as at December 31, 2019.

Estimate of net ultimate liability[1]

For the years ended December 31,						
Accident Year	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
At end of accident year	$ 1,657,739	$ 1,773,549	$ 2,249,292	$ 2,172,784	$ 2,319,019	
One year later	1,616,388	1,687,403	2,223,995	2,335,463	—	
Two years later	1,529,865	1,662,345	2,221,179	—	—	
Three years later	1,521,973	1,601,143	—	—	—	
Four years later	1,529,884	—	—	—	—	
Net ultimate liability 2015-2019	$ 1,529,884	$ 1,601,143	$ 2,221,179	$ 2,335,463	$ 2,319,019	$ 10,006,688
Net ultimate liability pre-2015						18,575,311
Total ultimate liability						$ 28,581,999
Net paid 2015-2019	(1,263,437)	(1,222,325)	(1,535,341)	(1,065,025)	(473,030)	(5,559,158)
Net paid pre-2015						(17,984,380)
Total net paid						$ (23,543,538)
Total net liability as at December 31, 2019						$ 5,038,461

13. Reserve for unearned premium

Activity in the reserve for unearned premiums for the years ended December 31, 2019 and 2018 is summarized as follows:

	Reserve for unearned premium	Prepaid reinsurance premiums	Net reserve for unearned premium
Balance at January 1, 2018	$ 2,430,598	$ 948,549	$ 1,482,049
Acquired through business combination	109,838	46,331	63,507
Premiums written during the year	5,960,746	2,710,986	3,249,760
Premiums earned during the year	(5,604,639)	(2,586,409)	(3,018,230)
Foreign currency translation	(18,376)	(12,479)	(5,897)
Balance at December 31, 2018	$ 2,878,167	$ 1,106,978	$ 1,771,189
Acquired through business combination	6,650	1,367	5,283
Premiums written during the year	6,787,918	2,885,697	3,902,221
Premiums earned during the year	(6,319,424)	(2,735,980)	(3,583,444)
Foreign currency translation	9,805	(5,576)	15,381
Balance at December 31, 2019	$ 3,363,116	$ 1,252,486	$ 2,110,630

14. Property and equipment

The components of property and equipment as at December 31, 2019, December 31, 2018, and January 1, 2018 are as follows:

	Right-of-use assets	Other property and equipment	Total
Cost			
Balance at January 1, 2018	$ 168,827	$ 119,632	$ 288,459
Additions	23,794	10,882	34,676
Acquisitions through business combinations (Note 4)	736	18,733	19,469
Disposals	—	(15,365)	(15,365)
Foreign currency translation	—	(526)	(526)
Balance at December 31, 2018	193,357	133,356	326,713
Additions	23,651	9,803	33,454
Acquisitions through business combinations (Note 4)	—	—	—
Disposals	(646)	(7,265)	(7,911)
Foreign currency translation	(2,397)	(29)	(2,426)
Balance at December 31, 2019	213,965	135,865	349,830
Accumulated depreciation			
Balance at January 1, 2018	$ —	$ (62,978)	$ (62,978)
Depreciation	(24,639)	(9,489)	(34,128)
Acquisitions through business combinations (Note 4)	—	(8,584)	(8,584)
Disposals	—	9,755	9,755
Accumulated foreign currency translation	(14)	95	81
Balance at December 31, 2018	(24,653)	(71,201)	(95,854)
Depreciation	(29,281)	(13,607)	(42,888)
Acquisitions through business combinations (Note 4)	—	—	—
Disposals	605	5,960	6,565
Accumulated foreign currency translation	2,725	1,448	4,173
Balance at December 31, 2019	(50,604)	(77,400)	(128,004)
Net property and equipment			
Balance at January 1, 2018	$ 168,827	$ 56,654	$ 225,481
Balance at December 31, 2018	$ 168,704	$ 62,155	$ 230,859
Balance at December 31, 2019	$ 163,361	$ 58,465	$ 221,826

14. Property and equipment, cont'd.

Leases as a lessee

The Company leases buildings for its office space and leased vehicles. Some leases include an option to renew the lease for an additional period after the end of the contract term. The renewal options held are exercisable only by the Company, and it assesses at the lease commencement whether it is reasonably certain to exercise the renewal options. The Company also sub-leases some of its office spaces under operating leases. The Company recognizes its leases of office spaces as right-of-use assets recorded within property and equipment on the Consolidated Balance Sheets and depreciation is recorded in general and administrative expenses on the Consolidated Statements of Profit and Comprehensive Income (Loss). Lease liabilities are recorded in loans and borrowings on the Consolidated Balance Sheets.

On inception of a lease, the weighted average incremental borrowing rate applied to lease liabilities is based on the comparable yield curve in the U.S. financial sector, adjusted for estimate of collateral spread.

A maturity analysis for the undiscounted liabilities related to leases as at December 31, 2019, December 31, 2018 and January 1, 2018 is summarized as follows:

	December 31, 2019	December 31, 2018	January 1, 2018
Less than one year	$ 29,200	$ 29,715	$ 22,417
One to five years	99,174	85,272	84,567
More than five years	73,105	93,287	139,861
Total undiscounted lease payments to be paid	$ 201,479	$ 208,274	$ 246,845

Interest on lease liabilities that are recognized as financing costs on the Consolidated Statements of Profit and Comprehensive Income (Loss) for the year ended December 31, 2019 is $6.1 million (2018 - $5.6 million).

The total cash outflow for leases recognized in the Consolidated Statements of Cash Flows for the year ended December 31, 2019 is $20.2 million (2018 - $10.6 million).

The Company also leases IT equipment and machinery with contractual terms of 1 to 3 years. These leases are generally considered to be leases of low-value items. The Company has elected not to recognize right-of-use assets and lease liabilities for these leases of low-value items.

Leases as a sub-lessor

The Company sub-leases some of its office building that it leases. These leases are classified as operating leases because they do not transfer substantially all of the risks and rewards incidental to the ownership of the assets. As at December 31, 2019, right-of-use assets included subleases accounted for as operating leases of $1.4 million (December 31, 2018 - $3.6 million, January 1, 2018 - $4.8 million).

The following table sets out the maturity analysis of the undiscounted lease payments to be received after December 31, 2019, December 31, 2018 and January 1, 2018:

	December 31, 2019	December 31, 2018	January 1, 2018
Less than one year	$ 776	$ 987	$ 588
One to five years	718	1,586	2,573
More than five years	—	—	—
Total undiscounted lease payments to be received	$ 1,494	$ 2,573	$ 3,161

Sub-lease income of $0.8 million was recorded in the Consolidated Statements of Profit and Comprehensive Income (Loss) for the year ended December 31, 2019 (2018 - $0.6 million).

15. Loans and borrowings

Credit Facilities

On November 2, 2017, the Company, Sompo International and certain designated subsidiaries entered into a $200.0 million Uncommitted Letter of Credit and Reimbursement Agreement with Mizuho Bank, Ltd. (the "Mizuho Credit Facility"). During 2017 and 2019, the size of the Mizuho Credit Facility was increased by $150.0 million and $100.0 million, respectively, to $450.0 million of uncommitted capacity. The Mizuho Credit Facility requires the compliance with certain customary restrictive covenants. The Obligors (as defined in the Mizuho Credit Facility) are required to pay a fee of 0.2% on the daily aggregate amount of letters of credit issued payable quarterly in arrears. As of December 31, 2019, there were letters of credit outstanding under the Mizuho Credit Facility of approximately $406.5 million (December 31, 2018 - $217.2 million, January 1, 2018 - $165.2 million).

On December 21, 2017, the Company, Sompo International and certain designated subsidiaries became an applicant under the Continuing Letter of Credit Agreement (for Standby Letters of Credit) with Bank of Tokyo-Mitsubishi UFJ, Ltd. (the "BTMU Credit Facility"). The BTMU Credit Facility was initially a $100.0 million unsecured letter of credit facility. During 2019, the size of the BTMU Credit Facility was increased by $150.0 million, to a $250.0 million unsecured letter of credit facility. The BTMU Credit Facility requires the compliance with certain customary restrictive covenants. Each applicant is required to pay a fee of 0.2% on the daily aggregate amount of letters of credit issued payable quarterly in arrears. As of December 31, 2019, there were letters of credit outstanding under the BTMU Credit Facility of approximately $202.7 million (December 31, 2018 - $53.9 million, January 1, 2018 - nil).

On March 23, 2016, the Company, Endurance Holdings and certain designated subsidiaries entered into a $450.0 million five-year letter of credit facility with JPMorgan Chase Bank, N.A. ("JPMorgan") as administrative agent (the "JPM Credit Facility"). Effective September 27, 2017, the JPM Credit Facility was amended to replace Endurance Holdings with Sompo International. Sompo International assumed all the rights, duties and obligations of Endurance Holdings as the Parent Borrower pursuant to the terms of the JPM Credit Facility, including the Parent Borrower Guaranty as defined in the JPM Credit Facility. Effective October 30, 2017, Endurance Holdings ceased to be a party to the JPM Credit Facility. In January 2018, the Company notified JPMorgan of its intent to reduce the size of the commitment under the JPM Credit Facility to $100.0 million. The JPM Credit Facility requires the compliance with certain customary restrictive covenants. The Company is required to pay a fee of 0.4% per annum on the daily stated amount of outstanding letters of credit issued under the JPM Credit Facility. In addition, the JPM Credit Facility requires the Company to pay to the Lenders a commitment fee of 0.125% per annum on the average daily amount of the unused commitments of the Lenders. The JPM Credit Facility permits a Lender, if requested and in its discretion, to issue a letter of credit pursuant to which it fronts for the other Lenders. For such letters of credit, such fronting lenders may receive certain fronting fees from the Company. As of December 31, 2019, there were no outstanding borrowings under the JPM Credit Facility (December 31, 2018 - nil, January 1, 2018 - $14.5 million).

Other Uncommitted Letter of Credit Agreements

The Company is party to certain uncommitted letter of credit reimbursement agreements ("LOC Agreements") that allow for the issuance of letters of credit in a variety of currencies, including U.S. Dollars. The fees paid under the LOC Agreements depend on the amount of the outstanding letters of credit and vary from 0.3% to 0.45% on the principal amount of letters of credit outstanding to a fee negotiated at the time of issuance of the individual letters of credit. As of December 31, 2019, there were letters of credit outstanding under the LOC Agreements of $31.9 million (December 31, 2018 - $26.1 million, January 1, 2018 - $29.8 million).

16. Pension Plan

Defined contribution plan

The Company provides pension benefits to eligible employees through various defined contribution plans sponsored by the Company. Under the Company's defined contribution plans, the Company makes contributions to its employees' accounts in amounts ranging from 3% to 12% of its employees' eligible earnings. This includes matching contributions made by the Company based on the level of employee contribution and additional contributions, depending on its annual financial performance. The employee and Company contributions in the defined contribution plans are invested at the election of each employee in one or more of several investment portfolios offered by third party investment advisors. Company contributions for the year ended December 31, 2019 resulted in an expense of $26.3 million (2018 - $22.3 million) included in general and administrative expenses within the Consolidated Statements of Profit and Comprehensive Income (Loss).

Defined benefit scheme

SJNKE operated a defined benefit pension scheme (the "SJNKE Defined Benefit Scheme"). Assets of the SJNKE Defined Benefit Scheme were held separately from those of the Company, and the SJNKE Defined Benefit Scheme was closed to new members on January 1, 2007. In November 2018, the Company executed a pension buy-out with respect to the SJNKE Defined Benefit Scheme and recognized a loss on settlement of $10.5 million within the losses on defined benefit scheme and legal settlements line of the Consolidated Statements of Profit and Comprehensive Income (Loss) for the year ended December 31, 2018.

17. Commitments and contingencies

Letters of credit

As of December 31, 2019, the Company had issued letters of credit of $641.1 million (December 31, 2018 - $297.2 million, January 1, 2018 - $209.5 million) under its credit facilities and letter of credit reimbursement agreements in favor of certain ceding companies to collateralize obligations.

Investment assets held in trust

During 2015, Endurance Bermuda established a multi-beneficiary reinsurance trust (the "Endurance Reinsurance Trust") domiciled in Delaware. The Endurance Reinsurance Trust was established as a means of providing statutory credit to Endurance Bermuda's U.S. cedants. As of December 31, 2019, the fair value of the assets held in the Endurance Reinsurance Trust exceeded $121.0 million (December 31, 2018 - exceeded $586.7 million, January 1, 2018 - exceeded $852.6 million), the minimum value required on each balance sheet date.

During 2015, Endurance Bermuda also established a second multi-beneficiary reinsurance trust (the "Reduced Collateral Trust") domiciled in Delaware. The Reduced Collateral Trust was established as a means of providing statutory credit to Endurance Bermuda's U.S. cedants in connection with a reduction in collateral requirements in certain states. As of December 31, 2019, the fair value of the assets held in the Reduced Collateral Trust exceeded $21.5 million (December 31, 2018 - exceeded $53.3 million, January 1, 2018 - exceeded $38.8 million), the minimum value required on each balance sheet date.

Endurance Bermuda is party to a reinsurance trust (the "MUSIC Trust"). The MUSIC Trust was established as a means of providing statutory credit to MUSIC in support of the business retained in connection with the 2011 sale of MUSIC to Selective. As of December 31, 2019, the fair value of the assets held in the MUSIC Trust was $15.7 million (December 31, 2018 - $19.3 million, January 1, 2018 - $25.2 million), the minimum value required on each balance sheet date.

The Company is party to a Lloyd's Deposit Trust Deed (the "Lloyd's Capital Trust") in order to meet Endurance Corporate Capital Limited ("ECCL")'s ongoing funds at Lloyd's ("FAL") requirements. The minimum value of cash and investments held by the Lloyd's Capital Trust is determined on the basis of ECCL's Individual Capital Assessment, which is used to determine the required amount of FAL. As of December 31, 2019, the fair value of assets held in the Lloyd's Capital Trust was $161.3 million (December 31, 2018 - $169.3 million; January 1, 2018 - $323.6 million), which met the minimum value required on each balance sheet date.

17. Commitments and contingencies, cont'd.

Investment assets held in trust, cont'd

Premiums received by Syndicate 5151 are required to be received into the Lloyd's Premiums Trust Funds (the "Premiums Trust Funds"). Under the Premiums Trust Funds' deeds, assets may only be used for the payment of claims and valid expenses for a stated period of time. As of December 31, 2019, the fair value of assets held in the Premiums Trust Funds was $427.1 million (December 31, 2018 - $407.2 million; January 1, 2018 - $240.2 million).

The Company's investment assets held in trust appear on the Company's Consolidated Balance Sheets as cash and cash equivalents, investments and accrued investment income, as appropriate.

Lloyd's New Central Fund

The Lloyd's New Central Fund is available to satisfy claims if a member of Lloyd's is unable to meet its obligations to policyholders. The Lloyd's New Central Fund is funded by an annual levy imposed on members, which is determined annually by Lloyd's as a percentage of each member's gross written premiums (2019 - 0.35%; 2018 - 0.35%). In addition, the Council of Lloyd's has power to call on members to make an additional contribution to the Lloyd's New Central Fund of up to 3% of their underwriting capacity each year should it decide that such additional contributions are necessary. The Company currently estimates that its 2019 obligation to the Lloyd's New Central Fund will be approximately $1.4 million (2018 - $1.7 million) and accrues for this obligation ratably throughout the year on a quarterly basis.

Lloyd's also imposes other charges on its members and the syndicates on which they participate, including an annual subscription charge of 0.36% of gross written premiums in 2019 (2018 - 0.36%), a market modernization levy of 0.07% in 2019 (2018 - 0.09%) and an overseas business charge, levied as a percentage of gross international premiums (defined as business outside the U.K. and the Channel Islands), with the percentage depending on the type of business written. Lloyd's also has power to impose additional charges under Lloyd's Powers of Charging Byelaw. The Company currently estimates that its 2019 obligation to Lloyd's for such charges will be approximately $3.8 million (2018 - $4.0 million) and accrues for this obligation ratably throughout the year on a quarterly basis.

With effect from 2019, Lloyd’s introduced syndicate loans to the central fund collected from all active syndicates. The proceeds from the loans are to be used to strengthen Lloyd’s central resources and facilitate the injection of capital to Lloyd’s Insurance Company SA (“Lloyd’s Brussels”). The syndicate loan is calculated as 0.33% of each member’s gross written premiums, $1.3 million for 2019.

Investment repurchase agreements

At December 31, 2019, the Company's had no investment repurchase agreement obligations (December 31, 2018 - $80.9 million, January 1, 2018 - nil). At December 31, 2018, the investment repurchase agreement obligations were fully collaterized. The following table presents the fair value of collateral pledged under repurchase agreements by investment category. The remaining contractual maturity of the repurchase agreements at December 31, 2018, was less than 30 days.

Collateral pledged under repurchase agreements	December 31, 2019	December 31, 2018	January 1, 2018
U.S. government and agencies securities	$ —	$ 32,585	$ —
Residential mortgage-backed securities	—	50,408	—
	—	82,993	—
Gross amount of recognized liabilities for repurchase agreements	$ —	$ 80,883	$ —

Pledged collateral levels are monitored daily and are generally maintained at an agreed-upon percentage of the fair value of the amounts borrowed during the life of the transaction. In the event of a decline in the fair value of the pledged collateral under these agreements, the Company may be required to transfer cash or additional securities as pledged collateral under these agreements. Upon termination of the transactions, the Company and its counterparties are obligated to return the amounts borrowed and the securities transferred, respectively. The Company's securities pledged under repurchase agreements appear on the Company's Consolidated Balance Sheets as fixed maturity investments.

Reinsurance commitments

In the ordinary course of business, the Company enters into reinsurance agreements that may include terms which could require the Company to collateralize certain of its obligations.

17. Commitments and contingencies, cont'd.

Employment agreements

The Company has entered into employment agreements with certain officers that provide for long term incentive awards, executive benefits and severance payments under certain circumstances.

Legal proceedings

The Company is party to various legal proceedings generally arising in the normal course of its business. While any proceeding contains an element of uncertainty, the Company does not believe that the eventual outcome of any litigation or arbitration proceeding to which it is presently a party could have a material adverse effect on its financial condition, results of operations or business. Pursuant to the Company's insurance and reinsurance agreements, disputes are generally required to be finally settled by arbitration.

18. Shareholder's equity

The Company's share capital for the years ended December 31, 2019, December 31, 2018 and January 1, 2018 is summarized as follows:

	December 31, 2019	December 31, 2018	January 1, 2018
Common shares:			
Authorized - $1.00 par value each	20,000,000	20,000,000	20,000,000
Issued, outstanding and fully paid:			
Ordinary common shares - $1.00 par value each	12,000,003	12,000,002	12,000,001

For the years ended December 31, 2019 and 2018, the ordinary common shares have increased as a result of acquisition of businesses under common control. For additional information, see Note 4, Business combinations.

19. Related party transactions

Note 1, Organization, provides information about the Company's structure, including details of the operating subsidiaries and parent companies. Affiliates of the Company for the years ended December 31, 2019, December 31, 2018 and January 1, 2018 included Sompo Holdings, its ultimate parent company, and the following subsidiary companies of Sompo Holdings:

Affiliates	Domicile
Blue Capital Management Ltd., manager of Blue Water Re Ltd.	Bermuda
Sompo Seguros S.A.	Brazil
Sompo Insurance China Co., Ltd.	China
Sompo Insurance (Hong Kong) Company Limited	Hong Kong
PT Sompo Insurance Indonesia	Indonesia
SJNK Asset Management	Japan
Sompo Japan Nipponkoa Insurance	Japan
Berjaya Sompo Insurance Berhand	Malaysia
Sompo Insurance Singapore Pte. Ltd	Singapore
SOMPO Taiwan Brokers Co., Ltd.	Taiwan
Sompo Insurance (Thailand) Public Company Limited	Thailand
Sompo Japan Sigorta Anonim Sirketi	Turkey

Intercompany reinsurance arrangements

The Company reinsured affiliates for property and casualty risks on an excess-of-loss and quota share basis. The Company also ceded a portion of it's direct and assumed business to affiliates.

19. Related party transactions, cont'd.

Intercompany reinsurance arrangements, cont'd.

The following table presents the impact in the Consolidated Statements of Profit and Comprehensive Income (Loss) of the related party reinsurance arrangements for the years ended December 31, 2019 and 2018:

	2019	2018
Gross premiums written	$ 29,492	$ 22,252
Ceded premiums written	(231,276)	(250,757)
Net premiums earned	(184,346)	(243,548)
Losses and loss adjustment expenses incurred	4,057	250,851
Acquisition expenses	65,453	64,960
Other underwriting income	2,541	11,116

The following table presents the impact in the Consolidated Balances Sheets of the related party reinsurance arrangements at December 31, 2019, December 31, 2018 and January 1, 2018:

	December 31, 2019	December 31, 2018	January 1, 2018
Premiums receivable	$ 11,734	$ 1,226	$ 4,049
Insurance and reinsurance balances receivable	392	3,366	174
Deferred acquisition costs, net	(9,951)	(28,911)	102
Prepaid reinsurance premiums	69,369	55,028	43,706
Reinsurance recoverable on unpaid losses	400,191	410,009	312,247
Reinsurance recoverable on paid losses	95,752	37,578	58,064
Reserve for losses and loss expenses	75,874	5,372	7,520
Reserve for unearned premiums	7,113	4,755	6,257
Insurance and reinsurance balances payable	120,509	52,899	54,751

Other intercompany balances

At December 31, 2019, the Company had a balance of $6.7 million due from affiliates (December 31, 2018 - $4.8 million, January 1, 2018 - $0.8 million) . At December 31, 2019, the Company had a balance of $1,212.8 million due to affiliates (December 31, 2018 - $1,294.5 million, January 1, 2018 - $448.7 million) . At December 31, 2019, the amount due to affiliates includes an unsecured promissory note for $200.0 million (December 31, 2018 and January 1, 2018 - $200.0 million, respectively) between Sompo International and Endurance Bermuda dated June 1, 2011. Interest on the unsecured promissory note is payable quarterly in arrears at a rate of 5.1% (December 31, 2018 and January 1, 2018 - 5.1%, respectively) . The principal amount of the unsecured promissory note matures on June 1, 2021. At December 31, 2019, the amount due to affiliates also includes an unsecured promissory note for $750.0 million (December 31, 2018 - $750.0 million, January 1, 2018 - nil) between Sompo International and Endurance Bermuda dated December 19, 2018. This unsecured promissory note is interest free and the principal amount matures on December 31, 2028. At December 31, 2019, December 31, 2018 and January 1, 2018 there were also other unsecured intercompany balances between Sompo International and the Company in addition to the unsecured promissory notes.

19. Related party transactions, cont'd.

Key management personnel compensation

Key management personnel of the Company includes its directors and executive management. The aggregate remuneration of directors and key management personnel compensation for the years ended December 31, 2019 and 2018 comprised the following:

	2019	2018
Short-term employee benefits	$ 10,765	$ 10,160
Post-employment benefits	494	501
Other long-term benefits	5,355	2,525
Termination Benefits	6,892	—
Total	**$ 23,506**	**$ 13,186**

Total compensation of the Company's key management personnel includes salaries, annual incentives, and non-cash benefits.

20. Statutory requirements and dividend restrictions

The Company's insurance and reinsurance operations are subject to insurance and/or reinsurance laws and regulations in the jurisdictions in which they operate, the most significant of which are Bermuda, the United States, the United Kingdom, Luxembourg and Singapore. These regulations include certain restrictions on the amount of dividends or other distributions, such as loans or cash advances, available to shareholders without prior approval of the insurance regulatory authorities. The stated regulatory requirements would not pose significant restrictions on the Company's ability to access the funds and settle the liabilities as they come due during its normal course of operation.

Bermuda

	December 31, 2019	December 31, 2018	January 1, 2018
Required statutory capital	$ 2,662,235	$ 2,288,573	$ 1,984,672
Actual statutory capital	4,618,020	4,660,848	5,225,093

For the entities registered in Bermuda, the aggregate statutory net income for the year ended December 31, 2019 is $469.4 million (2018 - 335.0 million).

Endurance Bermuda is a registered Class 4 insurer under the Insurance Act 1978 ("Bermuda Insurance Act") and related regulations as amended (the "Insurance Act"). Endurance Bermuda is required to maintain minimum solvency standards and to hold available statutory capital and surplus equal to or exceeding the Enhanced Capital Requirement as determined by the Bermuda Monetary Authority ("BMA") based upon a standard mathematical model that correlates the risk underwritten to the capital that is dedicated to the business. The required capital noted in the table above has been based on the Enhanced Capital Requirement. In addition to the Enhanced Capital Requirement, Endurance Bermuda is required to maintain a minimum statutory liquidity ratio and solvency margin. For all periods presented herein, Endurance Bermuda materially exceeded these minimum requirements.

Endurance Bermuda's ability to pay dividends and make capital distributions is subject to certain regulatory restrictions based on the Enhanced Capital Requirement, limits on the amount of Endurance Bermuda's premiums written and net reserves for losses and loss expenses and a minimum general capital and surplus requirement of $100.0 million.

United States

	December 31, 2019	December 31, 2018	January 1, 2018
Required statutory capital	$ 513,836	$ 459,208	$ 346,469
Actual statutory capital	1,823,299	1,937,980	1,569,806

For the entities registered in the United States, the aggregate statutory net income for the year ended December 31, 2019 is $177.5 million (2018 - $11.4 million).

20. Statutory requirements and dividend restrictions, cont'd

United States, cont'd.

Endurance Assurance, Endurance American, Endurance American Specialty and Endurance Risk Solutions are subject to regulation by the Delaware Department of Insurance. American Agri-Business and Lexon Insurance are subject to regulation by the Texas Department of Insurance. Sompo American Insurance and Sompo America Fire & Marine are subject to regulation by the New York Department of Financial Services. Bond Safeguard is subject to regulation by the South Dakota Division of Insurance. Sompo International's Delaware, Texas, New York and South Dakota domiciled entities must maintain a minimum level of statutory capital as established by such jurisdictions. The amount of required capital is determined through the use of the Risk Based Capital model established by the National Association of Insurance Commissioners and adopted by Delaware, Texas, New York and South Dakota. The required capital noted in the table above has been based on the Risk Based Capital model and represents the authorized control level risk based capital for these entities.

Dividends are limited to the greater of 10% of policyholders' surplus or statutory net income, excluding realized capital gains for the Company's Delaware domiciled entities, the greater of 10% of policyholders' surplus of the preceding year or statutory net income of the preceding year for the Company's Texas domiciled entities, the lesser of 10% of policyholders' surplus without exceeding unassigned surplus or net investment income of record for the Company's New York domiciled entities, and the greater of 10% of policyholders' surplus or statutory net income of the preceding year which includes net realized capital gains in an amount not to exceed 20% of net unrealized capital gains for the Company's South Dakota domiciled entity. In addition, dividends may only be declared or distributed out of earned surplus.

At December 31, 2019, Endurance Assurance, Endurance American, Endurance Risk Solutions and Endurance American Specialty did not have earned surplus and thus were precluded from declaring or distributing dividends during 2019 without the prior approval of the applicable insurance regulator. If the parent company is also an insurer, as is the case with Endurance American, Endurance American Specialty, Endurance Risk Solutions, Sompo America Insurance, and Sompo America Fire & Marine the parent company or companies must also meet their own dividend eligibility requirements in order to pass along any dividends received from subsidiary insurance companies.

United Kingdom

	December 31, 2019	December 31, 2018	January 1, 2018
Required statutory capital[1]	$ 177,986	$ 252,151	$ 179,551
Actual statutory capital[1]	477,318	637,917	486,063

(1) Includes the statutory capital of Endurance U.K and excludes Syndicate 5151. December 31, 2018 includes SJNKE.

For the entities registered in the United Kingdom, the aggregate statutory net income for the year ended December 31, 2019 is $35.1 million (2018 - $14.0 million).

Endurance U.K.

The required and actual statutory capital amounts in the "U.K." category in the table above include amounts related to Endurance U.K. Under the jurisdiction of the United Kingdom's Prudential Regulation Authority ("PRA"), Endurance U.K. must maintain a margin of solvency at all times under the Solvency II Directive from the European Insurance and Occupational Pensions Authority which was effective January 1, 2016. The regulations stipulate that insurers are required to calculate their minimum capital requirement ("MCR") and solvency capital requirement ("SCR"). Insurers can either apply for approval of an internal model to calculate the SCR or adopt the standard formula. Endurance U.K. have utilized the standard formula for the SCR since transition to Solvency II regime from December 31, 2016. As of December 31, 2019, the provisional SCR of Endurance U.K. was $178.0 million (December 31, 2018 - $217.1 million, January 1, 2018 - $172.6 million) and there was surplus capital of $299.3 million (December 31, 2018 - $254.6 million, January 1, 2018 - $306.5 million) with actual Own Funds Available of $477.3 million (December 31, 2018 - $471.7 million, January 1, 2018 - $486.0 million).

The PRA regulatory requirements impose no explicit restrictions on Endurance U.K.'s ability to pay a dividend, but Endurance U.K would have to notify the PRA 28 days prior to any proposed dividend payment. Dividends may only be distributed from profits available for distribution.

20. Statutory requirements and dividend restrictions, cont'd

United Kingdon, cont'd.

Endurance at Lloyd's

The Company participates in the Lloyd's market through Syndicate 5151, which is managed by Endurance at Lloyd's and is capitalized through ECCL. As a corporate member of Lloyd's, ECCL is subject to the oversight of the Council of Lloyd's.

ECCL is required to deposit cash, securities or letters of credit (or a combination of these assets) with Lloyd's in order to satisfy its FAL requirements, which are met through the Lloyd's Capital Trust. At December 31, 2019, ECCL had total capital of $287.0 million (December 31, 2018 - $280.9 million, January 1, 2018 - $295.7 million) which is made up of Funds at Lloyd's of $191.5 million (December 31, 2018 - $169.3 million, January 1, 2018 - $323.6 million) and the syndicate's total reconciliation reserve under Solvency II less foreseeable distributions of $95.5 million (December 31, 2018 - $111.6 million, January 1, 2018 - deficit of $27.9 million).

SJNKE

For 2018, the required and actual statutory capital amounts in the "U.K." category in the table above include amounts related to SJNKE. Prior to the merger of SJNKE into Sompo Europe on January 1, 2019, SJNKE was also subject to regulation from the PRA. As of December 31, 2018, the SCR of SJNKE was $35.1 million. SJNKE had surplus capital of $131.1 million as December 31, 2018, with actual Own Funds Available of $166.2 million.

Switzerland

In 2008, Endurance Bermuda established a branch in Zurich, Switzerland named Endurance Specialty Insurance Ltd. Pembroke (Bermuda) Zurich Branch. In 2015, Endurance U.K. established a branch in Zurich named Endurance Worldwide Insurance Limited, London, Zurich Branch. Swiss law does not impose additional regulation upon a Swiss branch of a foreign reinsurer.

Singapore

	December 31, 2019	December 31, 2018	January 1, 2018
Required statutory capital	$ 3,719	$ 3,668	$ 3,741
Actual statutory capital	60,765	68,408	83,470

For the entity registered in Singapore, the statutory net loss for the year ended December 31, 2019 is $7.1 million (2018 - $14.7 million).

Endurance Bermuda's Singapore branch ("Singapore Branch") is subject to Fund Solvency and Capital Adequacy requirements by the Monetary Authority of Singapore as a foreign company in Singapore and is regulated by the Monetary Authority of Singapore pursuant to the Insurance Act in Singapore. At December 31, 2019, December 31, 2018 and January 1, 2018, the Singapore Branch complied with the capital requirements promulgated by the Monetary Authority of Singapore.

Luxembourg

	December 31, 2019	December 31, 2018	January 1, 2018
Required statutory capital	$ 131,804	$ 27,624	$ —
Actual statutory capital	252,590	99,918	—

For the entity registered in Luxembourg, the statutory net income for the year ended December 31, 2019 is $8.0 million (2018 - $4.2 million loss).

In 2018, Sompo Europe was established under the laws of the Grand Duchy in Luxembourg. Under the jurisdiction of the Commissariat aux Assurances, Sompo Europe must maintain a margin of solvency at all times under the Solvency II Directive. Sompo Europe has utilized the standard formula for the SCR. As of December 31, 2019, the provisional SCR was $131.8 million (December 31, 2018 - $27.6 million) and there was surplus capital of $120.8 million (December 31, 2018 - $72.7 million) with actual Own Funds Available of $252.6 million (December 31, 2018 -$99.9 million).

21. Taxes

The following table shows the components of income tax expense for the years ended December 31, 2019 and 2018:

	2019	2018
Current tax:		
Current corporate tax expense for the year	114,165	6,908
Adjustments for prior year corporation tax	6,130	(217)
Total current tax expense	120,295	6,691
Deferred tax:		
Origination and reversal of temporary differences	(37,039)	3,036
Adjustments for prior year deferred tax	(14,617)	9,424
Total deferred tax (benefit) expense	(51,656)	12,460
Total income tax expense	68,639	19,151

Endurance Bermuda is not required to pay any income or capital gains taxes in Bermuda. Endurance Bermuda has received written assurance dated May 16, 2011 from the Minister of Finance of Bermuda under the Exempted Undertakings Tax Protection Act of 1966 of Bermuda, as amended, that in the event any legislation is enacted in Bermuda imposing any 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, such tax shall not be applicable to the Company until March 31, 2035 provided that the assurance is subject to the condition that it will not prevent the application of any taxes payable by the Company in respect of real property or leasehold interests in Bermuda held by it.

The Company has operating subsidiaries and branch operations in the United States, United Kingdom, Switzerland, Luxembourg, Belgium, France, Germany, Italy, Spain, Mexico, and Singapore, which are subject to the relevant taxes in those jurisdictions. The United States federal tax reform was enacted in December 2017, and as such, the federal corporate income tax rate was reduced from the 35% to 21%, effectively from January 1, 2018. In the United Kingdom, corporate tax rate was reduced from 19% to 17%, substantively enacted in 2016, with effect from April 1, 2020.

The actual income tax expense attributable to profit (loss) for the years ended December 31, 2019 and 2018 differed from the amount computed by applying the combined effective rate of 0% under Bermuda law to profit before income taxes, as a result of the following:

	2019	2018
Profit before tax	$ 739,806	$ 44,142
Corporate tax at 0% under Bermuda law	—	—
Tax expense effect on foreign taxes	85,610	13,635
Adjustments in respect of prior period	(8,488)	9,229
Other permanent differences	(3,952)	(592)
Changes in tax rates	179	643
Tax losses for which no deferred tax asset is recognized	1,700	1,820
Utilization of tax losses previously unrecognized for deferred tax	(6,410)	(5,584)
Total income tax expense	68,639	19,151

21. Taxes, cont'd.

Deferred income taxes represent the tax effect of the differences between the book and tax bases of assets and liabilities. Deferred income tax assets and liabilities consisted of the following as of December 31, 2019, December 31, 2018 and January 1, 2018:

			December 31, 2019		
2019	**Net deferred tax asset (liability) at January 1, 2019**	**Recognized in Consolidated Statement of Profit in 2019**	**Net**	**Deferred tax asset**	**Deferred tax liability**
Investments	$ 5,439	$ (29,487)	$ (24,048)	$ (24,048)	$ —
Intangible assets	(33,391)	13,244	(20,147)	(10,917)	(9,230)
Insurance related items	43,659	17,018	60,677	60,677	—
Employee benefits	7,576	13,959	21,535	21,535	—
Losses carried forward	45,988	8,028	54,016	54,016	—
Other	927	28,894	29,821	30,906	(1,085)
Total	**$ 70,198**	**$ 51,656**	**$ 121,854**	**$ 132,169**	**$ (10,315)**

	January 1, 2018					December 31, 2018		
2018	**Deferred tax asset**	**Deferred tax liability**	**Net**	**Recognized in Consolidated Statement of Profit (Loss) in 2018**	**Business combinations and other**	**Net**	**Deferred tax asset**	**Deferred tax liability**
Investments	$ (444)	$ —	$ (444)	$ 3,415	$ 2,468	$ 5,439	$ 5,439	$ —
Intangible assets	(7,512)	(10,935)	(18,447)	(1,142)	(13,802)	$ (33,391)	(22,829)	(10,562)
Insurance related items	71,479	—	71,479	(37,492)	9,672	$ 43,659	43,659	—
Employee benefits	8,648	—	8,648	(1,444)	372	$ 7,576	7,576	—
Losses carried forward	31,403	—	31,403	14,568	17	$ 45,988	45,988	—
Other	(566)	—	(566)	9,635	(8,142)	$ 927	927	—
Total	**$103,008**	**$ (10,935)**	**$ 92,073**	**$ (12,460)**	**$ (9,415)**	**$ 70,198**	**$ 80,760**	**$ (10,562)**

For the years ended December 31, 2019, December 31, 2018, and January 1, 2018, the Company had no material uncertain tax positions.

At December 31, 2019, the Company's U.S. subsidiaries had no net operating loss carry forward. At December 31, 2018 and January 1, 2018 certain of the Company's U.S. subsidiaries did not recognize a deferred tax asset in relation to a net operating loss carry forward of $111.0 million and $196.2 million, respectively, due to the uncertainty regarding their recoverability. In the United States, the net operating loss carry forwards has been fully utilized in 2019.

At December 31, 2019, Endurance Bermuda's Singapore branch did not recognize deferred tax asset in relation to a net operating loss carry forward of $51.4 million (December 31, 2018 - $37.5 million, January 1, 2018 - $37.5 million) due to the uncertainty regarding their recoverability. Net operating loss carry forwards have no expiration date in Singapore.

At December 31, 2019, Sompo Europe's Italian branch did not recognize deferred tax asset in to a net operating loss carry forward of $108.5 million (December 31, 2018 - $110.9 million) due to the uncertainty regarding their recoverability. Net operating loss carry forwards have no expiration date in Italy.

A deferred tax liability has not been recognized in respect to the investment in associate. The Company has determined that the undistributed profits of its associate will not be distributed in the foreseeable future.

22. Subsequent events

COVID-19 pandemic

Subsequent to December 31, 2019, there has been a global coronavirus outbreak ("COVID-19") that may have a significant impact on the Company. The extent of the impact, which could result in the Company experiencing insurance and reinsurance claims activity and investment losses, will depend on future developments. In addition, the Company's operations could be materially and adversely impacted as a result of office closures, quarantine measures, travel restrictions, and the disease's impact on the health of the Company's employees. As of the date of issuance of the Consolidated Financial Statements, the outbreak is still evolving, and thus there is significant uncertainty as to its ultimate impact on the Company.

23. Transition to IFRS

The Company has adopted IFRS effective January 1, 2019. Prior to the adoption of IFRS, the Company presented its financial statements in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"). As a result, the 2018 comparative information has been adjusted from amounts previously reported in the Company's financial statements prepared in accordance with U.S. GAAP. IFRS 1 requires first-time adopters to apply IFRS standards retrospectively as if IFRS had been in effect from the date of the Company's inception. The Company's transition date is January 1, 2018 (the "Transition Date") and an opening Consolidated Balance Sheet has been prepared as at that date. These Consolidated Financial Statements have been presented in accordance with the IFRS accounting policies discussed in Note 2, Significant accounting policies.

(a) Presentation of Consolidated Financial Statements

Similar to U.S. GAAP, the Company presented the Consolidated Statements of Profit and Comprehensive Income (Loss) on the "nature of expense" format under IFRS. The Company has determined that presenting expenses based on nature provides more meaningful and relevant information to users of its financial statements.

For certain items under U.S. GAAP, the Company previously grouped together or separately presented the items on the face of the Consolidated Financial Statements. Summary of key presentation differences between U.S. GAAP and IFRS are as follows:

Investments

Components within investments were separately presented on the face of the Consolidated Balance Sheet under U.S. GAAP. Under IFRS, investments are grouped together and disclosed separately in Note 6, Investments. In addition, net realized and unrealized gains and losses were grouped together under U.S. GAAP. Realized and unrealized balances are presented separately under IFRS on the Consolidated Statements of Profit and Comprehensive Income (Loss).

Deferred acquisition costs

Under U.S. GAAP, deferred acquisition costs were presented net of reinsurance arrangements. Under IFRS, deferred acquisition costs have been presented separately between gross and ceded on the Consolidated Balance Sheets.

Derivative assets and liabilities

Under U.S. GAAP, derivative assets were included as part of other assets while derivative liabilities were part of other liabilities. Under IFRS, derivative assets and liabilities are separately presented on the Consolidated Balance Sheets.

Property and equipment

Previously, property and equipment balances were included in other assets under U.S. GAAP. Property and equipment is now presented separately on the Consolidated Balance Sheets.

Taxes

Current and deferred tax assets and liabilities have previously been netted together under U.S. GAAP. Under IFRS, reclassification have been made to show current tax asset, current tax liability, deferred tax asset, and deferred tax liability separately on the Consolidated Balance Sheets.

Change in unearned premium

Previously, change in gross unearned premium have been presented on net basis after amounts ceded under reinsurance arrangements under U.S. GAAP. Under IFRS, these balances are presented on a gross basis on the Consolidated Statements of Profit and Comprehensive Income (Loss).

23. Transition to IFRS cont'd

Losses and loss expenses

Ceded recoveries under reinsurance arrangements were netted against losses and loss expenses under U.S. GAAP. Under IFRS, these amounts are presented on a gross basis between incurred and recoverable on the Consolidated Statements of Profit and Comprehensive Income (Loss).

(b) Optional exemptions from full retrospective application

IFRS 1 provides entities preparing their first IFRS compliant financial statements with several optional exemptions from full retrospective application of IFRS. The Company has applied certain of these optional exemptions as described below.

Business combinations

This exemption allows the Company to choose any date in the past from which it wants to account for all business combinations under IFRS 3. The Company has elected to apply this exemption as of March 27, 2017 and therefore has not restated business combinations that took place prior to this date. Any goodwill arising on such business combinations on and before March 27, 2017 remains at the carrying value determined under U.S. GAAP.

Investments

This exemption allows a first-time adopter to designate, at the Transition Date, a financial asset as measured at FVTPL provided the asset are managed on a fair value basis and their performance is monitored on this basis at that date. The Company has satisfied this criteria and elected to apply this exemption for all investments held at the Transition Date.

Cumulative translation differences

This exemption permits the Company to reset its cumulative translation differences to zero by recognizing the full amount in opening retained earnings as at the Transition Date. The Company has elected to apply this exemption.

Leases

This exemption allows the Company to apply the following approach to account for all of its leases where it is a lessee:

- Assess whether a contract existing at the Transition Date contains a lease by applying IFRS 16 to these contracts on the basis of facts and circumstances existing at the Transition Date.
- Measure the lease liability at the present value of the remaining lease payments, discounted using the Company's incremental borrowing rate at the Transition Date.
- Measure a right-of-use asset at the transition date by an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognized in the Consolidated Balance Sheets immediately before the Transition Date.
- Apply IAS 36, *Impairment of Assets* ("IAS 36"), to right-of-use assets at the transition date.

Additionally, the Company applied the following practical expedients at the Transition Date on a lease-by-lease basis, available under IFRS 1:

- Apply a single discount rate to a portfolio of leases with reasonably similar characteristics.
- Elect not to recognize lease liability and right-of-use assets at the Transition Date for short-term leases that have a lease term of 12 months or less and leases of low-value asset.
- Use hindsight, such as in determining the lease term if the contract contains options to extend or terminate the lease.

The Company has elected to apply the exemptions and practical expedients above.

(c) Mandatory exceptions to retrospective application of IFRS

In preparing these Consolidated Financial Statements in accordance with IFRS 1 the Company has applied the following mandatory exception from full retrospective application of IFRS.

23. Transition to IFRS cont'd

Estimates

At the Transition Date, the Company's estimates under IFRS are consistent with estimates previously made under U.S. GAAP at the same date, after adjusting for differences in accounting policies.

(d) Reconciliations of shareholder's equity from U.S. GAAP to IFRS

The following is a reconciliation of the Company's total shareholders' equity reported in accordance with U.S. GAAP to its shareholder's equity reported in accordance with IFRS for the following dates:

	Note	December 31, 2018	January 1, 2018
Total shareholders' equity as reported under U.S. GAAP		$ 6,223,250	$ 7,269,534
Transitional adjustments:			
Business combinations	i	(1,356,127)	(1,601,298)
Leases	ii	19,860	26,429
Taxes	iii	11,523	10,517
Others		(961)	(1,407)
Total transitional adjustments		**(1,325,705)**	**(1,565,759)**
Total shareholder's equity as reported under IFRS		**$ 4,897,545**	**$ 5,703,775**

The following is an explanation of the transitional adjustments to shareholder's equity:

(i) Business combinations

As noted in Note 23(b), the Company elected the optional exemption available in IFRS 1 to designate March 27, 2017 as the date from which it will account for business combinations under IFRS 3. As a result, the previously applied pushdown accounting by Endurance Bermuda under U.S. GAAP from the acquisition by Sompo Holdings was reversed

(ii) Leases

Under U.S. GAAP, the Company classified leases of office spaces as operating lease. The rental expenses were recognized on a straight-line basis over the lease term, and any lease incentives were reduced from the rental expenses over the lease term on the same recognition basis as the rental payments. Upon the adoption of IFRS 16, the Company recognized the leases of office spaces as right-of-use assets and lease liabilities in the Consolidated Balance Sheets.

(iii) Taxes

This adjustment reflects the change in current or deferred income taxes resulting from the effect of the IFRS adjustments described as allowed under IAS 12, *Income Taxes* ("IAS 12").

(iv) Impairment

The renewal rights intangible assets associated with BCAI that existed prior to application of pushdown accounting have been fully impaired under IFRS.

23. Transition to IFRS cont'd

(e) Reconciliations of net profit (loss) and comprehensive loss from U.S. GAAP to IFRS:

The following is a reconciliation of the Company's net loss and comprehensive loss reported in accordance with U.S. GAAP to its net profit and comprehensive loss in accordance with IFRS for the year ended December 31, 2018:

	Note		2018
Net loss as reported under U.S. GAAP		$	(128,338)
Transitional adjustments:			
Business combination	i		240,867
Investments	ii		(80,233)
Leases	iii		(6,570)
Taxes	iv		1,007
Others			(1,742)
Total transitional adjustments			**153,329**
Net profit as reported under IFRS		**$**	**24,991**

	Note		2018
Comprehensive loss as reported under U.S. GAAP		$	(261,032)
Transitional adjustments:			
Adjustments to net loss			153,329
Business combination	i		13,521
Net unrealized holding losses on investments arising during the period	ii		73,001
Total transitional adjustments			**239,851**
Comprehensive loss as reported under IFRS		**$**	**(21,181)**

The following is an explanation of the adjustments to net profit (loss) and comprehensive loss:

(i) Business combination

The adjustments relate to the reversal of movements during the year related to the fair value adjustments and subsequent amortization of pushdown accounting applied under U.S. GAAP.

(ii) Investments

Under U.S. GAAP, investments were carried at fair value and classified as trading or available-for-sale. Under IFRS, the Company designated investments as FVTPL from the Transition Date. Net unrealized holding losses previously recognized in other comprehensive loss under U.S. GAAP were reclassed to net profit (loss).

(iii) Leases

Under IFRS, the Company accounts for leases of office spaces in right-of-use asset and lease liabilities. As a result, the Company depreciates the leased assets on the same basis as similar owned assets and records interest expense on the obligation. Under U.S. GAAP, these office spaces were accounted for as operating leases and rental payments were expensed on a straight-line basis over the lease term.

(iv) Income taxes

This adjustment reflects the change in current or deferred income taxes resulting from the effect of the IFRS adjustments described.

23. Transition to IFRS cont'd

(f) Adjustments to the Consolidated Statements of Cash Flows from U.S. GAAP to IFRS

The transition from U.S. GAAP to IFRS had no significant impact on cash flows generated by the Company.