

HANNOVER RE (BERMUDA) LTD.

Financial Statements
(With Independent Auditor's Report Thereon)

Year Ended December 31, 2018



Independent auditor's report

To the Board of Directors and Shareholder of Hannover Re (Bermuda) Ltd.

Our opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Hannover Re (Bermuda) Ltd. as at December 31, 2018, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards

What we have audited

The Company's financial statements comprise:

- the balance sheet as at December 31, 2018;
- the statement of income for the year then ended;
- the statement of comprehensive income for the year then ended;
- the statement of changes in shareholder's equity for the year then ended;
- the statement of cash flows for the year then ended; and
- the notes to the financial statements, which include a summary of significant accounting policies.

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 financial statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Company in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) and the ethical requirements of the Chartered Professional Accountants of Bermuda Rules of Professional Conduct (CPA Bermuda Rules) that are relevant to our audit of the financial statements in Bermuda. We have fulfilled our other ethical responsibilities in accordance with the IESBA Code and the ethical requirements of the CPA Bermuda Rules.



Responsibilities of Management and Those Charged with Governance for the financial statements

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

In preparing the 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.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the 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 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 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 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 financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.



We communicate with those charged with governance 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.

PricewaterhouseCoopers Ltd.

Chartered Professional Accountants

Hamilton, Bermuda

March 25, 2019

HANNOVER RE (BERMUDA) LTD.

Balance Sheet

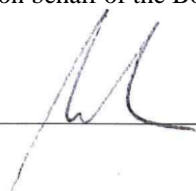
December 31, 2018

(Expressed in thousands of United States Dollars)

	<u>2018</u>	<u>2017</u>
Assets		
Fixed-income securities – available for sale (Note 6)	\$ 2,140,167	\$ 2,073,800
Fixed-income securities – loans and receivables (Note 6 and 18)	7,044	14,088
Fixed-income securities – held to maturity (Note 6)	17,655	30,785
Other invested assets – available for sale (Note 6)	27,641	34,276
Cash and cash equivalents (Notes 5 and 6)	65,108	115,155
Funds withheld (Note 7)	103,784	94,332
Reinsurance recoverable on unpaid claims (Notes 7 and 8)	557,275	316,158
Prepaid reinsurance premium (Notes 7 and 8)	31,962	32,891
Deferred acquisition costs (Note 7)	22,667	17,645
Accounts receivable	185,150	187,629
Other assets (Note 10)	6,730	896
Fixtures, fittings and equipment (Note 9)	<u>143</u>	<u>144</u>
 Total assets	 \$ 3,165,326	 \$ 2,917,799
Liabilities		
Loss and loss adjustment expense reserve (Note 8)	\$ 1,361,194	\$ 1,123,874
Unearned premium reserve (Note 8)	154,833	139,283
Ceded deferred acquisition costs (Note 7)	7,716	7,823
Ceded funds withheld (Note 7)	1,990	1,890
Reinsurance payable (Note 11)	302,453	256,943
Accounts payable and accrued expenses (Note 12)	2,270	2,283
Dividends payable (Note 13)	<u>100,000</u>	<u>175,000</u>
 Total liabilities	 <u>1,930,456</u>	 <u>1,707,096</u>
Shareholder's equity		
Authorized, issued and fully paid, 4,522,359 shares of \$1 par value each (Note 13)	4,522	4,522
Contributed surplus (Note 13)	1,097,200	1,097,200
Accumulated other comprehensive (loss) income (Note 14)	(28,651)	10,677
Retained earnings	<u>161,799</u>	<u>98,304</u>
 Total shareholder's equity	 <u>1,234,870</u>	 <u>1,210,703</u>
 Total liabilities and shareholder's equity	 \$ 3,165,326	 \$ 2,917,799

The notes are an integral part of the financial statements

Signed on behalf of the Board:



 _____ Director



 _____ Director

HANNOVER RE (BERMUDA) LTD.

Statement of Income

For the year ended December 31, 2018

(Expressed in thousands of United States Dollars)

	<u>2018</u>	<u>2017</u>
Income		
Gross written premium	\$ 723,693	\$ 610,400
Ceded written premium	(247,284)	(220,751)
Change in gross unearned premium (Note 8)	(23,479)	(9,770)
Change in ceded unearned premium (Note 8)	<u>(911)</u>	<u>2,523</u>
Net premium earned	<u>452,019</u>	<u>382,402</u>
Ordinary investment income	57,413	53,742
Realized gains on investments	2,703	7,546
Realized losses on investments	(6,504)	(4,461)
Net unrealized gains on derivatives	1,027	221
Other investment expenses	<u>(2,678)</u>	<u>(2,637)</u>
Net investment income (Note 6)	<u>51,961</u>	<u>54,411</u>
Total revenue	<u>503,980</u>	<u>436,813</u>
Expenses		
Losses and loss adjustment expenses incurred (Note 8)	295,904	278,053
Commission and brokerage net, change in deferred acquisition costs	24,254	13,801
Other acquisition costs	4,566	4,429
Administrative expenses	17,111	16,484
Depreciation (Note 9)	<u>72</u>	<u>68</u>
Total expenses	<u>341,907</u>	<u>312,835</u>
Other income (Note 15)	<u>1,422</u>	<u>4,080</u>
Net income (all attributable to the shareholder)	<u>\$ 163,495</u>	<u>\$ 128,058</u>

The notes are an integral part of the financial statements

HANNOVER RE (BERMUDA) LTD.

Statement of Comprehensive Income

For the year ended December 31, 2018

(Expressed in thousands of United States Dollars)

	<u>2018</u>	<u>2017</u>
Net income	\$ 163,495	\$ 128,058
Other comprehensive (loss) income		
Reclassifiable to the statement of income		
Unrealized (depreciation) appreciation arising during the period	(37,837)	9,993
Less: reclassification adjustment for net realized (gains) losses included in net income	(1,543)	1,400
Amortisation of net unrealized appreciation related to securities transferred to held to maturity	(13)	(46)
Foreign exchange rate differences	<u>65</u>	<u>391</u>
Other comprehensive (loss) income	<u>(39,328)</u>	<u>11,738</u>
Comprehensive income (all attributable to the shareholder)	<u>\$ 124,167</u>	<u>\$ 139,796</u>

The notes are an integral part of the financial statements

HANNOVER RE (BERMUDA) LTD.

Statement of Changes in Shareholder's Equity

For the year ended December 31, 2018

(Expressed in thousands of United States Dollars)

	<u>2018</u>	<u>2017</u>
Share capital		
Balance at beginning and end of year (Note 13)	\$ <u>4,522</u>	\$ <u>4,522</u>
Contributed surplus		
Balance at beginning and end of year (Note 13)	<u>1,097,200</u>	<u>1,097,200</u>
Accumulated other comprehensive (loss) income		
Balance at beginning of year	10,677	(1,061)
Change in unrealized (depreciation) appreciation of investments	<u>(39,328)</u>	<u>11,738</u>
Balance at end of year	<u>(28,651)</u>	<u>10,677</u>
Retained earnings		
Balance at beginning of year	98,304	145,246
Net income	163,495	128,058
Dividends declared (Note 13)	<u>(100,000)</u>	<u>(175,000)</u>
Balance at end of year	<u>161,799</u>	<u>98,304</u>
Total shareholder's equity	\$ <u><u>1,234,870</u></u>	\$ <u><u>1,210,703</u></u>

The notes are an integral part of the financial statements

HANNOVER RE (BERMUDA) LTD.

Statement of Cash Flows

For the year ended December 31, 2018
(Expressed in thousands of United States Dollars)

	<u>2018</u>	<u>2017</u>
Cash flows from operating activities		
Net income	\$ 163,495	\$ 128,058
Adjustments for non-cash items included in net income:		
Depreciation of capital assets	72	68
Net realized losses on disposal of fixed assets	5	–
Net realized losses (gains) on disposal of investments	3,801	(3,085)
Net unrealized gains on derivatives	(1,027)	(221)
Amortisation of investments	5,576	5,900
Changes in accrued interest	313	(534)
Effect of changes in exchange rates	(1,421)	(4,080)
Net changes in non-cash balances relating to operations:		
Changes in funds withheld	(13,617)	29,530
Changes in receivables from reinsurance business	(5,336)	(29,658)
Changes in payables from reinsurance business	45,510	25,973
Changes in funds withheld under reinsurance business	70	973
Changes in unearned reinsurance premium (net)	24,390	7,247
Changes in loss and loss adjustment expense reserve (net)	25,352	117,577
Changes in deferred acquisition costs (net)	(5,773)	(1,936)
Changes in other assets and liabilities (net)	<u>1,814</u>	<u>(2,798)</u>
Cash flows provided by operating activities	<u>243,224</u>	<u>273,014</u>
Cash flows from investing activities		
Fixed-income securities – available for sale including short term investments		
Maturities and sales	890,616	926,912
Purchases	(1,025,810)	(978,764)
Fixed-income securities – loans and receivables		
Maturities and sales	7,000	7,000
Fixed-income securities – held to maturity		
Maturities	12,105	5,000
Other invested assets – available for sale		
Maturities and sales	–	11
Purchases	(931)	(7,850)
Purchase of fixed assets	(78)	(12)
Proceeds from the sale of fixed assets	<u>3</u>	<u>–</u>
Cash flows used in investing activities	<u>(117,095)</u>	<u>(47,703)</u>
Cash flows from financing activities		
Dividends paid	(175,000)	(200,000)
Interest paid	<u>(1,103)</u>	<u>(824)</u>
Cash flows used in financing activities	<u>(176,103)</u>	<u>(200,824)</u>
Exchange rate differences on cash and cash equivalents	<u>(73)</u>	<u>1,817</u>
Net (decrease) increase in cash and cash equivalents	(50,047)	26,304
Cash and cash equivalents at beginning of year	<u>115,155</u>	<u>88,851</u>
Cash and cash equivalents at end of year	<u>\$ 65,108</u>	<u>\$ 115,155</u>

The notes are an integral part of the financial statements

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

1. **Company information**

Hannover Re (Bermuda) Ltd. (the “Company”) is a wholly owned subsidiary of Hannover Rück SE (“Hannover Re SE” or “the Parent”). The ultimate parent company of Hannover Re SE is HDI Haftpflichtverband der Deutschen Industrie V.a.G. (“HDI”). The Company is incorporated in Bermuda and its registered office is located at Victoria Place, 31 Victoria Street, Hamilton, Bermuda. The Company commenced writing reinsurance business in June 2001 and is licensed as a Class 4 reinsurer under the Insurance Act, 1978 of Bermuda and related regulations to write all classes of property and casualty business.

The Company writes primarily property catastrophe reinsurance contracts on an excess of loss basis. Property catastrophe reinsurance covers unpredictable events such as hurricanes, windstorms, hailstorms, earthquakes, freezes, riots and other man-made or natural disasters. Every property catastrophe excess of loss contract written by the Company provides for aggregate limits and attachment points. The Company also assumes cyber, workers’ compensation, marine, aviation, credit surety, motor, casualty, personal accident and terrorism contracts primarily on an excess of loss basis.

2. **Basis of presentation**

2.1 **Statement of compliance**

These financial statements are prepared in accordance with International Financial Reporting Standards (“IFRS”) and interpretations issued by the International Financial Reporting Interpretations Committee (“IFRIC”).

These financial statements were examined by the Board of Directors and adopted at the meeting of the Board of Directors held on March 21, 2019 and hence released for publication.

2.2 **Basis of measurement**

The financial statements have been prepared on the historical cost basis. See Note 3 for the exceptions to this.

2.3 **Functional and presentation currency**

Items included in the financial statements are measured using the currency of the primary economic environment in which the entity operates (the “functional currency”). The financial statements are presented in United States Dollars, which is also the Company’s functional currency.

2.4 **Use of estimates and judgements**

The preparation of financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected. The area involving a higher degree of judgment and where estimates are significant to the financial statements is the technical reserves. This is disclosed further in Notes 3.11 and 8 of these financial statements.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies

In the Company's efforts to meet international disclosure standards and to meet the requirements of the local regulators, the Company has prepared financial statements in accordance with IFRS.

The financial statements reflect all IFRS in force as at December 31, 2018, as well as all interpretations issued by IFRIC, application of which was mandatory for the 2018 financial year.

Since 2002, the standards adopted by the International Accounting Standards Board ("IASB") have been referred to as IFRS; the standards dating from earlier years still bear the name "International Accounting Standards ("IAS)". Standards are cited in our Notes accordingly; in cases where the Notes do not make explicit reference to a particular standard, the term IFRS is used.

The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been consistently applied to all years presented unless otherwise stated.

New accounting standards or accounting standards applied for the first time

The IASB published amendments to IFRS 4 "Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts" which give certain insurance entities the option to defer mandatory application of IFRS 9 "Financial Instruments" to 2021. At its meeting on November 14, 2018 the IASB also tentatively decided to defer the date of initial application of IFRS 17 "Insurance Contracts" by one year to annual reporting periods beginning on or after January 1, 2022. In this connection it was further decided to correspondingly extend the period for exercise of the optional temporary exemption from applying IFRS 9 that is available to companies whose activities are predominantly connected with insurance. The Company is exercising the deferral option, inter alia due to the interdependency between the recognition of financial instruments and insurance contracts.

The Company is applying IFRS 15 "Revenue from Contracts with Customers" for the first time with effect from January 1, 2018. The standard specifies when and in what amount revenue is to be recognised and which disclosures are required for this purpose. Financial instruments and other contractual rights and obligations which are to be recognised under separate standards as well as (re)insurance contracts within the scope of IFRS 4 "Insurance Contracts" are expressly exempted from the standard's scope of application. The predominant activity of the Company falls within the scope of application of IFRS 4. Consequently, the services falling within the scope of application of IFRS 15 did not have any significant implications overall for the Company's net assets, financial position or result of operations. The modified retrospective approach was chosen for initial application of IFRS 15, according to which the cumulative effect of applying the new standard is recognised in retained earnings as at January 1, 2018. In addition, the practical transition relief provided in the standard with respect to completed contracts and contract modifications will be utilised.

The amendments to existing standards listed below were applicable for the first time in the year under review and had no significant implications overall for the net assets, financial position or result of operations of the Company.

- Classification and Measurement of Share-based Payment Transactions (Amendments to IFRS 2)
- Annual Improvements to IFRSs 2014 - 2016 Cycle
- IFRIC 22 "Foreign Currency Transactions and Advance Consideration"

3. Summary of significant accounting policies (continued)

Standards or changes in standards that have not yet entered into force or are not yet applicable

The IASB has issued the following standards, interpretations and amendments to existing standards with possible implications for the financial statements of the Company, application of which is not yet mandatory for the year under review and which are not being applied early by the Company:

In May 2017 the IASB published the final version of IFRS 17 "Insurance Contracts". IFRS 17 replaces IFRS 4 and thereby establishes for the first time consistent principles for the recognition, measurement, presentation and disclosure of insurance contracts, reinsurance contracts and investment contracts with discretionary participation features. The measurement model of IFRS 17 requires entities to measure groups of insurance contracts based on estimates of discounted future cash flows with an explicit risk adjustment for non-financial risks ("fulfilment cash flows") as well as a contractual service margin, representing the expected (i.e. unearned) profit for the provision of insurance coverage in the future.

Insurance revenue is reported when it is earned by recognising in each period the changes in the liability for providing coverage for which the insurance entity receives compensation as well as the part of the premiums that cover acquisition costs. Receipts and payments relating to savings components are not recognised as revenue or as profit or loss in the statement of income. Insurance finance income and expenses result from discounting effects and financial risks.

Changes in assumptions that do not relate to interest rates or financial risks are not recognised directly in the statement of income but are booked against the contractual service margin and hence spread across the remaining coverage period. Changes in estimates are only recognised immediately in profit or loss in the case of those groups of insurance contracts that are expected to be loss-making.

IFRS 17 includes an approximation method for short-term contracts that captures the liability for providing insurance coverage through unearned premium, as has been the case to date. Liabilities from outstanding claims must be discounted using current interest rates under IFRS 17.

IFRS 17 is effective for annual reporting periods beginning on or after January 1, 2022.

Hannover Re SE launched an extensive multi-year implementation project in 2017 to explore the implications of the standard on the financial statements – including the interdependency with IFRS 9 – and the necessary implementation steps were defined and initiated. At this moment, however, it is too early to comment on any specific implications of the new standard at the time of initial application.

In January 2016 the IASB issued IFRS 16 "Leases" setting out new principles governing the recognition, measurement, presentation and disclosure of leases. The most significant new requirements relate principally to accounting by lessees. In the future, the lessee shall as a general principle recognise a lease liability for all leases. At the same time it shall recognise a right to use the underlying asset. Accounting by lessors remains comparable with current practice, according to which the lessor classifies each lease as an operating lease or a finance lease. The standard is to be applied to annual periods beginning on or after January 1, 2019.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies (continued)

In July 2014 the IASB published the final version of IFRS 9 “Financial Instruments”, which supersedes all previous versions of this standard and replaces the existing IAS 39 “Financial Instruments: Recognition and Measurement”. The standard contains requirements governing classification and measurement, impairment based on the new expected credit loss impairment approach and general hedge accounting. Initial mandatory application of the standard is set for annual periods beginning on or after January 1, 2018. In September 2016, however, the IASB published “Applying IFRS 9, Financial Instruments with IFRS 4, Insurance Contracts” (Amendments to IFRS 4). These amendments address the implications of the different effective dates for initial application of IFRS 9 and the anticipated new standard for the recognition of insurance and reinsurance contracts. Under the deferral approach provided for in the amendments, entities whose predominant activity is issuing insurance and reinsurance contracts within the scope of IFRS 4 are granted an optional temporary exemption from recognising their financial instruments in accordance with IFRS 9 until probable entry into force of IFRS 17 on January 1, 2022. The IFRS 9 implementation project is running parallel to and in close coordination with the IFRS 17 implementation project.

In addition to the accounting principles described above, the IASB has issued the following standards, interpretations and amendments to existing standards with possible implications for the financial statement of the Company, application of which was not yet mandatory for the year under review and which are not being applied early by the Company. Initial application of these new standards is not expected to have any significant implications for the Company’s net assets, financial position or result of operations.

Further IFRS Amendments and Interpretations		
Published:	Title	Initial application to annual periods beginning on or after the following date:
October 2018	Definition of Material (Amendments to IAS 1 and IAS 8)	January 1, 2020
October 2018	Definition of a Business (Amendment to IFRS 3)	January 1, 2020
March 2018	Amendments to References to the Conceptual Framework in IFRS Standards	January 1, 2020
February 2018	Plan Amendment, Curtailment or Settlement (Amendments to IAS 19)	January 1, 2019
December 2017	Annual Improvements to IFRS Standards 2015 – 2017 Cycle	January 1, 2019
October 2017	Prepayment Features with Negative Compensation (Amendments to IFRS 9)	January 1, 2019
June 2017	IFRIC 23 - Uncertainty over Income Tax Treatments	January 1, 2019

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies (continued)

3.1 Reinsurance contracts

IFRS 4 “Insurance Contracts” represents the outcome of Phase I of the IASB project “Insurance Contracts” and constitutes a transitional arrangement. IFRS 17, which was issued by the IASB in May 2017, establishes binding principles for the measurement of insurance contracts effective for annual reporting periods beginning on or after January 1, 2022. IFRS 4 sets out basic principles for the accounting of insurance contracts. Underwriting business is to be subdivided into insurance and investment contracts. The standard is also applicable to reinsurance contracts. IFRS 4 contains fundamental rules governing specific circumstances, such as the separation of embedded derivatives and unbundling of deposit components, but it does not set out any more extensive provisions relating to the measurement of insurance and reinsurance contracts. In conformity with the basic rules of IFRS 4 and the IFRS Framework, reinsurance-specific transactions therefore continue to be recognised in accordance with the pertinent provisions of US GAAP (United States Generally Accepted Accounting principles) as applicable on the date of initial application of IFRS 4 on January 1, 2005.

(a) Premiums earned

Premiums assumed are estimated based on information received from ceding companies and reinsurance intermediaries and are included in income on a straight-line basis over the period of underlying coverage with the unearned portion deferred in the balance sheet. Reinsurance premiums ceded are similarly pro-rated over the terms of the treaties with the unearned portion being deferred in the balance sheet as prepaid reinsurance premium. Adjustments to premium estimates are recorded when updated information is reported by the ceding companies and reinsurance intermediaries. Such adjustments could result in significantly higher or lower premiums than originally estimated by the Company.

(b) Reinstatement premiums and Retrospectively-rated premiums

Reinstatement premiums and retrospectively-rated premiums are recognised in accordance with provisions of the reinsurance contracts. Reinstatement premiums are premiums charged for the restoration of the reinsurance limit, generally coinciding with the payment of losses by the Company. Reinstatement premiums are earned immediately whilst the original contract premium continues to be earned over the full period of the contract. Retrospectively-rated premiums triggered by losses are earned immediately.

Premium deficiencies are recognised in the statement of income, to the extent that such deficiencies exist, in the period in which they arise.

3.2 Financial assets

As a basic principle we recognise the purchase and sale of directly held financial assets as at the settlement date. The recognition of fixed-income securities includes apportionable accrued interest.

(a) Financial assets held to maturity

Financial assets held to maturity are comprised of non-derivative assets that entail fixed or determinable payments on a defined due date and are acquired with the intent and ability to be held until maturity. They are measured at amortized cost. The corresponding premiums or discounts are recognised in profit or loss across the duration of the instruments using the effective interest rate method. An impairment loss is taken in the event of permanent impairment.

(b) Loans and receivables

Loans and receivables are non-derivative financial instruments that entail fixed or determinable payments on a defined due date and are not listed on an active market or sold at short notice. They are carried at amortized cost. Premiums or discounts are deducted or added within the statement of income using the effective interest rate method until the amount repayable becomes due. Impairment is taken only to the extent that repayment of a loan is unlikely or no longer to be expected in the full amount.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies (continued)

3.2 Financial assets (continued)

(c) Financial assets at fair value through profit or loss

Such assets consist of securities held for trading and are classified and measured at fair value through profit or loss since acquisition. In addition, all derivative financial instruments not acquired for hedging purposes are recognised here. Realized and changes in unrealized gains or losses on financial assets carried at fair value through profit or loss are recognised directly in the statement of income in the period in which they occur.

(d) Financial assets classified as available for sale

Financial assets classified as available for sale are carried at fair value. Unrealized gains and losses arising out of changes in the fair value of securities held as available for sale are recognised in shareholder's equity. All financial instruments that do not satisfy the criteria for classification as held to maturity, loans and receivables, at fair value through profit or loss, or trading are allocated to the category of available for sale. Accrued interest is also recognised in this category.

Establishment of the fair value of financial instruments carried as assets or liabilities: The fair value of financial instruments carried as assets or liabilities is established using the methods and models described below. The fair value of a financial instrument corresponds to the amount that the Company would receive or pay if it were to exit the said financial instrument on the balance sheet date. Insofar as market prices are listed on markets for financial assets, their bid price is used; financial liabilities are valued at ask price. In other cases the fair values are established on the basis of the market conditions prevailing on the balance sheet date for financial assets with similar credit rating, duration and return characteristics or using recognised models of mathematical finance. The Company uses a number of different valuation models for this purpose. The details are set out in the table below. Financial assets for which no publicly available prices or observable market data can be used as inputs (financial instruments belonging to fair value hierarchy Level 3) are for the most part measured on the basis of proven valuations drawn up by knowledgeable, independent experts, e.g. audited net asset value, the plausibility of which has previously been subjected to systematic review. For further information see our explanatory remarks on the fair value hierarchy in Note 6.7.

Valuation models		
Financial instrument	Parameter	Pricing Model
Fixed-income securities		
Unlisted plain vanilla bonds, interest rate swaps	Yield curve	Present value model
Unlisted structured bonds	Yield curve, volatility surfaces	Hull-White, Black-Karasinski, LIBOR market model, etc.
Unlisted ABS / MBS, CDO / CLO	Risk premiums, default rates, prepayment speed and recovery rates	Present value method
Other invested assets		
Unlisted equities and equity instruments	Acquisition cost, cash flows, EBIT multiples, as applicable book value	Capitalised earnings method, discounted cash flow method, multiple-based approaches
Private equity funds, private equity real estate funds	Audited net asset values (NAV)	Net asset value method
Unlisted bond, equity and real estate funds	Audited net asset values (NAV)	Net asset value method

(e) Investment income

Investment income is recognised on the accrual basis and includes the amortisation of premium or discount on debt securities purchased at amounts different from their par value.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies (continued)

3.2 Financial assets (continued)

(f) Netting of financial instruments

Financial assets and liabilities are only netted and recognised in the appropriate net amount if a corresponding legal claim (reciprocity, similarity and maturity) exists or is expressly agreed by contract, in other words if the intention exists to offset such items on a net basis or to effect this offsetting simultaneously.

(g) Impairment loss and reversals

Management records an impairment loss to fair value through net income for any impairment in the value of securities. Any subsequent recovery in the fair value of an impaired debt instrument classified as available for sale is reversed through net income, while a recovery in an impaired available for sale equity security is recognised in other comprehensive income.

3.3 Cash and cash equivalents

Cash is carried at face value. For purposes of the statements of cash flows, the Company considers all time deposits with an original maturity of ninety days or less and money market funds which can be redeemed without penalty as equivalent to cash.

3.4 Short term investments

This item consists of investments with an original maturity of up to one year and is carried at fair value.

3.5 Funds withheld

Funds withheld are receivables or payables due to or from reinsurers in the amount of their contractually withheld cash deposits; they are recognised at acquisition cost (nominal amount). Appropriate allowance is made for credit risks.

3.6 Accounts receivable

Accounts receivable are carried at nominal value; value adjustments are made where necessary on the basis of a case-by-case analysis. Accounts receivable predominantly represent amounts due from ceding companies including amounts due from related parties of \$23,325 (2017 - \$29,068). See Note 18.2.

3.7 Deferred acquisition costs

Deferred acquisition costs principally consist of commissions, brokerage and other variable costs directly connected with the acquisition or renewal of existing reinsurance contracts. These acquisition costs are capitalized and amortized over the expected period of the underlying reinsurance contracts.

3.8 Reinsurance recoverable on unpaid claims

Shares of our retrocessionaires in the loss and loss adjustment expense reserve are calculated according to the contractual conditions on the basis of the gross loss and loss adjustment expense reserve. Appropriate allowance is made for credit risks.

3.9 Other assets

Other assets other than derivatives are accounted for at cost or amortized cost. Derivative financial instruments are measured at fair value. See Note 3.17.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

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(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies (continued)

3.10 Fixtures, fittings and equipment

Fixtures, fittings and equipment are recorded at cost less accumulated depreciation calculated on a straight-line basis, over the estimated useful lives of the assets, which are as follows:

Computer equipment	5 years
Fixtures and fittings	5 years
Leasehold improvements	5 years

3.11 Loss and loss adjustment expense reserve

Reserves are established for payment obligations from reinsurance losses that have occurred but have not yet been settled. They are subdivided into reserves for reinsurance losses reported by the balance sheet date and reserves for reinsurance losses that have already been incurred but not yet reported (“IBNR”) by the balance sheet date. The loss and loss adjustment expense reserves are based on estimates that may diverge from the actual amounts payable. In reinsurance business a considerable period of time may elapse between the occurrence of an insured loss, notification by the insurer and pro-rata payment of the loss by the reinsurer. For this reason the realistically estimated future settlement amount based on long-standing established practice is carried out. Recognised actuarial methods are used for estimation purposes. In this regard we make allowance for past experience, currently known facts and circumstances, the expertise of the market units as well as other assumptions relating to the future development, in particular economic, social and technical influencing factors. Future payment obligations are not discounted for the time value of money. The Company involves an actuary in the annual reserving process.

Loss and loss adjustment expense reserves are shown gross in the balance sheet, i.e. before deduction of the share attributable to our reinsurers.

3.12 Unearned premium

Unearned premium is premium that has been recorded but is allocated to future risk periods. In reinsurance business, flat rates are sometimes used if the data required for calculation pro rata temporis is not available.

3.13 Shareholder’s equity

The items “common shares” and “contributed surplus” are comprised of the amounts paid in by the Parent. In addition to the statutory reserves of the Company and the allocations from net income, the retained earnings consist of reinvested profits generated by the Company in previous periods. For retrospective change of accounting policies, the adjustment for previous periods is recognised in the opening balance sheet value of the retained earnings and comparable items of the earliest reported period. Unrealized gains and losses from the fair value measurement of financial instruments held as available for sale are carried in accumulated other comprehensive loss.

3.14 Related party transactions

IAS 24 defines related parties, among others, as parent companies and subsidiaries, subsidiaries of a common parent company, associated companies, legal entities under the influence of management and the management of the company itself.

All related party transactions have been recorded in accordance with IAS 24 and include business both assumed and ceded under usual market conditions.

See Note 18 for further details.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

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(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies (continued)

3.15 Currency translation

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the date of the transactions. Foreign exchange gains and losses resulting from these transactions and balances are recognised in the statement of income for the year.

Foreign currency assets and liabilities are translated at exchange rates in effect at the balance sheet date. Exchange rate differences from the translation of assets and liabilities are recognised directly in the statement of income. Foreign currency gains and losses from components of equity are recognised in the statement of other comprehensive income.

3.16 Impairment of assets

(a) Financial assets carried at amortised cost

The Company assesses at each balance sheet date whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that have occurred after the initial recognition of the asset (a “loss event”) and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated. Objective evidence that a financial asset or group of assets is impaired includes observable data that comes to the attention of the Company about the following events;

- (i) significant financial difficulty of the issuer or debtor;
- (ii) a breach of contract, such as a default or delinquency in payments;
- (iii) it becomes probable that the issuer or debtor will enter bankruptcy or other financial reorganisation;
- (iv) the disappearance of an active market for that financial asset because of financial difficulties; or
- (v) observable data indicating that there is a measurable decrease in the estimated future cash flow from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the group, including:
 - adverse changes in the payment status of issuers or debtors in the group; or
 - national or local economic conditions that correlate with defaults on the assets in the group.

The Company first assesses whether objective evidence of impairment exists for financial assets that are individually significant. If the Company determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is or continues to be recognised are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has been incurred on loans and receivables or held to maturity financial assets carried at amortised cost, the amount of the loss is measured as the difference between the asset’s carrying amount and the present value of estimated future cash flows (excluding future credit losses that have been incurred) discounted at the financial asset’s original effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognised in the statement of income for the period. If a held to maturity investment or a loan has a variable interest rate, the discount rate for measuring any impairment loss is the original effective interest rate determined under contract. As a practical expedient, the Company may measure impairment on the basis of an instrument’s fair value using an observable market price.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies (continued)

3.16 Impairment of assets (continued)

(a) Financial assets carried at amortised cost (continued)

For the purpose of a collective evaluation of impairment, financial assets are grouped on the basis of similar credit risk characteristics (i.e., on the basis of the Company's grading process that considers asset type industry, past-due status and other relevant factors). Those characteristics are relevant to the estimation of future cash flows for groups of such assets by being indicative of the issuer's ability to pay all amounts due under the contractual terms of the debt instrument being evaluated.

If in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised (such as improved credit rating), the previously recognised impairment loss on the debt instrument is reversed by adjusting the allowance account. The amount of the reversal is recognised in the statement of income for the period.

(b) Available for sale financial assets

The Company assesses at each balance sheet date whether there is objective evidence that an available for sale financial asset is impaired. If any such evidence exists for available for sale financial assets, the cumulative loss – measured as the difference between the acquisition cost and current fair value, less any impairment loss on the financial asset previously recognised in profit or loss – is removed from equity and recognised in the statement of income for the period. The impairment loss is reversed through the statement of income for the period, if in a subsequent period, the fair value of a debt instrument classified as available for sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in profit or loss.

(c) Impairment of other non-financial assets

Assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units).

3.17 Derivative financial instruments

Derivatives are financial instruments, the fair value of which is derived from an underlying instrument such as equities, bonds, indices or currencies.

Derivatives are recognised initially at fair value; attributable transaction costs are recognised in profit or loss when incurred. Subsequent to initial recognition, derivatives are measured at fair value and changes therein are recognised immediately in profit or loss.

The fair values of the derivative financial instruments are determined on the basis of the market information available at the balance sheet date and using the effective interest rate method. If the underlying transaction and the derivative are not carried as one unit, the derivative is recognised in the trading portfolio item on the balance sheet.

See Note 10.2 for further details.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

3. Summary of significant accounting policies (continued)

3.18 Employee benefits

A defined contribution plan is a pension plan under which the Company pays fixed contributions into a separate entity. The Company has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods.

For defined contribution plans, the Company pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Company has no further payment obligations once the contributions have been paid. The contributions are recognised as an employee benefit expense when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

4. Management of technical and financial risks

4.1 General risk management

Due to the nature of its business, the Company expects that its claims experience will generally be characterized by low frequency and high severity claims. The Company manages its exposure to catastrophic events by limiting the amount of its exposure in each geographic zone.

The Company assumes a worldwide diversified book of business that covers exposures across various catastrophe zones and perils, certain of which are protected by retrocession programs. In 2018, the Company's geographical exposure comprised of approximately 27% U.S. based risks (2017 - 26%), 27% European based risks (2017 - 26%), 19% Asian based risks (2017 - 18%), 11% Australian based risks (2017 - 13%) and 16% other (2017 - 17%). Within the U.S., risks are further diversified by state.

As part of a holistic approach to risk management, the Company takes into account numerous relevant scenarios. In addition, extreme scenarios are analysed, their effect on key balance sheet variables and performance indicators are determined, evaluated in relation to the planned figures and alternative courses of action are identified.

4.2 Technical risk

The under reserving of claims constitutes a significant technical risk. Loss reserves are determined using actuarial methods, primarily based on information provided by cedants and supplemented as necessary by additional reserves established on the basis of the Company's own loss assessments. Reserves are set aside for claims that have occurred and been reported to the insurer, but in respect of which the amount is not yet known and which therefore cannot yet be paid. There are also claims that do not manifest themselves until a later stage and which are therefore only reported by the policyholder to the insurer and by the insurer to its reinsurer sometime after their occurrence. Reserves must be established for such IBNR (incurred but not reported) claims because years or even decades often elapse until the final settlement of such losses. This is especially true of liability claims. For certain catastrophic events, there is considerable uncertainty underlying the assumptions and associated estimated reserve for loss and loss adjustment expenses. These estimates are reviewed regularly and as experience develops and new information becomes known, the reserves are adjusted as necessary. Uncertainties in relation to reserving are therefore unavoidable. The IBNR reserve is calculated on a differentiated basis according to risk categories and regions.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

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(Expressed in thousands of United States Dollars)

4. Management of technical and financial risks (continued)

4.3 Market risk

The overriding principle guiding the Company's investment strategy is capital preservation while giving adequate consideration to the security, liquidity, mix and spread of the assets. Risks in the investment sector consist primarily of market, credit, spread and liquidity risks. The most significant market price risks are interest rate and currency risks. Insurance contract liabilities are not directly sensitive to the level of market interest rates, as they are undiscounted and contractually non-interest-bearing.

In order to monitor interest rate risks and share price risks, management uses stress tests that estimate the loss potential under extreme market conditions as well as sensitivity and duration analyses that complement the Company's range of risk management tools. Interest rate risks refer to an unfavourable change in the value of financial assets held in the portfolio due to changes in the market interest rate level. One of management's central objectives of this strategy is to match cash flows on the assets and liabilities sides as closely as possible. In addition, management uses defined duration ranges within which asset managers can position themselves opportunistically according to their market expectations. The parameters for these ranges are directly linked to the Company's risk-carrying capacity.

Management spreads these risks through systematic diversification across various sectors and regions.

Currency risks are of considerable importance to an internationally operating reinsurance enterprise that writes a significant proportion of its business in foreign currencies. The Company monitors and reduces its risks through extensive matching of currency distributions on the assets and liabilities side.

Further information on the risk concentrations of our investments can be obtained from the tables on the rating structure of fixed-income securities as well as on the currencies in which investments are held in Notes 6.5 and 6.6.

4.4 Credit risks

Bad debt risks in reinsurance are of relevance to the Company because the business that the Company accepts is not always fully retained, but instead portions are retroceded as necessary. Retrocession partners are therefore carefully selected in light of credit considerations. This is also true of the Company's broker relationships, under which risks may occur inter alia through the loss of the premium paid by the cedant to the broker or through double payments of claims.

Credit risks may arise out of a failure to pay (interest and/or capital repayment) or change in the credit status (rating downgrade) of issuers of securities. The Company attaches vital importance to credit assessment conducted on the basis of the quality criteria set out in the investment guidelines. See Note 6.5 for the rating structure of fixed-income securities and Note 7.1 for additional credit risk disclosure.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

4. Management of technical and financial risks (continued)

4.5 Liquidity risks

The liquidity risk refers to the risk that it may not be possible to sell holdings or close open positions due to the illiquidity of the market – or to do so only with delays or price markdowns – as well as the risk that the traded volumes influence the markets in question. Regular liquidity planning and a liquid asset structure are used by the Company to make the necessary payments. The Company manages the liquidity risk inter alia by allocating a liquidity code to every security. Adherence to the limits defined in the investment guidelines for each liquidity class is subject to daily control. The spread of investments across the various liquidity classes is specified in the monthly investment reports and controlled by limits. See Note 6.1 for the maturities of fixed-income securities and Note 8.2 for expected maturities of the technical reserves.

5. Cash and cash equivalents

	<u>2018</u>	<u>2017</u>
Cash at bank	\$ 36,133	\$ 92,409
Money market funds	22,632	–
Time deposits	<u>6,343</u>	<u>22,746</u>
Total cash and cash equivalents	<u>\$ 65,108</u>	<u>\$ 115,155</u>

The average interest rate on time deposits at December 31, 2018 was 0.71% (2017 - 1.63%) and the average maturity of time deposits was 12 days (2017 - 7 days).

6. Investments including income and expenses

The Company classifies investments according to the following categories: held to maturity, loans and receivables, financial assets at fair value through profit or loss, and available for sale. The allocation and measurement of investments are determined by the investment intent.

The investments also encompass investments in other invested assets, short-term investments, cash and funds withheld/contract deposits.

For further explanation see Note 3 “Summary of significant accounting policies”.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

*(Expressed in thousands of United States Dollars)***6. Investments including income and expenses (continued)****6.1 Maturities of the fixed-income securities**

	2018		2017	
	Cost or amortized cost, including accrued interest	Fair value	Cost or amortized cost, including accrued interest	Fair value
(a) Held to maturity				
Due within one year	\$ 5,810	\$ 5,960	\$ 12,191	\$ 12,198
Due after one through two years	—	—	6,128	6,506
Due after two through three years	11,845	12,877	—	—
Due after three through four years	—	—	12,466	13,987
Total	<u>\$ 17,655</u>	<u>\$ 18,837</u>	<u>\$ 30,785</u>	<u>\$ 32,691</u>

	2018		2017	
	Cost or amortized cost, including accrued interest	Fair value	Cost or amortized cost, including accrued interest	Fair value
(b) Loans and receivables				
Due within one year	\$ 7,044	\$ 7,033	\$ 7,088	\$ 7,091
Total	<u>\$ 7,044</u>	<u>\$ 7,033</u>	<u>\$ 14,088</u>	<u>\$ 14,094</u>

	2018		2017	
	Cost or amortized cost, including accrued interest	Fair value	Cost or amortized cost, including accrued interest	Fair value
(c) Available for sale, including cash and cash equivalents and short term investments				
Due within one year	\$ 430,405	\$ 429,736	\$ 326,729	\$ 326,769
Due after one through two years	250,641	248,394	466,646	467,120
Due after two through three years	283,622	280,014	267,319	267,093
Due after three through four years	235,789	232,510	246,711	243,831
Due after four through five years	241,231	235,549	166,569	167,158
Due after five through ten years	574,462	565,660	530,770	530,443
Due after ten years	<u>221,481</u>	<u>213,412</u>	<u>181,546</u>	<u>186,541</u>
Total	<u>\$ 2,237,631</u>	<u>\$ 2,205,275</u>	<u>\$ 2,186,290</u>	<u>\$ 2,188,955</u>

The stated maturities may in individual cases diverge from the contractual maturities because borrowers may have the right to call or prepay obligations with or without penalty.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

6. Investments including income and expenses (continued)

6.2 Amortized cost, unrealized gains and losses, accrued interest and fair value on the portfolio of investments

(a) Held to maturity

	2018				
	Cost or amortized cost	gains	Unrealized losses	Accrued interest	Fair value
Fixed-income securities					
Corporate securities	\$ —	\$ —	\$ —	\$ —	\$ —
Covered bonds	<u>17,347</u>	<u>1,182</u>	<u>—</u>	<u>308</u>	<u>18,837</u>
Total	<u>\$ 17,347</u>	<u>\$ 1,182</u>	<u>\$ —</u>	<u>\$ 308</u>	<u>\$ 18,837</u>
	2017				
	Cost or amortized cost	gains	Unrealized losses	Accrued interest	Fair value
Fixed-income securities					
Corporate securities	\$ 5,997	\$ 2	\$ —	\$ —	\$ 5,999
Covered bonds	<u>24,269</u>	<u>1,904</u>	<u>—</u>	<u>519</u>	<u>26,692</u>
Total	<u>\$ 30,266</u>	<u>\$ 1,906</u>	<u>\$ —</u>	<u>\$ 519</u>	<u>\$ 32,691</u>

(b) Loans and receivables

	2018				
	Cost or Amortised cost	gains	Unrealized losses	Accrued interest	Fair value
Loans and receivables	\$ <u>7,000</u>	\$ —	\$ 11	\$ 44	\$ <u>7,033</u>
Total	<u>\$ 7,000</u>	<u>\$ —</u>	<u>\$ 11</u>	<u>\$ 44</u>	<u>\$ 7,033</u>
	2017				
	Cost or Amortised cost	gains	Unrealized losses	Accrued interest	Fair value
Loans and receivables	\$ <u>14,000</u>	\$ 6	\$ —	\$ 88	\$ <u>14,094</u>
Total	<u>\$ 14,000</u>	<u>\$ 6</u>	<u>\$ —</u>	<u>\$ 88</u>	<u>\$ 14,094</u>

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

*(Expressed in thousands of United States Dollars)***6. Investments including income and expenses (continued)****6.2 Amortized cost, unrealized gains and losses, accrued interest and fair value on the portfolio of investments (continued)****(c) Available for sale**

	2018				
	Cost or amortized cost	<u>gains</u>	<u>Unrealized</u> <u>losses</u>	Accrued <u>interest</u>	Fair <u>value</u>
Fixed-income securities					
Government debt securities of					
EU member states	\$ 83,119	\$ 643	\$ 36	\$ 668	\$ 84,394
US Treasury notes	653,159	2,145	11,694	2,328	645,938
Debt securities issued by					
semi-governmental entities	143,910	143	994	945	144,004
Debt securities issued by					
other foreign governments	177,179	979	100	1,580	179,638
Corporate securities	974,444	1,730	21,494	9,831	964,511
Covered bonds	43,375	71	303	185	43,328
Asset-backed securities	81,005	107	3,553	795	78,354
	<u>2,156,191</u>	<u>5,818</u>	<u>38,174</u>	<u>16,332</u>	<u>2,140,167</u>
Other invested assets					
Investment funds	8,306	3,616	13	–	11,909
Shares in limited partnership	15,663	341	272	–	15,732
	<u>23,969</u>	<u>3,957</u>	<u>285</u>	<u>–</u>	<u>27,641</u>
Total	\$ 2,180,160	\$ 9,775	\$ 38,459	\$ 16,332	\$ 2,167,808

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

6. Investments including income and expenses (continued)
6.2 Amortized cost, unrealized gains and losses, accrued interest and fair value on the portfolio of investments (continued)
(c) Available for sale (continued)

	2017				
	Cost or amortized cost	Unrealized gains	Unrealized losses	Accrued interest	Fair value
Fixed-income securities					
Government debt securities of					
EU member states	\$ 86,677	\$ 418	\$ 106	\$ 716	\$ 87,705
US Treasury notes	618,848	2,552	9,977	2,761	614,184
Debt securities issued by					
semi-governmental entities	152,141	241	655	1,091	152,818
Debt securities issued by					
other foreign governments	172,026	408	525	1,797	173,706
Corporate securities	912,001	13,153	3,134	9,499	931,519
Covered bonds	32,469	5	203	182	32,453
Asset-backed securities	<u>80,338</u>	<u>494</u>	<u>6</u>	<u>589</u>	<u>81,415</u>
	2,054,500	17,271	14,606	16,635	2,073,800
Other invested assets					
Investment funds	11,577	7,929	–	–	19,506
Shares in limited partnership	<u>14,732</u>	<u>48</u>	<u>10</u>	<u>–</u>	<u>14,770</u>
	26,309	7,977	10	–	34,276
Total	\$ 2,080,809	\$ 25,248	\$ 14,616	\$ 16,635	\$ 2,108,076

6.3 Investment income

	2018	2017
Fixed-income securities – held to maturity	\$ 729	\$ 932
Fixed-income securities – loans and receivables	201	376
Fixed-income securities – available for sale	60,547	56,777
Other invested assets	<u>1,282</u>	<u>1,249</u>
Interest on investments	62,759	59,334
Amortisation	(5,576)	(5,900)
Interest on cash balances, cash equivalents and short term investments	<u>230</u>	<u>308</u>
Ordinary investment income	57,413	53,742
Realized gains on investments	2,703	7,546
Realized losses on investments	(6,504)	(4,461)
Unrealized gains/losses on derivatives	1,027	221
Other investment expenses	<u>(2,678)</u>	<u>(2,637)</u>
Total investment income	\$ <u>51,961</u>	\$ <u>54,411</u>

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

*(Expressed in thousands of United States Dollars)***6. Investments including income and expenses** (continued)**6.3 Investment income** (continued)

Included in realized gains on investments is \$39 (2017 - \$544) which is the yield component of forward exchange transactions that were entered into by the Company in 2018. See Note 10.2.

6.4 Net gains and losses on investments

<u>2018</u>	Ordinary investment income	Realized gains and losses	Appreciation (impairments)	Unrealized gains and losses	Net income from invested assets
Held to maturity					
Fixed-income securities	\$ 640	\$ —	\$ —	\$ —	\$ 640
Loans and receivables					
Fixed-income securities	201	—	—	—	201
Available for sale					
Fixed-income securities	55,060	(4,164)	—	—	50,896
Other invested assets	1,282	324	—	—	1,606
At Fair Value through profit and loss					
Derivative financial instruments	—	39	—	1,027	1,066
Cash	<u>230</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>230</u>
Total	<u>\$ 57,413</u>	<u>\$ (3,801)</u>	<u>\$ —</u>	<u>\$ 1,027</u>	<u>\$ 54,639</u>
<u>2017</u>					
Held to maturity					
Fixed-income securities	\$ 858	\$ —	\$ —	\$ —	\$ 858
Loans and receivables					
Fixed-income securities	376	—	—	—	376
Available for sale					
Fixed-income securities	50,951	2,274	—	—	53,225
Other invested assets	1,249	267	—	—	1,516
At Fair Value through profit and loss					
Derivative financial instruments	—	544	—	221	765
Cash	<u>308</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>308</u>
Total	<u>\$ 53,742</u>	<u>\$ 3,085</u>	<u>\$ —</u>	<u>\$ 221</u>	<u>\$ 57,048</u>

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

6. Investments including income and expenses (continued)

6.4 Net gains and losses on investments (continued)

The net gains and losses on the investment portfolio of held to maturity investments, loans and receivables, available for sale investments, derivative financial instruments and other are comprised of interest income, amortisation, and realized gains and losses. In the case of derivative financial instruments recognised at fair value through profit and loss, an allowance is also made for changes in unrealized gains and losses.

6.5 Rating structure of fixed-income securities

	2018					
	<u>AAA</u>	<u>AA</u>	<u>A</u>	<u>BBB</u>	<u>BBB></u>	<u>Total</u>
Fixed-income securities - held to maturity	\$ 17,655	\$ -	\$ -	\$ -	\$ -	\$ 17,655
Fixed-income securities - loans and receivables	\$ -	\$ 7,044	\$ -	\$ -	\$ -	\$ 7,044
Fixed-income securities - available for sale	<u>\$ 814,490</u>	<u>\$ 406,066</u>	<u>\$ 439,676</u>	<u>\$ 457,930</u>	<u>\$ 22,005</u>	<u>\$ 2,140,167</u>
Total invested assets	<u>\$ 832,145</u>	<u>\$ 413,110</u>	<u>\$ 439,676</u>	<u>\$ 457,930</u>	<u>\$ 22,005</u>	<u>\$ 2,164,866</u>
	2017					
	<u>AAA</u>	<u>AA</u>	<u>A</u>	<u>BBB</u>	<u>BBB></u>	<u>Total</u>
Fixed-income securities - held to maturity	\$ 24,788	\$ -	\$ -	\$ 5,997	\$ -	\$ 30,785
Fixed-income securities - loans and receivables	\$ -	\$ 14,088	\$ -	\$ -	\$ -	\$ 14,088
Fixed-income securities - available for sale	<u>\$ 805,373</u>	<u>\$ 371,799</u>	<u>\$ 411,195</u>	<u>\$ 461,007</u>	<u>\$ 24,426</u>	<u>\$ 2,073,800</u>
Total invested assets	<u>\$ 830,161</u>	<u>\$ 385,887</u>	<u>\$ 411,195</u>	<u>\$ 467,004</u>	<u>\$ 24,426</u>	<u>\$ 2,118,673</u>

HANNOVER RE (BERMUDA) LTD.

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6.6 Investments were held in the following currencies

	2018							Total
	AUD	EUR	GBP	JPY	USD	Other		
Fixed-income securities - held to maturity	\$ -	\$ 17,655	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,655
Fixed-income securities - loans and receivables	-	-	-	-	7,044	-	-	7,044
Fixed-income securities - available for sale	61,720	10,816	149,605	48,772	1,722,073	147,181	-	2,140,167
Other invested assets - available for sale	-	-	-	-	27,641	-	-	27,641
Short-term investments, cash	<u>885</u>	<u>2,253</u>	<u>12,522</u>	<u>11,225</u>	<u>29,573</u>	<u>8,650</u>	-	<u>65,108</u>
Total Investments and cash	<u>\$ 62,605</u>	<u>\$ 30,724</u>	<u>\$ 162,127</u>	<u>\$ 59,997</u>	<u>\$ 1,786,331</u>	<u>\$ 155,831</u>	-	<u>\$ 2,257,615</u>
	2017							
	AUD	EUR	GBP	JPY	USD	Other	Total	
Fixed-income securities - held to maturity	\$ -	\$ 30,785	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,785
Fixed-income securities - loans and receivables	-	-	-	-	14,088	-	-	14,088
Fixed-income securities - available for sale	92,703	16,357	129,630	17,133	1,656,954	161,023	-	2,073,800
Other invested assets - available for sale	-	-	-	-	34,276	-	-	34,276
Short-term investments, cash	<u>6,697</u>	<u>2,973</u>	<u>7,418</u>	<u>2,913</u>	<u>80,771</u>	<u>14,383</u>	-	<u>115,155</u>
Total Investments and cash	<u>\$ 99,400</u>	<u>\$ 50,115</u>	<u>\$ 137,048</u>	<u>\$ 20,046</u>	<u>\$ 1,786,089</u>	<u>\$ 175,406</u>	-	<u>\$ 2,268,104</u>

HANNOVER RE (BERMUDA) LTD.

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December 31, 2018

(Expressed in thousands of United States Dollars)

6. **Investments including income and expenses** (continued)

6.7 **Fair value measurement**

For the purposes of the disclosure requirements pursuant to IFRS 13 “Fair Value Measurement”, it is necessary to assign to a three-level fair value hierarchy not only the financial assets and liabilities recognised at fair value but also those assets and liabilities that are recognised at amortised cost but for which disclosure of fair value is required.

The fair value hierarchy, which reflects characteristics of the price data and inputs used for measurement purposes, is structured as follows:

- Level 1: Assets or liabilities measured at (unadjusted) prices quoted directly in active and liquid markets.
- Level 2: Assets or liabilities which are measured using observable market data and are not allocable to level 1. Measurement is based, in particular, on prices for comparable assets and liabilities that are traded on active markets, prices on markets that are not considered active as well as inputs derived from such prices or market data.
- Level 3: Assets or liabilities that cannot be measured or can only be partially measured using observable market inputs. The measurement of such instruments draws principally on valuation models and methods.

If input factors from different levels are used to measure a financial instrument, the level of the lowest input factor material to measurement is determinative.

The operational units responsible for coordinating and documenting measurement are organizationally separate from the operational units that enter into investment risks. All relevant valuation processes and valuation methods are documented. Decisions on fundamental valuation issues are taken by a valuation committee that meets monthly.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

*(Expressed in thousands of United States Dollars)***6. Investments including income and expenses** (continued)**6.7 Fair value measurement** (continued)

At December 31, 2018, the Company's financial instruments which are measured at fair value were allocated between Levels 1, 2 and 3 as follows:

<u>2018</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Liabilities	\$ _____	\$ _____	\$ _____	\$ _____
<u>2018</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Fixed-income securities				
Government debt securities of				
EU member states	\$ 84,394	\$ —	\$ 84,394	\$ —
US treasury notes	645,939	—	645,939	—
Debt securities issued by				
other foreign government	179,638	—	179,638	—
Semi government	144,004	—	144,004	—
Corporate securities	964,510	—	964,510	—
Covered bonds	43,328	—	43,328	—
Asset-backed securities	<u>78,354</u>	<u>—</u>	<u>78,354</u>	<u>—</u>
	2,140,167	—	2,140,167	—
Other invested assets				
Investment funds	11,909	—	11,909	—
Shares in limited partnership	<u>15,732</u>	<u>—</u>	<u>—</u>	<u>15,732</u>
	27,641	—	11,909	15,732
Total	\$ <u>2,167,808</u>	\$ <u>—</u>	\$ <u>2,152,076</u>	\$ <u>15,732</u>

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

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*(Expressed in thousands of United States Dollars)***6. Investments including income and expenses** (continued)**6.7 Fair value measurement** (continued)

<u>2017</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Liabilities	\$ _____	\$ _____	\$ _____	\$ _____
<u>2017</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Fixed-income securities				
Government debt securities of				
EU member states	\$ 87,705	\$ —	\$ 87,705	\$ —
US treasury notes	614,184	—	614,184	—
Debt securities issued by				
other foreign government	173,706	—	173,706	—
Semi government	152,819	—	152,818	—
Corporate securities	931,518	—	931,519	—
Covered bonds	32,453	—	32,453	—
Asset-backed securities	<u>81,415</u>	<u>—</u>	<u>81,415</u>	<u>—</u>
	2,073,800	—	2,073,800	—
Other invested assets				
Investment funds	19,506	—	19,506	—
Shares in limited partnership	<u>14,770</u>	<u>—</u>	<u>—</u>	<u>14,770</u>
	34,276	—	19,506	14,770
Total	\$ 2,108,076	\$ —	\$ 2,093,306	\$ 14,770

HANNOVER RE (BERMUDA) LTD.

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December 31, 2018

*(Expressed in thousands of United States Dollars)***6. Investments including income and expenses** (continued)**6.7 Fair value measurement** (continued)

The following table summarizes the fair value hierarchy of financial assets and liabilities measured at amortised cost:

<u>2018</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Fixed-income securities				
Corporate securities	\$ –	\$ –	\$ –	\$ –
Covered bonds	18,837	–	18,837	–
Loans and receivables	<u>7,033</u>	<u>–</u>	<u>7,033</u>	<u>–</u>
Total	\$ 25,870	\$ –	\$ 25,870	\$ –
	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>2017</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Fixed-income securities				
Corporate securities	\$ 5,999	\$ –	\$ 5,999	\$ –
Covered bonds	26,692	–	26,692	–
Loans and receivables	<u>14,094</u>	<u>–</u>	<u>14,094</u>	<u>–</u>
Total	\$ 46,785	\$ –	\$ 46,785	\$ –
	<u> </u>	<u> </u>	<u> </u>	<u> </u>

There were no transfers between levels during 2018 or 2017. There were three Level 3 investments held during 2018 (2017 - three).

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

*(Expressed in thousands of United States Dollars)***6. Investments including income and expenses** (continued)**6.7 Fair value measurement** (continued)

The following table summarizes the movement on the Company's Level 3 investments during the year:

<u>2018</u>	Other invested assets- available for sale	<u>Total</u>
Level 3 investments as of January 1, 2018	\$ 14,770	\$ 14,770
Capital calls	930	930
Unrealized gains included in accumulated other comprehensive income	<u>32</u>	<u>32</u>
Level 3 investments as of December 31, 2018	<u>\$ 15,732</u>	<u>\$ 15,732</u>
<u>2017</u>	Other invested assets- available for sale	<u>Total</u>
Level 3 investments as of January 1, 2017	\$ 6,903	\$ 6,903
Capital calls	7,839	7,839
Unrealized gains included in accumulated other comprehensive income	<u>28</u>	<u>28</u>
Level 3 investments as of December 31, 2017	<u>\$ 14,770</u>	<u>\$ 14,770</u>

The securities included in Level 3 consist of a limited partnership share, priced using the Mark to Model method as at the balance sheet date. As these investments have limited observable transactions at the reported net asset value date, they have been classified as Level 3.

HANNOVER RE (BERMUDA) LTD.

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December 31, 2018

*(Expressed in thousands of United States Dollars)***7. Technical assets**

The retrocessionaires' portions of the technical reserves are based on the contractual agreements of the underlying reinsurance treaties. For further details refer to the remarks on the technical reserves see Note 8.

In Property and Casualty business, acquisition costs directly connected with the acquisition or renewal of contracts are deferred for the unearned portion of the premium.

Development of deferred acquisition costs

	2018		
	<u>Gross</u>	<u>Retroceded</u>	<u>Net</u>
Balance at December 31 of the previous year	\$ 17,645	\$ 7,823	\$ 9,822
Currency translation at January 1	<u>(308)</u>	<u>(5)</u>	<u>(303)</u>
Balance at January 1	17,337	7,818	9,519
Increases	10,048	7,741	2,307
Decreases	(4,381)	(7,847)	3,466
Currency translation at December 31	<u>(337)</u>	<u>4</u>	<u>(341)</u>
Balance at December 31	<u>\$ 22,667</u>	<u>\$ 7,716</u>	<u>\$ 14,951</u>
	2017		
	<u>Gross</u>	<u>Retroceded</u>	<u>Net</u>
Balance at December 31 of the previous year	\$ 14,346	\$ 7,110	\$ 7,236
Currency translation at January 1	<u>330</u>	<u>6</u>	<u>324</u>
Balance at January 1	14,676	7,116	7,560
Increases	6,243	7,794	(1,551)
Decreases	(3,605)	(7,093)	3,488
Currency translation at December 31	<u>331</u>	<u>6</u>	<u>325</u>
Balance at December 31	<u>\$ 17,645</u>	<u>\$ 7,823</u>	<u>\$ 9,822</u>

For further explanatory remarks, see Note 3 "Summary of significant accounting policies".

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

7.1 Reinsurance

In 2018 and 2017, the Company entered into Whole Account excess of loss treaty reinsurance agreements with the Parent. The Parent's subsidiaries are protected under the covers of the Whole Account treaties which are then ceded to third party insurers. The treaties cover specific named perils including earthquake, flood, storm and similar natural catastrophes, as well as aviation and marine events.

The Company also participates in the Parent's K Quota Share which involves a quota share cession on geographically specific natural catastrophe risks as well as worldwide aviation and marine risks. The transaction has an indefinite term and can be cancelled annually by the investors. Each investor's participation is wholly collateralized by contractually defined investments in the form of cash and equivalent liquid assets, as well as letters of credit.

Reinsurance contracts do not relieve the Company from its obligations to policyholders. Failure of reinsurers to honour their obligations could result in losses to the Company; consequently, allowances are established for any amounts deemed uncollectible. At December 31, 2018, losses recoverable from reinsurers in the amount of \$556,710 (2017 - \$315,254) and prepaid reinsurance premium of \$31,623 (2017 - \$32,358) were associated with the Parent. The Parent is rated AA- by Standard & Poor's and A+ by A.M. Best.

7.2 Funds withheld

The funds withheld of \$103,784 (2017 - \$94,332) represents the cash and security deposits furnished by the Company to cedants that do not trigger any cash flows and cannot be realized by cedants without the Company's consent. At December 31, 2018, funds withheld in the amount of \$92,136 (2017 - \$85,266) were associated with related parties, while interest earned on this related party balance totalled \$1,150 (2017 - \$808). Total interest earned on funds withheld during 2018 amounted to \$1,235 (2017 - \$888).

7.3 Ceded funds withheld

Ceded funds withheld under reinsurance treaties totalling \$1,990 (2017 - \$1,890), represent cash deposits furnished to the Company by our retrocessionaires that do not trigger any cash flows and cannot be realized without the consent of our retrocessionaires.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

*(Expressed in thousands of United States Dollars)***8. Technical reserves**

In order to show the net technical reserves remaining in the retention the following table compares the gross reserves with the corresponding retrocessionaires' shares shown as assets.

	2018			2017		
	<u>Gross</u>	<u>Retroceded</u>	<u>Net</u>	<u>Gross</u>	<u>Retroceded</u>	<u>Net</u>
Loss and loss adjustment expense reserve	\$ 1,361,194	\$ 557,275	\$ 803,919	\$ 1,123,874	\$ 316,158	\$ 807,716
Unearned premium reserve	<u>154,833</u>	<u>31,962</u>	<u>122,871</u>	<u>139,283</u>	<u>32,891</u>	<u>106,392</u>
Total	<u>\$ 1,516,027</u>	<u>\$ 589,237</u>	<u>\$ 926,790</u>	<u>\$ 1,263,157</u>	<u>\$ 349,049</u>	<u>\$ 914,108</u>

The loss and loss adjustment expense reserves are in principle recorded on the basis of information supplied by the ceding companies. Additional IBNR reserves are established for losses that have been incurred but not as yet reported. This estimate is based on past experience and estimations of the future development.

The development of the loss and loss adjustment expense reserve is shown in the following table. Commencing with the gross reserve, the change in the reserve after deduction of the reinsurers' portions is shown in the year under review and the previous year.

HANNOVER RE (BERMUDA) LTD.

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(Expressed in thousands of United States Dollars)

8. **Technical reserves** (continued)

8.1 **Loss and loss adjustment expense reserve roll-forward**

	2018		
	<u>Gross</u>	<u>Retroceded</u>	<u>Net</u>
Balance at December 31 of the previous year	\$ 1,123,874	\$ 316,158	\$ 807,716
Currency translation at January 1	<u>(32,390)</u>	<u>(2,881)</u>	<u>(29,509)</u>
Balance at January 1	1,091,484	313,277	778,207
Losses and loss adjustment expenses incurred			
Current year	641,666	302,769	338,897
Previous years	<u>8,199</u>	<u>51,192</u>	<u>(42,993)</u>
	<u>649,865</u>	<u>353,961</u>	<u>295,904</u>
Losses and loss adjustment expenses paid			
Current year	(72,220)	(30,173)	(42,047)
Previous years	<u>(308,458)</u>	<u>(79,953)</u>	<u>(228,505)</u>
	<u>(380,678)</u>	<u>(110,126)</u>	<u>(270,552)</u>
Currency translation at December 31	<u>523</u>	<u>163</u>	<u>360</u>
Balance at December 31	<u>\$ 1,361,194</u>	<u>\$ 557,275</u>	<u>\$ 803,919</u>
	2017		
	<u>Gross</u>	<u>Retroceded</u>	<u>Net</u>
Balance at December 31 of the previous year	\$ 924,146	\$ 270,074	\$ 654,072
Currency translation at January 1	<u>40,854</u>	<u>10,888</u>	<u>29,966</u>
Balance at January 1	965,000	280,962	684,038
Losses and loss adjustment expenses incurred			
Current year	658,001	239,895	418,106
Previous years	<u>(182,062)</u>	<u>(42,009)</u>	<u>(140,053)</u>
	<u>475,939</u>	<u>197,886</u>	<u>278,053</u>
Losses and loss adjustment expenses paid			
Current year	(151,901)	(102,243)	(49,658)
Previous years	<u>(170,493)</u>	<u>(59,676)</u>	<u>(110,817)</u>
	<u>(322,394)</u>	<u>(161,919)</u>	<u>(160,475)</u>
Currency translation at December 31	<u>5,329</u>	<u>(771)</u>	<u>6,100</u>
Balance at December 31	<u>\$ 1,123,874</u>	<u>\$ 316,158</u>	<u>\$ 807,716</u>

HANNOVER RE (BERMUDA) LTD.

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December 31, 2018

*(Expressed in thousands of United States Dollars)***8. Technical reserves (continued)****8.1 Loss and loss adjustment expense reserve roll-forward (continued)**

The loss and loss adjustment expense reserves are based upon estimations that entail an element of uncertainty. Owing to the fact that the period of some reinsurance treaties is not the calendar year or because they are concluded on an underwriting-year basis, it is frequently impossible in reinsurance business to make an exact allocation of claims expenditures to the current financial year and the previous year and as such management has to make estimates as part of the allocation process.

The run-off triangles show the run-off of the reserve established as at each balance sheet date, this reserve comprising the provisions constituted in each case for the current and preceding occurrence years. The run-off of the reserve for individual occurrence years is not shown in this regard, but rather the run-off of the reserve constituted annually in the balance sheet as at the balance sheet date.

8.2 Net loss reserve and its run-off**Loss and loss adjustment expense reserve – gross**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Total</u>
Estimate of ultimate claims:									
- at end of year	\$ 1,060,170	\$ 166,179	\$ 274,928	\$ 234,257	\$ 290,921	\$ 356,384	\$ 658,001	\$ 641,666	
- one year later	1,134,975	159,738	248,486	246,563	293,775	347,467	796,261		
- two years later	1,124,140	83,211	209,104	206,745	183,440	290,827			
- three years later	1,175,744	78,516	174,266	176,567	140,438				
- four years later	1,179,101	73,245	160,552	163,928					
- five years later	1,161,091	67,040	152,933						
- six years later	1,154,524	65,333							
- seven years later	1,154,821								
Cumulative payments to date	(1,089,710)	(52,601)	(97,141)	(106,280)	(66,438)	(151,299)	(395,426)	(72,220)	
Cumulative effects of currency rate changes	<u>(9,066)</u>	<u>(10,308)</u>	<u>(36,032)</u>	<u>(22,294)</u>	<u>(4,279)</u>	<u>3,337</u>	<u>(5,275)</u>	<u>407</u>	
Total	56,045	2,424	19,760	35,354	69,721	142,865	395,560	569,853	\$ 1,291,582
Liability in respect of prior years									<u>69,612</u>
Liability recognised in the balance sheet									<u>\$ 1,361,194</u>

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

*(Expressed in thousands of United States Dollars)***8. Technical reserves (continued)****8.2 Net loss reserve and its run-off (continued)****Loss and loss adjustment expense reserve – net**

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Total</u>
Estimate of ultimate claims:									
- at end of year	\$ 373,311	\$ 138,942	\$ 218,266	\$ 188,787	\$ 226,314	\$ 241,615	\$ 418,106	\$ 338,897	
- one year later	310,773	132,745	202,815	200,995	235,156	225,010	475,840		
- two years later	322,058	70,813	175,368	170,782	153,683	186,716			
- three years later	376,038	66,322	145,880	149,784	120,472				
- four years later	383,804	61,051	132,166	137,145					
- five years later	368,616	54,846	124,547						
- six years later	364,687	53,139							
- seven years later	366,323								
Cumulative payments to date	(329,213)	(36,724)	(70,854)	(79,498)	(53,508)	(81,934)	(251,341)	(42,047)	
Cumulative effects of currency rate changes	<u>8,565</u>	<u>(13,991)</u>	<u>(33,933)</u>	<u>(22,293)</u>	<u>(4,277)</u>	<u>3,333</u>	<u>(5,526)</u>	<u>423</u>	
Total	45,675	2,424	19,760	35,354	62,687	108,115	218,973	297,273	\$ 790,261
Liability in respect of prior years									<u>13,658</u>
Liability recognised in the balance sheet									\$ <u>803,919</u>

HANNOVER RE (BERMUDA) LTD.

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December 31, 2018

(Expressed in thousands of United States Dollars)

8. Technical reserves (continued)

8.2 Net loss reserve and its run-off (continued)

Duration of the Loss and loss adjustment expense reserve

IFRS 4.38 in conjunction with 4.39(d) requires information which helps to clarify the amount and timing of cash flows expected from reinsurance contracts. In the following tables the future maturities of the technical reserves are shown and these are broken down by the expected remaining payment profiles of the liability. The analysis below excludes funds withheld directly related to the reserves. For further explanation of the recognition and measurement of the reserves see Note 3 "Summary of significant accounting policies".

Expected maturities of the Loss and loss adjustment expense reserve

	Loss and loss adjustment expense reserve					
	2018			2017		
	Gross	Retroceded	Net	Gross	Retroceded	Net
Due within one year	\$ 295,237	\$ 85,597	\$ 209,640	\$ 262,218	\$ 52,514	\$ 209,704
Due between one and five years	940,772	416,284	524,488	764,320	233,862	530,458
Due between six and ten years	122,666	54,279	68,387	95,269	29,150	66,119
Due between eleven and twenty years	<u>2,519</u>	<u>1,115</u>	<u>1,404</u>	<u>2,067</u>	<u>632</u>	<u>1,435</u>
	<u>\$ 1,361,194</u>	<u>\$ 557,275</u>	<u>\$ 803,919</u>	<u>\$ 1,123,874</u>	<u>\$ 316,158</u>	<u>\$ 807,716</u>

The average duration of the gross loss and loss adjustment expense reserves was 2.13 years (2017 - 1.84 years) and is determined using projections of the expected future payments based on the historical payment pattern.

The payment patterns are determined with the aid of estimation methods and adjusted to reflect changes in payment behaviour and outside influences. The payment patterns used can be compared year for year by contrasting the projected payments with the actual amounts realized.

HANNOVER RE (BERMUDA) LTD.

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*(Expressed in thousands of United States Dollars)***9. Fixtures, fittings and equipment**

	<u>Leasehold improvements</u>	<u>Fixtures and fittings</u>	<u>Computer equipment</u>	<u>Total</u>
Cost				
At January 1, 2017	\$ 1,766	\$ 996	\$ 1,526	\$ 4,288
Additions	<u>—</u>	<u>8</u>	<u>4</u>	<u>12</u>
At December 31, 2017	\$ 1,766	\$ 1,004	\$ 1,530	\$ 4,300
Additions	—	6	72	78
Disposals	<u>—</u>	<u>—</u>	<u>(1,231)</u>	<u>(1,231)</u>
At December 31, 2018	<u>\$ 1,766</u>	<u>\$ 1,010</u>	<u>\$ 371</u>	<u>\$ 3,147</u>
Accumulated depreciation				
At January 1, 2017	\$ 1,735	\$ 987	\$ 1,366	\$ 4,088
Depreciation	<u>11</u>	<u>5</u>	<u>52</u>	<u>68</u>
At December 31, 2017	\$ 1,746	\$ 992	\$ 1,418	\$ 4,156
Depreciation	11	5	56	72
Disposals	<u>—</u>	<u>—</u>	<u>(1,224)</u>	<u>(1,224)</u>
At December 31, 2018	<u>1,757</u>	<u>997</u>	<u>250</u>	<u>3,004</u>
Carrying amount				
At December 31, 2017	<u>\$ 20</u>	<u>\$ 12</u>	<u>\$ 112</u>	<u>\$ 144</u>
At December 31, 2018	<u>\$ 9</u>	<u>\$ 13</u>	<u>\$ 121</u>	<u>\$ 143</u>

With regard to the measurement of fixtures, fittings and equipment, refer to our explanatory notes on other assets in Note 3 “Summary of significant accounting policies”.

HANNOVER RE (BERMUDA) LTD.

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(Expressed in thousands of United States Dollars)

10. Other assets and liabilities

10.1 Other assets

	<u>2018</u>	<u>2017</u>
Other receivables	\$ 1	\$ –
Prepaid expenses	716	665
Derivative financial instrument	<u>6,013</u>	<u>231</u>
Total	<u>\$ 6,730</u>	<u>\$ 896</u>

10.2 Other items

Derivative financial instruments

Derivatives are financial instruments, the fair value of which is derived from an underlying instrument such as equities, bonds, indices or currencies. The Company used derivative financial instruments in order to hedge currency risks during the transition of the change of functional currency from the Euro to the United States Dollar in 2014. In this context special care is taken to limit the risks, select first-class counterparties and adhere strictly to the standards defined by investment guidelines.

As a result of these EUR transactions, the Company had a positive income impact in 2018 of \$3,304 (2017 – negative income impact of \$5,889) and, at December 31, 2018, has a derivative financial asset balance of \$2,466 (2017 - \$231) presented within other assets. At December 31, 2018, the derivative financial instruments arising were as a result of the nominal amounts of - €27,200 (2017 - €27,200, €3,500 and €5,000) hedged against the United States Dollar at a rate of 1.19988 respectively (2017 - 1.19988, 1.19906 and 1.19912). The derivative financial instruments are recorded at fair value, denominated in United States Dollars and are classified as Level 2 investments.

In 2018, the Company entered into a JPY hedge transaction to hedge currency risks associated with JPY losses. As a result of this transactions, the Company had a positive income impact in 2018 of \$3,247 (2017 – nil impact) and, at December 31, 2018, has a derivative financial asset balance of \$3,547 (2017 - nil) presented within other assets. At December 31, 2018, the derivative financial instruments arising were as a result of the nominal amounts of ¥6,600,000 and ¥10,850,000 (2017 - nil) hedged against the United States Dollar at a rate of 113.373 and 112.334 respectively (2017 - nil). The derivative financial instruments are recorded at fair value, denominated in United States Dollars and are classified as Level 2 investments.

Derivative financial instrument gains and losses are recorded through profit and loss as either a foreign exchange component or an interest yield component. The foreign exchange component is recorded through profit and loss under foreign exchange gains or losses while the interest component is recorded as a realized or unrealized investment gain or loss.

The EUR derivative financial instrument matures on January 11th, 2019 and the JPY derivative financial instruments mature on January 18th and March 28th, 2019. The derivative financial instruments are legally entered into by the Parent, which is rated AA- by Standard & Poor's, and passed on to the Company through a contractual intercompany arrangement.

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Notes to Financial Statements

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11. Reinsurance payable

	<u>2018</u>	<u>2017</u>
Balance payable to related parties	\$ 30,642	\$ 58
Balance payable to third parties	<u>271,811</u>	<u>256,885</u>
	<u>\$ 302,453</u>	<u>\$ 256,943</u>

Balances payable to reinsurers include amounts due for retroceded premiums netted off against amounts recoverable from retrocessionaires for their share of claims recoverable, as calculated in accordance with individual retrocession arrangements.

The carrying value of these amounts approximates fair value due to the short-term nature of the payables.

12. Accounts payable and accrued expenses

	<u>2018</u>	<u>2017</u>
Accrued expenses	\$ 399	\$ 548
Other accounts payable	173	24
Stock option and share award provisions	<u>1,698</u>	<u>1,711</u>
	<u>\$ 2,270</u>	<u>\$ 2,283</u>

13. Shareholder's equity

Shareholder's equity is shown as a separate component of the financial statements in accordance with IAS 1 "Presentation of Financial Statements" and subject to IAS 32 "Financial Instruments: Disclosure and Presentation" in conjunction with IAS 39 "Financial Instruments: Recognition and Measurement". The change in shareholder's equity comprises of not only the net income deriving from the statement of income but also the changes in the value of asset and liability items not recognised in the statement of income.

The 4,522,359 common shares of \$1 par value represent the total authorized, issued and fully paid share capital of the Company. Each share carries an equal voting right and an equal dividend settlement.

13.1 Contributed surplus

Contributed surplus represents cash contributed by the shareholder in excess of the issued share capital, as described in Note 3.

13.2 Dividends

The dividends declared in 2018 and 2017 were \$100,000 and \$175,000 respectively. This represents a dividend per share in United States Dollars of \$22.11 (2017 - \$38.70). Dividends of \$175,000 and \$200,000 were paid in 2018 and 2017, respectively.

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Notes to Financial Statements

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14. Other comprehensive (loss) income

Accumulated other comprehensive (loss) income amounted to \$(28,651) (2017 - \$10,677). This arose primarily from the recognition of unrealized gains and losses on investments at year end.

15. Other income

Foreign exchange gain	<u>2018</u>	<u>2017</u>
Investment revaluation	\$ (23,686)	\$ 25,278
Loss and loss adjustment expense reserve revaluation	31,867	(46,183)
Reinsurance recoverable on unpaid claims revaluation	(2,717)	10,117
Accounts receivable revaluation	(7,816)	10,536
Other revaluation	<u>3,773</u>	<u>4,332</u>
Total	\$ 1,421	\$ 4,080

16. Taxes

Under current Bermuda law the Company is not required to pay any taxes in Bermuda on either income or capital gains. The Company has received an undertaking from the Minister of Finance in Bermuda that in the event of any such taxes being imposed the Company will be exempted from taxation until the year 2035.

17. Staff and expenditures on personnel

17.1 Staff

The average number of staff at the Company is 29 (2017 - 30).

17.2 Key management compensation

	<u>2018</u>	<u>2017</u>
Salaries and other short-term employee benefits	\$ 2,673	\$ 2,851
Post-employment benefits	160	163
Stock options	<u>(5)</u>	<u>(159)</u>
Total	\$ 2,828	\$ 2,855

17.3 Defined contribution plans

The Company has a defined contribution plan that is based on length of service, the employee's income, and level of contributions. The expense recognised for these obligations in the year under review in accordance with IAS 19.46 amounted to \$698 (2017 - \$723).

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Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

18. Related party disclosures

18.1 Loans to related parties

Included in the balance sheet under fixed income securities – loans and receivables, is a loan in the amount of \$7,044 (2017 - \$14,088) including accrued interest of \$44 (2017 - \$88) to Hannover Life Reassurance Bermuda Ltd., a company related through common control. The loan was granted on February 26, 2014, bears an interest rate of 2.5% per annum, will be repaid in equal instalments over five years, and will mature on February 26, 2019.

During the year, interest income of \$201 (2017 - \$376) was earned on this loan and is included within investment income in the accompanying statement of income.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

*(Expressed in thousands of United States Dollars)***18. Related party disclosures (continued)****18.2 Other related party transactions and balances****Underwriting transactions with related parties**

	<u>2018</u>	<u>2017</u>
Statement of Income		
Gross written premium		
Hannover Re SE	\$ 98	\$ –
Companies related through common control	156,484	141,028
Ceded written premium		
Hannover Re SE	64,694	42,273
Companies related through common control	39	39
Acquisition and other underwriting expenses		
Hannover Re SE	332	1,275
Companies related through common control	7,708	7,793
Losses and loss adjustment expenses incurred		
Companies related through common control	6,064	4,520
Reinsurance recoveries		
Hannover Re SE	124,823	57,885
Interest expense		
Hannover Re SE	1,103	824
Other (income) expenses		
Hannover Re SE	(11)	310
Balance sheet		
Accounts receivable		
Hannover Re SE	\$ –	\$ 36,802
Companies related through common control	23,287	29,068
Deferred acquisition costs		
Hannover Re SE	1	1
Companies related through common control	302	231
Prepaid reinsurance premium		
Hannover Re SE	423	532
Companies related through common control	2	–
Outstanding losses recoverable from reinsurers		
Hannover Re SE	118,606	24,259
IBNR losses recoverable from reinsurers		
Hannover Re SE	102,577	52,371
Unearned premium reserve		
Companies related through common control	16,777	22,376
Outstanding losses and loss adjustment expenses		
Companies related through common control	122,530	133,865
IBNR losses and loss adjustment expenses		
Companies related through common control	19,449	41,080
Reinsurance payable		
Hannover Re SE	30,504	–
Companies related through common control	138	58
Other liabilities		
Companies related through common control	–	10

All transactions and balances arise from the normal course of business and are unsecured.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

18. Related party disclosures (continued)

18.2 Other related party transactions and balances (continued)

Other investment expenses

The Company has an investment management agreement in place with a related party to manage the Company's investment portfolio. Investment management fees incurred during the year amounted to \$2,386 (2017 - \$2,350) which are paid as incurred.

19. Statutory requirements

As a Class 4 insurer, the Company must at all times maintain a solvency margin and an enhanced capital requirement ("ECR") in accordance with the provisions of the Insurance Act. Each year the Company is required to file with the Bermuda Monetary Authority (the "Authority") a capital and solvency return within four months of its relevant financial year end (unless specifically extended).

Under the Bermuda Insurance Act, 1978 and related regulations, the Company is subject to capital requirements calculated using the Bermuda Solvency Capital Requirement ("BSCR"), which is standardized statutory risk-based capital model used to measure the risk associated with the Company's assets, liabilities, premiums and the risk associated with operations. The Authority requires all Class 4 insurers to maintain their capital at a target level which is 120% of the ECR calculated in accordance with the BSCR and to maintain the minimum margin of solvency.

Actual statutory capital and surplus, as determined using statutory accounting principles, is as follows:

	<u>2018</u>	<u>2017</u>
Total shareholder's equity	\$ 1,234,870	\$ 1,210,703
Non-admitted assets	<u>(860)</u>	<u>(810)</u>
Statutory capital and surplus	<u>\$ 1,234,010</u>	<u>\$ 1,209,893</u>

The Company is also required to maintain a minimum liquidity ratio, whereby the value of its relevant assets is not less than 75% of the amount of its relevant liabilities. Relevant assets include cash and cash equivalents, accrued interest receivable, premiums receivable, funds withheld by ceding company, available for sale fixed-income securities and held to maturity fixed-income securities. Certain categories of assets do not qualify as relevant assets under the statute. The relevant liabilities are total general business insurance reserves (net of reinsurance recoverable) and total other liabilities, less sundry liabilities.

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

19. Statutory requirements (continued)

At December 31, 2018, the Company was required to maintain relevant assets of approximately \$1,000,127 (2017 - \$1,012,668). At that date relevant assets were approximately \$2,539,548 (2017 - \$2,536,064) and the minimum liquidity ratio was therefore met.

The Company is prohibited from declaring or paying a dividends if its Class 4 statutory capital and surplus is less than its ECR, or if it is in breach of its solvency margin or minimum liquidity ratio, or if the declaration or payment of such dividends would cause such breach. Further, the Company, as a Class 4 insurer, is prohibited from paying in any year dividends of more than 25% of its total statutory capital and surplus (as shown on its previous year's statutory balance sheet) unless it files (at least seven days before payment of such dividends) with the Authority an affidavit stating that it will continue to meet its solvency margin and minimum liquidity ratio. The Company must obtain the Authority's prior approval for a reduction by 15% or more of the total statutory capital as set forth in its previous year's financial statements. These restrictions on declaring or paying dividends and distributions under the Insurance Act are in addition to those under the Companies Act 1981, which apply to all Bermuda companies. The maximum amount available for payment of dividends or other distributions from retained earnings in 2018 without prior regulatory approval is approximately \$302,473 (2017 - \$311,270).

All statutory requirements were met as at December 31, 2018 and December 31, 2017.

20. Capital management

The preservation and consistent enhancement of its capital is a key strategic objective for the Company. The Company satisfies the capital expectations of the rating agencies that assess its financial strength. The Company met the applicable local minimum capital requirements in the year under review.

21. Other notes

21.1 Letters of credit

Ceding companies domiciled in the United States and Australia are required, pursuant to their insurance laws, to obtain letters of credit issued on the Company's behalf from approved banks in order to further secure the Company's obligations under certain reinsurance contracts. At December 31, 2018, letters of credit totalling \$230,572 (2017 - \$115,071) were issued on behalf of the Company.

21.2 Operating lease

Future minimum rentals payable under non-cancellable operating leases as at December 31 are as follows:

	<u>2018</u>	<u>2017</u>
Less than one year	\$ 678	\$ 812
Between one and five years	2,713	2,713
More than five years	<u>—</u>	<u>678</u>
Total	<u>\$ 3,391</u>	<u>\$ 4,203</u>

HANNOVER RE (BERMUDA) LTD.

Notes to Financial Statements

December 31, 2018

(Expressed in thousands of United States Dollars)

21. **Other notes** (continued)

21.2 **Operating lease** (continued)

The Company leases its building and as such, this leased asset is not recognised on the Company's balance sheet. The lease runs for a period of 5 years, with an option to renew the lease after that date for the same period. The Company signed a new lease with a term of five years commencing January 1, 2019. The lease payments include a portion of the maintenance expenses calculated according to the square footage of the premises.

Payments made under operating leases are recognised in profit or loss on a straight-line basis over the term of the lease. During the year ended December 31, 2018, \$924 (2017 - \$888) was recognised as an expense in the statement of income in respect of operating leases.