

Tokio Millennium Re AG

# Financial Condition Report

Year ended 31 December 2017

30 April 2018



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## I. Executive summary

Tokio Millennium Re AG ('TMR' or the 'Company') ended 2017 with a net loss after tax of USD 158.9 million corresponding to a negative return on equity of 12.4%. This is only the third time in TMR's history that we end the year with a net loss, but unfortunately the largest. This result, however, should not come as a total surprise in what was one of the costliest years for natural catastrophes on record.

TMR's result was impacted mainly by claims from natural catastrophes (e.g. Hurricanes Harvey, Irma and Maria (HIM) and wildfires in California) and claims from man-made events (e.g. Ogden rate change in the U.K. and the Las Vegas shooting). But also contributing to the net loss was the recognition of reserve development in the non-catastrophe book based upon a proactive reserve review undertaken by TMR.

For the reasons explained above, the overall underwriting performance in 2017 resulted in a net underwriting loss of USD 107.5 million with a combined ratio of 116.2%. Catastrophe losses contributed 11.8 points to the loss ratio while prior year reserve strengthening added a further 4.3 points to this ratio.

Our third party capital (TPC) strategy and de-risking continued to fulfil its purpose in reducing volatility, while also providing for growing fee income. To this end, our net HIM loss for the year amounted to USD 76.6 million or 5.8% of opening shareholders' equity. Our bespoke advanced technology platform, developed to trade with our TPC partners, has given us increased scale and flexibility to drive and expand our TPC strategy during 2017.

The investment portfolio performed strongly, with investment income of USD 68.8 million. The optimised investment strategy has resulted in higher investment income, aided by our collaboration with Delphi Capital Management, Inc., an affiliate company specialising in investment management. The investment income increased by 13% compared to the prior year, primarily due to increased assets under management and an increased allocation to higher yielding assets.

TMR continues its efforts to increase the efficiency of its operations, resulting in a reduction of 1.4 points in the administrative expense ratio to 8.2%, compared to 9.6% in 2016.

The holistic management of our balance sheet together with TMR's proven business strategy has been key in weathering the challenges of 2017. Our capitalisation remains strong with shareholder's equity of USD 1.2 billion and total assets over USD 5 billion going into 2018. As a consequence, TMR will continue to do what it is here for, delivering long-term, sustainable value for our parent company, customers and employees, today and tomorrow.

## II. Business and performance

### A. Name of insurer

Tokio Millennium Re AG, formerly known as Tokio Millennium Re Ltd., is a Swiss-based reinsurance company. TMR's registered office is located at Beethovenstrasse 33, 8002 Zurich, Switzerland.

This Financial Condition Report ('FCR') covers TMR as a legal entity and includes its branches and subsidiaries. Some of the information contained herein is already included in the Company's Annual Report published on its website.

### B. Supervisors

#### *Legal entity supervisor*

Swiss Financial Market Supervisory Authority ('FINMA')  
Laupenstrasse 27  
3003 Bern  
Switzerland

#### *Group supervisor*

Japanese Financial Services Agency ('FSA')  
3-2-1 Kasumigaseki Chiyodaku  
Tokyo 100-8967  
Japan

Details on the supervisors of TMR's branches and subsidiaries can be found in section II. E. below.

### C. Approved auditor

The approved external auditor of TMR is PricewaterhouseCoopers ('PwC'), with its registered office located at Birchstrasse 160, 8050 Zurich, Switzerland.

### D. Business strategy and objectives

TMR's business activity is focused on assuming and managing reinsurance risk in return for premiums that provide a compensating margin, above the expected loss cost and expenses, for the risks which is transferred.

The business environment in which TMR operated in 2017 was one of continually advancing technology, low interest rates, and growing regulatory rigor. In 2017, the value of the reinsurance product was also clearly demonstrated, with catastrophe claims impacting the marketplace in the US (Hurricanes Harvey and Irma and wildfires in California), in Mexico (earthquakes) and in the Caribbean (notably the impact of Hurricane Maria in Puerto Rico). Following these events, while the flow of new capital into the reinsurance marketplace has moderated, the industry remains well, if not over, capitalised. Reinsurance rates continued to fall at the beginning of the year but, by the end of 2017, catastrophe and other losses stemmed the recent years' trend of reinsurance price reductions.

TMR participates in most forms and classes of reinsurance treaties. These include contracts which are driven by catastrophe events such as excess of loss property catastrophe, workers' compensation catastrophe and terrorism contracts. Catastrophe reinsurance covers the impact of unpredictable events such as hurricanes, windstorms, hailstorms, earthquakes, fires, freezes, floods and other man-made or natural disasters. TMR also offers non-catastrophe property and casualty coverage on both proportional and per risk excess of loss treaties, with an emphasis on the higher frequency and lower severity category of exposures. Casualty lines of business include motor, general liability, excess casualty, auto liability, employer's liability, professional liability, workers' compensation, directors and officers, errors and omissions and medical malpractice. In addition, TMR offers coverage for certain other specialty lines of business, these include but are not limited to agriculture, credit, engineering, marine, and energy treaties.

## II. Business and performance (continued)

TMR also provides non-traditional customised reinsurance and financial solutions for its clients' property and casualty exposures on a treaty basis.

Through its Capital Solutions unit, TMR provides alternative risk transfer solutions, enabling traditional reinsurance to be supported on a collateralised basis by third party capital providers. This transformer mechanism is a key differentiator for TMR. It brings new solutions to both our clients and third-party capital providers, and offers risk management alternatives to TMR and its clients which are not commonly available to either insurers or reinsurers.

TMR holds customer centricity as one of its core values; TMR is analytically biased, innovative and responsive in its partnerships with customers. The Company's offices are distributed globally to be proximate to its clients. The Company operates in five locations; from its headquarters in Zurich and from branches in Sydney, London, Hamilton, Bermuda and Stamford, Connecticut.

TMR develops its business plan and strategies by line of business and geography on guidance from TMR Group management and approval from the Board of Directors for material changes. While autonomy is retained, TMR's strategy is also aligned with the requirements of Tokio Marine Holdings, Inc. ('TMHD'), TMR's ultimate parent company.

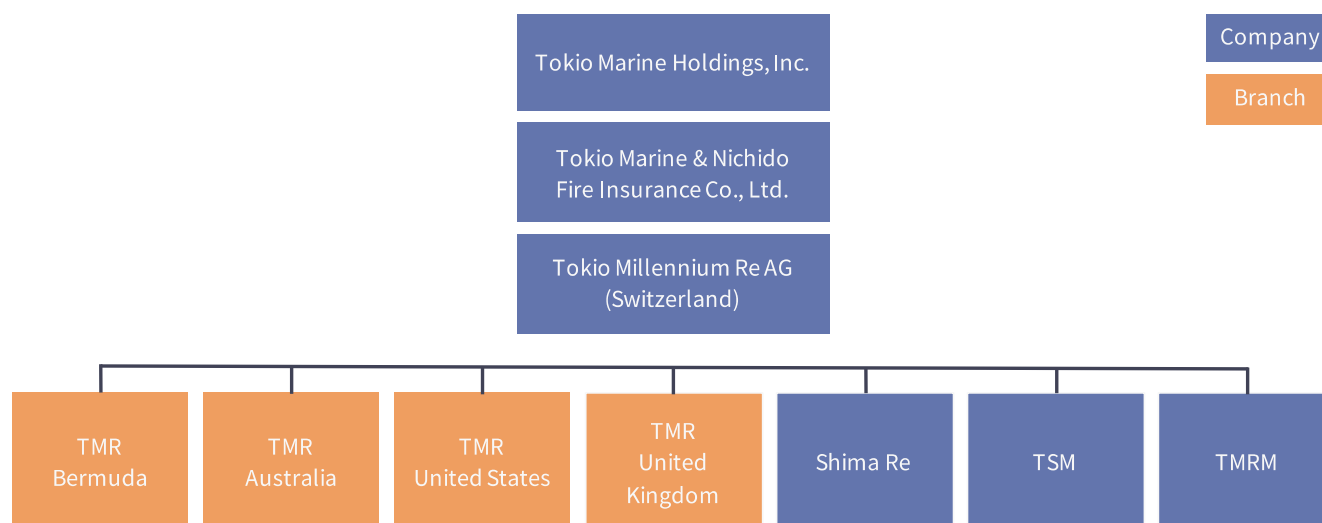
TMR's mid-term strategy is expressed through eight objectives; the first four are principally externally focused, and the second four internally:

1. Leverage successes and drive analytics to produce superior underwriting results
2. Steer to an optimal portfolio, leveraging existing strengths and relationship
3. Strengthen partnerships inside and outside the Tokio Marine Group
4. Mature the third-party capital strategy, moving from independent to integrated
5. Continue to pursue active capital management
6. Value creation through optimising both sides of the balance sheet
7. Continuous operational excellence, creating a scalable and cost effective operating platform for TMR
8. To be a 'Good Company'

The Good Company philosophy is integral to the Tokio Marine Group; it recognises that our remit as a partner of choice for our customers and as an employer extends beyond solely maximising shareholder returns.

## II. Business and performance (continued)

### E. Ownership details and group structure



TMR is a wholly-owned subsidiary of Tokio Marine and Nichido Fire Insurance Co., Ltd. ('TMNF'). The ultimate parent company is TMHD, a company incorporated in Japan.

TMR was formed in Bermuda on 15 March 2000 and re-domesticated to Switzerland on 15 October 2013.

TMR was set up to diversify the business of its parent company and enhance the capital efficiency of TMHD by allowing Tokio Marine to move into markets outside of Japan. TMR originally specialised in property catastrophe reinsurance.

In 2003, Tokio Millennium Agency Ltd. ('TMA'), a wholly-owned subsidiary of TMR, was incorporated in Bermuda. Its primary activity was to facilitate risk swap agreements between TMNF and other insurance companies, for which it received agency fees.

In late 2005, TMR secured additional capital from TMNF and in early 2006 expanded into lines such as workers' compensation, terrorism, crop/hail, as well as lower layers of natural peril risks. This was a timely strategic move in response to post 'Hurricane Katrina' business opportunities and pricing environment that had the effect of improving the risk profile of TMR's existing reinsurance portfolio by spreading some of its risk to non-catastrophe exposures.

In 2010, TMR entered a new phase of strategic expansion and a new dimension of risk diversification by expanding its geographic and product spread by opening two branches in Switzerland ('TMRCH') and Australia ('TMRA'), and by moving into non-catastrophe property and casualty lines of business.

In 2012, TMR renamed TMA to Tokio Solution Management Ltd. ('TSM') and formed a new wholly-owned subsidiary, Shima Reinsurance Ltd. ('Shima Re'), to expand its risk transformer and capital market solutions business. These strategic moves further diversified TMR's sources of income and risk.

## II. Business and performance (continued)

In 2013, the re-domestication to Switzerland from Bermuda formed the next step in TMR's plans for strategic growth and expansion. TMR's branch in Switzerland was discontinued as part of the re-domestication and at the same time TMR formed a branch in Bermuda ('TMRB').

In 2014, TMR opened a US branch ('TMRUS') to further expand TMR's non-catastrophe portfolio and focused on non-catastrophe product lines. TMR formed TMR Management Inc. ('TMRM') in December 2014 as the management company for TMRUS.

In 2014, TMR formed a branch in the United Kingdom ('TMRUK') and started writing business incepting July 2015. The business written by TMRUK included the new and renewal business formerly written by TMR's affiliate, Tokio Millennium Re (UK) Ltd., which as of July 2015 no longer accepts any new business.

These initiatives not only allowed TMR to build its global platform to better serve its customers but also further diversify its risk to major catastrophic events, therefore further improving the risk profile of its books of business.

### *Regulatory supervision*

TMR's principal regulator is FINMA, but its branches and subsidiaries are also supervised by the following:

- TMRB, TSM, Shima Re – Bermuda Monetary Authority ('BMA');
- TMRA – Australian Prudential Regulation Authority ('APRA');
- TMRUS – New York State Department of Financial Services ('NYDFS'); and
- TMRUK – Prudential Regulation Authority ('PRA') and Financial Conduct Authority ('FCA').

## II. Business and performance (continued)

### F. Underwriting performance

The underwriting results (excluding administrative expenses, investment income and foreign exchange gains/losses) for the years ended 31 December 2017 and 2016 are shown below:

USD '000	2017	2016
Gross premiums written	1,606,499	1,552,640
Net premiums written	1,301,583	1,317,916
Net premiums earned	1,347,333	1,139,119
Net acquisition expenses	(348,292)	(314,337)
Net losses incurred	(1,104,408)	(666,540)
Net other underwriting expense	(2,182)	(2,173)
Net underwriting (loss) income	(107,549)	156,069

The net underwriting result (excluding administrative expenses, investment income and foreign exchange gains/losses), by the lines of business as prescribed by FINMA, for the years ended 31 December 2017 and 2016 are as follows:

Net underwriting (loss) income USD '000	2017	2016	Variance
<b>FINMA Line of Business</b>			
Personal accident	505	240	265
Motor	(80,333)	(4,585)	(75,748)
Marine, aviation and transport	3,004	289	2,715
Property	(34,565)	123,253	(157,818)
Casualty	(4,221)	29,772	(33,993)
Miscellaneous	8,061	7,100	961
<b>Total</b>	<b>(107,549)</b>	<b>156,069</b>	<b>(263,618)</b>

Net underwriting losses were incurred for the Motor, Property and Casualty lines of business in the year 2017 and performance deteriorated compared to the prior year. The results were impacted mainly by claims from natural catastrophes (e.g., Hurricanes Harvey, Irma and Maria (HIM) and wildfires in California) and claims from man-made events (e.g., Ogden rate change in the U.K. and the Las Vegas shooting). But also contributing to the negative results was the recognition of reserve development in the non-catastrophe book based upon a proactive reserve review undertaken by TMR.



## II. Business and performance (continued)

Refer to section I - Executive Summary above for general commentary on TMR's 2017 results. Also refer to the attachment – 'Performance Solo Reinsurance' for further details.

### i. Insurance business written by segment

The details of annual gross premiums written split by the lines of business as prescribed by FINMA are provided below:

USD '000	2017 Gross premiums written	2017 Percentage of total	2016 Gross premiums written	2016 Percentage of total
<b>FINMA Line of business</b>				
Personal accident	10,700	0.7	1,581	0.1
Motor	429,687	26.7	468,853	30.2
Marine, aviation and transport	39,560	2.5	24,355	1.6
Property	649,102	40.4	643,159	41.4
Casualty	442,709	27.6	349,650	22.5
Miscellaneous	34,741	2.1	65,042	4.2
<b>Total</b>	<b>1,606,499</b>	<b>100.0</b>	<b>1,552,640</b>	<b>100.0</b>

### ii. Insurance business written by geographical region

The details of annual gross premiums written by geographic area of risk insured are provided below:

USD '000	2017 Gross premiums written	2017 Percentage of total	2016 Gross premiums written	2016 Percentage of total
<b>Geographic area of risk insured</b>				
North America	1,093,226	68.1	987,367	63.6
Europe	249,746	15.5	285,653	18.4
Worldwide	200,940	12.5	186,429	12.0
Australasia	34,872	2.2	56,175	3.6
Asia	24,738	1.5	35,523	2.3
Other	2,977	0.2	1,493	0.1
<b>Total</b>	<b>1,606,499</b>	<b>100.0</b>	<b>1,552,640</b>	<b>100.0</b>

## II. Business and performance (continued)

### G. Investment performance

The components of net investment income by asset category for the years ended 31 December 2017 and 2016 are as follows:

<b>31 December 2017</b> <b>USD '000</b>	<b>Interest and dividends</b>	<b>Net realised gains</b>	<b>Net change in unrealised gains</b>	<b>Impairment losses</b>	<b>Net investment income</b>
Cash and cash equivalents	1,034	-	-	-	1,034
Funds withheld	1,469	-	-	-	1,469
Short term investments	2,311	-	-	-	2,311
Fixed interest securities – AFS	68,578	205	-	(583)	68,200
Catastrophe bonds	5	-	-	-	5
Equity securities – AFS	2,109	1,298	-	(743)	2,664
Other securities – FVTPL	-	722	317	-	1,039
Sub-total	75,506	2,225	317	(1,326)	76,722
Investment management fees					(7,910)
<b>Net investment income</b>					<b>68,812</b>

<b>31 December 2016</b> <b>USD '000</b>	<b>Interest and dividends</b>	<b>Net realised gains</b>	<b>Net change in unrealised gains</b>	<b>Impairment losses</b>	<b>Net investment income</b>
Cash and cash equivalents	1,128	-	-	-	1,128
Funds withheld	3,032	-	-	-	3,032
Short term investments	3,496	-	-	-	3,496
Fixed interest securities – AFS	50,878	3,904	-	(32)	54,750
Catastrophe bonds	5	-	-	-	5
Equity securities – AFS	3,106	558	-	(1,214)	2,450
Other securities – FVTPL	-	270	1,176	-	1,446
Sub-total	61,645	4,732	1,176	(1,246)	66,307
Investment management fees					(5,435)
<b>Net investment income</b>					<b>60,872</b>

Refer to section I - Executive Summary above for general commentary on TMR's 2017 results (including investment performance).

Profit and loss items recognised directly in equity include changes in unrealised gains on investments, foreign currency translation adjustment and tax reserve for unrealised gains on investments. For further details, refer to the 'Consolidated Statement of Comprehensive Income' and 'Consolidated Statement of Changes in Shareholder's Equity' in TMR's Annual Report.

## II. Business and performance (continued)

### H. Material income and expenses for the reporting period

TMR's main revenue source is premiums (refer to section I. F. above). The Company's major expenses come from incurred losses, acquisition costs and general and administrative expenses.

Refer to section I - Executive Summary above for commentary on TMR's 2017 results. Also refer to the attachment – 'Performance Solo Reinsurance' for further details.

### I. Any other material information

The information presented in section II provides a true and fair view of the business and performance of the Company during the year. There is no other material information to disclose.

### III. Governance structure

The following diagram depicts the governance structure of the Company:



#### A. Board of Directors, Executive Committee and other committees

##### i. Board of Directors ('Board')

The Board is entrusted with the ultimate direction of the Company as well as the supervision of its management. The Board represents the Company towards third parties and attends to all matters which are not delegated to or reserved for another corporate body of the Company by law, the Articles of Association or the regulations.

As outlined in the Swiss Code of Obligations, and as set out in the Company's Articles of Association, the Board has the following non-transferable and inalienable duties:

- the overall management of the Company and the issuing of all necessary directives;
- determination of the Company's organisation;
- the organisation of the accounting, internal control system ('ICS'), financial control and financial planning systems as required for management of the Company;
- the appointment and dismissal of persons entrusted with managing and representing the Company and the granting of signatory power;
- overall supervision of the persons entrusted with managing the Company, in particular with regard to compliance with the law, the articles of association, operational regulations and directives;
- compilation of the annual report, preparation for the annual (shareholders) general meeting and implementation of its resolutions; and
- notification to FINMA in the event of reasonable concern of over indebtedness or serious liquidity problems.

### III. Governance structure (continued)

#### ii. Audit, Risk and Compliance Committee ('ARCC')

The ARCC's duties cover:

- the effective operation of the internal and external audit functions;
- the integrity of the financial statements of the Company;
- the effectiveness of the risk management policies and procedures; and
- the monitoring of compliance with legal and regulatory requirements.

#### iii. TMRUS Audit Committee

The TMRUS Audit Committee is responsible for overseeing the accounting and financial reporting processes of TMRUS and assessing the auditing of the statutory financial statements of TMRUS.

#### iv. Executive Committee ('EC')

The purpose of the EC is to exercise all the powers and authority of the Board in the management of the business and affairs of the Company between the meetings of the Board, subject to certain limitations on authorities, duties and responsibilities and matters that are specifically reserved for the Board or another committee of the Board.

The EC is supported by two further decision making bodies: the Risk Management Committee and the Reserving Committee.

#### v. Investment Committee

The Investment Committee's duties include the following:

- review, propose and seek approval from the Board for the Investment Principles and Asset Liability Management and Strategic Asset Allocation Policy on a regular basis so that it remains appropriate;
- update and review the investment strategy on a regular basis, ensuring that it is consistent with current asset-liability management;
- approve the target Strategic Asset Allocation, define appropriate benchmarks, evaluate the investment performance and take any necessary measures to ensure that the interests and rights of policyholders and shareholders are not compromised; and
- evaluate any investment activity which may have a material impact on the risk return profile of the investment portfolio.

### III. Governance structure (continued)

#### vi. Compensation and Nominations Committee

The Compensation and Nominations Committee's ('CNC') duties include the following:

- develop the broad framework and cost of executive compensation and advise the Board on it;
- give the Directors, Chief Officers and each Head of Branch every encouragement to enhance the Company's performance and ensure that they are fairly rewarded for their individual contributions;
- advise the Board on the level of compensation of each Director as well as TMR's general compensation scheme and determining the level of compensation and employment terms of each Chief Officer and Head of Branch on behalf of the Board;
- oversee the introduction, and determine the terms of any compensation schemes intended to reward or incent employees of the Company and to determine the participation of each individual in such schemes, including the award of any bonuses and the grant of any rights or options thereunder;
- maintain an overview of the overall policy in relation to the compensation and conditions of service of other managers and senior employees within the Company;
- appointment, reappointment or dismissal of the following positions: Chairman of the Board of the Company, Chief Officers and Heads of Branch of the Company, and Chairpersons and members of each Board Committee of the Company;
- recommend to the shareholders of the Company the nomination, appointment, reappointment or dismissal of the directors of the Company; and
- set the authority of each Chief Officer and Head of the Branch of the Company.

#### *Compensation policy*

The Company has a compensation policy in place. Employee compensation in TMR is comprised of: salary, bonuses (short/long term incentives) and company pension or retirement contributions; and benefits which include medical insurance, life and disability insurance commensurate with local market practices.

The Company may at its discretion offer the opportunity for variable compensation, by way of cash-based short and long term incentive schemes that are dependent upon local market practices, seniority levels or other factors determined in the Chief Executive Officer's ('CEO') discretion. Employees will not be overly dependent on variable components. Variable compensation and salary reviews will be based on a combination of the assessment of the individual's performance and the performance of the Company.

Individual performance is measured at least annually in a formal performance assessment process, and takes into account how the employee has demonstrated core competencies and has achieved agreed individual, team and Company goals. The performance criteria do not encourage unauthorised or unwanted risk-taking that exceeds the Company's level and appetite of tolerated risk.

A long-term incentive scheme is in place at the Company for certain offices and/or seniority levels of employees based upon local market practices in order to motivate the achievement of the Company's long-term objectives, to aid the retention of key talent and to align their interests to those of the Tokio Marine Group.

### III. Governance structure (continued)

As mentioned above, the Company's CNC is responsible for advising the Board on the Company's general compensation scheme and determining the level of compensation and terms of each Non-Executive Director, Chief Officer and Head of Branch. The CEO is responsible for agreeing the compensation for all officers and chief executive officers of any subsidiaries. The EC is responsible for agreeing the compensation of all employees below officers, in addition to ensuring that salary reviews and bonus payments are consistently applied throughout the Company.

On recruitment, promotion and at periodic review of compensation including salary, bonuses and pension/retirement benefits, the HR function seeks independent external advice to ensure the levels of compensations are appropriate.

#### *Pension or early retirement schemes for members, board of directors and senior employees*

The Company's Switzerland operation offers a defined benefit pension plan to its employees. The plan offers mandatory benefits as prescribed by the Law on Occupational Benefits in Switzerland as well as voluntary benefits. The Company and the members contribute a defined percentage of salary to the pension arrangement.

The Company operates defined contribution plans in the Bermuda, Australia and United Kingdom branches. The Company also maintains a defined contribution plan for employees of its US branch in accordance with Section 401(k) of the Internal Revenue Code.

TMR does not have any early retirement schemes.

#### **vii. Risk Management Committee ('RMC')**

The objective of the RMC is to oversee and facilitate the enterprise risk management ('ERM') programme development process, as well as to agree or recommend risk management policies and procedures. The primary duties of the RMC are to:

- establish and maintain a common understanding of enterprise risk which needs to be addressed in order to meet corporate objectives;
- identify the most significant risks on an on-going basis; and
- monitor the Company's risk management and assurance efforts, and identify and assist in the improvement thereof.

#### **viii. Reserving Committee**

The primary duties of the Reserving Committee are to:

- oversee the loss reserving function and appraise the sufficiency and effectiveness of the loss reserving practices of the Company;
- review the adequacy of estimated loss and loss expense reserves, including unallocated loss adjustment expenses ('ULAE');
- approve the loss and loss expense reserves to be recorded by the Company; and
- review the Reserving Policy and oversee the Company's compliance with it.

### III. Governance structure (continued)

#### **ix. Shareholder controllers, persons who exercise significant influence, the Board or senior executive material transactions**

There were no material transactions during the year. Also refer to TMR's Annual Report.

#### **B. Fitness and proprietary requirements**

##### **i. Fit and proper process in assessing the Board of Directors and senior executives**

As indicated in section III. A. vi. above, the Company's CNC is responsible for recommending to the Board the appointment, reappointment or dismissal of the following positions: Chairman of the Board of the Company, Chief Officers and Heads of Branch of the Company, and Chairpersons and members of each Board Committee of the Company.

The CNC is also responsible for the following requirements as it relates to applying fit and proper requirements to the nominations process:

- regularly review the structure, size and composition (including the skills, knowledge and experience) of the Board with regard to any changes;
- ensure that the Board and Board Committees have the appropriate skills and experience to manage the business;
- give due regard to any relevant legal or regulatory requirements; and
- ensure that there is no major conflict of interest issues for Directors, Chief Officers and Heads of Branch in accordance with the Company's Conflicts of Interest Policy, in particular for those persons holding interests outside of the Tokio Marine Group.

The Company also conducts reference checks and employment background screening by reputable third parties and/or governmental authorities, as applicable, as part of its nomination process of board members, Chief Officers and Heads of Branch.

##### **ii. Board and senior executives' professional qualifications, skills and expertise**

TMR's Board consists of 6 directors, comprising 5 Non-Executive Directors, 2 of whom are independent, and 1 Executive Director, being the CEO. In accordance with Article 13, section 1 of the Swiss Insurance Supervision Ordinance, the CEO will cease to be a director of TMR on or before 30 June 2018. There were no changes to the composition of the Board during the reporting period.

The roles and responsibilities of the non-executive directors are outlined in a Board of Directors Charter. The roles and responsibilities of the executive director are set out in their contract.

The Company's senior executive team comprises the CEO, Chief Financial Officer ('CFO'), Chief Risk Officer ('CRO'), Chief Operating Officer ('COO'), the Chief Legal Officer ('CLO') and, from 1 October 2017, the Chief Underwriting Officer ('CUO').



### III. Governance structure (continued)

Details regarding the professional qualifications, skills, expertise, and experience of each member of TMR's Board and senior executive team are as follows:

#### *Board*

##### **Richard Bennison**

*Independent Non-Executive Director*

Richard was appointed as an Independent Non-Executive Director to the Board of TMR in 2016. Richard is chair of the ARCC and the TMRUS Audit Committee.

Richard, a chartered accountant, has spent the majority of his career, spanning more than 35 years, with KPMG, where he most recently held the positions of Chief Operating Officer of KPMG Europe LLP and CEO of KPMG in the UK, with full responsibility for the UK firm's operating performance. Richard has experience across the insurance, asset management, retail and corporate banking sectors.

Richard holds a number of additional directorships, memberships and trusteeships including Chairman of Tokio Marine Kiln Syndicates Limited and Tokio Marine Kiln Insurance Limited, Independent Non-Executive Director and Chairman of the Board Audit committee of Prudential Assurance Company, Chairman of Taylor Clark Limited, and Governor, Honorary Treasurer and Chair of the Audit, Risk and Governance Committee of Motability. He is also a Trustee of The Underwood Trust.

##### **Hans-Peter Gerhardt**

*Independent Non-Executive Director*

Peter was appointed to the Board of Directors of TMR in June 2015.

Peter was formerly Chief Executive Officer and founding member of Paris Re, which was acquired by PartnerRe in 2009. Prior to that he was Chief Executive Officer of AXA Re and also served as Chairman of AXA Liabilities Managers. He was previously a Non-Executive Director at Brit Insurance Holdings, Plc and Vice-Chairman of the Board of General Cologne Re as well as a member of the General Re group's Executive Committee. Peter began his reinsurance career at Hannover Re.

Peter is an Independent Director of Asia Capital Re and ACR Capital Holdings and was Group Chief Executive Officer and Executive Director of both companies. He is also a Non-Executive Director and Chairman of the Underwriting and Risk Committee on the Board of African Risk Capacity Insurance Company. He is also an Independent Non-Executive Director of Enstar Group Ltd. and Tokio Marine Kiln Group Ltd.

Peter holds a German Diploma (MBA equivalent) in business administration and economics from the University of Hannover, Germany.

### III. Governance structure (continued)

#### **Ichiro Ishii**

*Non-Executive Director and Chairman of the Board*

'Rick' was appointed to the Board of TMR in April 2017 as the Chairman of the Board. Rick is chair of the Compensation and Nominations Committee.

Rick has extensive experience in the insurance industry both in Japan and abroad. He is currently an Executive Vice President of Tokio Marine Holdings, Inc. as well as an Executive Vice President of Tokio Marine & Nichido Fire Insurance Co., Ltd., TMR's immediate parent company.

Rick joined the Tokio Marine Group in 1978. Between 2002 and 2010, he held various positions as General Manager in Bangkok, Los Angeles, and New York before moving back to Japan in 2010. From 2010 to 2012 he worked as an Executive Officer and General Manager at the International Business Development Dept. of Tokio Marine Group. In 2013, Rick was promoted Managing Executive Officer of Tokio Marine Holdings, Inc. and Tokio Marine & Nichido Fire Insurance Co., Ltd., followed by a nomination to Senior Managing Executive Officer of Tokio Marine Holdings, Inc. and Tokio Marine & Nichido Fire Insurance Co., Ltd. in 2015, and Executive Vice President of Tokio Marine Holdings, Inc. and Tokio Marine & Nichido Fire Insurance Co., Ltd. in 2017. From April 2018, he is a Vice President Executive Officer of Tokio Marine Holdings, Inc. and Tokio Marine & Nichido Fire Insurance Co., Ltd.

Rick obtained a Bachelor of Engineering degree from the University of Tokyo in 1978.

#### **Michael J. Schell**

*Non-Executive Director and Vice-Chairman of the Board*

Mike was appointed to the Board of TMR in April 2017 as the Vice-Chairman of the Board.

Mike has over 45 years' experience in the insurance industry with over 15 years at Tokio Marine HCC (TMHCC). He is currently the Executive Vice President of TMHCC in Houston, Texas. He is also Chief Executive Officer of TMHCC's insurance companies Houston Casualty Company, U.S. Specialty Insurance Company Avemco Insurance Company and HCC Re. Prior to that, he worked 25 years at St. Paul Companies and also 5 years with INA. The last position Mike held at St. Paul Companies was President and COO of St. Paul's reinsurance division, St. Paul Re.

Mike holds an MBA from College of St. Thomas, St. Paul, Minnesota and has a Chartered Property & Casualty Underwriter (CPCU) designation.

### III. Governance structure (continued)

#### **Stephan Ruoff**

*Executive Director and Chief Executive Officer*

Stephan is Chief Executive Officer and Head of Europe of TMR. Stephan is chair of the EC.

He joined TMR in October 2011 as Chief Executive Officer of its Zurich branch and was instrumental in establishing the company's continental European presence. He was appointed CUO in 2013 and assumed his current position in 2015. He is also an Executive Director of two of TMR's subsidiaries, Tokio Solution Management Ltd. and TMR Management, Inc., a Non-Executive Director of Tokio Marine Kiln Group Ltd and was a Non-Executive Director of Tokio Millennium Re (UK) Ltd until June 2017.

Stephan has over 20 years of reinsurance underwriting and management experience. He began his career with the IFP in Paris as an engineer in the field of crude oil refining before joining Munich Re Group as Engineering Underwriter. From 1998 to 2003, Stephan worked as Chief Engineer and Underwriter for Munich Re in the Greater China region. He took on the role of General Manager of the company's Paris branch in 2004 with responsibility for developing an integrated facultative and treaty underwriting approach for the French market. In 2008, Stephan returned to Munich Re's head office as Executive Client Manager for the French and BeNeLux markets.

Stephan earned a German-French double diploma in engineering from the Technical University Berlin and Ecole des Mines in St. Etienne and his graduation in Insurance Management from St. Gallen University, Switzerland.

#### **Toshiaki Suzuki**

*Non-Executive Director*

Toshi was appointed to the Board of TMR in June 2014. Toshi is chair of the Investment Committee.

Toshi is a General Manager of the International Business Development Department of Tokio Marine Holdings, Inc., the principal holding company of the Tokio Marine Group. Toshi is a member of the Audit Committee Governance Team responsible for overseeing and planning the effective governance structure of the international operation of the group. He chairs audit committees of various group companies worldwide including those in North, Central and South America, and Asia as well as the reinsurance operation.

Toshi joined Tokio Marine in 1986 and has held various positions spanning from strategic planning to corporate accounting to M&A activities. His overseas assignment started in 1995 when he joined a team to set up an insurance operation in Mexico City. In 1999, he moved to London to assume the CFO position at TMEI. Returning to Tokyo briefly in 2003 as a manager responsible for M&A in non-Asian territories, Toshi moved to New York in 2004 to start up the regional headquarters for the Americas region and to manage the operations in Central and South America along with M&A activities. In 2009, he became CFO of the Brazilian operation in order to complete the post-merger integration. He returned to Tokyo in 2012 to assume his present position at Tokio Marine Holdings, Inc.

Toshi received a Bachelor of Arts degree from the International Christian University, Japan in 1986, and a Master of Business Administration from the Darden Graduate School at the University of Virginia, USA in 1993.

### III. Governance structure (continued)

#### *Senior Executive*

##### **Maurice Kane**

###### *Chief Financial Officer*

Maurice was appointed Chief Financial Officer of TMR in October 2013. He is chair of the Reserving Committee.

He joined TMR in April 2003 to establish and develop the finance and treasury function in Bermuda. He is now responsible for the global management and coordination of the finance and treasury functions of the company and its branches. He is also an Executive Director of Tokio Solution Management Ltd. and a Non-Executive Director of Tokio Millennium Re (UK) Ltd.

Maurice has over 20 years of experience in the financial services sector. Prior to joining TMR, Maurice held the position of Group Financial Controller of Aon Bermuda Ltd. and various other positions at Eagle Star Life (a division of Zurich Financial Services).

Maurice is a Fellow of the Association of Chartered Certified Accounts (FCCA) and an Associate in Reinsurance (ARe).

##### **Masahiro Koike**

###### *Chief Operating Officer*

Masa is Chief Operating Officer and Head of TMR's US Branch.

He joined the Tokio Marine Group in 1994. Prior to his current role, Masa was Head of Operations for the US branch of TMR. He is also an Executive Director of TMR Management, Inc.

Masa has more than 20 years of experience in the reinsurance field. He started his career in the property & casualty reinsurance field purchasing outward reinsurance protections for Tokio Marine and Nichido Fire. Masa subsequently moved on to aviation insurance/reinsurance, initially as an underwriter for space insurance/reinsurance. He later assumed the responsibility of Head of Underwriting for Tokio Marine Nichido's aviation book, serving the role of main underwriter for the aviation reinsurance portfolio, as well as overseeing the entire aviation insurance/reinsurance underwriting and operations.

Masa holds a Bachelor of Laws from Keio University, Japan, and an MBA from Stanford University.

### III. Governance structure (continued)

#### **Andreas Kull**

*Chief Risk Officer*

Andreas joined TMR in 2015 as Executive Vice President, Group Enterprise Risk Management and was appointed Chief Risk Officer in April 2016. Andreas is chair of the RMC.

Andreas has over 15 years of experience in risk management and actuarial roles. Prior to TMR, he was the Chief Risk Officer of AXA Winterthur. Before this he served in a consultancy role as an executive director at EY and held risk management and actuarial roles at Converium (now Scor) and Zurich Insurance where he started his career in 1999. He is also a Non-Executive Director of Tokio Marine Technologies, LLC.

Andreas is a qualified actuary (Swiss Association of Actuaries, German Association of Actuaries) with a CERA designation. He holds a master's in physics from the University of Bern and a PhD in physics from Ludwig-Maximilians-Universität in Munich, Germany.

#### **Rajiv Raval**

*Chief Legal Officer*

Rajiv is Chief Legal Officer of TMR. He joined TMR in August 2014 as Group General Counsel. Rajiv has extensive experience in the insurance and reinsurance industry.

Prior to joining TMR, he served as Senior Vice President and General Counsel of Berkley Insurance Company, a subsidiary of W.R. Berkley Corporation. Before that, he was a Partner at Lovells LLP (now Hogan Lovells US LLP) in New York, where he practiced for nine years. Rajiv began his reinsurance career with the Swiss Re Group, working at both Swiss Re America in New York and Swiss Re New Markets in Zurich, Switzerland. He is also a Non-Executive Director of Tokio Solution Management Ltd.

Rajiv is admitted to the Bar in the state of New York and is authorised in-house counsel in the state of Connecticut. Rajiv earned his Bachelor of Arts from New York University and his Juris Doctorate from Syracuse University College of Law.

#### **Brian Secrett**

*Chief Underwriting Officer*

Brian joined TMR as Chief Underwriting Officer and member of the EC effective 1 October 2017.

Brian has nearly 30 years of reinsurance underwriting experience. He joined TMR from Lloyd's, where he had been Head of Class of Business and subsequently Interim Head of Underwriting Performance.

Prior to that, Brian worked for PartnerRe for 21 years holding several management positions, most recently responsible for the leadership and management of PartnerRe's Catastrophe Business Unit worldwide. Previously, Brian served as PartnerRe's Catastrophe Unit's Chief Underwriting Officer and Deputy Head. He worked in Bermuda and Switzerland from 1994 to 2015. Brian's first role in the reinsurance industry was at Swiss Re in London, following two years of post-graduate research at the University of Surrey in the UK.

Brian holds a BA (honours) undergraduate degree in Geography.

## III. Governance structure (continued)

### C. Risk management and solvency self-assessment

#### i. Risk management process and procedures to identify, measure, manage and report on risk exposures

Risk governance describes the accountability (or ownership), roles and responsibilities, and information flow for risk management. It includes the stakeholders and constituent groups, including TMR's Board of Directors, management, committees and employees. Risk governance sets out the required structure and reporting, and defines the rules and processes for making risk related decisions. There is a defined risk governance structure at TMR, as described in the Risk Management Policy.

The ERM framework of TMR's ultimate parent company (TMHD) governs the ERM framework and practices of all Tokio Marine Group companies, including TMR, and is taken as the starting point of the Company's risk management framework. The defined risk governance structure at TMR is described in the Risk Management Policy.

#### *Risk management system and changes*

TMR's Risk management system builds on:

- TMR's risk strategy, as defined by the Risk appetite and tolerance/limit system, restricting risk amounts that TMR is willing to accept in pursuing its business strategy.
- TMR's risk management organization and governance.
- TMR's risk management process ensuring the identification of all material risks inherent in its business, assessing, controlling, mitigating and managing these risks.
- Timely risk monitoring and reporting.

TMR is continuously reviewing and improving the adequacy of its Risk Management System to address the changing risk and innovation landscape. During the reporting period, the following major changes have been made:

- Recognising the growing non-cat reserves as well as the related increasing complexity of the reserving process, TMR has strengthened its reserving team, process and tools.
- In line with the its adjusted investment strategy and the introduction of asset portfolios at branch level, TMR has reinforced its Asset Liability Modelling ('ALM') and Strategic Asset Allocation ('SAA') framework.
- TMR further enhanced its risk modelling capabilities supporting underwriting and pricing and portfolio management.

#### *Risk governance structure*

The chart in section III shows the governance structure of TMR. A key element of the risk governance is the RMC which oversees the ERM function and the Risk Management Working Group ('RMWG'). The RMWG reports in to the RMC and consists of representatives from the business units and various departments, thus ensuring appropriate communication from and to all business processes.

### III. Governance structure (continued)

The Company takes a global approach to risk management. The ERM function has a decentralised structure to efficiently manage risk across the group, leverage local expertise and mirror TMR's global set-up. The group ERM function is led and managed from the Swiss head office by the CRO and is staffed by experienced risk managers located in each of the business units who are responsible for both group and local risk management functions. The ERM function also includes Group Reserving which also has local reserving responsibilities assigned to business unit representatives.

#### **Risk culture**

An appropriate risk culture encompassing all activities conducted at TMR is the foundation of TMR's Risk management. Risk culture at TMR starts with the Board and EC who lead by example in risk management activities, set the overall tone and have clear accountabilities. Senior management form part of the process by ensuring that risks are communicated, the importance of controls is understood and that consideration is given to risks in all decision-making processes. Thus, ensuring that risk management is embedded throughout the entire organisation. These more informal processes are supported by formal strategies, policies, processes, organisational structure and description of roles which are clearly documented and communicated and ERM and Compliance as the second line of defence functions closely work and consult with business functions based on their know-how and technical expertise. Recognising this TMR's Risk management policy as signed off by the Board builds on a statement about risk culture highlighting its importance.

#### **Risk strategy**

TMR's risk strategy comprises the risk objectives, as described in the risk appetite, and the strategy for how they will be implemented.

The risk appetite, risk tolerance levels and risk limits are defined in the Risk Appetite and Risk Tolerance/Limit Policy. The implementation strategy is described in the Risk Management Policy.

The risk appetite is owned and set by the Board. It represents the Company's overall philosophy to risk taking in line with its objectives and the expectations of its stakeholders including, but not limited to, parent company, policyholders, regulators, directors and employees.

A summary of TMR's risk strategy, as defined by risk appetite, risk tolerance levels and risk limits, aims to:

- Safeguard the Company's financial strength and reputation in line with its Risk Appetite;
- Support the Company to achieve its business strategy, as well as to inform changes to the business strategy;
- Ensure that risks will be properly identified, assessed and quantified;
- Manage and control risk accumulations within tolerable limits by following risk appetite statements as defined in the Risk Appetite and Risk Tolerance/Limit Policy;
- Ensure that the Company can pay its liabilities, including day-to-day cash requirements, in a timely manner by holding an appropriate level of secure and liquid assets; and
- Ensure TMR is using its risk capacity in efficient and effective way.

### III. Governance structure (continued)

#### *Risk management process*

TMR, through its ERM function, RMWG and RMC, seeks to: identify all material risks inherent in its business including emerging risks; to understand the manifestations of each risk; and to assess, control, mitigate and manage these risks appropriately.

The objectives of TMR's risk management process are to ensure that:

- All material risks are proactively identified;
- The potential to cause losses or generate profits is understood and assessed;
- Appropriate action is taken to manage the assumption of each risk based on that assessment and TMR's stated risk appetite;
- Appropriate controls are in place to mitigate risks;
- An appropriate level of capital is held to cover financial and non-financial risks from all sources; and
- Following a severe catastrophic event(s), appropriate capital action can be executed to remain solvent and meet its obligations under reinsurance contracts.

TMR's risk management process build on ERM's quantitative and qualitative risk management capabilities. Beyond risk management key results of the quantitative risk assessment like e.g. capital allocation are used to inform other business processes, most notably the Business Steering process aiming at optimising TMR's liability portfolio to generate improved RoE.

#### *Risk identification*

TMR's Heads of Branch and the CEO's of the Company are responsible for risk identification at a branch or subsidiary level and reporting these risks to the RMC via the RMWG. Hence the RMWG identifies risks, including any emerging risks, using available resources such as risk-based self-assessments performed by each business unit and the findings of internal audits.

TMR also maintains a risk register which includes a description of the risk, the probability of its occurrence, the potential financial impact, severity level, action plans and risk owners. Risk drivers are identified during interviews with the risk owners and documented.

#### *Risk evaluation*

ERM holds annual discussions with each business unit and updates the likelihood and financial impact of each identified risk on a quarterly basis. This risk assessment is reviewed by the RMWG and presented to the RMC, ARCC, EC and Board.

Each material risk is measured and modelled over a one-year time horizon using TMR's internal economic capital model. The results are aggregated into a probability distribution of TMR's profit and loss to provide a holistic view of all risks and their interplay. In the risk aggregation process, both risk correlation and diversification effects are taken into account.



### III. Governance structure (continued)

Within TMR, risks are evaluated using the internal economic capital model for a number of purposes including: business planning; capital allocation; steering; reinsurance pricing; risk guidance and portfolio optimisation; retrocessions; and long term incentive plan.

Operational and unmodelled risks, that by nature have a lack of sufficient empirical data, are assessed through the risk register process via a scenario analysis approach based on expert judgment.

TMR's internal model for the premium (cat and non-cat) and reserve risk components are used in conjunction with the standard approach for market and credit risk; market value margin; and scenarios for the Swiss Solvency Test ('SST').

#### ***Stress and scenario testing***

Stress and scenario tests form part of the suite of tools that TMR uses in its risk management process. Stress and scenarios tests are used to assess the effects of one or more risk drivers on the Company's risk profile and financial strength in order to improve understanding of the business, in addition to validate the models used for evaluation purposes.

A stress test is the analysis of the impact of a single adverse event while a scenario test analyses the impact of a combination of adverse events.

TMR performs one-year stress and scenario tests and in addition multi-year scenarios that cover the entire planning period. Refer to section IV. E. for further details on the stress and scenarios run.

TMR's Stress and Scenario Policy defines the processes that are carried out to identify the impact of events or combinations of events.

#### ***Risk monitoring and reporting***

Risk reporting includes relevant, sufficient, accurate and timely information provided to senior management enabling appropriate monitoring and the fulfilment of their accountabilities. To this end TMR has implemented a quarterly risk reporting and an annual Own Risk and Solvency Assessment ('ORSA').

- The ERM Quarterly Report is provided to the RMC, EC, ARCC and Board. It contains a dashboard, which monitors adherence to risk tolerance and limits as defined in the Risk Appetite and Risk Tolerance/Limit Policy as well as information about internal and regulatory capital adequacy.
- The annual ORSA report, as provided to the RMWG, RMC, ARCC, EC, Board and FINMA, contains information on risk capital and solvency over the business planning time horizon. In addition, capital adequacy under various stress and scenarios and risk mitigation measures.

### III. Governance structure (continued)

#### ***Business continuity plans***

TMR has in place a comprehensive business continuity programme with a number of plans and procedure documents to prepare for various emergency situations. These documents define the appropriate response, mitigation and recovery actions during or after an emergency:

- Crisis Management Team Plan - describes the command and control activities necessary to assess emergencies, declare an emergency event and activate the business unit Contingency and Technology Recovery plans;
- Pandemic Response Plan - falls under the category of a Crisis Management Team plan; and
- Business Unit Contingency Plans - describes the critical activities that must be restored quickly to ensure the viability of the enterprise in the event of a physical (non-biological) event affecting the premises.

These detailed plans outline the processes that need restoration and identify the essential personnel and other resources required to perform those activities. These plans are covered in a comprehensive Emergency Management Policy which governs the Emergency and Crisis Management activities for all TMR locations.

#### **ii. Risk management and solvency self-assessment systems implementation**

The Solvency Self-Assessment, of the quantity and quality of capital required to support TMR's business goals given the amount of risk the Company has taken on (or plans to take on) and environmental factors, is monitored on an internal and regulatory (SST) basis.

The Solvency Self-Assessment on an internal one-year basis is reviewed on a quarterly basis to ensure that the Company's capital adequacy and liquidity resources are sufficient based on the risks to the Company that arise from its operations. The Solvency Self-Assessment on a regulatory basis is reviewed on an annual basis in line with SST reporting.

#### **iii. Relationship between solvency self-assessment, solvency needs and capital, and risk management**

The Company's ORSA provides TMR with an assessment of current and projected future risk and solvency up to and including three full years of new business in line with the Company's business planning. The report is provided by the CRO for use by the EC, Board, Senior Management and Heads of Branches as part of their strategic planning and business oversight. It is also required for regulatory purposes and is provided to FINMA in June each year.

#### **iv. Solvency self-assessment approval process**

The Company's ORSA Report is prepared by the risk management team, in consultation with relevant functions and business units, and reviewed by the CRO, RMWG, RMC, and ARCC and approved by the Board. After Board approval, the report is provided to FINMA.

The process respects the 'Three Lines of Defence' in that it is managed by the Second Line (rather than First), and is subject to review by Internal Audit as part of the ICS, and occasionally validated by third party consultants.

### III. Governance structure (continued)

#### D. Internal controls

##### i. Internal control system

TMR has implemented an ICS Framework and Policy which outlines the Company's processes and requirements regarding internal controls. The ICS outlines the process in place to ensure that TMR's risks are identified and appropriate controls are in place to mitigate these risks and ensure the Company's assets are protected, errors and irregularities (including fraud) are prevented, laws and regulations are adhered to and operations are managed effectively and efficiently. The ICS outlines the responsibilities of the three lines of defence for identifying, assessing, and monitoring risks and establishing, monitoring, and testing controls.

TMR is subject to the J-SOX control framework which includes documentation and annual testing of the design and operating effectiveness of the internal controls over financial reporting ('ICFR') and company level controls ('CLC'). In addition, TMR is subject to the Tokio Marine Group's Control Standards regime and management completes an annual Control Self-Assessment ('CSA') which requires that management review Control Standards to assess whether they are functioning as intended and provide quarterly updates on progress with any remedial action required.

##### ii. Compliance function

Responsibility for managing the business in a compliant manner ultimately lies with the Executive Officers and the Board of Directors. It is the role of the Legal & Compliance ('L&C') function to assist and guide the business, the Executive Officers and the Board of Directors and help them meet their responsibilities. The L&C function principally acts as a second line of defense in the Company, though also acts in a first line capacity in terms of its advisory and training and awareness activities, as described below.

The Company's L&C function comprises the Chief Legal Officer, who has overall responsibility for the L&C function, the Head of Group Compliance and local L&C representatives. The Chief Legal Officer is a member of the Company's EC and RMC and a permanent attendee at the Company's Compensation and Nominations Committee and Board meetings. The Head of Group Compliance is a permanent attendee at the Company's ARCC, TMRUS Audit Committee, Investment Committee and Board meetings.

The L&C function is principally concerned with conduct of business rules, codes and standards set by regulators and other related legal, regulatory and market conduct standards, including sanctions, licenses, anti-money laundering, insider dealing, market manipulation and financial promotion requirements.

Whilst the L&C function is not expected routinely to monitor for other matters, it is encouraged and entitled to raise and pursue a wider range of issues that come to its attention which are likely to be of concern to regulators or affect the reputation of the business.

Generally, the L&C function will not have responsibility for day-to-day management of business and operational matters (other than advisory support), nor for matters such as financial reporting, capital adequacy, credit and trading risk management, data protection, other IT and security issues and non-compliance related training.

### III. Governance structure (continued)

In order to achieve the above purpose, the L&C function provides assistance and guidance to management and business functions through the following main activities:

- Advisory – provision of proactive and reactive advisory service on compliance issues
- Monitoring – development and maintenance of appropriate compliance monitoring programmes
- Training and awareness – procedures designed to ensure staff are aware of relevant regulatory requirements
- Regulatory relationships – management of external relationships with regulators
- Reporting – regular reporting to management and as appropriate, to regulators
- Investigations – carrying out compliance related investigatory work.

These activities require appropriate independence and autonomy. However, it is vital that the L&C function should not simply be regarded as a function to ‘control’ management. Instead the L&C function should be regarded as a critical and integral part of the Company, working closely with business areas and contributing towards the wider management of the risks within the Company’s business, with particular regard to regulatory and reputational risk.

#### E. Internal audit

The Company has an Internal Audit (‘IA’) function established as the third line of defence whose primary responsibility is to provide Management and the ARCC with an independent and objective analysis and appraisal of: (1) the efficiency and effectiveness of the Company’s operations, (2) the reliability and completeness of its financial and management information, and (3) compliance with applicable laws and regulations. The IA Charter is reviewed and approved by the ARCC annually and outlines the roles, responsibilities of Internal Audit and details access rights, authority, confidentiality, etc. The IA function also adheres to the IA Methodology, which is adopted from the Global Audit Methodology from Head Office, and outlines the procedures required to perform the annual IA risk assessment, annual audit plan, and the execution of internal audits.

IA is responsible for maintaining an effective and appropriate internal audit programme through the following:

- delivery of the annual internal audit risk assessment and audit plan;
- execution of the annual audit plan using a risk based auditing approach which includes independently evaluating the control framework;
- delivery of the annual Japanese Sarbanes-Oxley (‘J-SOX’) control testing programme;
- validation of the Control Self-Assessment (‘CSA’) programme;
- reviewing the effectiveness of risk management processes and practices at TMR, this is incorporated into the annual internal audit plan;
- evaluating processes and controls which ensure that TMR is complying with applicable laws, regulations, and corporate ethical standards;
- evaluating change activities including significant projects or large scale business initiatives; and
- periodic reporting to TMHD and the International Internal Audit Committee.

### III. Governance structure (continued)

The IA function is led by the VP of IA who holds a group role responsible for all Business Units. The VP of IA reports to the ARCC, alongside an administrative reporting line to the CLO. The rest of the IA function is co-sourced to two Third Party Service Providers both which operate globally. The annual JSOX testing is co-sourced and specialist resources are used for specialised areas including IT, Actuarial, and elements of Risk Management. The co-source providers report to the VP of IA who is responsible for ensuring that the function complies with IIA Standards and regulatory requirements.

#### F. Actuarial function

The actuarial function at TMR is part of the ERM function which is led by the CRO, and is responsible for:

- coordinating the calculation of the technical reserves;
- ensuring appropriateness of methodologies, models and assumption used in the calculation of the technical reserves;
- assessing sufficiency and quality of data used in the calculation of the technical reserves;
- contributing to the effective implementation of TMR's risk management system;
- ensuring the Group's reporting and governance standards are adhered to; and
- ensuring the solvency margin is calculated correctly and tied assets are in accordance with supervisory legislation.

TMR's overall reserving process includes reviews by internal and external parties. The Company's Head of Reserving and Head of Claims are responsible for recommending, monitoring and adjusting the non-catastrophe and catastrophe reserves, respectively. The reserves are approved by the Reserving Committee, which is chaired by the CFO, and reviewed by the ARCC on a quarterly basis. An external independent analysis of TMR's reserves is also conducted by Milliman, Inc., with an annual certification that the financial statement losses and loss adjustment expenses ('LAE') reserves are adequate. In addition, PwC, who were appointed as TMR's external auditors from year-end 2016 (previously KPMG), opine on the correctness of the International Financial Reporting Standards ('IFRS') accounts including reserves.

The actuarial function is also required to contribute to the effective implementation of the risk management system of TMR, with respect to the risk modelling underlying the calculations of the capital requirements. TMR has developed an internal model for internal reporting purposes and uses the Premium Cat risk component of this model, in conjunction with the standard approach for other risk components for the SST. Results are reviewed by the ARCC and Board, and SST figures are submitted to FINMA.

In addition, in accordance with Swiss Insurance Supervisory law, the function has a Responsible Actuary. This role was outsourced to Ernst & Young ('E&Y') during 2017.

### III. Governance structure (continued)

#### G. Outsourcing

##### i. Outsourcing policy and key functions that have been outsourced

The Company has an Outsourcing Policy that sets out how the Company seeks to manage potential or actual outsourced arrangements, and has been designed having regard to the size and complexity of the business of the Company.

All outsourcing arrangements entered into by the Company are subject to the framework established in the Outsourcing Policy, with particular focus on material or critical operational functions. Outsourcing arrangements may be provided by both independent third party providers and other companies within the Tokio Marine Group (intra-group outsourcing). The Company will outsource material or critical operations only when doing so is economically justified or when third party assistance is necessary to provide essential services.

The Company currently outsources the following key functions:

- investment management
- Responsible Actuary; and
- support in the execution of business processes for its Australian Branch.

The Company has applied to FINMA to in-house the Responsible Actuary function, and expects this to be completed by end of Q2 2018.

##### ii. Material intra-group outsourcing

The Company has one material intra-group outsourcing arrangement. Delphi Capital Management, Inc. provides investment management services for TMR's 'non-core' investment portfolio.

#### H. Other material information

No other material information to report.

# IV. Risk profile

## A. Material risks exposed to during the reporting period

In the course of the Company’s risk identification, assessment, control, monitoring and reporting process, it has identified and categorised all of its risks into the following categories:

- underwriting risk including premium risk, catastrophe risk and reserve risk;
- market risk including interest rate risk, foreign exchange risk, revaluation risk, equity price risk and credit spread risk;
- credit risk;
- liquidity risk;
- operational risk; and
- strategic risk.

The chart below shows the composition of risk components on a SST basis.



## IV. Risk profile (continued)

### i. Underwriting risk

Underwriting risk consists of premium risk, catastrophe risk and reserve risk.

Underwriting risk may be due to either the acceptance of risks that do not comply with the Company's underwriting guidelines and corporate strategy, or the acceptance of risks that result in losses and expenses greater than it had anticipated at the time of underwriting.

As a reinsurance company, TMR is in the business of taking underwriting risk and therefore this is the most material risk. TMR's risk limits are defined in its Risk Appetite and Risk Tolerance/Limit Policy for underwriting risk combined.

The Company has Underwriting Guidelines in place that clearly define the territorial scope, risks to be written, business to be avoided, acceptance limits, maximum policy period, maximum net retention, outward reinsurance, security requirement (for retrocessionaires) and underwriting authority.

As a part of the risk control strategy and governance at TMR, all contracts must be reviewed and approved by an Underwriting Committee before they can be bound.

The Company employs experienced catastrophe analysts and modellers, as well as experienced and credentialed actuaries, to perform pricing analyses to ensure that each risk is adequately priced.

#### **Premium Risk**

Premium risk is the risk that the premium to be earned over the next twelve-month period from the in-force, new or renewal reinsurance contracts is insufficient to cover the claim costs, claim adjustment expenses as well as the acquisition costs to be incurred by those contracts over the same period.

Non-natural catastrophe premium risk on an SST Target Capital basis at year-end 2017 is USD 210.5 million on a standalone basis. While the level of non-natural catastrophe premiums stayed flat compared to last year the risk has slightly decreased following the use of FINMA's new standard model and also an improved business mix. In addition, there is also a large diversification benefit between natural catastrophe and non-natural catastrophe risk.

The Company has purchased retrocessions in the past several years to enhance the diversity of the portfolio, improve capital efficiency, manage the net retention and protect the capital of TMR. The Company will continue to utilise this important risk management tool when the pricing and risk mitigation impact justifies doing so.

#### **Catastrophe Risk**

Catastrophe risk is the risk that the premium to be earned over the next twelve-month period from the catastrophe exposed reinsurance contracts (in-force, new or renewal) is insufficient to cover potential claim costs, claim adjustment expenses as well as the acquisition costs associated with those contracts that may originate from extreme or exceptional catastrophic events over the same period, such as hurricanes, earthquakes, windstorms, landslides and terrorist attacks.

Catastrophe risk is classified as a separate and distinct class of underwriting risk mainly due to its low-frequency and high severity characteristics, its potential to affect numerous contracts simultaneously and inflict significant erosion of TMR's capital.



## IV. Risk profile (continued)

Natural catastrophe risk is the dominant contributor and driver of TMR's total risk with USD 578.5 million of SST Target Capital allocated to it on a standalone basis at year-end 2017. US Hurricane exposures are the largest region and peril contributing to Catastrophe risk. For 2018 and going forward the company will continue to actively manage its net natural catastrophe exposure via its third party capital strategy and also seek opportunities where they appear in the market. As such, the 99%TVaR of natural catastrophe risk is expected to remain stable over the planning period and natural catastrophe risk will continue to be the most material risk source.

The Company has made a series of strategic moves to diversify, spread and dilute its catastrophe exposures as well as optimise its underwriting portfolio through geographical diversification and by writing casualty and specialty lines and lower layers of business. Hence TMR's catastrophe exposures are managed by limiting the amount of exposure in any one geographic area.

The Company also writes reinsurance risks for periods of mainly one year so that the contracts can be assessed for pricing and terms and adjusted to reflect any changes in market conditions.

In addition, retrocession is purchased to enhance the diversity of TMR's portfolio, maintain the net retention and even out peak exposures and more effectively manage the volatility of TMR's book of business.

### **Reserve Risk**

Reserve risk is the risk that the best (point) estimate of unpaid loss and loss adjustment expense reserves are inadequate to cover all future payments for the full settlement of claims from all prior accident years (on or prior to the valuation date).

Reserve risk is distinct from premium risk and is related to exposures that have already been earned and claims that have already been incurred but have not yet been reported ('IBNR') or fully settled.

Reserve risk on an SST Target Capital basis at year-end 2017 is USD 339.5 million on a standalone basis. TMR has focused on short-tailed property lines of business in the past but now has increased its appetite for longer-tailed casualty and specialty lines of business. The proportion of medium and long-tailed lines of business underwritten by the Company continues to create a shift towards greater proportion of reserving risk in the risk profile. The standalone value of reserve risk will increase year on year over the planning period as the strategy to underwrite longer tailed business increases the overall level of reserves at each valuation date. A levelling out of the increase of reserve risk is expected to occur within a few years after the end of the current three-year business plan time horizon.

A full analysis of loss and loss adjustment expense reserves is performed on a quarterly basis. The reserve analyses are reviewed by and discussed with underwriters, actuaries, claims, finance and senior management prior to submission to the Reserve Committee. The Reserve Committee is appointed by the EC to review the sufficiency of the estimated loss reserves and to appraise the adequacy and effectiveness of the loss reserving practices of TMR. The Reserve Committee is comprised of the CEO, CRO, COO and CFO. As per section III. F. above, the Responsible Actuary is responsible for ensuring that adequate technical reserves are established.

## IV. Risk profile (continued)

### ii. Market risk

Market risk refers to the risk of financial loss due to a change in the value of the financial assets in TMR's investment portfolio or a change of market risk factors that affect the value of such assets or TMR's liabilities. TMR has identified interest rate risk, foreign exchange risk, revaluation risk, equity price risk and credit spread risk as its main sources of market risk.

Market risk on an SST Target Capital basis at year-end 2017 is USD 176.4 million on a standalone basis. Market risk increased over the past year mainly driven by an increase in credit risky fixed income assets which led to an increase in credit spread risks. Market risk is expected to continue to increase over the planning horizon because of a larger investible asset base (from higher reserves). The relative proportion of the Non-Core investment compared to total assets remains stable and there is a significant diversification benefit with underwriting risk.

#### *Interest Rate Risk*

Interest rate risk is a function of general economic and financial market factors (such as the level, trend and volatility of interest rates) as well as the characteristics of the individual fixed interest securities held in TMR's investment portfolio. TMR cannot control the former but it can control the latter.

Interest Rate risk on an SST Target Capital basis at year-end 2017 is USD 32.6 million on a standalone basis. Investment guidelines are established to manage this risk. These guidelines set parameters within which the external investment manager must operate. The guidelines are set by the Investment Committee. The Investment Guidelines specify the limitations on the maximum percentage of assets that can be invested in a single issuer or in a single asset class. There are also specific limitations on the maximum maturity for various classes of fixed interest securities and the minimum requirements of credit ratings. The Company reviews the composition, duration and asset allocation of its investment portfolio on a regular basis in order to respond to changes in interest rates and other market conditions. The Company also mitigates interest rate risk on the investment portfolio by establishing and monitoring duration ranges in its investment guidelines.

#### *Foreign Exchange Risk*

Foreign Exchange Rate risk on an SST Target Capital basis at year-end 2017 is USD 35.7 million on a standalone basis. The Company operates internationally and its exposures to foreign exchange risk arise primarily with respect to the U.S. dollar, Australian dollar, Euro, Pound Sterling and New Zealand dollar. The presentation currency of the Company is the U.S. dollar in which the Company reports its consolidated financial results. The effect of this on foreign exchange risk is that TMR is exposed to fluctuations in exchange rates for non-U.S. dollar denominated transactions and net assets.

The Company hedges non-U.S. dollar liabilities with non-U.S. dollar assets to mitigate against this risk.

#### *Revaluation risk*

The Company is subject to revaluation risk as a result of the translation into the Company's U.S. dollar reporting currency of the consolidated balance sheet of the Company's Swiss, Australian and United Kingdom operations, whose functional currencies are the Euro, Australian dollar and Pound Sterling, respectively.

## IV. Risk profile (continued)

### *Equity price risk*

Equity risk on an SST Target Capital basis at year-end 2017 is USD 16.1 million on a standalone basis. TMR is exposed to equity price risk through its holdings of equity investments. The Company holds equity investments to diversify its investment portfolio and take advantage of expected long-term returns. Investment limits as set out in TMR's investment principles are used to manage and monitor these exposures. Equity investments are limited to a relatively small proportion of TMR's overall investment portfolio and the equity holdings involved are diversified over a number of companies.

Risks from changes in equity prices are normally associated with decreasing share prices and increasing equity price volatilities. As stock markets also might increase, opportunities may arise from equity investments.

### *Credit spread risk*

Credit Spread risk on an SST Target Capital basis at year-end 2017 is USD 131.3 million on a standalone basis. TMR's investment strategy acknowledges the risk of declining market values for the Company's fixed interest securities due to the widening of credit spreads. Investment limits per portfolio as set out in TMR's investment principles are used to manage and monitor this risk. The advantage of being able to invest in long duration securities gives the Company the opportunity to invest in securities yielding spreads over the risk-free return and earning this additional yield component.

### **iii. Credit risk**

Credit risk is the risk of potential financial loss due to unexpected default, or deterioration in the credit ratings, of the debtors or counterparties of TMR.

- Asset credit risk may arise from the unexpected default, or deterioration in the credit ratings, of the debtors or issuers of the financial instruments that TMR holds in its investment portfolio, which may cause them to lose value;
- Bank credit risk involves the loss of the Company's funds held by a bank due to its insolvency;
- Broker credit risk stems from the insolvency of a broker that is either holding premium owed to the Company or claim payments owed by the Company to a cedant; and
- Retrocessionaire credit risk involves the default of one of the Company's retrocession partners who is then unable to indemnify a substantial claim to the Company following a large covered loss.

Credit risk on an SST Target Capital basis at year-end 2017 is USD 173.6 million on a standalone basis. Credit risk increased in 2017, on the one hand due to an increase in credit risky fixed income assets and on the other hand due to an increase in retrocession recoverables following the natural catastrophe events in 2017. There is little further movement expected in the planning period going forward with a slight increase expected due to growth in volume (reserve growth).

TMR's investment portfolio is appropriately diversified to limit the amounts of credit exposure with respect to rating categories and any one issuer. The Investment Committee has established comprehensive guidelines for the Company's investment managers regarding the type, duration and quality of investments acceptable to TMR. The performance of investment managers is regularly reviewed to confirm adherence to these guidelines.

## IV. Risk profile (continued)

Credit risk on premiums receivable from cedants is managed by conducting business with reputable broking organisations, with whom the Company has established relationships, and by rigorous cash collection procedures. The Company also has a broker approval process in place.

Counterparty credit risk, is modelled as a set of frequency-severity distributions resulting from the scenario analyses conducted and maintained by the ERM function using TMR's risk register.

To control and mitigate counterparty credit risk, the rules of the Company's Risk Appetite and Risk Tolerance/Limit policy concerning counterparty credit risk apply. Most of the retrocessions are either collateralised or placed with highly-rated reinsurers. TMR transacts most of its reinsurance businesses through major and reputable brokers and spreads its cash deposits across a number of reputable commercial banks.

In addition, a retrocession arrangement may be made with a retrocessionaire who does not meet the criteria in the Risk Appetite and Risk Tolerance/Limit Policy if collateral with an equivalent or better rating than the minimum A- rating is obtained for an amount at least equal to 100% of the retroceded limit.

### iii. Liquidity risk

Liquidity risk is the risk that the Company is unable to meet its contractual obligations in a timely manner due to the inability of its investment assets to be sold without causing a significant movement in the price and with minimum loss of value.

TMR aims to keep liquidity risk as low as possible so that the Company will be able to meet its contractual obligations in a timely manner, even under stressed scenarios such as following a major catastrophic event. The Company maintains sufficient liquid assets, or assets that can be converted into cash at short notice and without any significant capital loss, to meet expected cash flow requirements. These liquid assets are regularly monitored using cash flow forecasting to ensure that surplus funds are invested to achieve a higher rate of return. The Company also monitors market changes and outlooks and reallocates assets as deemed necessary.

Liquidity risk can be an outcome or consequence of the Company's exposures to catastrophe risk and market risk. However, for the purpose of monitoring risk limits, liquidity risk is included in and shares the risk limit with the market risk category.

### iv. Operational risk

Operational risk refers to the risk of financial or other loss, or potential damage to the Company's reputation resulting from inadequate or failed internal processes, people and systems or from external events.

Examples of the key operational risks facing the Company include: inaccurate application of processes, models and assumptions related to reserving and pricing processes, unexpected claims from silent cyber or pandemic risks, investment guidelines not being adhered to and Company credit rating downgrade.

Through the scenario analysis process, TMR has also made efforts to identify and assess the financial impact of various operational risks. These risks are managed through internal control and monitoring tools such as the risk register.

## IV. Risk profile (continued)

### v. Strategic risk

Strategic risk is the risk to earnings or capital arising from adverse business decisions or improper implementation of those decisions or inability to act in response to business opportunities or to adapt to changes in its operating environment.

The following are examples of strategic risks facing the Company:

- industry overcapacity that results in prolonged soft market conditions;
- flawed response plans to market price cycles, including maintaining premium volume and market share during market declines and improper performance incentives for underwriters and others;
- planning processes (e.g., plan loss ratio setting, target premium volume) that are not fully integrated with internal financial indicators and external benchmarks or are based on forecasts that are inherently optimistic;
- expansion into new lines or territories with inadequate underwriting expertise, pricing systems, price monitoring capabilities, understanding of regulatory requirements, claims handling staff; and
- failure of large information technology and infrastructure projects to achieve the specified goals.

Strategic risks can be split into two components, one being the risk emanating from making business decisions (active) such as the last two risks in the list above, and the other emanating from a lack of response to industry challenges (passive) such as the first three risks in the list above.

Strategic risk is especially important for TMR because it has optimised the risk profile of its business by growing those lines of business which help to diversify its concentration in catastrophe exposures. Although there is inherent risk in such strategic expansion into new lines and geographical areas, there are also many benefits. In setting TMR's appetite for this risk, both the risk and the benefits are taken into consideration.

TMR identifies and assesses various strategic risks within its risk register and performs scenario analyses to evaluate the potential financial impact that may arise from such risks.

New business will be evaluated periodically to determine whether or not it has met the strategic goals of the Company.

## IV. Risk profile (continued)

### B. Risk mitigation in the organisation

The Company controls risk in the organisation through a variety of ways, but ultimately risks are reported and monitored centrally by the ERM Function. The ERM Function also verifies that risks are either kept within agreed limits or temporary breaches for unique situations are appropriately escalated to the relevant Board and/or sub-committee and either approved or corrected. A list of all factual limit breaches together with the appropriate Limit Breach Management Plans will be furnished to the Board of TMR on a quarterly basis. Further, the Board, the ARCC, RMC and Internal Audit review the ERM framework and ensure the controls in place for managing the risk exposures are operating as intended. If a new risk emerges, the RMC establishes new controls to manage the risk. These controls are reported to the Board prior to adoption.

As above, TMR has various risk mitigation frameworks, tools and processes in place to either reduce the likelihood of a loss occurring, or, if it does, reducing its impact, including:

- risk appetite and risk tolerance/limits - limiting the risk that TMR is willing to accept at balance sheet, at risk type and partially at individual risk factor level;
- diversification both by product line and by geography;
- underwriting practices including the underwriting controls, employment of experienced catastrophe analysts, modellers and actuaries to perform pricing analyses to ensure that risks are adequately priced;
- use of numerous inwards reinsurance contract clauses to reduce its contractual liabilities; these include limits and exclusions as well as the rights that TMR have such as the right to cancel the contract in certain circumstances;
- purchase of retrocessional contracts to protect its balance sheet against peak exposures; although the Company recognises that whilst this can significantly reduce insurance risk, a retrocession will introduce counterparty credit risk and potentially basis risk from alternative risk transfer mechanisms such as Industry Loss Warranties;
- setting investment guidelines and define permitted investments for its core and non-core investment portfolio; it also sets restrictions and limits on each type of investment to enhance diversification, increase liquidity and decrease concentration risk;
- use of Asset Liability Management by employing both duration and currency matching; duration matching is a common risk management technique under which the interest rate sensitivities of assets and liabilities are matched to make sure that their prices change in the same way when interest rates change; foreign exchange matching ensures currency exposures across assets and liabilities match; and
- implementation and maintenance of an ICS Framework as per section III. D. i. above.

See section IV. A. above for further details on mitigations specific to each risk category.

The ERM Quarterly Risk Report, as provided to the RMC, the EC and the ARCC, monitors the adherence to risk tolerance and limits; comments on changes in the risk landscape; shows the ranking of the modelled and operational risks; provides key metrics like return on risk; shows the Nat-Cat modelled risks results by region and peril, based on the latest in-force exposure; monitors branch regulatory capital limits; comments on emerging risks; shows ALM summary results; and investment concentration summary results.

## IV. Risk profile (continued)

Underwriting practices are monitored in many ways by the Underwriting department. Each underwriting decision is peer reviewed by an independent underwriter and subsequently documented in the Underwriting Committee notes. The Underwriting Steering Committee meets on a monthly basis, the duties among others are:

- to ensure that the Underwriting strategy and daily practices are permissible under applicable laws, regulations, and established good market practices;
- ensure consistency of Business Unit-specific Underwriting strategies with overall corporate strategy, in particular risk guidance and risk limits; and
- to oversee and take responsibility for the creation and maintenance of effective Underwriting policies and procedures.

A Strategic Underwriting Forum takes place bi-annually and it is attended by the global Underwriting leadership team where the agenda is centered around planning and execution of underwriting strategy. TMR also has an Underwriting Quality Control programme which reviews portfolio management and promotes best practice performed by respective locations in management and building of portfolio. A globally accessible reporting tool has been launched, Tableau, which allows monitoring of various aspects of underwriting execution. The Underwriting department is subject to an annual Internal Audit reviewing compliance against policies and procedures. The Underwriting Peer Review Group, which comprises TMR management, Board and other Tokio Marine Group executive management, targets periodic reviews of the results and strategic direction of components of the global Underwriting portfolio.

Retrocession and Sourcing is governed by, respectively, the Retrocession, Fronting and Sourcing Guidelines. These documents set out the requirements for execution, approvals, documentation and acceptable security and any collateral requirements. The Strategic Retrocession Committee (CUO, CRO, Head of Capital Solutions) meets annually to review TMR's overall retrocession purchasing in connection with the business plan. The CRO reviews both the limit and 99%TVaR for each level of security and ERM monitors credit risk in the Risk Register.

The Finance and Treasury functions monitor compliance with the Investment Guidelines on a monthly basis. ALM reporting which provides information regarding duration and currency matching as well as compliance with the Asset-Liability Management and Strategic Asset Allocation Policy is carried out by the Treasury department on a quarterly basis. Quarterly reporting is presented to the Investment Committee and includes information regarding investments and ALM. The Investment Committee is responsible for reviewing, proposing and seeking approval from the Board for the Investment Principles and the Asset-Liability Management and Strategic Asset Allocation Policy on a regular basis so that it remains appropriate, recognising among other things, changes in lines of business and the economic environment.

## IV. Risk profile (continued)

### C. Material risk concentrations

As above, the Company has policies governing risk concentrations including but not limited to:

- Risk Appetite and Risk Tolerance/Limit Policy;
- Underwriting Guidelines;
- Retrocession Guidelines; and
- Investment Principles.

See above section IV. A. for further details on material concentrations specific to each risk category.

### D. Investment in assets in accordance with the prudent principles of the Code of Conduct

Cash and short term investments are managed internally by the Treasury unit, while the management of TMR's investment portfolios is outsourced to third party investment management firm or affiliated group company to generate investment income supporting the underwriting profitability. The investment portfolios supporting the technical provisions have an appropriate level of liquidity to ensure the ability to pay all contractual policyholder benefits and expense obligations, taking into account the management of interest rate, foreign exchange and liquidity risks between assets and liabilities as defined by the Company's Investment Principles. These guidelines are reviewed on an annual basis or ad hoc if any significant events have occurred.

### E. Stress testing and sensitivity analysis to assess material risks

TMR's Stress and Scenario Policy documents all of the stress and scenarios that are performed in any one year. The Company's one-year stress and scenario tests include:

- risk register scenarios which support the quantification of operational and non-modelled risks; these are assessed through a scenario analysis approach based on expert judgment;
- risk guidance scenarios which are used in exposure management to monitor the aggregation of TMR's underwriting risk; these are quantified using either exposure limits or risk based capital limits;
- SST scenarios that directly feed into the SST calculations;
- the Federal Reserve Board macroeconomic prescribed scenarios which are used as an additional instrument to evaluate and monitor investment risk; and
- ad hoc scenarios as requested by FINMA.

In addition, multi-year scenarios, over the entire three-year planning period, are performed as part of the ORSA process to explore the impact on TMR's solvency going forward.

Based on the capital and solvency assessments performed, TMR is adequately capitalised to support the risks associated with its current business activities and to pursue its business strategy while meeting the expectations of its clients and shareholders.



## V. Valuation

A key component of the Solvency Valuation is the Risk Bearing Capital ('RBC'). The RBC is constructed using the SST market consistent principles for the valuation of both asset and liabilities.

The starting point of the SST RBC calculation is the Company's consolidated financial statements. The statements are prepared in accordance with IFRS. The Company's 2017 year-end financial statements were audited by PwC. The consolidated financial statements include the accounts of the Company, its branches and its wholly-owned subsidiaries. All significant intercompany transactions and balances are eliminated on consolidation.

The IFRS balance sheet is then converted into a Market Consistent Balance Sheet ('MCBS') for the SST purpose.

### A. Valuation bases, assumptions and methods to derive the value of each asset class

#### i. Asset valuation before market consistent conversion

All assets are booked at fair values in accordance with IFRS. A fair value of asset or liability is the value that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between open market participants at the measurement date under the current market conditions regardless of whether that price is directly observable or estimate using another valuation technique.

The fair value principles used for the Company's investment assets are outlined below.

1. Cash and cash equivalents include cash at bank and on hand, short-term deposits and other short-term highly liquid investments that are subject to insignificant risk of changes in fair value as cash and cash equivalent. Cash and cash equivalents are carried in the consolidated balance sheet at amortised cost and carrying amounts approximate fair value due to the short-term nature and high liquidity of the instruments.
2. Investments are comprised of short-term investments and investments in fixed interest, equity and other securities and catastrophe bonds:
  - short-term investments - the carrying value reported in the consolidated balance sheet approximates their fair value due to the short-term nature of the investments;
  - fixed interest securities - priced using pricing services, such as index providers and pricing vendors; the pricing vendors provide pricing for a high volume of liquid securities that are actively traded; for securities that do not trade on an exchange, the pricing services generally utilise market data and other observable inputs in pricing models to determine prices;
  - catastrophe bonds - recorded at fair value based on quoted market prices, or when such prices are not available, by reference to published broker or underwriter bid and offer indications;
  - equity securities - comprised of common stock, mutual funds and real estate investment trusts; fair value is generally based on prices obtained from market exchanges in active markets; for investment in mutual funds, where the fair value of the fund is estimated to be the net asset value reported by the fund administrator at the balance sheet date; and

## V. Valuation (continued)

- other securities (mostly alternatives) – consist of investments in investment funds organised as limited partnerships, investment in funds organised as limited liability companies, real estate investments held by limited liability companies and investment in an absolute return fund; for private equity investments, since quoted market prices are not available, the transaction price is used as the best estimate of fair value at inception; for investments in funds organised as limited liability companies, the funds' financial statements constitute the key valuation input.

The following table shows the value of investment assets broken down by asset class:

<b>Investments by Asset Class</b> <b>USD '000</b>	<b>Previous Year – SST 2017</b> <b>As of 31 December 2016</b>	<b>Current Year – SST 2018</b> <b>As of 31 December 2017</b>
Fixed income securities	2,050,959	2,377,554
Loans	159,047	173,333
Equities	20,834	9,183
Alternatives	25,445	23,203
Cash and cash equivalents	313,775	229,380
<b>Total investment</b>	<b>2,570,060</b>	<b>2,812,653</b>

### ii. Transition from IFRS to SST Market Consistent valuation of investment assets

No adjustments to the fair value of investment assets under IFRS have been made for the conversion into a market consistent basis as of 31 December 2017:

<b>USD '000</b>	<b>IFRS</b>	<b>MCBS</b>	<b>Delta</b>	<b>Comment</b>
Fixed income securities	2,377,554	2,377,554	–	No adjustment
Loans	173,333	173,333	–	No adjustment
Equities	9,183	9,183	–	No adjustment
Alternatives	23,203	23,203	–	No adjustment
Cash and cash equivalents	229,380	229,380	–	No adjustment

## V. Valuation (continued)

### iii. Transition from IFRS to SST Market Consistent valuation of non-investment assets

The following adjustments to non-investment assets have been made in order to convert the balance sheet from an IFRS basis into a market consistent basis as of 31 December 2017:

USD '000	IFRS	MCBS	Delta	Comment
Reinsurance recoverable	230,177	220,407	(9,770)	Discounting impact
Capital assets	8,767	-	(8,767)	Intangible assets removed
Deferred acquisition costs ('DAC')	333,556	-	(333,556)	Offset against unearned premium ('UPR')
Unearned profit commission	2,275	-	(2,275)	Offset against UPR
Deferred tax asset ('DTA')	7,017	12,235	5,218	Gross up DTA
Other assets	20,392	13,277	(7,115)	Reduced by the amount of prepaid expenses

All other asset line items remained unchanged from the IFRS valuation.

## B. Valuation bases, assumptions and methods to derive the value of technical provisions

### i. Liability valuation before market consistent conversion

The reinsurance liabilities are based on the best estimate made by the Company derived from reasonable assumptions and appropriate generally accepted actuarial principles and methods.

#### 1. Outstanding losses and loss expenses

Outstanding losses and loss expenses are TMR's estimate of reasonable accruals for the unpaid loss and loss adjustment expenses that must be posted on the balance sheet on the valuation date in order to make an adequate provision for all unpaid loss and loss adjustment expense obligations of TMR under the terms of its contracts and agreements. They are comprised of the case reserves estimated by the ceding companies and IBNR reserves estimated by the Company.

Loss and loss adjustment expense reserves are estimated by the Group Reserving Actuary. The adequacy of TMR's carried reserves is independently reviewed by the responsible actuary who issues an actuarial report on its findings.

#### 2. Unearned premiums

Unearned premium reserves represent the unexpired portion of the premiums assumed, and are the second largest liability of TMR. This liability item can be determined relatively more objectively than the loss and loss adjustment expense reserves.

Premiums assumed are recorded on the accrual basis and are included in income over the period of exposure to risk with the unearned premium deferred in the balance sheet. Reinsurance premiums ceded are similarly earned over the period of exposure to risk with the unearned portion being deferred in the IFRS balance sheet as prepaid reinsurance premiums.

For excess of loss contracts, the ultimate premium is estimated at the contract inception. Subsequent premium adjustments, if any, are recorded in the period in which they are determined.

## V. Valuation (continued)

For proportional treaties, the amount of premium is normally estimated at the inception by the ceding company. TMR accounts for such premium using initial estimates, which are reviewed regularly with respect to the actual premium reported by the ceding company, changes in estimates are recognised in the period in which they are determined.

### ii. Transition from IFRS liabilities to SST Market Consistent valuation of liabilities

The loss and loss adjustment reserves carried out on the consolidated balance sheet are on a full undiscounted basis based on IFRS rules.

In order to value its balance sheet liabilities in a market consistent manner, loss and loss adjustment expense reserves are discounted to reflect the time value of money using the average payment patterns and the SST-specified yield curves. The amount of discount as of 31 December 2017 is approximately USD 96.7 million. Including this adjustment, the gross value of loss and loss adjustment expense reserves is USD 1,690.0 million with the corresponding net value being USD 1,469.6 million as of 31 December 2017.

As another adjustment, UPR is offset against DAC and unearned profit commission as mentioned in section on market consistent asset valuation above. Including this adjustment, the value of UPR is USD 925.4 million. The total best estimate value of provisions for insurance liabilities as of 31 December 2017 is USD 2,615.4 million (gross value of loss and loss adjustment expense reserves plus UPR). In addition to provisions for insurance liabilities, the market consistent value of reinsurance balances payable is at USD 140.2 million and the market consistent value of other liabilities is at USD 686.3 million as of 31 December 2017.

The following table provides an overview of liability items with a difference between IFRS and market consistent valuation as of 31 December 2017:

USD '000	IFRS	MCBS	Delta	Comment
Loss and loss adjustment expense reserve (gross)	1,786,723	1,690,049	(96,674)	Discounting impact
Unearned premium ('UPR')	1,261,200	925,369	(335,831)	DAC and unearned profit commission offset
Deferred tax liability ('DTL')	-	5,218	5,218	Gross up DTL

Claim provisions in this context represent the discounted loss and loss adjustment expenses. In the context of SST valuation, Risk Margin (known as Market Value Margin) is not valued in the balance sheet construction but rather a deduction to the risk bearing capital. The Risk Margin as of 31 December 2017 is valued at USD 90.4 million, and is calculated using the SST standard approach.

Premium provisions are equivalent to the unearned premium, offset by deferred acquisition cost. This does not recognise any equity in unearned premium.

## C. Description of recoverable from reinsurance contracts

Reinsurance recoverable from reinsurers represent the provisions for ceded reserves. They are discounted to reflect the time value of money using the average payment patterns and the SST-specified yield curves. The amount of discount is USD 9.8 million.

## V. Valuation (continued)

### D. Description of losses payable

This liability represents losses payable to the reinsured in accordance with the terms of the reinsurance contracts on losses already paid by the reinsured. Therefore, the value of this liability can be determined objectively and subject to little or no uncertainty. TMR as the reinsurer may require from the reinsured proper proof and documentation for the loss payments and may need to verify coverage of the losses by the reinsurance contract.

### E. Valuation bases, assumptions and methods to derive the value of other liabilities

All other liabilities are valued on an IFRS basis. Included in other liabilities are: accounts payable and accrued expenses, note payable, deferred fee income, retirement benefit obligation, deferred commission income and current tax liability. For deferred tax liability, as for deferred tax asset, the gross amount is shown under the market consistent basis while the net amount is shown under IFRS basis with nil impact on net assets due to this transition.

### F. Any other material information

No additional material information to report.

## VI. Capital Management

### A. Capital management process

As part of the Company's risk appetite, TMR defines the amount of capital required to meet its internal risk appetite, regulatory and rating agency requirements and commercial constraints. TMR's main objective is to ensure that it has sufficient capital resources to remain solvent on both regulatory and economic bases. Also, the capital projections shown in the Company's ORSA over the three-year business planning period facilitate Board discussion on the capital requirements for TMR.

Localised assets in TMR's US and Australia branches are ring-fenced to meet local regulatory requirements, otherwise fungibility of assets is unrestricted.

TMR benefits from a Deed of Guarantee ('DoG') from TMNF and Tokio Marine & Nichido Life Insurance Co. Ltd. ('TMNL'). TMNF and TMNL will meet TMR's obligations to all its beneficiaries in accordance with the terms and conditions of reinsurance policies issued by the Company if it should fail to make payment of any sum of money due under those policies.

TMR also benefits from a capital support agreement with TMNF which is referred to as the Net Worth Maintenance Agreement ('NWMA'). The NWMA ensures that certain minimum statutory capital and Risk Bearing Capital levels are maintained by TMR at all times. With the NWMA, TMR's solvency position is significantly enhanced, subject to a cap on the solvency ratio of 250%.

There have been no material changes to the Company's capital management process during the year.

### B. IFRS Capital

Shareholder's equity under IFRS as of 31 December 2017 and 2016 are shown below.

<b>Shareholder's equity</b>		
<b>USD '000</b>	<b>31 December 2017</b>	<b>31 December 2016</b>
Share capital	250,000	250,000
Contributed surplus	400,000	400,000
Retained earnings	556,194	715,127
Accumulated other comprehensive loss	(15,614)	(44,370)
<b>Total shareholder's equity</b>	<b>1,190,580</b>	<b>1,320,757</b>

Fully paid issued shares, which have a par value of USD 1 each, carry one vote per share and carry a right to dividends. Contributed surplus represents cash contributed to the shareholder in excess of the issued share capital. Accumulated other comprehensive loss comprise unrealised gain/loss on investments, foreign currency translation reserve, retirement benefit obligation and tax reserve on unrealised investment gains. Also refer to TMR's Annual Report for further information.

## VI. Capital Management (continued)

### C. Risk bearing capital calculation and dividend payable

The Company declared a dividend of USD 4.7 million to its shareholder in Q1 2018. This dividend is a direct upstream from the dividend paid by TSM to the TMR. Since the dividend was only declared in Q1 2018, the IFRS balance as of 31 December 2017 does not include any dividend payable in 2018. However, for solvency valuation, in line with regulatory guidelines, TMR considers a dividend payable of USD 4.7 million which reduces the risk bearing capital for SST 2018.

The Company's risk bearing capital is calculated to be USD 1,256.9 million for the year 2018, which is USD 66.3 million higher than the total shareholder's equity per the Company's IFRS financial statements as at 31 December 2017. This difference between IFRS shareholder's equity and risk bearing capital is due to the valuation differences described in sections V A iii) and V B ii), as well as the dividend payable and can be summarised as follows:

- Difference between market consistent and IFRS valuation of assets: USD -356.3 million;
- Difference between market consistent and IFRS valuation of liabilities: USD -427.3 million; and
- Dividend payable: USD 4.7 million.

TMR does not have any supplementary capital and hence all risk bearing capital is core capital.

## VII. Solvency

### A. Regulatory capital requirements

TMR evaluates its regulatory solvency position under the SST using a partial internal solvency model. For SST 2018, which is based on the valuation date 31 December 2017, TMR has used its internal model for natural catastrophe risks as well as for modeling the impact of the capital support instruments NWMA and DoG. For both natural catastrophe risks and capital support instruments, no standard model is provided by FINMA, hence internal model components are necessary. Natural catastrophe risks are modeled mainly on the basis of vendor models using model blending and parameter/ assumption settings as defined by TMR's pricing and underwriting team and approved by a dedicated committee comprising the CUO, CRO and other senior managers. The impact of capital support instruments is modeled as part of target capital considering trigger mechanisms and non-payment probabilities. TMR has used the SST standard model components for non-natural catastrophe insurance risk, market risk, credit risk, the risk margin, scenario modeling and risk aggregation. Approval by FINMA has been given to use the partial internal model for the SST 2018. TMR has applied with FINMA for full approval of its internal model components for SST (natural catastrophe risks and capital support instruments). This internal model approval process ('IMAP') is currently ongoing. Compared to the SST 2017 model, the main difference in the model used for SST 2018 is the move to FINMA's standard model for non-natural catastrophe insurance risks and insurance risk aggregation (StandRe).

#### Target capital

The following table shows a breakdown of TMR's target capital under the SST into its key components for the current and the previous reporting period. The main driver of TMR's target capital is underwriting risk which reflects TMR's core business.

Target capital key components USD '000	Previous Year – SST 2017 As of 31 December 2016	Current Year – SST 2018 As of 31 December 2017
Underwriting risk	648,625	649,995
Market risk	144,987	176,367
Diversification between market and underwriting risk	(132,459)	(160,010)
Credit risk	145,262	173,641
Other effects including guarantees and risk margin	(256,286)	(282,984)
<b>Target capital</b>	<b>550,129</b>	<b>557,009</b>



## VII. Solvency (continued)

### Underwriting risk

The table below shows the breakdown of TMR's underwriting risk under the SST into its key components including previous year and current year figures. For SST 2018, TMR is using FINMA's new standard model for non-natural catastrophe premium risk, reserve risk and insurance risk aggregation. The main component of underwriting risk is natural catastrophe risk which increased for SST 2018 in line with TMR's 2018 business plan. Non-natural catastrophe premium risk decreased due to an improved business mix. Reserve risk increased due to continued reserve growth in 2017 driven mainly by organic growth but also 2017 loss experience.

Underwriting risk key components USD '000	Previous Year – SST 2017 As of 31 December 2016	Current Year – SST 2018 As of 31 December 2017
Natural catastrophe risk	510,893	578,523
Non-natural catastrophe premium risk	248,612	210,486
Reserve risk	248,528	339,543
Diversification effect	(359,409)	(478,557)
<b>Total underwriting risk</b>	<b>648,624</b>	<b>649,995</b>

### Market risk

The table below shows the breakdown of TMR's market risk under the SST into its key components including previous year and current year figures. Market risk is calculated using the SST standard model. Overall market risk increases driven by an increase in yield curve risk coming from credit spread risk. This is due to an increased amount in credit risky fixed income assets. All other market risk components stay stable compared to the previous year. Note that for prudence reasons mutual funds are considered under equity and alternatives risk as well although the underlying risk is related to fixed income securities.

Market risk key components USD '000	Previous Year – SST 2017 As of 31 December 2016	Current Year – SST 2018 As of 31 December 2017
Yield curve risk (interest rates and credit spreads)	108,227	140,522
FX risk	34,293	35,713
Equity and alternatives risk	20,395	19,542
Diversification effect	(17,928)	(19,374)
<b>Total market risk</b>	<b>144,987</b>	<b>176,403</b>

## VII. Solvency (continued)

### *Risk bearing capital*

The following table shows a breakdown of TMR's risk bearing capital under the SST into its key components for the current and the previous reporting period. Overall, risk bearing capital stays stable between previous and current reporting period which is driven by two offsetting effects. On the one hand, market consistent value of assets minus liabilities reduces driven by 2017 financial results, on the other hand, and consequently the dividend amount payable which is shown under deductions is lower for the current year as compared to the previous year. The risk bearing capital results from the market consistent valuation as described in sections V and VI.

<b>Risk bearing capital key components USD '000</b>	<b>Previous Year – SST 2017 As of 31 December 2016</b>	<b>Current Year – SST 2018 As of 31 December 2017</b>
Market-consistent value of assets minus total from best estimate liabilities plus market-consistent value of other liabilities	1,363,379	1,261,600
Deductions	(105,661)	(4,665)
Supplementary capital	-	-
<b>Risk bearing capital</b>	<b>1,257,718</b>	<b>1,256,935</b>

As of 31 December 2017, TMR's SST 2018 solvency ratio is at 250%<sup>1</sup>. This includes the impact of the NWMA which leads to a reduction in target capital pre-event. Per guidance from FINMA, the modeled impact of the NWMA may not lead to a SST solvency ratio of above 250%, therefore TMR caps its SST solvency ratio at that level.

As of 31 December 2016, TMR's SST 2017 solvency ratio was at 250% given the impact of the NWMA and considering the above guidance from FINMA.

<sup>1</sup> The information about solvency as shown in this section is identical to the information which has been submitted to FINMA and for SST 2018 figures is still subject to regulatory audit.

## VIII. Subsequent Events

There are no significant subsequent events to report.

# Appendices to the Financial Condition Report

## Financial situation report: quantitative template 'Performance Solo Reinsurance'

Basis: IFRS financial statements (TMR AG consolidated)

Currency: USD (Amounts stated in millions)

	Total		Personal accident		Health		Motor		Marine, aviation, transport		Property		Casualty		Miscellaneous	
	Previous year	Reporting year	Previous year	Reporting year	Previous year	Reporting year	Previous year	Reporting year	Previous year	Reporting year	Previous year	Reporting year	Previous year	Reporting year	Previous year	Reporting year
Gross premiums	1,552.6	1,606.5	1.6	10.7	-	-	468.4	429.7	24.4	39.6	643.2	649.1	349.7	442.7	65.0	34.7
Reinsurers' share of gross premiums	(234.7)	(304.9)	-	-	-	-	(1.4)	(0.4)	(0.1)	(0.1)	(232.5)	(285.4)	(0.7)	(19.0)	-	-
Premiums for own account (1 + 2)	1,317.9	1,301.6	1.6	10.7	-	-	467.3	429.3	24.3	39.5	410.7	363.7	349.0	423.7	65.0	34.7
Change in unearned premium reserves	(199.3)	17.7	(0.8)	(7.4)	-	-	(93.0)	13.2	(11.8)	(1.7)	36.3	67.9	(84.4)	(58.5)	(45.6)	4.3
Reinsurers' share of change in unearned premium reserves	20.5	28.0	-	-	-	-	0.2	(0.1)	(0.3)	(0.0)	20.3	11.4	0.3	16.7	-	-
Premiums earned for own account (3 + 4 + 5)	1,139.1	1,347.3	0.8	3.3	-	-	374.5	442.3	12.2	37.8	467.3	443.1	264.9	381.8	19.4	39.0
Other income from insurance business	6.1	7.3	-	-	-	-	-	-	-	-	3.6	4.7	2.5	2.6	-	-
Total income from underwriting business (6 + 7)	1,145.2	1,354.7	0.8	3.3	-	-	374.5	442.3	12.2	37.8	470.9	447.7	267.4	384.5	19.4	39.0
Payments for insurance claims (gross)	(444.3)	(847.2)	(0.1)	(0.8)	-	-	(176.6)	(254.1)	(1.0)	(5.9)	(187.7)	(481.5)	(78.6)	(101.7)	(0.3)	(3.1)
Reinsurers' share of payments for insurance claims	8.4	218.0	-	-	-	-	-	-	-	-	8.4	218.0	-	-	-	-
Change in technical provisions	(252.5)	(637.2)	(0.3)	(1.2)	-	-	(118.7)	(188.7)	(8.6)	(18.7)	(42.7)	(229.1)	(76.1)	(181.0)	(6.1)	(18.5)
Reinsurers' share of change in technical provisions	21.9	162.0	-	-	-	-	-	7.3	-	-	21.9	153.9	-	0.8	-	-
Change in technical provisions for unit-linked life insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Expenses for insurance claims for own account (9 + 10 + 11 + 12 + 13)	(666.5)	(1,104.4)	(0.4)	(2.1)	-	-	(295.3)	(435.5)	(9.6)	(24.7)	(200.1)	(338.6)	(154.7)	(281.9)	(6.4)	(21.6)
Acquisition expenses (gross)	(340.9)	(379.5)	(0.2)	(0.7)	-	-	(83.7)	(87.1)	(2.4)	(10.1)	(169.1)	(165.9)	(81.9)	(109.0)	(3.6)	(6.7)
Reinsurers' share of acquisition expenses	26.6	31.2	-	-	-	-	-	-	-	(0.0)	26.6	28.8	-	2.5	-	-
Administration expenses	(108.6)	(110.1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acquisition and administration expenses for own account (15 + 16 + 16.1)	(422.9)	(458.4)	(0.2)	(0.7)	-	-	(83.7)	(87.1)	(2.4)	(10.1)	(142.5)	(137.1)	(81.9)	(106.6)	(3.6)	(6.7)
Other underwriting expenses for own account	(8.3)	(9.5)	-	(0.0)	-	-	(0.1)	0.0	-	(0.0)	(5.1)	(6.6)	(0.8)	(0.3)	(2.3)	(2.6)
Total expenses from underwriting business (14 + 17 + 18) (non-life insurance only)	(1,097.7)	(1,572.3)	(0.6)	(2.8)	-	-	(379.1)	(522.7)	(12.0)	(34.8)	(347.7)	(482.3)	(237.4)	(388.7)	(12.3)	(30.9)
Investment income	66.3	76.7														
Investment expenses	(5.4)	(7.9)														
Net investment income (20 + 21)	60.9	68.8														
Capital and interest income from unit-linked life insurance	-	-														
Other financial income	-	-														
Other financial expenses	-	-														
Operating result (8 + 14 + 17 + 18 + 22 + 23 + 24 + 25)	108.4	(148.8)														
Interest expenses for interest-bearing liabilities	-	-														
Other income	15.1	(12.9)														
Other expenses	-	-														
Extraordinary income/expenses	-	-														
Profit / loss before taxes (26 + 27 + 28 + 29 + 30)	123.5	(161.6)														
Direct taxes	(2.8)	2.8														
Profit / loss (31 + 32)	120.7	(158.8)														

# Financial situation report: quantitative template

## 'Market-consistent Balance Sheet Solo'

Currency: USD (Amounts stated in millions)

		SST 2017 31.12.2016	Adjustments Previous period	SST 2018 31.12.2017
Market-consistent value of investments	Real estate	-	-	-
	Shareholdings	-	-	-
	Fixed-income securities	2,051.0	-	2,377.6
	Loans	159.0	-	173.3
	Mortgages	-	-	-
	Equities	20.8	-	9.2
	Other investments	25.4	-	23.2
	Collective investment schemes	-	-	-
	Alternative investments	25.4	-	23.2
	Other investments	-	-	-
	Total investments	2,256.3	-	2,583.3
	Financial investments from unit-linked life insurance	-	-	-
	Receivables from derivative financial instruments	-	-	-
Market-consistent value of other assets	Cash and cash equivalents	313.8	-	229.4
	Receivables from insurance business	976.0	-	1,278.5
	Other receivables	90.3	-	65.0
	Other assets	509.7	-	547.4
	Total other assets	1,889.7	-	2,120.3
<b>Total market-consistent value of assets</b>	<b>Total market-consistent value of assets</b>	<b>4,146.0</b>	<b>-</b>	<b>4,703.6</b>
Best estimate liabilities (BEL)	Best estimate of provisions for insurance liabilities	1,927.8	-	2,615.4
	Direct insurance: life insurance business (excluding ALV)	-	-	-
	Direct insurance: non-life insurance business	1,927.8	-	2,615.4
	Direct insurance: health insurance business	-	-	-
	Direct insurance: unit-linked life insurance business	-	-	-
	Direct insurance: other business	-	-	-
	Outward reinsurance: life insurance business (excluding ALV)	-	-	-
	Outward reinsurance: non-life insurance business	-	-	-
	Outward reinsurance: health insurance business	-	-	-
	Outward reinsurance: unit-linked life insurance business	-	-	-
	Outward reinsurance: other business	-	-	-
	Reinsurers' share of best estimate of provisions for insurance liabilities	93.2	-	140.2
	Direct insurance: life insurance business (excluding ALV)	-	-	-
	Direct insurance: non-life insurance business	-	-	-
	Direct insurance: health insurance business	-	-	-
	Direct insurance: unit-linked life insurance business	-	-	-
	Direct insurance: other business	-	-	-
	Outward reinsurance: life insurance business (excluding ALV)	-	-	-
	Outward reinsurance: non-life insurance business	93.2	-	140.2
	Outward reinsurance: health insurance business	-	-	-
	Outward reinsurance: unit-linked life insurance business	-	-	-
Outward reinsurance: other business	-	-	-	
Market-consistent value of other liabilities	Non-technical provisions	-	-	-
	Interest-bearing liabilities	25.0	-	-
	Liabilities from derivative financial instruments	4.0	-	110.7
	Deposits retained on ceded reinsurance	599.4	-	508.2
	Liabilities from insurance business	-	-	-
	Other liabilities	133.2	-	67.5
<b>Total BEL plus market-consistent value of other liabilities</b>	<b>Total BEL plus market-consistent value of other liabilities</b>	<b>2,782.6</b>	<b>-</b>	<b>3,442.0</b>
	<b>Market-consistent value of assets minus total from BEL plus market-consistent value of other liabilities</b>	1,363.4		1,261.6

# Financial situation report: quantitative template 'Solvency Solo'

Currency: USD (Amounts stated in millions)

		SST 2017 31.12.2016	Adjustments SST 2017	SST 2018 31.12.2017
Derivation of RBC	Market-consistent value of assets minus total from best estimate liabilities plus market-consistent value of other liabilities	1,363.4		1,261.6
	Deductions	105.7		4.7
	<b>Core capital</b>	1,257.7		1,256.9
	Supplementary capital	-		-
	<b>RBC</b>	1,257.7	-	1,256.9
<hr/>				
		SST 2017 31.12.2016	Adjustments SST 2017	SST 2018 31.12.2017
Derivation of target capital	Underwriting risk	648.6		650.0
	Market risk	145.0		176.4
	Diversification effects	(132.5)		(160.0)
	Credit risk	145.3		173.6
	Risk margin and other effects on target capital	(256.3)		(283.0)
	<b>Target capital</b>	550.1	-	557.0
<hr/>				
		SST 2017 31.12.2016	Adjustments SST 2017	SST 2018 31.12.2017
SST ratio	Risk-bearing capital / target capital	250%	0%	250%

# Strengthening Tomorrow

2017 Annual Report





On the cover: Strengthening Tomorrow is about skillfully interpreting what we can see now, so we can construct a clearer picture of the future.

## Financial Highlights

### Ratings

A<sup>++</sup>

A.M. BEST

*As of 10 January 2018*

A<sup>+</sup>

STANDARD & POOR'S

*As of 16 April 2018*

USD million	2017
Total Assets	5,059.8
Net Premium Written	1,301.6
Net Assets	1,190.6
Net Income/(Loss)	(158.9)

Percent	2017
Loss Ratio	82.1
Combined Ratio	116.2

2017 was both an eye opening year and a crystallising moment to recognise the need for resilience. Resilience in our balance sheet. Resilience in our relationships and commitments. Resilience in the models that help us construct a picture of the future. Resilience for today and the many tomorrows to come.

### Stephan Ruoff

Chief Executive Officer



2017 has been a true test for the (re)insurance sector and for TMR. Based on recent estimates, the past year will go down in history as one of the costliest ever for the insurance industry, with exceptionally high claims from natural and man-made losses. However, with the effects of climate change continuing to unfold, we have to expect and prepare for a changing risk landscape.

#### TMR stands strong thanks to a resilient balance sheet

TMR's resilience was tested in 2017, and we remain steadfast in our mission and strategy in the face of historic losses for the sector. TMR's balance sheet absorbed the shocks from exceptionally high natural catastrophe claims, as well as from man-made losses. But these challenges are what TMR is here for, and our quick and reliable response is how we add value for our customers. However, this test came at a high price. We ended the year at a net loss of USD 158.9 million, the highest in TMR's history. Let me assure you that, despite the significant loss experience, TMR's solvency position as measured by TMR's internal capital model and the 2018 Swiss Solvency Test ('SST') ratio remains

strong, demonstrating the resilience of TMR's balance sheet in line with TMR's A.M. Best A++ and Standard & Poor's A+ ratings.

#### TMR's third party capital strategy reduced earnings volatility significantly

Compared to our peers, TMR fared better than its benchmark on the natural catastrophe side, thanks to our third party capital strategy. By efficiently matching risk pools with capital pools, we offered more capacity to our cedants and optimised TMR's own risk portfolio while generating an additional fee income stream. As 2017 demonstrated, third party capital is here to stay, and it will play an ongoing and ever more leading role in the risk transfer universe. TMR will continue on this successful path as a facilitator, helping to shape the future of risk transfer together with our third party capital partners.

# As 2017 demonstrated, third party capital is here to stay, and it will play an ongoing and ever more leading role in the risk transfer universe.

## TMR took resolute action to strengthen underperforming lines of business

But our results also show that portions of TMR's non-catastrophe business did not perform as expected. After an in-depth analysis of our entire non-catastrophe portfolio, TMR took prompt action by significantly strengthening reserves as well as adjusting its underwriting approach for certain underperforming lines of business. This reserve strengthening was predominantly for the U.S. portfolio and mostly for younger underwriting years, including U.S. auto and U.K. motor, and for the large loss activity in the third and fourth quarters on excess casualty lines.

A detailed analysis of our 2017 financials is set forth in the message from Maurice Kane, our CFO, and on the following pages of this annual report.

## Making tomorrow's balance sheet even stronger

2017 has clearly demonstrated how important a solid capital cover is to fulfilling our role as a reinsurer. TMR's priority is to continue to carefully manage the profitability of our book of business through robust and analytical risk selection, following several years of diversification of our book across risks and regions. Another priority will be to offer large capacities to our customers in all market conditions. As in 2017, TMR will continue to benefit from capital support and synergies of the larger Tokio Marine Group. Accessing new risk pools, bundling research and development efforts and benefiting from a more comprehensive understanding of newer and emerging risks (e.g. cyber risk) illustrate these efforts.

# The past year clearly tested our business model and our strategy – and proved that TMR is resilient and can absorb even extreme peak risk.

## Creating the underwriting function of tomorrow

In 2017, we planted the seeds for TMR's underwriting function of the future. In October, Brian Secrett joined TMR as our Chief Underwriting Officer. With nearly 30 years of reinsurance and underwriting experience, he now leads the underwriting and pricing functions at TMR, with responsibility for underwriting income and related risk assumption. This new role will help build on the integrity of TMR's analytical focus, in order to better serve TMR's customers and achieve superior underwriting results. Our business model will be structured around a customer focused global multiline reinsurance strategy. Highly analytical, specialist and individual risk selection will remain the foundation of our underwriting approach.

Most importantly, we have strong underwriting talent focusing on the business we know and understand. Today and tomorrow, we continue to invest in this talent for our business partners' benefit.

## Our ultimate success is delivery on our commitments to our stakeholders

The past year clearly tested our business model and our strategy – and proved that TMR is resilient and can absorb even extreme peak risk, as observed in 2005, 2011 and again in 2017. Delivering on our commitments to customers is a core value for TMR, and we will continue to be here for them, protecting their balance sheets with ours. With our skilled and dedicated team, plus the strong backing of the Tokio Marine Group, TMR remains in a unique position to continue to deliver year after year.

In this age of uncertainty, TMR strives to bring peace of mind to your tomorrow.

**Stephan Ruoff**  
Chief Executive Officer

## A Summary of the Financial Year 2017

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Our third party capital strategy continued to fulfil its purpose in reducing volatility, while providing income.

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Our investment portfolio performed strongly with a positive return of USD 68.8 million.

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Our cost control remains a priority.

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Our capitalisation remains strong with shareholder's equity of USD 1.2 billion and total assets over USD 5 billion going into 2018.

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## Message from the Chief Financial Officer

### Maurice Kane

Chief Financial Officer



TMR ended 2017 with a net loss after tax of USD 158.9 million, corresponding to a negative return on equity of 12.4%. This is only the third time in TMR's history that we end the year with a net loss, but unfortunately the largest. This result, however, should not come as a total surprise in what was one of the costliest years for natural catastrophes on record.

TMR's result was impacted mainly by claims from natural catastrophes (e.g. Hurricanes Harvey, Irma and Maria (HIM) and wildfires in California) and claims from man-made events (e.g. Ogden rate change in the U.K. and the Las Vegas shooting). But also contributing to the net loss was the recognition of reserve development in the non-catastrophe book based upon a proactive reserve review undertaken by TMR.

For the reasons explained previously, the overall underwriting performance in 2017 resulted in a net underwriting loss of USD 107.5 million with a combined ratio of 116.2%. Catastrophe losses contributed 11.8 points to the loss ratio, while prior year reserve strengthening added a further 4.3 points to this ratio.

### Third party capital strategy – reducing volatility and diversifying risk and income

Our third party capital strategy and de-risking continued to fulfil their purpose in reducing volatility, while also providing for growing fee income. To this end, our net HIM loss for the year amounted to USD 76.6 million or 5.8% of opening shareholders equity. Our bespoke advanced technology platform, developed to trade with our third party capital partners, has given us increased scale and flexibility to drive and expand our third party capital strategy during 2017.

# TMR will continue to do what it is here for, delivering long term, sustainable value.

## TMR results – aided by a strong investment performance

The investment portfolio performed strongly, with investment income of USD 68.8 million. The optimised investment strategy has resulted in higher investment income, aided by our collaboration with Delphi Capital Management, Inc., an affiliate company specialising in investment management. The investment income increased by 13% compared to the prior year, primarily due to increased assets under management and an increased allocation to higher yielding assets.

## Cost control – a continued priority

TMR continues its efforts to increase the efficiency of its operations, resulting in a reduction of 1.4 points in the administrative expense ratio to 8.2%, compared to 9.6% in 2016.

## TMR is financially well positioned to continue to deliver value to our stakeholders

The holistic management of our balance sheet, together with TMR's proven business strategy, has been key in weathering the challenges of 2017. Our capitalisation remains strong, with shareholder's equity of USD 1.2 billion and total assets over USD 5 billion going into 2018. As a consequence, TMR will continue to do what it is here for, delivering long term, sustainable value for our parent company, customers and employees, today and tomorrow.

**Maurice Kane**  
Chief Financial Officer



## Corporate Information

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### TMR

#### Directors

*(as at 31 December 2017)*

Ichiro Ishii  
Richard Bennison  
Hans-Peter Gerhardt  
Stephan Ruoff  
Michael J. Schell  
Toshi Suzuki

#### Parent Company

Tokio Marine & Nichido Fire  
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Japan

#### Auditors

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# Consolidated Financial Statements

With Independent Auditor's Report Thereon

Years ended 31 December 2017 and 2016

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# Report of the statutory auditor

To the General Meeting of Tokio Millennium Re AG, Zurich

## Report of the statutory auditor on the consolidated financial statements

As statutory auditor, we have audited the accompanying consolidated financial statements of Tokio Millennium Re AG, which comprise the balance sheet, statement of comprehensive income, cash flow statement, statement of changes in equity and notes (pages 13 to 85), for the year ended 31 December 2017.

### Board of Directors' responsibility

The Board of Directors is responsible for the preparation of the consolidated financial statements in accordance with the International Financial Reporting Standards (IFRS) and the requirements of Swiss law. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

### Auditor's responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards as well as the International Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the consolidated financial statements 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 entity's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the consolidated financial statements, which comprise the balance sheet, statement of comprehensive income, cash flow statement, statement of changes in equity and notes for the year ended 31 December 2017 give a true and fair view in accordance with the International Financial Reporting Standards (IFRS) and comply with Swiss law.

## Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

PricewaterhouseCoopers AG



Philip Kirkpatrick  
Audit expert  
Auditor in charge



Lee Bellamy

Zurich, 27 February 2018

Enclosure: Consolidated financial statements (balance sheet, statement of comprehensive income, cash flow statement, statement of changes in equity and notes)

# Consolidated Balance Sheet

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

Assets	Note	2017	2016
Cash and cash equivalents	5	229,380	313,775
Funds withheld	6	107,563	71,768
Investments	7, 8	2,583,273	2,256,285
Accrued interest receivable	11	17,100	14,151
Premiums receivable	11	970,853	856,770
Derivative balances receivable	11	35,661	-
Deposit assets	11, 12	348,444	393,823
Prepaid reinsurance premiums		87,270	58,184
Fair value of derivative assets	8	69,729	3,960
Outstanding losses recoverable from reinsurers	11, 17	230,177	64,975
Deferred acquisition expenses	13	333,556	359,834
Unearned profit commission		2,275	2,764
Current tax asset		1,110	1,082
Deferred tax asset	14	7,017	2,183
Property and equipment	15	8,385	9,573
Intangible assets	16	8,767	9,162
Other assets	11	19,283	15,032
<b>Total assets</b>		<b>5,059,843</b>	<b>4,433,321</b>
<b>Liabilities</b>			
Outstanding losses and loss expenses	17, 18	1,786,723	1,114,659
Liability for collateral held on behalf of counterparties	10, 18	159,721	185,536
Reinsurance balances payable	18	140,212	92,379
Derivative balances payable	18	73,028	783
Deposit liabilities	12, 18	348,444	393,823
Payable for investments purchased	18	5,235	7,947
Unearned premiums	17	1,261,200	1,237,051
Fair value of derivative liabilities	8, 18	37,687	4,008
Deferred commission income	13	13,187	6,065
Accounts payable and accrued expenses	18	32,724	35,966
Retirement benefit obligation	20	4,347	4,497
Deferred fee income		5,216	3,659
Current tax liability		1,539	1,062
Deferred tax liability	14	-	129
Note payable	18, 19	-	25,000
<b>Total liabilities</b>		<b>3,869,263</b>	<b>3,112,564</b>
<b>Shareholder's equity</b>			
Share capital	21	250,000	250,000
Contributed surplus	21	400,000	400,000
Retained earnings		556,194	715,127
Accumulated other comprehensive loss		(15,614)	(44,370)
<b>Total shareholder's equity</b>		<b>1,190,580</b>	<b>1,320,757</b>
<b>Total liabilities and shareholder's equity</b>		<b>5,059,843</b>	<b>4,433,321</b>

See accompanying notes to consolidated financial statements

# Consolidated Statement of Comprehensive Income

Years ended 31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

Revenue	Note	2017	2016
Reinsurance premiums assumed	4	1,606,499	1,552,640
Change in unearned premiums		17,743	(199,359)
Reinsurance premiums earned – assumed		1,624,242	1,353,281
Reinsurance premiums ceded	22	304,916	234,724
Change in prepaid reinsurance		(28,007)	(20,562)
Reinsurance premiums earned – ceded		276,909	214,162
Net premiums earned		1,347,333	1,139,119
Other underwriting income		7,324	3,835
Total operating income		1,354,657	1,142,954
Net investment income	7	68,812	60,872
<b>Total revenue</b>		<b>1,423,469</b>	<b>1,203,826</b>
<b>Expenses</b>			
Loss and loss expenses incurred		1,484,382	697,037
Losses recoverable from reinsurers		(379,974)	(30,497)
Net loss and loss expenses incurred	17	1,104,408	666,540
Acquisition expenses	23	348,292	314,337
Profit commission		4,856	6,860
Net derivative expense (income)	9	4,279	(2,238)
Other underwriting expenses		371	1,386
General and administrative expenses	24	110,120	108,616
Net foreign exchange losses (gains)		12,892	(15,117)
Total expenses		1,585,218	1,080,384
(Loss) profit before tax		(161,749)	123,442
Tax benefit (expense)	14	2,816	(2,770)
<b>(Loss) profit after tax</b>		<b>(158,933)</b>	<b>120,672</b>

## Consolidated Statement of Comprehensive Income (continued)

Years ended 31 December 2017 and 2016  
(Expressed in thousands of United States Dollars)

Other comprehensive (loss) income	2017	2016
<i>Items that are or may be reclassified to profit or loss</i>		
Net change in unrealised gains on investments	21,087	3,219
Net change in tax reserve for unrealised gains on investments	32	231
Change in foreign currency translation adjustment	7,473	(2,082)
Sub-total	28,592	1,368
<i>Item that will not be reclassified to profit or loss</i>		
Change in retirement benefit obligation	164	(1,283)
Other comprehensive income, net of tax	28,756	85
<b>Total comprehensive (loss) income</b>	<b>(130,177)</b>	<b>120,757</b>

See accompanying notes to consolidated financial statements

## Consolidated Statement of Changes in Shareholder's Equity

Years ended 31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

	Share capital	Contributed surplus	Retained earnings	Unrealised gain (loss) on investments	Tax reserve on unrealised investment gains	Foreign currency translation reserve	Retirement benefit obligation	Accumulated other comprehensive income	Total
<b>Balance 1 January 2016</b>	<b>250,000</b>	<b>400,000</b>	<b>600,349</b>	(15,735)	(231)	(25,870)	(2,619)	<b>(44,455)</b>	<b>1,205,894</b>
Profit	-	-	120,672	-	-	-	-	-	120,672
Other comprehensive income (loss)	-	-	-	3,219	231	(2,082)	(1,283)	85	85
Dividends	-	-	(5,894)	-	-	-	-	-	<b>(5,894)</b>
<b>Balance 31 December 2016</b>	<b>250,000</b>	<b>400,000</b>	<b>715,127</b>	(12,516)	-	(27,952)	(3,902)	<b>(44,370)</b>	<b>1,320,757</b>
Loss	-	-	(158,933)	-	-	-	-	-	(158,933)
Other comprehensive income	-	-	-	21,087	32	7,473	164	28,756	28,756
Dividends	-	-	-	-	-	-	-	-	-
<b>Balance 31 December 2017</b>	<b>250,000</b>	<b>400,000</b>	<b>556,194</b>	8,571	32	(20,479)	(3,738)	<b>(15,614)</b>	<b>1,190,580</b>

See accompanying notes to consolidated financial statements

# Consolidated Statement of Cash Flows

Years ended 31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

Cash flows from operating activities	Note	2017	2016
(Loss) profit before tax		(161,749)	123,442
Adjustments for:			
Depreciation of property and equipment	15	2,836	2,707
Amortisation of intangible assets	16	5,379	4,978
Amortisation of investments		2,603	4,224
Interest income		(80,441)	(64,507)
Net realised gains on sale of investments	7	(2,225)	(4,732)
Net impairment and other investment losses		1,326	1,246
Net change in unrealised gains on other securities	7	(317)	(1,176)
Other non-cash movements		(3,983)	(5,611)
Change in:			
Funds withheld		(35,795)	7,228
Premiums receivable		(114,083)	(140,371)
Derivative balances receivable		(35,661)	-
Deposit assets	12	45,379	(97,646)
Prepaid reinsurance premiums		(29,086)	(20,508)
Fair value of derivative assets		(65,769)	813
Outstanding losses recoverable from reinsurers		(165,202)	(12,245)
Deferred acquisition expenses		26,278	(31,896)
Unearned profit commission		489	3,307
Other assets		(4,251)	5,591
Outstanding losses and loss expenses		672,064	256,959
Liability for collateral held on behalf of counterparties		(40,096)	(43,581)
Reinsurance balances payable		47,833	3,272
Derivative balances payable		72,245	783
Deposit liabilities	12	(45,379)	97,646
Unearned premiums		24,149	153,704
Fair value of derivative liabilities		33,679	(299)
Deferred commission income		7,122	2,554
Accounts payable and accrued expenses		(2,882)	679
Deferred fee income		1,557	866
Cash provided by operating activities		156,020	247,427
Income taxes paid		(1,872)	(1,168)
<b>Net cash provided by operating activities</b>		<b>154,148</b>	<b>246,259</b>



## Consolidated Statement of Cash Flows (continued)

Years ended 31 December 2017 and 2016  
(Expressed in thousands of United States Dollars)

Cash flows from investing activities	2017	2016
Interest received	77,492	62,391
Purchase of investments	(1,111,859)	(977,855)
Proceeds on sales and maturities of investments	824,427	711,357
Purchase of property and equipment	(1,648)	(441)
Purchase of intangible assets	(4,984)	(5,711)
<b>Net cash used in investing activities</b>	<b>(216,572)</b>	<b>(210,259)</b>
Cash flows from financing activities		
Interest paid	(360)	(1,278)
Dividends paid	-	(5,894)
Settlement of note payable	(25,000)	-
<b>Net cash used in financing activities</b>	<b>(25,360)</b>	<b>(7,172)</b>
Net (decrease) increase in cash and cash equivalents	(87,784)	28,828
Foreign exchange gains on cash and cash equivalents	3,389	5,910
Cash and cash equivalents at beginning of year	313,775	279,037
<b>Cash and cash equivalents at end of year</b>	<b>229,380</b>	<b>313,775</b>

See accompanying notes to consolidated financial statements

# Notes to Consolidated Financial Statements

31 December 2017 and 2016

*(Expressed in thousands of United States Dollars)*

## 1. General

Tokio Millennium Re AG (the 'Company' or 'TMR'), formerly known as Tokio Millennium Re Ltd., is a Swiss-based reinsurance company and is licensed and regulated by the Swiss Financial Market Supervisory Authority ('FINMA'). TMR's registered office is located at Beethovenstrasse 33, 8002 Zurich, Switzerland. The Company is a wholly owned subsidiary of Tokio Marine and Nichido Fire Insurance Co., Ltd. The ultimate parent company is Tokio Marine Holdings, Inc., a company incorporated in Japan.

The Company was formed in Bermuda on 15 March 2000 and redomesticated to Switzerland on 15 October 2013. TMR has become subject to Swiss law without liquidation and re-establishment.

The Company participates in various excess of loss property catastrophe, workers' compensation catastrophe, crop/hail and terrorism reinsurance contracts. Catastrophe reinsurance covers unpredictable events such as hurricanes, windstorms, hailstorms, earthquakes, fires, freezes, floods and other man-made or natural disasters. The Company also offers non-catastrophe property and casualty covers on both proportional and per risk excess of loss treaties, with an emphasis on the higher frequency/lower severity category of exposures. Casualty lines of business include motor, general liability, excess casualty, auto liability, employer's liability, professional liability, workers' compensation, directors and officers, errors and omissions and medical malpractice. In addition, TMR assumes credit insurance contracts.

The Company also provides non-traditional customised reinsurance and financial solutions for its clients' world-wide property and casualty exposures on both a treaty and facultative basis.

A branch in the United Kingdom ('TMRUK') was formed on 17 September 2014. TMR received authorisation from the Prudential Regulation Authority ('PRA') to operate as a branch in the United Kingdom on 8 April 2015. TMRUK commenced writing business on 1 July 2015, which included the new and renewal business formerly written by TMR's affiliate, Tokio Millennium Re (U.K.) Ltd.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 1. General (continued)

The Company formed a branch in the United States ('TMRUS') and was issued a licence by the New York State Department of Financial Services on 2 June 2014. TMRUS was established to further expand TMR's non-catastrophe portfolio and focuses on non-catastrophe product lines.

TMR Management, Inc. ('TMRM'), a wholly owned subsidiary of the Company, was incorporated in the State of Connecticut, United States of America, on 18 December 2013, with an initial share capital of USD 1,000 (authorised and issued shares of 1,000 at USD 1 per share). TMRM, pursuant to a management agreement with TMR, acts as a manager for TMRUS.

On 15 October 2013, the Company formed a branch in Bermuda and is licensed as a Class 3B reinsurer under the Insurance Act, 1978, of Bermuda and related regulations to write all classes of property and casualty business. The Company's branch in Switzerland, originally formed on 31 August 2010, was discontinued as part of the redomestication of the Company effective 15 October 2013.

Tokio Millennium Agency Ltd. ('TMA'), a wholly owned subsidiary of the Company, was incorporated in Bermuda on 28 May 2003, with an initial share capital of USD 12,000. Its primary activity was to facilitate risk swap agreements between Tokio Marine and Nichido Fire Insurance Co., Ltd. and other insurance companies for which it received agency fees. In 2012, TMA was renamed Tokio Solution Management Ltd. ('TSM'). The Bermuda Monetary Authority ('BMA') issued a licence to TSM to conduct business as an insurance management company on 24 August 2012.

TSM manages and facilitates transactions through Shima Reinsurance Ltd. ('Shima Re') or other third party vehicles. In addition, TSM facilitates clients' fronting and leveraging agreements and also provides professional claims and loss reserving services.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 1. General (continued)

The Company's wholly owned subsidiary, Shima Re, a Class 3 segregated accounts company, was incorporated under the laws of Bermuda on 30 July 2012 and registered under the Segregated Companies Act of 2000. With TSM as its manager, Shima Re provides its clients with a platform to transform either fronted or direct reinsurance transactions.

The Company formed a branch in Australia on 22 October 2010. The Australian Prudential Regulation Authority ('APRA') issued a licence to the Company's Australian branch to conduct business as a general insurer on 1 March 2011.

## 2. Basis of preparation

### (a) Statement of compliance

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ('IFRS') as issued by the International Accounting Standards Board ('IASB').

When IFRS is silent, as it is in respect of the measurement of certain insurance products, the IFRS framework (IFRS 4, *Insurance Contracts*) allows reference to another comprehensive body of accounting principles. Accordingly, to the extent that IFRS 4 does not specify the recognition or measurement of insurance contracts, transactions reported in these consolidated financial statements have been prepared in accordance with another comprehensive body of accounting principles for insurance contracts, namely U.S. GAAP.

### (b) Basis of measurement

The consolidated financial statements are presented in U.S. Dollars, which is the Company's reporting currency. They are compiled on a going concern basis. The consolidated financial statements have been prepared on the historical cost basis. See Note 3 for exceptions to this.

### (c) Use of estimates and judgments

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgments, 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 estimate is revised and in any future periods affected.

The most significant estimate made by management is in relation to outstanding losses and loss expenses. Estimates in relation to losses and loss expenses are discussed in Note 3(b) – Insurance contracts. Also refer to Note 17 – Insurance liabilities.

## 3. Summary of significant accounting policies

### (a) Basis of consolidation

The financial statements consolidate the accounts of the Company, its branches and its wholly owned subsidiaries. A subsidiary is an entity that is controlled by TMR. TMR controls an entity when it is exposed to or has the rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of the subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases. The financial statements of the subsidiaries are prepared for the same reporting year as the parent company, using consistent accounting policies. All significant intercompany transactions and balances are eliminated on consolidation.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 3. Summary of significant accounting policies (continued)

#### (b) Insurance contracts

##### **Classification**

Contracts that transfer significant insurance risk are considered insurance contracts, while contracts without significant insurance risk are classified as investment contracts.

##### **Reinsurance premiums assumed and acquisition costs**

Reinsurance premiums assumed are recorded on the accruals basis and are included in income over the period of exposure to risk with the unearned portion deferred in the consolidated balance sheet. Premiums assumed are stated before the deductions of brokerage, commissions and taxes.

For excess of loss contracts, the ultimate premium is estimated at contract inception. Subsequent premium adjustments, if any, are recorded in the period in which they are determined. For proportional treaties, the amount of premium is normally estimated at inception by management based on information provided by the ceding company. The Company accounts for such premium using initial estimates, which are reviewed regularly with respect to the actual premium reported by the ceding company. Changes in estimates are recognised in the period in which they are determined.

For certain property catastrophe contracts, the Company earns reinstatement premiums upon the occurrence of a loss under the reinsurance contract. Reinstatement premiums are calculated in accordance with the contract terms based upon the ultimate loss estimate associated with each contract.

Premiums for retroactive exposures in reinsurance contracts are earned at the inception of the contract, as all of the underlying loss events covered by these exposures occurred in the past. Any underwriting profit at inception related to retroactive exposures in a reinsurance contract is deferred and recognised over the estimated future payout of the outstanding losses and loss expenses. Any underwriting loss at inception related to retroactive exposures in a reinsurance contract is recognised immediately.

Premiums receivable from brokers, insureds and cedants are recognised when due and recorded net of commissions, brokerage, premium taxes and other levies on premiums, unless the contract specifies otherwise. These balances are reviewed for impairment, with any impairment loss recognised as an expense in the period in which it is determined.

Acquisition expenses, mainly commissions and brokerage, related to unearned premiums are deferred and amortised to income over the periods in which the premiums are earned. The method followed in determining the deferred acquisition expenses limits the amount of the deferral to its realisable value, by giving consideration to losses and expenses expected to be incurred as premiums are earned.

Where applicable, no-claims bonuses and profit commissions are accrued based on claims experience.

##### **Reinsurance premiums ceded**

Reinsurance premiums ceded comprise the cost of reinsurance contracts entered into. Premiums ceded are accounted for in the period in which the contract is bound, and are similarly earned over the period of exposure to risk, with the unearned portion being deferred in the consolidated balance sheet as prepaid reinsurance premiums.

Premiums payable to agents and brokers are recognised when due.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 3. Summary of significant accounting policies (continued)

### (b) Insurance contracts (continued)

#### **Outstanding losses and loss expenses**

Losses and loss expenses paid are recorded when advised by the ceding insurance companies. Outstanding losses comprise estimates of the amount of reported losses and loss expenses received from the ceding insurance companies plus a provision for losses incurred but not reported ('IBNR'). The IBNR provision is estimated by management based on reports from industry sources, including initial estimates of aggregate industry losses, individual loss estimates received from ceding companies and brokers, output from commercially available catastrophe loss models and actuarial analysis using historical data available to the Company on the business assumed together with industry data.

Given the inherent nature of major catastrophic events, considerable uncertainty underlies the assumptions and associated estimated reserve for losses and loss expenses. These estimates are reviewed regularly and, as experience develops and new information becomes known, the reserves are adjusted as necessary. Such adjustments, if any, are reflected in income in the period in which they are determined.

Due to the inherent uncertainty in estimating the liability for losses and loss expenses, there can be no assurance that the ultimate liability will not be settled for a significantly greater or lesser amount than that recorded.

Based on the current assumptions used, management believes that the Company's recorded amount is a reasonable estimate of the ultimate cost of losses incurred to the consolidated balance sheet date. Reserves for non-catastrophe property and casualty covers are based on individual claims, case reserve and other reserve estimates reported by insureds and ceding companies, as well as the Company's actuarial estimates of ultimate losses. Inherent in the estimates of ultimate losses are expected trends in claim severity and frequency and other factors that could vary significantly as claims are settled. The Company does not have the benefit of a significant amount of its own historical experience with non-catastrophe lines of business. Accordingly, the setting and reserving for incurred losses in these lines of business could be subject to greater variability.

Ultimate losses may vary materially from the amounts provided in the consolidated financial statements. These estimates are reviewed regularly and, as experience develops and new information becomes known, the reserves are adjusted as necessary. Such adjustments, if any, are reflected in the consolidated statement of comprehensive income in the period in which they become known and are accounted for as changes in estimates.

Amounts recoverable from reinsurers are estimated in a manner consistent with the underlying liabilities. Reinsurance recoverable on dual trigger reinsurance contracts require the Company to estimate its ultimate losses applicable to these contracts, as well as to estimate the ultimate amount of industry losses that will be reported by the applicable statistical reporting agency, as per contract terms.

#### **Liability adequacy tests**

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

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 3. Summary of significant accounting policies (continued)

### (c) Financial instruments

#### **Cash and cash equivalents**

The Company considers all cash at bank and on hand, short term deposits and other short term highly liquid investments that are subject to insignificant risk of changes in fair value as cash and cash equivalents. Cash equivalents are financial investments with less than three months to maturity at the date of acquisition.

Cash and cash equivalents are carried in the consolidated balance sheet at amortised cost. Carrying amounts approximate fair value due to the short term nature and high liquidity of the instruments.

#### **Funds withheld**

Funds withheld are contractual receivables due to reinsurers from their clients; they are valued at original cost (nominal amount) at the date of acquisition. In addition, also included in funds withheld are amounts arising from the application of the deposit method of accounting. Appropriate allowance is made for credit risks.

#### **Investments**

The Company's investments comprise short term investments and investments in fixed interest, equity and other securities and catastrophe bonds. The classification is determined at the time of initial purchase. Purchases and sales of investments are recognised at fair value on the trade date. Transaction costs are treated in accordance with the investment classification.

The cost of investments is adjusted for amortisation of premiums and discounts. Realised gains and losses on investments are recognised in net investment income using the specific identification method (as securities are purchased by lot). Interest income on investments is accrued to the consolidated balance sheet date.

Investments are derecognised when the Company has transferred substantially all of the risks and rewards of ownership. On derecognition of an available for sale investment, previously recorded unrealised gains and losses are removed from accumulated other comprehensive income in shareholder's equity and included in current period income.

The Company, together with its investment managers, reviews investments on an individual security basis for evidence of impairment. This is performed on a quarterly basis as part of the financial close process. Impairment losses are recognised when there is objective evidence that the Company will be unable to collect all amounts due according to contractual terms of the individual security.

An available for sale debt security is impaired if there is objective evidence that a loss event has occurred after initial recognition of the security and up to the relevant consolidated balance sheet date, and that loss event has negatively affected the estimated future cash flows, i.e., amounts due according to the contractual terms of the security are not considered collectible. Impairment losses on available for sale debt securities are recognised by reclassifying the losses from accumulated other comprehensive income to the consolidated statement of comprehensive income. The amount reclassified is the difference between the amortised cost and the current fair value, less any impairment loss previously recognised in profit or loss. If the fair value of an impaired available for sale debt security subsequently increases and the increase can be related objectively to an event occurring after the impairment loss was recognised, then the impairment loss is reversed through profit or loss; otherwise it is reversed through other comprehensive income.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 3. Summary of significant accounting policies (continued)

### (c) Financial instruments (continued)

#### **Investments (continued)**

An available for sale equity security is considered to be impaired if there is objective evidence that the cost may not be recovered. Objective evidence that the cost may not be recovered, in addition to qualitative impairment criteria, includes a significant or prolonged decline in the fair value below cost. If an available for sale equity security is impaired, any further declines in the fair value at subsequent reporting dates are recognised as impairments. Therefore, at each reporting period, for an equity security that was determined to be impaired, additional impairments are recognised for the difference between the fair value and the original cost basis, less any previously recognised impairment. Reversals of impairments of available for sale equity securities are not recorded through the income statement but recycled out of other comprehensive income when sold.

The identification of impairment is an inherently uncertain process involving various assumptions and factors, including the financial condition of the counterparty, expected future cash flows, observable market prices, etc. Estimates and assumptions are based on management's judgment and other information available prior to the issuance of the consolidated financial statements. Significantly different results can occur as circumstances change and additional information becomes known.

The Company's investments are managed following prudent standards of diversification. Specific provisions limit the allowable holdings of a single issue and issuers.

#### *Short term investments*

Short term investments represent bank deposits and investments in money market funds with an original term of greater than 90 days but less than one year. The carrying value reported in the consolidated balance sheet for these short term investments approximates their fair value due to the short term nature of the investments.

#### *Fixed interest securities – available for sale*

This consists of debt securities which are classified as available for sale and are carried at fair value, with any unrealised gains and losses (difference between amortised cost and fair value), with the exception of currency valuation differences, included in accumulated other comprehensive income as a separate component of equity. The amortisation and currency valuation differences are included in profit or loss.

The fair value of fixed interest securities is based on prices provided by internationally recognised independent pricing services. The independent pricing sources obtain actual transaction prices for securities that have quoted prices in active markets. For securities that are not actively traded, the pricing services typically uses 'matrix pricing,' which uses observable inputs including reported trades, benchmark yields, broker/dealer quotes, interest rate spreads, prepayment spreads and other such inputs from market sources to determine a reasonable fair value.

#### *Investments in catastrophe bonds – available for sale*

The Company's investments in catastrophe bonds are classified as available for sale and are carried at fair value, with any unrealised gains and losses (difference between amortised cost and fair value), with the exception of currency valuation differences, included in accumulated other comprehensive income as a separate component of equity. The amortisation and currency valuation differences are included in profit or loss.



# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 3. Summary of significant accounting policies (continued)

### (c) Financial instruments (continued)

#### **Investments (continued)**

##### *Equity securities – available for sale*

The Company's equity securities are classified as available for sale and are carried at fair value, with any unrealised gains and losses (including currency valuation differences), included in accumulated other comprehensive income as a separate component of equity.

##### *Other securities – fair value through profit and loss*

Other securities consist of investments in investment funds organised as limited partnerships, investments in funds organised as limited liability companies and investment in an absolute return fund. These are designated at fair value through profit or loss from the date of acquisition.

##### *Derivative financial instruments*

From time to time, the Company enters into catastrophe swap derivatives, under which certain catastrophe reinsurance exposures are ceded to or assumed from the swap counterparty. The Company does this to facilitate institutional investors who seek to diversify their portfolios by adding non-correlated reinsurance risks to their portfolio. The Company transforms such risks by selling reinsurance and buying derivatives from the institutional investors, or vice versa. The Company earns a fee for its role in facilitating such transactions. Since there is no right of offset, all transactions are presented on a gross basis in the consolidated financial statements. Although the derivatives provide an economic hedge against the assumed or ceded reinsurance contract, the Company designates its derivatives as non-hedging derivative instruments based upon criteria established by IAS 39, *Financial Instruments: Recognition and Measurement*. Catastrophe swaps are recorded at fair value with changes in fair values recorded in the consolidated statement of comprehensive income. Fair value is estimated by management primarily based on the unexpired period of risk, an evaluation of the probability of loss and other unobservable inputs. The Company's catastrophe swap derivatives are initially priced at fair value in a non-stressed market and amortisation reflects the change in fair value in the absence of any loss events. The inputs for catastrophe swap derivatives are purely based on management's evaluation and are unobservable.

##### *Receivables*

The Company's receivables have fixed or determinable payments and are carried at cost less any provision for impairment in value. Refer to Note 3(b) – Insurance contracts for discussion on receivables arising from reinsurance contracts.

##### *Impairment of financial assets*

Objective factors that are considered when determining whether a financial asset or group of financial assets may be impaired include, but are not limited to, the following:

- negative rating agency announcements in respect of investment issuers, reinsurers and debtors;
- significant reported financial difficulties of investment issuers, reinsurers and debtors;
- actual breaches of credit terms such as persistent late payments or actual default;
- the disintegration of the active market(s) in which a particular asset is traded or deployed; and
- adverse economic or regulatory conditions that may restrict future cash flows and asset recoverability.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 3. Summary of significant accounting policies (continued)

#### (d) Deposit assets and liabilities

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

The Company earns fee income for the provision of these contracts. Fee income is based upon the terms of the contracts, with the unearned portion deferred in the consolidated balance sheet, as deferred fee income. The revenue and expense recorded for such contracts are included in other underwriting income.

#### (e) Property and equipment

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

Computer equipment	3 years
Fixtures and fittings	5 years
Leasehold improvements	Over the term of the underlying lease
Motor vehicles	5 years
Office equipment	4 years

#### (f) Intangible assets

Intangible assets are stated at cost less amortisation calculated on a straight-line basis over the estimated useful lives of the assets. The Company's intangible assets comprise of computer software with a specific amortisation rate of 3 years.

#### (g) Impairment of non-financial assets

Assets that are subject to amortisation are tested for impairment when there is an indication of a possible impairment at the reporting date.

Objective factors that are considered when determining whether a non-financial asset (such as an intangible asset or item of property and equipment) or group of non-financial assets may be impaired include, but are not limited to, the following:

- adverse economic, regulatory or environmental conditions that may restrict future cash flows and asset usage and/or recoverability; and
- the likelihood of accelerated obsolescence arising from the development of new technologies and products; and the disintegration of the active market(s) to which the asset is related.

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 purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units).

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 3. Summary of significant accounting policies (continued)

#### (g) Impairment of non-financial assets (continued)

Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, to the extent that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior periods. A reversal of an impairment loss is recognised as income immediately.

#### (h) Bad debt provision

The Company reviews receivables on a quarterly basis and a bad debt provision is recorded only to the extent that repayment is unlikely or no longer expected in full amount. In addition, the Company considers known and emerging credit events to determine if other provisions are necessary.

#### (i) Translation of foreign currencies

The consolidated financial statements of the Company are presented in U.S. Dollars.

Foreign currency transactions are recorded in the functional currency for each entity using the exchange rates prevailing at the dates of the transactions, or at the average rate for the period when this is a reasonable approximation. Monetary assets and liabilities denominated in foreign currencies are translated at period end exchange rates. The resulting exchange differences on translation are recorded in profit or loss. Non-monetary assets and liabilities carried at historical cost denominated in a foreign currency are translated at historic rates. Non-monetary assets and liabilities carried at fair value denominated in a foreign currency are translated at the exchange rate at the date the estimated fair value was determined, with resulting exchange differences recorded in accumulated other comprehensive income in shareholder's equity.

The functional currency of the Bermuda and U.S. branches is the U.S. Dollar. The functional currencies of the Company's Swiss, Australian and U.K. operations are the Euro, Australian Dollar and Pound Sterling, respectively. In translating the financial results of those entities whose functional currency is other than the U.S. Dollar, reporting currency, assets and liabilities are converted into U.S. Dollars using the rates of exchange in effect at the balance sheet dates, and revenues and expenses are converted using the average foreign exchange rates for the period. The effect of translation adjustments are reported in the consolidated balance sheet and consolidated statement of changes in shareholder's equity as a foreign currency translation adjustment, a separate component of accumulated other comprehensive income.

#### (j) Leases

All leases are classified as operating leases and are not recognised in the consolidated balance sheet. Rentals payable under operating leases are charged to income on a straight-line basis over the lease term.

#### (k) Long term incentive compensation plan

In 2008, the Board approved a compensation program for employees. In the first quarter of 2016, the Compensation and Nominations Committee of the Board approved an amendment to the compensation program that changed the metric used to calculate the value of awards. Under the amended long term incentive compensation plan, the value of awards is based on the difference between the actual profit and target profit over the performance period. The accounting for the compensation program is in accordance with IAS 19, *Employee Benefits*.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 3. Summary of significant accounting policies (continued)

#### (l) Taxation

The Swiss operation and the Australia, U.S. and U.K. branches of the Company operate in jurisdictions where they are subject to taxation. Income taxes have been provided for in accordance with the provisions of IAS 12, *Income Taxes*. Current and deferred income taxes are charged or credited to profit or loss. Deferred income taxes are provided for all temporary differences between the bases of assets and liabilities used in the consolidated balance sheet and those used in the various jurisdictional tax returns. Deferred tax assets are recognised for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be used. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

The Company recognises a tax benefit relating to uncertain tax positions only where the position is probable to be sustained assuming examination by tax authorities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, using tax rates enacted or substantively enacted at the reporting date.

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

#### (m) Retirement benefit obligation

##### **Defined contribution plans**

TMR has defined contribution plans where the Company pays fixed contributions into a separate entity from which post-employment and other benefits are paid. The Company has no legal or constructive obligation to pay further contributions if the plan does not hold sufficient assets to pay employees the benefits relating to employee service in the current and prior periods. Payments to the defined contribution plans are recognised as an expense when employees have rendered services entitling them to the contributions. This is generally in the year of contribution. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in future payments is available.

##### **Defined benefit plan**

The Company also has a defined benefit post-retirement plan in relation to the Swiss operation. The net retirement benefit obligation in relation to this plan is based on, among other things, assumptions of the discount rate, estimated return on plan assets and salary increases. The cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at the end of each reporting period. Actuarial gains and losses are recognised in other comprehensive income. Past service costs are recognised immediately in the period of a plan amendment. The Company recognises the overfunded or underfunded status of the defined benefit post-retirement plan as an asset or liability in its consolidated balance sheet and recognises changes in the funded status in the year in which the changes occur through other comprehensive income. Any asset resulting from this calculation is limited to the sum of any cumulative unrecognised net losses and the present value of any economic benefits available in the form of refunds or reductions in future contributions to the plan.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 3. Summary of significant accounting policies (continued)

Accounting standards and amendments issued but not yet adopted

Accounting standards issued and amendments to published standards that are not yet effective up to the date of issuance of the Company's consolidated financial statements are listed below. The Company intends to adopt these standards when they become effective.

### **IFRS 17, Insurance contracts**

In May 2017, the IASB finished its long-standing project to develop an accounting standard on insurance contracts and published IFRS 17. IFRS 17 replaces IFRS 4, which currently permits a wide variety of practices in accounting for insurance contracts. IFRS 17 will fundamentally change the accounting by all entities that issue insurance contracts, reinsurance contracts and investment contracts with discretionary participation features.

IFRS 17 is effective for annual periods beginning on or after 1 January 2021, with earlier application permitted if IFRS 15, *Revenue from Contracts with Customers*, and IFRS 9, *Financial Instruments*, are also applied. TMR will adopt the standard on its effective date. The standard requires entities to retrospectively apply IFRS 17 unless impracticable. At transition date, TMR will need to: (a) identify, recognise and measure each group of insurance contracts as if IFRS 17 had always applied; (b) derecognise any existing balances that would not exist had IFRS 17 always applied; and (c) recognise any resulting net difference in equity.

The adoption of IFRS 17 will bring forth significant changes regarding the Company's measurement and disclosure of reinsurance contracts both in terms of liability measurement and profit recognition. TMR has completed a preliminary impact analysis in 2017. In 2018, a wider project will be formally established involving all concerned functions within the Company.

### **IFRS 9, Financial instruments**

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

IFRS 9 is effective for annual reporting periods beginning on or after 1 January 2018, with early adoption permitted. In 2016, the IASB issued an amendment to IFRS 4 which permits insurers to apply IAS 39 rather than IFRS 9, for annual periods beginning before 1 January 2021, provided certain preconditions are met. These preconditions, relating to insurance being the dominant activity of a reporting entity, are fulfilled by TMR and it is planned to carry out this option. In this context, interdependencies with IFRS 17, *Insurance Contracts*, have to be considered to come to a final conclusion on the combined impact of both accounting standards.

The adoption of IFRS 9 will have an effect on the classification and measurement and impairment model applied to the Company's financial instruments. The new standard also introduces expanded disclosure requirements and changes in presentation. These are expected to change the nature and extent of the Company's disclosures about its financial instruments particularly in the year of the adoption. TMR is in the process of analysing the impact of this standard on its consolidated financial statements.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 3. Summary of significant accounting policies (continued)

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

#### **Amendments to IFRS 4, Insurance contracts, regarding the implementation of IFRS 9, Financial instruments**

These amendments, published in September 2016, introduce two approaches: an overlay approach and a deferral approach. The amended standard will:

- give all companies that issue insurance contracts the option to recognise in other comprehensive income, rather than profit or loss, the volatility that could arise when IFRS 9 is applied before the new insurance contracts standard is issued; and
- give companies whose activities are predominantly connected with insurance an optional temporary exemption from applying IFRS 9 until the year 2021. The entities that defer the application of IFRS 9 will continue to apply the existing financial instruments standard – IAS 39, *Financial Instruments: Recognition and Measurement*.

Both the temporary exemption and the overlay approach allow entities to avoid temporary volatility in profit or loss that might result from adopting IFRS 9 before the forthcoming new insurance contracts standard. Furthermore, by using the temporary exemption, an entity does not have to implement two sets of major accounting changes within a short period of time, and it can take into account the effects of the new insurance standard when first applying the classification measurement requirements of IFRS 9.

The amendments are effective for annual periods beginning on or after 1 January 2018. As mentioned above, the Company has opted to defer the application of IFRS 9 until annual periods beginning on or after 1 January 2021 (the ‘deferral approach’) in order to align with the IFRS 17 implementation.

#### **Amendment to IFRS 9, Financial instruments, on prepayment features with negative compensation**

This amendment, published in October 2017, confirms that when a financial liability measured at amortised cost is modified without this resulting in de-recognition, a gain or loss should be recognised immediately in profit or loss. The gain or loss is calculated as the difference between the original contractual cash flows and the modified cash flows discounted at the original effective interest rate. This means that the difference cannot be spread over the remaining life of the instrument, which may be a change in practise from IAS 39, *Financial Instruments: Recognition and Measurement*.

The amendment is effective for annual periods beginning on or after 1 January 2019, that is, one year later than the effective date of IFRS 9. As mentioned above, the Company has opted to defer the application of IFRS 9 until annual periods beginning on or after 1 January 2021 (the ‘deferral approach’) in order to align with the IFRS 17 implementation.

#### **IFRS 15, Revenue from contracts with customers**

IFRS 15, published in May 2014, is a converged standard from the IASB and FASB on revenue recognition and replaces IAS 18, *Revenue*. The standard will improve the financial reporting of revenue and improve comparability of the top line in financial statements globally. The underlying principle is that an entity will recognise revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services, based on the satisfaction of performance objectives.

Revenue from contracts accounted for under IFRS 4, *Insurance Contracts*, and from financial instruments accounted for under IAS 39, *Financial Instruments: Recognition and Measurement*, are outside the scope of IFRS 15.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 3. Summary of significant accounting policies (continued)

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

### **IFRS 15, Revenue from contracts with customers (continued)**

The standard is effective for annual periods beginning on or after 1 January 2018, with early adoption permitted. TMR will adopt the standard on its effective date and it is not expected to have a material impact on the Company's consolidated financial statements.

### **IFRS 16, Leases**

On 13 January 2016, the IASB published IFRS 16, *Leases*, which replaces the current guidance in IAS 17, *Leases*. It will result in almost all leases being recognised on the balance sheet. Under IAS 17, lessees were required to make a distinction between a finance lease (on balance sheet) and an operating lease (off balance sheet). IFRS 16 now requires lessees to recognise a lease liability reflecting future lease payments and a 'right-of-use asset' for virtually all lease contracts. The IASB included an optional exemption for certain short term leases and leases of low-value assets; however, this exemption can only be applied by lessees. Under IFRS 16, a contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for a consideration.

IFRS 16 is effective for annual reporting periods beginning on or after 1 January 2019. Earlier application is permitted, but only in conjunction with IFRS 15, *Revenue from Contracts with Customers*. The Company is in the process of analysing the impact of this standard on its consolidated financial statements.

### **Amendments to IFRS 2, Share based payments, on clarifying how to account for certain types of share-based payment transactions**

This amendment, published in June 2016, clarifies the measurement basis for cash-settled, share-based payments and the accounting for modifications that change an award from cash-settled to equity-settled. It also introduces an exception to the principles in IFRS 2 that will require an award to be treated as if it was wholly equity-settled, where an employer is obliged to withhold an amount for the employee's tax obligation associated with a share-based payment and to pay that amount to the tax authority. These amendments are effective for annual periods beginning on or after 1 January 2018 and are not expected to have an impact on the Company's results.

### **Annual improvements to IFRSs 2014–2016 cycle**

In December 2016, the IASB published its annual amendments to IFRSs and the related bases for conclusions and guidance. The IASB uses the annual improvements process to make necessary, but non-urgent, amendments to IFRSs that will not be included as part of a major project. These amendments affect two standards, namely:

- IFRS 1, *First-time Adoption of IFRS*, regarding the deletion of short term exemptions for first-time adopters regarding: IFRS 7, *Financial Instruments: Disclosures*; IAS 19, *Employee Benefits*; and IFRS 10, *Consolidated Financial Statements*, effective 1 January 2018; and
- IAS 28, *Investments in Associate and Joint Ventures*, regarding measuring an associate or joint venture at fair value, effective 1 January 2018.

These amendments will have no impact on the Company's consolidated financial statements.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 4. Risk disclosures

The Company, through its Enterprise Risk Management ('ERM') function, Risk Management Working Group ('RMWG') and Risk Management Committee ('RMC'), seeks to identify all material risks inherent in its business, including emerging risks; to understand the manifestations of each risk; and to assess, control, mitigate and manage these risks appropriately.

The objectives of TMR's risk management process are to ensure that:

- all material risks are proactively identified;
- the potential to cause losses or generate profits is understood and assessed;
- appropriate action is taken to manage the assumption of each risk based on that assessment and the Company's stated risk appetite;
- appropriate controls are in place to mitigate risks;
- an appropriate level of capital is held to cover financial and non-financial risks from all sources; and
- following a severe catastrophic event(s), appropriate capital action can be executed to remain solvent and meet its obligations under reinsurance contracts.

The oversight of the Company's risk management program is provided by the Board of Directors and senior management, assisted by the RMC.

In the course of the Company's risk identification, assessment, control, monitoring and reporting process, it has identified and categorised all of its risks into the following categories:

- underwriting risk including premium risk, catastrophe risk and reserve risk;
- market risk including interest rate risk, foreign exchange risk, revaluation risk, equity price risk and credit spread risk;
- credit risk;
- liquidity risk;
- operational risk; and
- strategic risk.

### (a) Underwriting risk

Underwriting risk consists of premium risk, catastrophe risk and reserve risk.

Underwriting risk may be due to either the acceptance of risks that do not comply with the Company's underwriting guidelines and corporate strategy, or the acceptance of risks that result in losses and expenses greater than it had anticipated at the time of underwriting.

As a reinsurance company, TMR is in the business of taking underwriting risk and therefore has a high appetite for underwriting risk. TMR's risk limits are defined in its Risk Appetite and Risk Tolerance/Limit Policy for underwriting risk and reserve risk combined.



## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (a) Underwriting risk (continued)

The Company has underwriting guidelines in place that clearly define the territorial scope, risks to be written, business to be avoided, acceptance limits, maximum policy period, maximum net retention, outward reinsurance, security requirement (for retrocessionaires) and underwriting authority.

As a part of the risk control strategy and governance at TMR, all contracts must be reviewed and approved by an Underwriting Committee before they can be bound.

The Company employs experienced catastrophe analysts and modellers, as well as experienced and credentialed actuaries, to perform pricing analyses to ensure that each risk is adequately priced.

#### Premium risk

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

The Company has purchased retrocessions in the past several years to enhance the diversity of the portfolio, improve capital efficiency, manage the net retention and protect the capital of TMR. The Company will continue to utilise this important risk management tool when the pricing and risk mitigation impact justifies doing so.

Details of annual premiums assumed by geographic area of risk insured are provided below:

Geographic area of risk insured	2017 Reinsurance premiums assumed	%	2016 Reinsurance premiums assumed	%
North America	1,093,226	68.1	987,367	63.6
Europe	249,746	15.5	285,653	18.4
Worldwide	200,940	12.5	186,429	12.0
Australasia	34,872	2.2	56,175	3.6
Asia	24,738	1.5	35,523	2.3
Other	2,977	0.2	1,493	0.1
<b>Total</b>	<b>1,606,499</b>	<b>100.0</b>	<b>1,552,640</b>	<b>100.0</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (a) Underwriting risk (continued)

##### Premium risk (continued)

Details of annual premiums assumed by line of business are provided below:

Line of business	2017 Reinsurance premiums assumed	%	2016 Reinsurance premiums assumed	%
Property catastrophe	389,750	24.2	342,251	22.0
Property	232,385	14.5	246,973	15.9
Casualty	673,168	41.9	709,866	45.7
Specialty	118,375	7.4	127,434	8.2
Multi-line	192,821	12.0	126,116	8.2
<b>Total</b>	<b>1,606,499</b>	<b>100.0</b>	<b>1,552,640</b>	<b>100.0</b>

##### Catastrophe risk

Catastrophe risk is the risk that the premium to be earned over the next twelve-month period from the catastrophe exposed reinsurance contracts (in-force, new or renewal) is insufficient to cover potential claim costs, claim adjustment expenses as well as the acquisition expenses associated with those contracts that may originate from extreme or exceptional catastrophic events over the same period, such as hurricanes, earthquakes, windstorms, landslides and terrorist attacks.

Catastrophe risk is classified as a separate and distinct class of underwriting risk mainly due to its low-frequency and high-severity characteristics and its potential to affect numerous contracts simultaneously and inflict significant erosion of TMR's capital.

A core element of TMR's book of business continues to be property catastrophe reinsurance. Therefore, TMR has a high appetite for catastrophe risk as long as this business is adequately priced. The Company writes reinsurance risks for periods of mainly one year so that the contracts can be assessed for pricing and terms and adjusted to reflect any changes in market conditions.

The Company has made a series of strategic moves to diversify, spread and dilute its catastrophe exposures as well as optimise its underwriting portfolio through geographical diversification and by writing casualty and specialty lines and lower layers of business.

Catastrophe risk is the dominant contributor and driver of TMR's total risk. TMR's catastrophe exposures are managed by limiting the amount of exposure in any one geographic area.

Retrocession is purchased to enhance the diversity of TMR's portfolio, maintain the net retention and even out peak exposures and more effectively manage the volatility of TMR's book of business.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (a) Underwriting risk (continued)

##### **Reserve risk**

Reserve risk is the risk that the best (point) estimate of unpaid loss and loss adjustment expense reserves are inadequate to cover all future payments for the full settlement of claims from all prior accident years (on or prior to the valuation date).

Reserve risk is distinct from premium risk and is related to exposures that have already been earned and claims that have already been incurred but have not yet been reported ('IBNR') or fully settled.

TMR has focused on short-tailed property lines of business in the past but now has increased its appetite for longer-tailed casualty and specialty lines of business. The proportion of medium and long-tailed lines of business underwritten by the Company continues to create a shift towards a greater proportion of reserving risk in the risk profile. TMR's risk limits are not defined separately for catastrophe risk, non-catastrophe premium risk and reserve risk, but are defined for insurance risk as a whole.

To manage reserving risk, TMR's actuarial team use a range of recognised actuarial techniques to project gross premiums written, monitor claims development patterns and stress-test ultimate insurance liability balances. An independent actuary also performs a half-yearly review for the Company.

A full analysis of loss and loss adjustment expense reserves is performed on a quarterly basis. The reserve analyses are reviewed by and discussed with underwriters, actuaries, claims, finance and senior management prior to submission to the Reserve Committee. The Reserve Committee is appointed by the Executive Committee to review the sufficiency of the estimated loss reserves and to appraise the adequacy and effectiveness of the loss reserving practises of TMR. The Reserve Committee is comprised of the Chief Executive Officer ('CEO'), Chief Risk Officer ('CRO'), Chief Operating Officer ('COO'), and Chief Financial Officer ('CFO').

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (a) Underwriting risk (continued)

##### Reserve risk (continued)

The table below illustrates the development of the estimates of ultimate cumulative claims for the Company after the end of the accident year, illustrating how amounts estimated have changed from the initial estimates made.

Estimate of gross ultimate liability	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
At end of accident year	43,975	191,957	515,356	324,587	306,172	431,405	559,407	757,851	1,460,884	
One year later	46,829	206,494	529,491	318,895	306,962	428,287	547,292	810,380		
Two years later	45,644	213,431	504,483	317,360	296,375	415,797	552,533			
Three years later	45,104	222,238	523,370	308,435	286,511	416,688				
Four years later	48,962	231,680	517,826	304,045	289,770					
Five years later	46,231	223,342	515,669	301,445						
Six years later	46,105	224,789	516,812							
Seven years later	45,925	225,378								
Eight years later	44,076									
Ultimate liability 2009–2017	44,076	225,378	516,812	301,445	289,770	416,688	552,533	810,380	1,460,884	4,617,966
Ultimate liability pre-2009										441,720
										5,059,686
Paid – 2009–2017	(43,853)	(190,561)	(493,816)	(262,691)	(234,052)	(325,255)	(374,007)	(428,413)	(479,143)	(2,831,791)
Paid – pre-2009										(441,172)
										(3,272,963)
Gross liability as at 31 December 2017										1,786,723

Estimate of net ultimate liability	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
At end of accident year	31,810	170,263	377,402	254,757	305,924	386,508	552,426	728,211	1,089,634	
One year later	38,565	169,950	389,664	251,442	306,438	383,075	539,716	766,254		
Two years later	38,249	167,065	369,326	246,004	297,565	379,977	545,404			
Three years later	38,064	181,156	389,245	242,263	287,695	380,562				
Four years later	42,028	190,598	383,064	238,001	289,224					
Five years later	39,312	183,547	380,907	237,004						
Six years later	39,314	184,994	382,784							
Seven years later	39,315	185,583								
Eight years later	39,094									
Ultimate liability 2009–2017	39,094	185,583	382,784	237,004	289,224	380,562	545,404	766,254	1,089,634	3,915,543
Ultimate liability pre-2009										389,302
										4,304,845
Paid – 2009–2017	(38,914)	(147,797)	(362,743)	(200,505)	(233,596)	(324,291)	(367,416)	(420,916)	(263,233)	(2,359,411)
Paid – pre-2009										(388,888)
										(2,748,299)
Net liability as at 31 December 2017										1,556,546

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (a) Underwriting risk (continued)

##### Reserve risk (continued)

A summary of changes in outstanding losses and loss expenses for 2017 and 2016, including outstanding losses recoverable from reinsurers, is presented in Note 17 – Insurance liabilities.

The reserves established can be more or less than adequate to meet individual claims arising. The level of uncertainty varies significantly from class to class but can arise from inadequate case reserves for known large losses and catastrophes or from inadequate provision for IBNR. The Company believes that the loss reserves established are adequate; however, a 1% improvement/deterioration in the total estimated gross losses would have an impact on profit before tax of USD 17.9 million gain/loss (2016 – USD 11.1 million). There was no change to the Company's reserving methodology during the year.

#### (b) Market risk

Market risk refers to the risk of financial loss due to a change in the value of the financial assets in TMR's investment portfolio or a change of market risk factors that affect the value of such assets. TMR has identified interest rate risk, foreign exchange risk, revaluation risk, equity price risk and credit spread risk as its main sources of market risk.

##### Interest rate risk

Interest rate risk is a function of general economic and financial market factors (such as the level, trend and volatility of interest rates) as well as the characteristics of the individual fixed interest securities held in TMR's investment portfolio. TMR cannot control the former, but it can control the latter.

Investment guidelines are established to manage this risk. These guidelines set parameters within which the external investment manager must operate. The guidelines are set by the Investment Committee. The Investment Guidelines specify the limitations on the maximum percentage of assets that can be invested in a single issuer or in a single asset class. There are also specific limitations on the maximum maturity for various classes of fixed interest securities and the minimum requirements of credit ratings. The Company reviews the composition, duration and asset allocation of its investment portfolio on a regular basis in order to respond to changes in interest rates and other market conditions. The Company also mitigates interest rate risk on the investment portfolio by establishing and monitoring duration ranges in its investment guidelines.

The investment mix of the fixed interest portfolios is as follows:

<i>As at 31 December 2017</i>	Fair value	%
U.S. treasuries	114,354	5.0
Non-U.S. government	115,222	5.1
Corporate	1,078,328	47.4
Agency residential mortgage-backed	212,687	9.3
Commercial mortgage-backed	58,676	2.6
Asset-backed	84,637	3.7
Collateralised debt obligations	251,555	11.1
Municipals	360,285	15.8
<b>Total fixed interest securities</b>	<b>2,275,744</b>	<b>100.0</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (b) Market risk (continued)

##### Interest rate risk (continued)

<i>As at 31 December 2016</i>	Fair value	%
U.S. treasuries	143,364	7.1
Non-U.S. government	87,857	4.3
Corporate	930,336	46.1
Agency residential mortgage-backed	286,598	14.2
Commercial mortgage-backed	52,377	2.6
Asset-backed	133,787	6.6
Collateralised debt obligations	169,156	8.4
Municipals	215,023	10.7
<b>Total fixed interest securities</b>	<b>2,018,498</b>	<b>100.0</b>

The sensitivity of the Company's fixed interest investment portfolio to interest rate movements is detailed below, assuming linear movements in interest rates:

Immediate shift in yield (basis points)	2017	%	2016	%
100	(71,748)	(3.2)	(61,548)	(3.0)
75	(53,883)	(2.4)	(47,034)	(2.3)
50	(35,953)	(1.6)	(30,807)	(1.5)
25	(17,971)	(0.8)	(15,737)	(0.8)
(25)	17,924	0.8	15,509	0.8
(50)	35,551	1.6	29,997	1.5
(75)	52,485	2.3	44,694	2.2
(100)	68,785	3.0	56,443	2.8

The above shows the possible impact to unrealised gain (loss) on investments, a component of accumulated other comprehensive income.

The durations of the managed portfolios are as follows:

	2017	2016
Fixed interest securities	3.3	3.1

##### Foreign exchange risk

The Company operates internationally, and its exposures to foreign exchange risk arise primarily with respect to the U.S. Dollar, Australian Dollar, Euro, Pound Sterling and New Zealand Dollar. The presentation currency of the Company is the U.S. Dollar, in which the Company reports its consolidated financial results. The effect of this on foreign exchange risk is that TMR is exposed to fluctuations in exchange rates for non-U.S. Dollar denominated transactions and net assets.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (b) Market risk (continued)

##### Foreign exchange risk (continued)

The Company hedges non-U.S. Dollar liabilities with non-U.S. Dollar assets to mitigate against this risk.

The Company's assets and liabilities, categorised at their translated carrying amounts as at 31 December 2017, are as follows:

Assets	USD	AUD	EUR	NZD	GBP	Other	Total
Cash and cash equivalents	22,734	16,533	73,632	45,470	36,425	34,586	229,380
Funds withheld	85,688	-	16,684	-	-	5,191	107,563
Investments	2,143,932	147,015	117,034	2,842	172,450	-	2,583,273
Accrued interest receivable	13,560	1,470	830	-	1,240	-	17,100
Premiums receivable	712,625	27,957	52,672	8,988	125,544	43,067	970,853
Derivative balances receivable	35,661	-	-	-	-	-	35,661
Deposit assets	-	-	223,305	-	125,139	-	348,444
Prepaid reinsurance premiums	81,120	4,012	-	137	903	1,098	87,270
Fair value of derivative assets	66,700	-	-	-	-	3,029	69,729
Outstanding losses recoverable from reinsurers	213,609	6,976	2,479	5,983	211	919	230,177
Deferred acquisition expenses	270,879	11,779	10,794	5,420	27,014	7,670	333,556
Unearned profit commission	792	1	98	-	390	994	2,275
Current tax asset	900	-	-	-	210	-	1,110
Deferred tax asset	32	207	-	-	6,735	43	7,017
Property and equipment	6,337	68	1,729	-	251	-	8,385
Intangible assets	8,559	-	208	-	-	-	8,767
Other assets	7,425	36	9,494	-	1,042	1,286	19,283
<b>Total assets as at 31 December 2017</b>	<b>3,670,553</b>	<b>216,054</b>	<b>508,959</b>	<b>68,840</b>	<b>497,554</b>	<b>97,883</b>	<b>5,059,843</b>

#### Liabilities

Outstanding losses and loss expenses	1,276,718	32,158	124,883	54,368	239,155	59,441	1,786,723
Liability for collateral held on behalf of counterparties	42,075	17	117,418	-	-	211	159,721
Reinsurance balances payable	115,748	14,072	2,784	145	5,681	1,782	140,212
Derivative balances payable	70,550	-	-	-	-	2,478	73,028
Deposit liabilities	-	-	223,305	-	125,139	-	348,444
Payable for investments purchased	5,235	-	-	-	-	-	5,235
Unearned premiums	969,927	69,588	38,857	14,118	136,149	32,561	1,261,200
Fair value of derivative liabilities	35,093	-	-	-	-	2,594	37,687
Deferred commission income	12,480	377	35	24	124	147	13,187
Accounts payable and accrued expenses	25,576	3,224	4	-	1,974	1,946	32,724
Retirement benefit obligation	-	-	-	-	-	4,347	4,347
Deferred fee income	3,099	-	-	-	1,092	1,025	5,216
Current tax liability	-	1,539	-	-	-	-	1,539
Deferred tax liability	-	-	-	-	-	-	-
Note payable	-	-	-	-	-	-	-
<b>Total liabilities as at 31 December 2017</b>	<b>2,556,501</b>	<b>120,975</b>	<b>507,286</b>	<b>68,655</b>	<b>509,314</b>	<b>106,532</b>	<b>3,869,263</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (b) Market risk (continued)

##### Foreign exchange risk (continued)

The Company's assets and liabilities, categorised at their translated carrying amounts as at 31 December 2016, are as follows:

Assets	USD	AUD	EUR	NZD	GBP	Other	Total
Cash and cash equivalents	133,990	17,766	62,688	58,597	17,129	23,605	313,775
Funds withheld	49,064	-	19,479	-	-	3,225	71,768
Investments	1,896,153	125,994	168,086	-	66,052	-	2,256,285
Accrued interest receivable	10,684	1,227	1,659	-	581	-	14,151
Premiums receivable	646,141	27,834	48,578	12,180	89,613	32,424	856,770
Deposit assets	-	-	239,564	-	154,259	-	393,823
Prepaid reinsurance premiums	53,817	2,095	-	81	1,036	1,155	58,184
Fair value of derivative assets	2,638	-	-	-	-	1,322	3,960
Outstanding losses recoverable from reinsurers	52,934	2,948	2,733	5,368	92	900	64,975
Deferred acquisition expenses	296,544	12,449	10,664	6,650	25,636	7,891	359,834
Unearned profit commission	2,172	3	42	-	510	37	2,764
Current tax asset	890	-	-	-	192	-	1,082
Deferred tax asset	208	-	-	-	1,130	845	2,183
Property and equipment	7,565	80	1,900	-	28	-	9,573
Intangible assets	8,871	-	286	-	5	-	9,162
Other assets	6,202	36	8,300	-	4	490	15,032
<b>Total assets as at 31 December 2016</b>	<b>3,167,873</b>	<b>190,432</b>	<b>563,979</b>	<b>82,876</b>	<b>356,267</b>	<b>71,894</b>	<b>4,433,321</b>
<b>Liabilities</b>							
Outstanding losses and loss expenses	809,097	23,954	87,226	65,063	81,198	48,121	1,114,659
Liability for collateral held on behalf of counterparties	3,699	15	181,283	-	-	539	185,536
Reinsurance balances payable	76,471	9,177	471	125	3,451	2,684	92,379
Derivative balances payable	783	-	-	-	-	-	783
Deposit liabilities	-	-	239,564	-	154,259	-	393,823
Payable for investments purchased	7,947	-	-	-	-	-	7,947
Unearned premiums	960,004	66,810	44,033	16,873	120,524	28,807	1,237,051
Fair value of derivative liabilities	2,649	-	-	-	-	1,359	4,008
Deferred commission income	5,457	262	-	12	232	102	6,065
Accounts payable and accrued expenses	29,145	2,829	4	-	1,870	2,118	35,966
Retirement benefit obligation	-	-	-	-	-	4,497	4,497
Deferred fee income	1,607	-	-	-	1,773	279	3,659
Current tax liability	-	1,062	-	-	-	-	1,062
Deferred tax liability	-	129	-	-	-	-	129
Note payable	25,000	-	-	-	-	-	25,000
<b>Total liabilities as at 31 December 2016</b>	<b>1,921,859</b>	<b>104,238</b>	<b>552,581</b>	<b>82,073</b>	<b>363,307</b>	<b>88,506</b>	<b>3,112,564</b>



# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 4. Risk disclosures (continued)

### (b) Market risk (continued)

#### **Foreign exchange risk (continued)**

As at 31 December 2017, the Company used closing rates of exchange for major currencies of: USD 1: AUD 1.28; USD 1: EUR 0.83; USD 1: NZD 1.41; and USD 1: GBP 0.74.

As at 31 December 2016, the Company used closing rates of exchange for major currencies of: USD 1: AUD 1.39; USD 1: EUR 0.95; USD 1: NZD 1.44; and USD 1: GBP 0.81.

The impact on net income of a proportional foreign exchange movement of 10% up and 10% down against the U.S. Dollar at the year end closing rates, applied on foreign currency net assets, would be an increase or decrease of USD 7.7 million (2016: USD 7.5 million). This analysis assumes that all other variables, in particular interest rates, remain constant and that the underlying valuation of assets and liabilities in their base currency is unchanged.

#### **Revaluation risk**

The Company is subject to revaluation risk as a result of the translation into the Company's U.S. Dollar reporting currency of the consolidated balance sheet of the Company's Swiss, Australian and United Kingdom operations, whose functional currencies are the Euro, Australian Dollar and Pound Sterling, respectively.

#### **Equity price risk**

TMR is exposed to equity price risk through its holdings of equity investments. The Company holds equity investments to diversify its investment portfolio and take advantage of expected long-term returns. Investment limits as set out in TMR's investment principles are used to manage and monitor these exposures. Equity investments are limited to a relatively small proportion of TMR's overall investment portfolio and the equity holdings involved are diversified over a number of companies.

Risks from changes in equity prices are normally associated with decreasing share prices and increasing equity price volatilities. As stock markets might also increase, opportunities may arise from equity investments.

As of 31 December 2017, TMR's equity investments, amounting to a fair value of USD 27.3 million (2016 – USD 40.3 million), would have lost USD 2.7 million (2016 – USD 4.0 million) in value assuming equity markets declined by 10%. A 10% upward movement is estimated to have an equal but opposite effect. This is the possible impact to unrealised gain/loss on investments, a component of accumulated other comprehensive income.

#### **Credit spread risk**

Our investment strategy acknowledges the risk of declining market values for our fixed interest securities due to the widening of credit spreads. Investment limits per portfolio as set out in TMR's investment principles are used to manage and monitor this risk. The advantage of being able to invest in long duration securities gives the Company the opportunity to invest in securities yielding spreads over the risk-free return and earning this additional yield component.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (c) Credit risk

Credit risk is the risk of potential financial loss due to unexpected default, or deterioration in the credit ratings, of the debtors or counterparties of TMR.

Asset credit risk may arise from the unexpected default, or deterioration in the credit ratings, of the debtors or issuers of the financial instruments that TMR holds in its investment portfolio, which may cause them to lose value.

Credit risk on premiums receivable from cedants is managed by conducting business with reputable broking organisations, with whom the Company has established relationships, and by rigorous cash collection procedures. The Company also has a broker approval process in place.

The table below presents an analysis of the Company's major exposures to counterparty credit risk, based on Standard & Poor's (S&P) or equivalent rating.

2017	Cash and cash equivalents	Funds withheld	Investments (1)	Premiums receivable	Deposit assets	Losses recoverable	Derivative assets (2)
AAA	-	-	418,632	-	-	-	-
AA+, AA, AA-	164,827	67,688	842,139	194,354	-	-	-
A+, A, A-	64,553	26,413	574,768	387,414	-	38,237	-
BBB+, BBB, BBB-	-	1,517	463,585	5,859	-	-	-
Other/Unknown (3)	-	11,945	284,149	383,226	348,444	191,940	105,390
<b>Total</b>	<b>229,380</b>	<b>107,563</b>	<b>2,583,273</b>	<b>970,853</b>	<b>348,444</b>	<b>230,177</b>	<b>105,390</b>
2016							
AAA	-	-	288,624	-	-	-	-
AA+, AA, AA-	191,557	17,196	804,935	165,951	-	-	-
A+, A, A-	122,218	48,112	443,478	325,349	-	32,683	-
BBB+, BBB, BBB-	-	2,367	457,447	19,405	-	-	-
Other/Unknown (3)	-	4,093	261,801	346,065	393,823	32,292	3,960
<b>Total</b>	<b>313,775</b>	<b>71,768</b>	<b>2,256,285</b>	<b>856,770</b>	<b>393,823</b>	<b>64,975</b>	<b>3,960</b>

(1) Investments comprise of short term investments, fixed interest securities, catastrophe bonds, equity securities and other securities

(2) Derivative assets comprise of derivative balances receivable and fair value of derivative assets

(3) Losses recoverable, deposit assets and derivative assets classified as 'Other/Unknown' are collateralised

The following table shows premiums receivable that are past due but not impaired:

	2017	2016
Less than 90 days past due	17,487	7,363
Between 91 and 180 days past due	554	107
Over 180 days past due	678	494
<b>Total</b>	<b>18,719</b>	<b>7,964</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (c) Credit risk (continued)

TMR has a medium credit risk appetite and elects to take limited credit risk. TMR's investment portfolio is appropriately diversified to limit the amounts of credit exposure with respect to particular rating categories and any one issuer. The Investment Committee has established comprehensive guidelines for the Company's investment managers regarding the type, duration and quality of investments acceptable to TMR. The performance of investment managers is regularly reviewed to confirm adherence to these guidelines.

TMR is also exposed to various counterparty credit risks in the course of conducting its underwriting activities. For example, the Company may have a significant amount of premiums receivables held by its brokers, clients or retrocessionaires.

The Company may have posted funds or collateral with clients or other parties as required by the reinsurance contracts. It may have cash deposits in a number of banking institutions. A retrocessionaire may fail to meet its obligations under the retrocession contracts.

This type of credit risk is called counterparty credit risk, which is modelled as a set of frequency-severity distributions resulting from the scenario analyses conducted and maintained by the Enterprise Risk Management unit using TMR's risk register.

To control and mitigate counterparty credit risk, the rules of the Company's Risk Appetite and Risk Limit policy concerning counterparty credit risk apply. Most of the retrocessions are either collateralised or placed with highly rated reinsurers. TMR transacts most of its reinsurance business through major and reputable brokers and spreads its cash deposits across a number of reputable commercial banks.

In addition, a retrocession arrangement may be made with a retrocessionaire who does not meet the criteria in the Risk Appetite and Risk Limit Policy, if collateral with an equivalent or better rating than the minimum A rating is obtained for an amount at least equal to 100% of the retroceded limit.

As at 31 December 2017, the Company's credit risk exposure in relation to losses recoverable from unrated counterparties to reinsurance ceded agreements is USD 191.9 million (2016 – USD 32.3 million), which is collateralised by letters of credit and assets held in trusts by the reinsurance counterparty for the benefit of the Company.

As at 31 December 2017, the Company's exposure to credit risk of the counterparties to catastrophe swap agreements is USD 105.4 million (2016 – USD 4.0 million), which is collateralised by letters of credit and assets held in trusts by the reinsurance counterparty for the benefit of the Company.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (d) Liquidity risk

Liquidity risk is the risk that the Company is unable to meet its contractual obligations in a timely manner due to the inability of its investment assets to be sold without causing a significant movement in the market price and with minimum loss of value.

TMR aims to keep liquidity risk as low as possible so that the Company will be able to meet its contractual obligations in a timely manner, even under stressed scenarios such as following a major catastrophic event. The Company maintains sufficient liquid assets, or assets that can be converted into cash at short notice and without any significant capital loss, to meet expected cash flow requirements. These liquid assets are regularly monitored using cash flow forecasting to ensure that surplus funds are invested to achieve a higher rate of return. The Company also monitors market changes and outlooks and reallocates assets as deemed necessary.

Liquidity risk can be an outcome or consequence of the Company's exposures to catastrophe risk and market risk. However, for the purpose of monitoring risk limits, liquidity risk is included in and shares the risk limit with the market risk category.

The maturity dates of the Company's fixed interest portfolio are as follows:

	2017	2016
Less than one year	255,228	204,702
Between one and two years	202,752	264,958
Between two and three years	171,139	192,322
Between three and four years	259,781	153,803
Between four and five years	234,418	210,526
Over five years	184,586	135,246
Agency residential mortgage-backed	212,687	286,598
Commercial mortgage-backed	58,676	52,377
Asset-backed securities	84,637	133,787
Collateralised debt obligations	251,555	169,156
Municipals	360,285	215,023
<b>Total fixed interest securities</b>	<b>2,275,744</b>	<b>2,018,498</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (d) Liquidity risk (continued)

The maturity profile of the financial liabilities of the Company is as follows:

<i>As at 31 December 2017</i>	Years until liability becomes due				Total
	Less than one	One to three	Three to five	Over five	
Outstanding losses and loss expenses	531,318	599,689	293,535	362,181	1,786,723
Liability for collateral held on behalf of counterparties	25,488	27,624	11,851	94,758	159,721
Reinsurance balances payable	136,025	4,187	-	-	140,212
Derivative balances payable	30,375	38,546	4,107	-	73,028
Deposit liabilities	37,572	47,540	20,061	243,271	348,444
Payable for investments purchased	5,235	-	-	-	5,235
Fair value of derivative liabilities	13,765	19,778	4,144	-	37,687
Accounts payable and accrued expenses	25,231	5,973	1,160	360	32,724
<b>Total</b>	<b>805,009</b>	<b>743,337</b>	<b>334,858</b>	<b>700,570</b>	<b>2,583,774</b>

<i>As at 31 December 2016</i>	Years until liability becomes due				Total
	Less than one	One to three	Three to five	Over five	
Outstanding losses and loss expenses	300,018	361,779	183,249	269,613	1,114,659
Liability for collateral held on behalf of counterparties	39,887	37,776	32,813	75,060	185,536
Reinsurance balances payable	92,139	240	-	-	92,379
Derivative balances payable	783	-	-	-	783
Deposit liabilities	75,977	77,637	60,700	179,509	393,823
Payable for investments purchased	7,947	-	-	-	7,947
Fair value of derivative liabilities	4,008	-	-	-	4,008
Accounts payable and accrued expenses	28,284	5,619	1,488	575	35,966
Note payable	25,000	-	-	-	25,000
<b>Total</b>	<b>574,043</b>	<b>483,051</b>	<b>278,250</b>	<b>524,757</b>	<b>1,860,101</b>

While the estimation of the ultimate liability for outstanding losses and loss expenses is complex and incorporates a significant amount of judgment, the timing of payment of outstanding losses and loss expenses is also uncertain and cannot be predicted as simply as for other financial liabilities. Actuarial and statistical techniques, past experience and management's judgment have been used to determine a likely settlement pattern.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 4. Risk disclosures (continued)

#### (e) Operational risk

Operational risk refers to the risk of financial or other loss, or potential damage to the Company's reputation resulting from inadequate or failed internal processes, people and systems or from external events.

The following are some of the examples of operational risks facing the Company:

- legal and compliance risk;
- information technology risk (including cyber risk);
- loss of key officers or employees;
- system failure and business disruption;
- execution errors;
- employment practise liability; and
- internal and external fraud.

Through the scenario analysis process, TMR has also made efforts to identify and assess the financial impact of various operational risks. These risks are managed through internal control and monitoring tools such as the risk register.

TMR has a low appetite for operational risk. Unlike underwriting and investment risks, operational risk has no upside and only downside and therefore should be avoided if feasible and cost-effective.

Operational risk is difficult to quantify but can be controlled through appropriate corporate governance and internal control measures. The Company has developed a number of policies and procedures aimed to control or mitigate the negative impact that may potentially result from operational risk events.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 4. Risk disclosures (continued)

### (f) Strategic risk

Strategic risk is the risk to earnings or capital arising from adverse business decisions or improper implementation of those decisions or inability to act in response to business opportunities or to adapt to changes in its operating environment.

The following are examples of strategic risks facing the Company:

- industry overcapacity that results in prolonged soft market conditions;
- flawed response plans to market price cycles, including maintaining premium volume and market share during market declines and improper performance incentives for underwriters and others;
- planning processes (e.g., plan loss ratio setting, target premium volume) that are not fully integrated with internal financial indicators and external benchmarks or are based on forecasts that are inherently optimistic;
- expansion into new lines or territories with inadequate underwriting expertise, pricing systems, price monitoring capabilities, understanding of regulatory requirements, claims handling staff; and
- failure of large information technology and infrastructure projects to achieve the specified goals.

Strategic risks can be split into two components, one being the risk emanating from making business decisions (active) such as the last two risks in the list above, and the other emanating from a lack of response to industry challenges (passive) such as the first three risks in the list above.

Strategic risk is especially important for TMR because it has optimised the risk profile of its business by growing those lines of business that help to diversify its concentration in catastrophe exposures. Although there is inherent risk in such strategic expansion into new lines and geographical areas, there are also many benefits. In setting TMR's appetite for this risk, both the risk and the benefits are taken into consideration.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 4. Risk disclosures (continued)

### (f) Strategic risk (continued)

TMR identifies and assesses various strategic risks within its risk register and performs scenario analyses to evaluate the potential financial impact that may arise from such risks.

New business will be evaluated periodically to determine whether or not it has met the strategic goals of the Company.

### **Capital model**

The Company attempts to identify and appropriately define all material risks internal and external to the Company, understand the manifestations of each risk and ensure that risks are managed, controlled or mitigated. To the extent that a risk is not fully mitigated, the Company will measure the financial impact of the risk and include it in its capital adequacy assessment and measurement framework. The internal capital model covers all of the material risks identified above, including regulatory obligations.

Each of the material risks is measured and modelled by TMR's internal or third-party vendor models. The results are aggregated into a probability distribution of the Company's profit or loss (via Monte Carlo simulation) in order to provide a holistic view of all risks facing the Company. In the risk aggregation process, both risk correlation and diversification effects are taken into account. From the probability distribution, the Company's overall capital requirements using various risk measures and under various capital standards can be determined.



## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 5. Cash and cash equivalents

Cash and cash equivalents represent cash at bank of USD 229.4 million as at 31 December 2017 (2016 – USD 313.8 million).

### 6. Funds withheld

Funds withheld as at 31 December 2017 totalling USD 107.6 million (2016 – USD 71.8 million) represents funds furnished by the Company to its cedants and are largely held in trusts by trustees. The funds do not trigger any cash flows and cannot be realised by cedants without the Company's consent. In the event of default on such a deposit, the Company's reinsurance commitment would be reduced to the same extent.

### 7. Investments

Investments comprise the following:

	2017	2016
Short term investments	252,574	177,979
Fixed interest securities, available for sale	2,275,744	2,018,498
Investment in catastrophe bonds, available for sale	-	3,154
Equity securities, available for sale	27,300	40,343
Other securities, at fair value through profit and loss	27,655	16,311
<b>Total</b>	<b>2,583,273</b>	<b>2,256,285</b>

#### (a) Short term investments

The Company's short term investments represent bank deposits and investments in money market funds with an original term of greater than 90 days but less than one year. As at 31 December, short term investments comprised of the following:

	2017	2016
Money market funds	185,576	117,377
Fixed deposits	66,998	60,602
<b>Total</b>	<b>252,574</b>	<b>177,979</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 7. Investments (continued)

#### (b) Fixed interest securities, available for sale

(i) The amortised cost, fair value and unrealised gains and losses of investments in available for sale fixed interest securities are as follows:

<i>As at 31 December 2017</i>	<b>Amortised cost</b>	<b>Unrealised gains</b>	<b>Unrealised losses</b>	<b>Fair value</b>
U.S. treasuries	116,501	69	(2,216)	114,354
Non-U.S. government	115,300	448	(526)	115,222
Corporate	1,075,702	5,542	(2,916)	1,078,328
Agency residential mortgage-backed	216,691	314	(4,318)	212,687
Commercial mortgage-backed	58,742	1,961	(2,027)	58,676
Asset-backed	85,008	11	(382)	84,637
Collateralised debt obligations	247,636	3,927	(8)	251,555
Municipals	352,646	8,825	(1,186)	360,285
<b>Total</b>	<b>2,268,226</b>	<b>21,097</b>	<b>(13,579)</b>	<b>2,275,744</b>

<i>As at 31 December 2016</i>	<b>Amortised cost</b>	<b>Unrealised gains</b>	<b>Unrealised losses</b>	<b>Fair value</b>
U.S. treasuries	145,815	508	(2,959)	143,364
Non-U.S. government	87,119	1,004	(266)	87,857
Corporate	930,685	3,608	(3,957)	930,336
Agency residential mortgage-backed	292,213	634	(6,249)	286,598
Commercial mortgage-backed	56,299	214	(4,136)	52,377
Asset-backed	133,968	196	(377)	133,787
Collateralised debt obligations	167,915	2,210	(969)	169,156
Municipals	217,054	1,585	(3,616)	215,023
<b>Total</b>	<b>2,031,068</b>	<b>9,959</b>	<b>(22,529)</b>	<b>2,018,498</b>

Of the USD 2,275.7 million available for sale fixed interest securities as at 31 December 2017 (2016 – USD 2,018.5 million), USD 91.8 million (2016 – USD 134.9 million) relates to securities held by the Company for the purpose of funding future claim payments in relation to a loss portfolio transfer agreement (LPTA<sup>1</sup>). As at 31 December 2017, the securities related to the LPTA consist of non-U.S. government securities of USD 30.7 million (2016 – USD 44.6 million), corporate securities of USD 61.1 million (2016 – USD 88.8 million) and asset-backed securities of USD nil (2016 – USD 1.5 million). The net unrealised gain on the LPTA securities of USD 0.6 million at the end of the year 2017 (2016 – USD 1.3 million) has been offset against the corresponding liability for collateral held on behalf of counterparties. The LPTA is referred to in Note 12 – Deposit contracts.

In the normal course of business, available for sale fixed interest securities and cash and cash equivalents with fair value of USD 152.1 million as at 31 December 2017 (2016 – USD 128.8 million), were deposited in trust for the benefit of ceding companies and credit institutions.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 7. Investments (continued)

#### (b) Fixed interest securities, available for sale

- (ii) The amortised cost and estimated fair value of available for sale fixed interest securities by contractual maturity are shown below. Actual maturities may differ from contractual maturities because borrowers may have the right to repay obligations with or without prepayment penalties.

<i>As at 31 December 2017</i>	<b>Amortised cost</b>	<b>Fair value</b>
Within one year	255,195	255,228
From one to five years	869,325	868,090
From five to ten years	182,983	184,586
Subtotal	1,307,503	1,307,904
Agency residential mortgage-backed	216,691	212,687
Commercial mortgage-backed	58,742	58,676
Asset-backed	85,008	84,637
Collateralised debt obligations	247,636	251,555
Municipals	352,646	360,285
<b>Total</b>	<b>2,268,226</b>	<b>2,275,744</b>

<i>As at 31 December 2016</i>	<b>Amortised cost</b>	<b>Fair value</b>
Within one year	204,574	204,702
From one to five years	822,902	821,608
From five to ten years	136,143	135,247
Subtotal	1,163,619	1,161,557
Agency residential mortgage-backed	292,213	286,598
Commercial mortgage-backed	56,299	52,377
Asset-backed	133,968	133,787
Collateralised debt obligations	167,915	169,156
Municipals	217,054	215,023
<b>Total</b>	<b>2,031,068</b>	<b>2,018,498</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 7. Investments (continued)

#### (b) Fixed interest securities, available for sale (continued)

(iii) The Company's available for sale fixed interest securities carry a weighted average credit rating of A (2016 -A) as assigned by Standard & Poor's (S&P).

The rating profile of the Company's available for sale fixed interest securities, based on S&P or equivalent rating, is shown in the table below.

	2017	2016
AAA	319,563	257,180
AA+, AA, AA-	710,796	703,106
A+, A, A-	540,518	416,784
BBB+, BBB, BBB-	463,585	439,435
Below investment grade	42,932	35,580
Not rated	198,350	166,413
<b>Total</b>	<b>2,275,744</b>	<b>2,018,498</b>

#### (c) Investments in catastrophe bonds, available for sale

The Company had one catastrophe bond investment as at 31 December 2016, which matured in 2017. The catastrophe bond had a credit rating of BB- as assigned by S&P.

<i>As at 31 December 2016</i>	Cost	Unrealised gains	Unrealised losses	Fair value
Catastrophe bonds	3,156	-	(2)	3,154

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 7. Investments (continued)

#### (d) Equity securities, available for sale

The acquisition cost, fair value and unrealised gains and losses of investments in available for sale equity securities are as follows:

<i>As at 31 December 2017</i>	Acquisition cost	Unrealised gains	Unrealised losses	Fair value
Common stock	8,512	701	(31)	9,182
Mutual funds	10,000	481	-	10,481
Real estate investment trusts	7,101	613	(77)	7,637
<b>Total</b>	<b>25,613</b>	<b>1,795</b>	<b>(108)</b>	<b>27,300</b>

<i>As at 31 December 2016</i>	Acquisition cost	Unrealised gains	Unrealised losses	Fair value
Common stock	19,806	1,296	(268)	20,834
Mutual funds	10,000	375	-	10,375
Real estate investment trusts	9,204	-	(70)	9,134
<b>Total</b>	<b>39,010</b>	<b>1,671</b>	<b>(338)</b>	<b>40,343</b>

#### (e) Other securities, at fair value through profit and loss

The acquisition cost, fair value and unrealised gains and losses of investments in other securities at fair value through profit and loss are as follows:

<i>As at 31 December 2017</i>	Acquisition cost	Unrealised gains	Unrealised losses	Fair value
<i>Investments in:</i>				
Limited partnerships	12,634	1,367	(294)	13,707
Limited liability companies	1,689	170	-	1,859
Absolute return fund	12,005	84	-	12,089
<b>Total</b>	<b>26,328</b>	<b>1,621</b>	<b>(294)</b>	<b>27,655</b>

<i>As at 31 December 2016</i>	Acquisition cost	Unrealised gains	Unrealised losses	Fair value
<i>Investments in:</i>				
Limited partnerships	13,212	925	(103)	14,034
Limited liability companies	2,089	188	-	2,277
<b>Total</b>	<b>15,301</b>	<b>1,113</b>	<b>(103)</b>	<b>16,311</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 7. Investments (continued)

#### (f) Components of investment income

The components of net investment income for the years ended 31 December 2017 and 2016 were as follows:

<i>31 December 2017</i>	Interest and dividends	Net realised gains	Net change in unrealised gains	Impairment losses	Net investment income
Cash and cash equivalents	1,034	-	-	-	1,034
Funds withheld	1,469	-	-	-	1,469
Short term investments	2,311	-	-	-	2,311
Fixed interest securities – AFS	68,578	205	-	(583)	68,200
Catastrophe bonds	5	-	-	-	5
Equity securities – AFS	2,109	1,298	-	(743)	2,664
Other securities – FVTPL	-	722	317	-	1,039
Sub-total	75,506	2,225	317	(1,326)	76,722
Investment management fees					(7,910)
<b>Net investment income</b>					<b>68,812</b>

<i>31 December 2016</i>	Interest and dividends	Net realised gains	Net change in unrealised gains	Impairment losses	Net investment income
Cash and cash equivalents	1,128	-	-	-	1,128
Funds withheld	3,032	-	-	-	3,032
Short term investments	3,496	-	-	-	3,496
Fixed interest securities – AFS	50,878	3,904	-	(32)	54,750
Catastrophe bonds	5	-	-	-	5
Equity securities – AFS	3,106	558	-	(1,214)	2,450
Other securities – FVTPL	-	270	1,176	-	1,446
Sub-total	61,645	4,732	1,176	(1,246)	66,307
Investment management fees					(5,435)
<b>Net investment income</b>					<b>60,872</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements

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

The following are the levels within the fair value hierarchy:

- **Level 1** – Valuations based on quoted prices in active markets for identical assets or liabilities that the Company has the ability to access. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these instruments does not entail a significant degree of judgment.
- **Level 2** – Valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, directly or indirectly. Level 2 inputs include quoted prices for similar assets and liabilities in active markets and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals, broker quotes and certain pricing indices.
- **Level 3** – Valuations based on inputs that are unobservable and significant to the overall fair value measurement. These measurements include circumstances where there is little, if any, market activity for the asset or liability. In these cases, significant management assumptions can be used to establish management's best estimate of the assumptions used by other market participants in determining the fair value of the asset or liability.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the level in the fair value hierarchy within which the fair value measurement in its entirety falls has been determined based on the lowest level input that is significant to the fair value measurement of the asset or liability. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and the Company considers factors specific to the asset or liability.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements (continued)

Below is a summary of the assets and liabilities that are measured at fair value on a recurring basis:

<i>As at 31 December 2017</i>		Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
Financial assets	Total			
<i>Investments</i>				
Short term investments	252,574	252,574	-	-
<i>Fixed interest securities</i>				
U.S. treasuries	114,354	114,354	-	-
Non-U.S. government	115,222	-	115,222	-
Corporate	1,078,328	-	904,995	173,333
Agency residential mortgage-backed	212,687	-	212,687	-
Commercial mortgage-backed	58,676	-	58,676	-
Asset-backed	84,637	-	84,637	-
Collateralised debt obligations	251,555	-	239,805	11,750
Municipals	360,285	-	358,350	1,935
Equity securities	27,300	16,819	-	10,481
Other securities	27,655	-	12,089	15,566
Sub-total	2,583,273	383,747	1,986,461	213,065
Derivative assets	69,729	-	-	69,729
<b>Total</b>	<b>2,653,002</b>	<b>383,747</b>	<b>1,986,461</b>	<b>282,794</b>
<i>Financial liabilities</i>				
Derivative liabilities	(37,687)	-	-	(37,687)
<b>Total</b>	<b>2,615,315</b>	<b>383,747</b>	<b>1,986,461</b>	<b>245,107</b>



## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements (continued)

<i>As at 31 December 2016</i>		Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
<b>Financial assets</b>	<b>Total</b>			
<i>Investments</i>				
Short term investments	177,979	177,979	-	-
<i>Fixed interest securities</i>				
U.S. treasuries	143,364	143,364	-	-
Non-U.S. government	87,857	-	87,857	-
Corporate	930,336	-	770,538	159,798
Agency residential mortgage-backed	286,598	-	286,598	-
Commercial mortgage-backed	52,377	-	50,180	2,197
Asset-backed	133,787	-	133,787	-
Collateralised debt obligations	169,156	-	169,156	-
Municipals	215,023	-	213,060	1,963
Investments in catastrophe bonds	3,154	-	3,154	-
Equity securities	40,343	29,968	-	10,375
Other securities	16,311	-	-	16,311
Sub-total	2,256,285	351,311	1,714,330	190,644
Derivative assets	3,960	-	-	3,960
<b>Total</b>	<b>2,260,245</b>	<b>351,311</b>	<b>1,714,330</b>	<b>194,604</b>
<i>Financial liabilities</i>				
Derivative liabilities	(4,008)	-	-	(4,008)
<b>Total</b>	<b>2,256,237</b>	<b>351,311</b>	<b>1,714,330</b>	<b>190,596</b>

There were no transfers made between Levels 1, 2 and 3 of the fair value hierarchy in 2017.

The Company elected to classify certain non-U.S. government securities within Level 2 in 2016, which were previously within Level 1. While these securities may qualify for Level 1 classification based on ordinary transactions in identical instruments, it has been assumed, as a practical expedient, that such instruments would predominantly be valued based on a mix of observable inputs.

#### Short term investments

Short term investments, which comprise securities due to mature within one year of the date of purchase, that are traded in active markets are classified within Level 1 as fair values are based on quoted market prices.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements (continued)

#### Fixed interest securities

Fixed interest securities are priced using pricing services, such as index providers and pricing vendors. The pricing vendors provide pricing for a high volume of liquid securities that are actively traded. For securities that do not trade on an exchange, the pricing services generally utilise market data and other observable inputs in pricing models to determine prices. Prices are generally verified using third party data. The techniques generally used to determine the fair value of our fixed interest securities are detailed below by asset class.

#### *U.S. treasuries*

These securities are primarily priced by pricing vendors. When pricing these securities, the vendor may utilise daily data from many real-time market sources, including active trades. As such, the Company considers its U.S. treasury fixed interest securities as Level 1.

#### *Non-U.S. government*

Fixed interest securities included in non-U.S. government are primarily priced by pricing vendors. When evaluating these securities, the vendor may gather information from market sources and integrate other observations from markets and sector news. Evaluations are updated by obtaining broker-dealer quotes and other market information including actual trades, when available. For securities in which trade volume is relatively high, the vendor may utilise data from active trades; as such, these are included as Level 1. For securities in which trade volume is low, the pricing vendor may also utilise data from more frequently traded securities with similar attributes. These are considered observable inputs; therefore, the fair value of such securities is classified as Level 2.

#### *Corporate*

Corporate securities primarily include fixed rate corporate bonds and floating rate notes. The Company's corporate fixed interest securities are primarily priced by pricing vendors. When evaluating these securities, the vendor may gather information from market sources regarding the issuer of the security and obtain credit data, as well as other observations from markets and sector news. Evaluations are updated by obtaining broker-dealer quotes and other market information including actual trades, when available. The pricing vendor may also consider the specific terms and conditions of the securities, including any specific features that may influence risk. These are considered observable inputs; therefore, the fair value of such securities are classified as Level 2.

The Company's corporate securities also include private placements and mortgage loans, for which there is limited observable input on which to measure fair value, which are classified as Level 3. The fair value of these private placements is estimated to be equal to their amortised cost.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements (continued)

#### Fixed interest securities (continued)

##### *Residential ('RMBS') and commercial mortgage-backed ('CMBS') securities*

The vendor uses various valuation techniques and pricing models to measure the fair value of its investments in RMBS and CMBS, including option-adjusted spread models, volatility-driven multi-dimensional single cash flow stream models and matrix correlation to comparable securities. RMBS include U.S. agency securities and collateralised mortgage obligations. Inputs utilised in connection with the valuation techniques include monthly payment and performance information, including prepayments, default severity, delinquencies, market indices and the amounts of the tranches in the particular structure which are senior or subordinate, as applicable, to the tranche represented by the Company's investment. Valuations may also be corroborated by daily active market quotes. As of 31 December 2017, 100% (2016 – 99%) of the Company's investment in mortgage-backed securities are valued using observable inputs and therefore are categorised as Level 2 of the fair value hierarchy. Mortgage-backed securities categorised as Level 3 of the fair value hierarchy in 2016 were valued using non-binding broker quotes that relied on unobservable inputs.

##### *Asset-backed*

The underlying collateral for the Company's asset-backed fixed interest securities primarily consists of automobile and credit card loans. Securities held in this sector are primarily priced by pricing vendors and are considered as Level 2 by the Company as inputs are observable. The pricing vendor may apply dealer quotes and other available trade information such as bids and offers, prepayment spreads that may be adjusted for the underlying collateral or current price data, the U.S. treasury curve, swap curve and TBA values as well as cash settlement.

##### *Collateralised debt obligations*

Collateralised debt obligations consist of collateralised loans. The pricing vendor's valuation techniques utilise non-binding broker quotes as the key input for a majority of the portfolio. As such inputs are generally unobservable, these collateralised debt obligations are categorised as Level 3 of the fair value hierarchy. For the remaining securities, valuation is determined utilising observable inputs including monthly payment information, prepayment data, default severity and delinquencies. These securities are categorised as Level 2 of the fair value hierarchy.

##### *Municipals*

These include bonds or notes issued by U.S. municipalities. Inputs utilised include recently executed transactions and other market data, spreads, benchmark curves including treasury and other benchmarks, trustee reports, material event notices, new issue data and issuer financial statements. These inputs are generally observable, and as such, these securities are categorised as Level 2 of the fair value hierarchy. The remaining securities are valued using non-binding broker quotes that rely on unobservable inputs, and thus these securities are categorised as Level 3 of the fair value hierarchy.

# Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

## 8. Fair value measurements (continued)

### Investments in catastrophe bonds

Investments in catastrophe bonds were recorded at fair value based on quoted market prices or, when such prices were not available, by reference to published broker or underwriter bid and offer indications. As such, the Company considered its investments in catastrophe bonds as Level 2 in 2016.

### Equity securities

This is comprised of common stock, mutual funds and real estate investment trusts. Equities are generally included as Level 1 in the fair value hierarchy as prices are obtained from market exchanges in active markets. Investments in mutual funds, where the fair value of the fund is estimated to be the net asset value reported by the fund administrator at the balance sheet date, are classified as Level 3.

### Other securities

Other securities consist of investments in investment funds organised as limited partnerships, investment in funds organised as limited liability companies, real estate investments held by limited liability companies and an investment in absolute return fund.

For private equity investments, since quoted market prices are not available, the transaction price is used as the best estimate of fair value at inception. When evidence is believed to support a change to the carrying value from the transaction price, adjustments are made to reflect expected exit values. Ongoing valuation reviews are based on assessments of each underlying investment and the inputs utilised in these reviews include, among other things, the evaluation of financing and sale transactions with third parties, expected cash flows, material events and market-based information. These investments are categorised as Level 3 of the fair value hierarchy.

For investments in funds organised as limited liability companies, the funds' financial statements constitute the key valuation input. The value calculated using the equity method of accounting with respect to the investment in this limited liability company was reflective of the fair market value of such investments, and therefore such investments are categorised as Level 3 of the fair value hierarchy.

For the investment in absolute return fund, the fund's exposure in general is related to fixed income securities and fixed income related securities issued by, or giving exposure to, governments, government agencies, companies and supnationals. The fund publishes a daily price on the most common financial information providers. As such, the Company considers its investment in absolute return fund as Level 2 of the fair value hierarchy.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements (continued)

#### Fair value of derivative assets and liabilities

Included in Level 3 are the Company's catastrophe swap derivatives. Catastrophe swap derivatives are stated at fair value as estimated by management primarily based on the unexpired period of risk, an evaluation of the probability of loss and other unobservable inputs. The Company's catastrophe swap derivatives are initially priced at fair value in a non-stressed market and amortisation reflects the change in fair value in the absence of any loss events. The fair value of derivative contracts is sensitive to loss-triggering events. In the event of a loss, the Company would adjust the fair value of the derivative to account for a recovery or liability in accordance with the contract terms and the estimate of exposure under the contract. The inputs for catastrophe swap derivatives are based on management's evaluation and are unobservable.

The following tables provide reconciliations for Level 3 assets measured at fair value on a recurring basis for the years ended 31 December 2017 and 2016:

<i>As at 31 December 2017</i>		Net gains (losses) included in earnings	Net unrealised gains (losses) included in other comprehensive income	Purchases	Sales	Transfers out of Level 3	2017
<b>Financial assets</b>	<b>2016</b>						
Corporate	159,798	1,009	-	40,258	(27,732)	-	173,333
Commercial mortgage-backed	2,197	385	(214)	-	(2,368)	-	-
Collateralised debt obligations	-	-	-	11,750	-	-	11,750
Municipals	1,963	-	(28)	-	-	-	1,935
Equity securities	10,375	-	106	-	-	-	10,481
Other securities	16,311	955	-	1,093	(2,793)	-	15,566
Derivative assets	3,960	(23,751)	-	89,520	-	-	69,729
Sub-total	194,604	(21,402)	(136)	142,621	(32,893)	-	282,794
<b>Financial liabilities</b>							
Derivative liabilities	(4,008)	19,472	-	-	(53,151)	-	(37,687)
<b>Total</b>	<b>190,596</b>	<b>(1,930)</b>	<b>(136)</b>	<b>142,621</b>	<b>(86,044)</b>	<b>-</b>	<b>245,107</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements (continued)

<i>As at 31 December 2016</i>		Net gains (losses) included in earnings	Net unrealised gains (losses) included in other comprehensive income	Purchases	Sales	Transfers out of Level 3	2016
<b>Financial assets</b>	<b>2015</b>						
Corporate	35,003	586	-	159,552	(35,343)	-	159,798
Commercial mortgage-backed	10,831	311	351	1,895	(11,191)	-	2,197
Collateralised debt obligations	37,845	154	1,046	-	-	(39,045)	-
Municipals	-	-	(37)	2,000	-	-	1,963
Equity securities	9,266	-	1,109	-	-	-	10,375
Other securities	13,314	1,241	-	2,593	(837)	-	16,311
Derivative assets	4,773	(29,844)	-	29,031	-	-	3,960
Sub-total	111,032	(27,552)	2,469	195,071	(47,371)	(39,045)	194,604
<b>Financial liabilities</b>							
Derivative liabilities	(4,307)	32,082	-	-	(31,783)	-	(4,008)
<b>Total</b>	<b>106,725</b>	<b>4,530</b>	<b>2,469</b>	<b>195,071</b>	<b>(79,154)</b>	<b>(39,045)</b>	<b>190,596</b>

The Company transferred certain collateral debt obligations from Level 3 into Level 2 in 2016, as the valuation is now determined utilising observable inputs for these securities.

Net gains (losses) on investments and on derivative assets and liabilities are included in net investment income and net derivative income, respectively, in the consolidated statement of comprehensive income.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements (continued)

Investments included in Level 3

As at 31 December 2017, investments included in Level 3 amounted to USD 213.1 million (2016 – USD 190.6 million).

If models are used to measure financial assets and liabilities included in Level 3 under which the adoption of alternative inputs lead to a material change in fair value, IFRS 13 requires disclosure of the effects of these alternative assumptions.

Equity securities and other securities classified as Level 3 are mainly priced based on the (adjusted) net asset value method. The key unobservable input is net asset value, which is provided by the respective fund manager. Since the Company has limited insight into the specific inputs used by the fund managers in estimating fair value, the effects of using alternative inputs within the meaning of IFRS 13 cannot be reasonably established.

Mortgage loans and private placements are valued at amortised cost, which reasonably approximate fair value for these securities. The key unobservable input for fair value measurement would be a risk adjusted interest rate benchmark (market interest rate for the same tenor and the respective credit risk). The application of alternative inputs and assumptions has no material effect on the consolidated financial statements.

Commercial mortgage-backed securities and collateralised debt obligations classified as Level 3 are mainly priced based on the income approach by brokers and traders. The primary unobservable input used in the discounted cash flow method is a risk-adjusted interest rate benchmark. A significant yield increase of this benchmark in isolation could result in a decreased fair value, while a significant yield decrease could result in an increased fair value.

However, a simplified 10% stress of this main non-market observable input has no material impact to the fair value as at 31 December 2017 and 2016.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 8. Fair value measurements (continued)

Derivative assets and liabilities included in Level 3

As at 31 December 2017, derivative assets comprise unearned derivative expense of USD 69.7 million (2016 – USD 4.0 million).

As at 31 December 2017, derivative liabilities comprise unearned derivative income of USD 37.7 million (2016 – USD 4.0 million).

The following methods and assumptions are used by the Company in estimating fair value disclosures for other financial instruments:

#### **Cash and cash equivalents, short term investments and liability for collateral held on behalf of counterparties**

The carrying amounts reported in the consolidated balance sheet for these instruments approximate their fair values.

#### **Other assets and liabilities**

The fair value of funds withheld, accrued interest receivable, premiums receivable, derivative balances receivable, deposit assets, other assets, reinsurance balances payable, derivative balances payable, deposit liabilities, payable for investments purchased, accounts payable and accrued expenses and note payable approximates their carrying value due to their short term nature in general. The estimates of fair values are subjective in nature and are not necessarily indicative of the amounts that the Company would actually realise in a current market exchange. However, any differences would not be expected to be material. Certain instruments such as prepaid reinsurance premiums, outstanding losses recoverable from reinsurers, deferred acquisition expenses, unearned profit commission, property and equipment, intangible assets, other assets, outstanding losses and loss expenses, unearned premiums, deferred commission income and deferred fee income are excluded from fair value disclosure.

Thus, the total fair value amounts cannot be aggregated to determine the underlying economic value of the Company.

### 9. Net derivative expense or income

Net derivative expense consists of catastrophe swap derivative premiums expensed of USD 4.3 million (2016 – USD 2.2 million net derivative income).

As discussed in Note 4 under 'Credit Risk', the Company's maximum exposure to unrated counterparties is fully collateralised.

### 10. Collateral held on behalf of counterparties

Collateral received in the form of cash, which is not legally segregated from the Company, is recognised as an asset in the consolidated balance sheet with a corresponding liability for the repayment. In addition, amounts arising from the application of the deposit method of accounting to ceded retrocession or reinsurance contracts are included.



## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 11. Reinsurance and other assets

	2017	2016
Premiums receivable	970,853	856,770
Derivative balances receivable	35,661	-
Deposit assets	348,444	393,823
Accrued interest receivable	17,100	14,151
Outstanding losses recoverable from reinsurers	230,177	64,975
Other assets	19,283	15,032
<b>Total</b>	<b>1,621,518</b>	<b>1,344,751</b>

The current and non-current portions are expected to be as follows:

	2017	2016
Current portion	1,017,636	852,256
Non-current portion	603,882	492,495
<b>Total</b>	<b>1,621,518</b>	<b>1,344,751</b>

The Company assesses its reinsurance receivables for impairment on a quarterly basis by reviewing counterparty payment history. The carrying amounts disclosed above reasonably approximate the fair value at the reporting date.

### 12. Deposit contracts

Effective 1 July 2014, Tokio Millennium Re AG – Bermuda branch ('TMRB') entered into a loss portfolio transfer agreement ('first LPTA'). TMRB accepted, on a fully collateralised basis, the liability of a loss portfolio with an aggregate limit capped at EUR 366.0 million. Through a quota share retrocession agreement, TMRB retroceded 100% of its liability to another party. TMRB is compensated through a ceding commission as a percentage of the initial aggregate limit, which is earned from the first LPTA effective date to expected contract termination date. The collateral for the first LPTA consists of short term investments and available for sale fixed interest securities which are included in the Company's consolidated balance sheet. These are referred to in Note 7 – Investments.

Effective 30 June 2016, TMRB entered into three loss portfolio transfer agreements ('second LPTA'). TMRB accepted, on a fully collateralised basis, the liability of a loss portfolio with an aggregate limit capped at GBP 202.8 million. Through three retrocession agreements, TMRB retroceded 100% of its liability to another party. TMRB is compensated through a ceding commission as a percentage of the initial aggregate limit, which is earned from the second LPTA effective date to expected contract termination date. The collateral assets for the second LPTA are held in trusts by the counterparty for the benefit of the Company. For consolidation purposes, it was determined that the Company does not have sufficient control over the assets held in the trust accounts; therefore, these assets are not included in the consolidated balance sheet. The trust accounts had a total cash balance of USD 117.2 million as of 31 December 2017 (2016 – USD 248.0 million).

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 13. Deferred acquisition expenses and deferred commission income

The reconciliation of opening and closing deferred acquisition expenses incurred and ceded is as follows:

2017	Gross	Ceded	Other	Net
As at 1 January	359,834	(6,065)	(4,229)	349,540
Expense deferred	342,967	(38,440)	(98)	304,429
Amortisation	(379,501)	31,209	-	(348,292)
Other	10,256	109	-	10,365
As at 31 December	333,556	(13,187)	(4,327)	316,042
<b>2016</b>				
As at 1 January	327,938	(3,511)	(1,199)	323,228
Expense deferred	385,099	(31,892)	(4,084)	349,123
Amortisation	(340,995)	25,604	1,054	(314,337)
Other	(12,208)	3,734	-	(8,474)
As at 31 December	359,834	(6,065)	(4,229)	349,540

The current and non-current portions are expected to be as follows:

	2017	2016
Current portion	232,055	236,970
Non-current portion	83,987	112,570
<b>Total</b>	<b>316,042</b>	<b>349,540</b>

### 14. Taxation

The Swiss operation is subject to Swiss cantonal and federal taxes of 21.15% (2016: 21.15%). The Company has branches that operate in Australia, the United States and the United Kingdom, which are subject to income taxes at statutory rates of 30% (2016: 30%), 35% (2016: 35%) and 19% (2016: 20%), respectively.

The Company has subsidiaries and a branch in Bermuda that are not subject to income or capital gains tax under the current Bermuda law. In the event there is a change in current law such that income or capital gains are imposed, the Company would be exempt from such tax until March 2035 pursuant to the Bermuda Exempted Undertakings Tax Protection Act of 1966.

Reductions in the United Kingdom's corporate tax rate from 20% to 19% (effective from 1 April 2017) and 17% (effective from 1 April 2020) were substantively enacted in 2015 and 2016, respectively.

The United States federal tax reform was enacted in December 2017, and as such, the federal corporate income tax rate was reduced from the existing rate of 35% to 21% with effect from 1 January 2018.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 14. Taxation (continued)

#### Income tax

The Swiss standard rate of tax is 21.15% (2016: 21.15%), whereas the tax benefit for the year ended 31 December 2017 as a percentage of loss before tax is 1.74% (2016: 2.24% tax charge as a percentage of profit before tax). The reasons for this difference are explained below:

	2017	2016
(Loss) profit before tax	(161,749)	123,442
<i>Tax calculated at the standard corporation tax rate applicable in</i>		
Switzerland: 21.15% (2016: 21.15%)	(34,210)	26,108
Non-taxable loss (income)	2,425	(24,743)
Tax rate differences on foreign branches	(15,101)	652
Deferred tax adjustment in respect of prior years	372	686
Tax rate change adjustment	17,770	108
Tax losses for which no deferred tax asset is recognised	26,112	-
Utilisation of tax losses previously unrecognised for deferred tax	-	(892)
Other	(184)	851
<b>Total tax (benefit) expense</b>	<b>(2,816)</b>	<b>2,770</b>

The following table presents the major components of the income tax expense:

	2017	2016
Corporation tax charge for the year	2,162	2,513
Adjustments in respect of prior year corporation tax	(352)	(70)
Deferred tax credit for the year	(5,647)	(637)
Adjustments in respect of prior year deferred tax	207	856
Tax rate change adjustment	814	108
<b>Total tax (benefit) expense</b>	<b>(2,816)</b>	<b>2,770</b>

#### Deferred tax

	2017	2016
Deferred tax asset	7,017	2,183
Deferred tax liability	-	(129)
<b>Total net deferred tax asset</b>	<b>7,017</b>	<b>2,054</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 14. Taxation (continued)

#### Deferred tax (continued)

The Company's deferred tax asset results from an operating loss carry forward and IFRS versus tax basis accounting differences. The deferred tax asset of USD 7.0 million as at 31 December 2017 (2016 – USD 2.2 million) has been recognised as the Company expects the business to produce taxable profits in future periods against which the tax losses can be offset. A deferred tax asset of USD 0.7 million was written down to nil in 2016 for tax benefits that management determined will not be realised against future taxable profits.

TMR's U.S. branch did not recognise any deferred tax asset from its net operating loss carry forward as at 31 December 2017 due to the uncertainty regarding its recoverability.

In accordance with IAS 12, *Income Taxes*, to avoid the need for detailed scheduling of the timing of the reversal of each temporary difference, TMR has offset its deferred tax asset against its deferred tax liability, as they relate to the same taxable entities and relate to income taxes levied by the same taxation authorities.

Net deferred tax assets analysed by balance sheet headings and after appropriate netting are as follows:

<i>As at 31 December</i>	2016	Income statement (charge) credit	Transfer from equity	Foreign currency translation	2017
Outstanding losses and loss expense	4,981	(5,004)	-	23	-
Unearned premiums	37,773	(37,773)	-	-	-
Deferred acquisition expenses	884	71	-	77	1,032
Accounts payable and accrued expenses	1,796	(1,428)	-	12	380
Operating losses	29,044	(19,894)	-	891	10,041
Retirement benefit obligation	75	64	-	15	154
Other	1,547	(828)	-	(91)	628
Total deferred tax assets	76,100	(64,792)	-	927	12,235
Investment assets	(262)	232	32	(16)	(14)
Premiums receivable	(367)	175	-	(41)	(233)
Outstanding losses and loss expense	(4,948)	533	-	(585)	(5,000)
Deferred acquisition expenses	(68,359)	68,359	-	-	-
Other	(110)	119	-	20	29
Total deferred tax liabilities	(74,046)	69,418	32	(622)	(5,218)
<b>Net deferred tax assets</b>	<b>2,054</b>	<b>4,626</b>	<b>32</b>	<b>305</b>	<b>7,017</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 15. Property and equipment

Property and equipment as at 31 December 2017 comprise:

Cost	Computer equipment	Fixtures and fittings	Leasehold improvements	Motor vehicles	Office equipment	Total
As at 1 January 2017	10,664	3,589	13,133	127	20	27,533
Additions	836	193	588	33	2	1,652
Disposals	(2,478)	-	-	(76)	(17)	(2,571)
As at 31 December 2017	9,022	3,782	13,721	84	5	26,614

#### Accumulated depreciation

As at 1 January 2017	9,586	2,598	5,646	112	18	17,960
Charge for the year	1,011	367	1,447	10	1	2,836
Disposals	(2,475)	-	-	(75)	(17)	(2,567)
As at 31 December 2017	8,122	2,965	7,093	47	2	18,229

#### Net book value

As at 31 December 2017	900	817	6,628	37	3	8,385
As at 1 January 2017	1,078	991	7,487	15	2	9,573

Property and equipment as at 31 December 2016 comprise:

Cost	Computer equipment	Fixtures and fittings	Leasehold improvements	Motor vehicles	Office equipment	Total
As at 1 January 2016	10,246	3,572	13,208	127	20	27,173
Additions	418	17	86	-	-	521
Disposals	-	-	(161)	-	-	(161)
As at 31 December 2016	10,664	3,589	13,133	127	20	27,533

#### Accumulated depreciation

As at 1 January 2016	8,354	2,263	4,596	103	17	15,333
Charge for the year	1,232	335	1,130	9	1	2,707
Disposals	-	-	(80)	-	-	(80)
As at 31 December 2016	9,586	2,598	5,646	112	18	17,960

#### Net book value

As at 31 December 2016	1,078	991	7,487	15	2	9,573
As at 1 January 2016	1,892	1,309	8,612	24	3	11,840

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 16. Intangible assets

Intangible assets as at 31 December 2017 comprise:

Cost	Computer software
As at 1 January 2017	39,669
Additions	5,003
Disposals	(21)
As at 31 December 2017	44,651
Accumulated amortisation	
As at 1 January 2017	30,507
Charge for the year	5,379
Disposals	(2)
As at 31 December 2017	35,884
Net book value	
As at 31 December 2017	8,767
As at 1 January 2017	9,162

Intangible assets as at 31 December 2016 comprise:

Cost	Computer software
As at 1 January 2016	33,958
Additions	5,711
Disposals	-
As at 31 December 2016	39,669
Accumulated amortisation	
As at 1 January 2016	25,529
Charge for the year	4,978
Disposals	-
As at 31 December 2016	30,507
Net book value	
As at 31 December 2016	9,162
As at 1 January 2016	8,429

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 17. Insurance liabilities

#### (a) Outstanding losses and loss expenses and losses recoverable from reinsurers

The summary of changes in outstanding losses and loss expenses is as follows:

	Outstanding Losses and loss expenses	Outstanding losses recoverable from reinsurers	Net
<b>As at 31 December 2015</b>	<b>857,700</b>	<b>(52,730)</b>	<b>804,970</b>
Incurred losses related to:			
Current year	741,684	(29,640)	712,044
Prior years	(44,647)	(857)	(45,504)
Adverse development cover	-	9,592	9,592
Loss portfolio transfer	7,583	-	7,583
Net effect of foreign currency exchange rate changes	(3,539)	202	(3,337)
Total incurred	701,081	(20,703)	680,378
Paid losses related to:			
Current year	202,362	(8,288)	194,074
Prior years	241,760	(170)	241,590
Total paid	444,122	(8,458)	435,664
<b>As at 31 December 2016</b>	<b>1,114,659</b>	<b>(64,975)</b>	<b>1,049,684</b>
Incurred losses related to:			
Current year	1,419,319	(371,250)	1,048,069
Prior years	65,063	(8,724)	56,339
Adverse development cover	-	(2,274)	(2,274)
Loss portfolio transfer	(1,698)	-	(1,698)
Net effect of foreign currency exchange rate changes	36,559	(949)	35,610
Total incurred	1,519,243	(383,197)	1,136,046
Paid losses related to:			
Current year	479,143	(215,910)	263,233
Prior years	368,036	(2,085)	365,951
Total paid	847,179	(217,995)	629,184
<b>As at 31 December 2017</b>	<b>1,786,723</b>	<b>(230,177)</b>	<b>1,556,546</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 17. Insurance liabilities (continued)

#### (a) Outstanding losses and loss expenses and losses recoverable from reinsurers (continued)

The current and non-current portions of the outstanding losses and loss expenses are expected to be as follows:

	Outstanding losses and loss expenses	Outstanding losses recoverable from reinsurers	Net
2017			
Current	531,318	(100,200)	431,118
Non-current	1,255,405	(129,977)	1,125,428
<b>Total</b>	<b>1,786,723</b>	<b>(230,177)</b>	<b>1,556,546</b>
2016			
Current	300,018	(19,831)	280,187
Non-current	814,641	(45,144)	769,497
<b>Total</b>	<b>1,114,659</b>	<b>(64,975)</b>	<b>1,049,684</b>

During 2017, the Company incurred net losses of USD 1,104.4 million (2016 – USD 666.5 million), which mostly relate to attritional losses on proportional and non-catastrophe excess of loss property and casualty contracts. In addition, USD 76.6 million was related to net losses from hurricanes Harvey, Irma and Maria, which occurred in the third quarter of 2017, and USD 34.5 million was related to California wildfire losses in the last quarter of 2017. There were also losses of USD 43.1 million recorded on aggregate treaties.

The Company experienced net adverse development of USD 56.3 million (2016 – USD 45.5 million favourable) attributable to prior years, which mostly relate to development on attritional losses on proportional and non-catastrophe excess of loss property and casualty contracts.

During 2016, the Company incurred net losses of USD 666.5 million, which also mostly relate to attritional losses on proportional and non-catastrophe excess of loss property and casualty contracts. Furthermore, USD 19.3 million related to losses from Hurricane Matthew in October 2016 and USD 6.3 million on a hailstorm event in the Netherlands in June 2016.



## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 17. Insurance liabilities (continued)

#### (a) Outstanding losses and loss expenses and losses recoverable from reinsurers (continued)

For certain catastrophic events, there is considerable uncertainty underlying the assumptions and associated estimated reserves for losses and loss adjustment expenses. Reserves are reviewed regularly and, as experience develops and new information becomes known, the reserves are adjusted as necessary. Such adjustments could require a material change in the amount estimated. The uncertainty surrounding reserves for property catastrophe exposures arises from problems such as policy coverage issues, multiple events affecting one geographic area and the impact on claims adjusting by ceding companies. These issues can cause significant delays to the timing of notification of changes to loss estimates reported by ceding companies. Estimates for events are based on a review of contracts affected by the events, information received from both clients and brokers, industry insured loss estimates, output from both industry and proprietary models and management judgment. It has also been assumed that underlying policy terms and conditions are upheld during the loss adjustment process. There remains the potential for legal and regulatory issues arising regarding the scope of coverage. Consequently, the ultimate net impact of losses from these events on the Company's net income might differ substantially from the estimates. Such adjustments, if necessary, are reflected in results of operations in the period in which they become known.

#### (b) Unearned premiums

The current and non-current portions of the unearned premiums are expected to be as follows:

	2017	2016
Current portion	927,332	852,499
Non-current portion	333,868	384,552
<b>Total</b>	<b>1,261,200</b>	<b>1,237,051</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 18. Reinsurance and other liabilities

	2017	2016
Outstanding losses and loss expenses	1,786,723	1,114,659
Liability for collateral held on behalf of counterparties	159,721	185,536
Reinsurance balances payable	140,212	92,379
Derivative balances payable	73,028	783
Deposit liabilities	348,444	393,823
Payable for investments purchased	5,235	7,947
Fair value of derivative liabilities	37,687	4,008
Accounts payable and accrued expenses	32,724	35,966
Note payable	-	25,000
<b>Total</b>	<b>2,583,774</b>	<b>1,860,101</b>

The current and non-current portions are expected to be as follows:

	2017	2016
Current portion	805,009	574,043
Non-current portion	1,778,765	1,286,058
<b>Total</b>	<b>2,583,774</b>	<b>1,860,101</b>

### 19. Note payable

The company issued a private catastrophe bond, 'Omamori', using a segregated account of Shima Re, which provides TMR with a source of fully collateralised second event retrocessional reinsurance protection against United States earthquakes and named storms. The Omamori catastrophe bond is a three-year deal which inceptioned on 17 January 2014. The transaction was facilitated by TSM as insurance manager of Shima Re. In accordance with IFRS 10, *Consolidated Financial Statements*, as TMR has control over the Omamori segregated account, it has been consolidated with the Company's financial statements. As a result of this transaction, a note payable of USD 25.0 million as of 31 December 2016 was recorded in the consolidated balance sheet. It paid a 5% annual coupon rate to noteholders, and as such, the related interest expense and payable were recorded in the consolidated financial statements. This matured and was settled in 2017.

### 20. Retirement benefit obligation

#### (a) Defined benefit scheme

The Company's Swiss operation offers a defined benefit pension plan to its employees. The plan offers mandatory benefits as prescribed by the Law on Occupational Benefits in Switzerland, as well as voluntary benefits. These mandatory benefits comprise guarantees regarding the level of interest paid annually on accrued pension savings, as well how the rates on these accrued savings are converted into a pension payment at the time of retirement. The Company and the members contribute a defined percentage of salary to the pension arrangement. Credit accumulation is granted on these contributions. At retirement, the accumulated contributions are converted into a pension. The liability shown relates solely to active members and disability pensioners since the responsibility for meeting old-age pensions in payment is irrevocably transferred to an insurance company. Independent actuarial reviews of the ongoing benefit obligations were undertaken as at 31 December 2017.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 20. Retirement benefit obligation (continued)

#### (a) Defined benefit scheme (continued)

The principal assumptions used for the purposes of the actuarial valuations were as follows:

	2017 % pa	2016 % pa
Discount rate	0.70	0.70
Expected rate of salary increase	1.00	2.60
Interest credit rate	1.00	1.00
Demographic assumptions	BVG 2015 GT	BVG 2015 GT

The table below shows the impact on the defined benefit obligation that a change in certain key assumptions would have:

Assumption change	Defined benefit obligation
(Increase)/decrease in discount rate by 0.25%	(17,958)/19,589
(Decrease)/increase in salary by 0.25%	(18,611)/18,912

Amounts recognised in the consolidated statement of comprehensive income in respect of the defined benefit scheme are as follows:

	2017	2016
Current service cost	1,165	1,355
Interest cost	131	149
Interest on plan assets	(98)	(125)
Past service cost	-	(584)
Administration costs	31	32
<b>Total</b>	<b>1,229</b>	<b>827</b>

The amount included in the consolidated balance sheet arising from the Company's obligations with respect to its defined benefit scheme is as follows:

	2017	2016
Present value of defined benefit obligations	18,736	17,460
Fair value of plan assets	(14,389)	(12,963)
<b>Retirement benefit obligation</b>	<b>4,347</b>	<b>4,497</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 20. Retirement benefit obligation (continued)

#### (a) Defined benefit scheme (continued)

Movements in the present value of the defined benefit obligation during the year are as follows:

	2017	2016
As at 1 January	17,460	16,759
Current service cost	1,165	1,355
Interest cost	131	149
Contributions from plan participants	384	386
Actuarial (loss) gain	(919)	1,341
Net transfers	(310)	(1,385)
Past service cost	-	(587)
Foreign currency translation adjustment	825	(558)
<b>As at 31 December</b>	<b>18,736</b>	<b>17,460</b>

There were no actuarial gains or losses from changes in demographic assumptions. The actuarial gain in 2017 and actuarial loss in 2016 were primarily driven by the change in financial assumptions.

The average duration of the defined benefit obligations was 17.4 years in 2017 (2016 – 19.1 years).

Movements in the fair value of plan assets during the year are as follows:

	2017	2016
Opening fair value of plan assets	12,963	13,475
Interest income on plan assets	98	125
Actuarial gain	(211)	(89)
Contributions from plan participants	384	386
Employer contributions	878	893
Net transfers	(310)	(1,385)
Administration costs	(31)	(32)
Foreign currency translation adjustment	618	(410)
<b>Closing fair value of plan assets</b>	<b>14,389</b>	<b>12,963</b>

The analysis of the plan assets and the expected rate of return by asset class are not provided for the defined benefit scheme as the investment decisions are at the discretion of third parties to whom the Company has ceded investment risk under the insurance policies taken out to meet its obligations.

The Company expects to make a contribution of USD 0.9 million (2016 – USD 0.8 million) to the defined benefit scheme during the next financial year.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 20. Retirement benefit obligation (continued)

#### (b) Defined contribution plans

The Company operates defined contribution plans in its branches in Bermuda, Australia and the United Kingdom.

The total contributions for the year ended 31 December 2017 amounted to USD 2.0 million (2016 – USD 1.9 million).

The Company also maintains a defined contribution plan for employees of its U.S. branch in accordance with Section 401(k) of the Internal Revenue Code. The total contribution for the year ended 31 December 2017 amounted to USD 0.2 million (2016 – USD 0.2 million).

### 21. Share capital

	2017	2016
Authorised, issued and fully paid, shares of CHF 0.91 (USD 1) par value each	250,000	250,000
Contributed surplus	400,000	400,000

Fully paid issued shares, which have a par value of CHF 0.91 (USD 1) each, carry one vote per share and carry a right to dividends.

Contributed surplus represents cash contributed by the shareholder in excess of the issued share capital.

### 22. Ceded reinsurance

The Company uses retrocessional agreements to reduce its exposure to risk of loss on reinsurance assumed.

These agreements generally provide for recovery of a portion of losses and loss expenses from retrocessionaires.

The Company remains liable to its cedants to the extent that the retrocessionaires do not meet their obligations under these agreements. Failure of reinsurers to honour their obligations could result in losses to the Company.

The Company defines rated reinsurers as companies with a minimum S&P rating of A+ or A.M. Best rating of A and net assets of more than USD 500.0 million. The Company evaluates the financial condition of its rated reinsurers and monitors concentration of credit risk, on an ongoing basis, arising from similar geographic regions, activities or economic characteristics of the reinsurers in order to minimise its exposure to significant losses from rated reinsurer insolvencies. Provisions are made for amounts considered potentially uncollectible.

The Company generally requires non-rated reinsurers to fully collateralise their reinsurance obligations. As further discussed in Note 4 under 'Credit Risk', the Company's maximum exposure to unrated reinsurers is fully collateralised.

In addition to purchasing retrocessional cover, the Company also uses derivative instruments to cover certain assumed reinsurance risks. Refer to Note 2 – Basis of preparation and Note 8 – Fair value measurements.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 23. Acquisition expenses

	2017	2016
Acquisition expenses	304,527	353,206
Change in deferred acquisition expenses	43,765	(38,869)
<b>Total</b>	<b>348,292</b>	<b>314,337</b>

### 24. General and administrative expenses

General and administrative expenses consist of the following:

	2017	2016
Employee benefit expenses	58,667	58,595
Depreciation of property and equipment	2,836	2,707
Amortisation of intangible assets	5,379	4,978
Operating lease charges	3,416	3,462
Other expenses	39,822	38,874
<b>Total</b>	<b>110,120</b>	<b>108,616</b>

### 25. Employee benefit expenses

	2017	2016
Wages and salaries	36,889	35,149
Long-term incentive compensation plan	2,742	2,355
Retirement benefit obligation costs – defined benefit scheme	1,229	827
Retirement benefit obligation costs – defined contribution scheme	2,247	2,121
Bonus and other benefits	15,560	18,143
<b>Total</b>	<b>58,667</b>	<b>58,595</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 26. Commitments

- (a) The Company leases office space under operating leases which expire at various dates. The Company renews and enters into new leases in the ordinary course of business as required. Total rent expense with respect to these operating leases for the year ended 31 December 2017 was USD 3.4 million (2016 – USD 3.5 million).

Future minimum lease payments under the leases are expected to be as follows:

Year	
2018	2,939
2019	2,957
2020	2,278
2021	1,474
2022	68
Later	-
<b>Total</b>	<b>9,716</b>

- (b) The above lease agreements also include a maintenance commitment. Maintenance expense for the current year amounts to USD 0.6 million (2016 – USD 0.6 million), which has been included in general and administrative expenses.
- (c) Some lease agreements for office space provide an option to extend the lease beyond the expiration date.
- (d) Effective 6 August 2010, the Company entered into a Revolving Letter of Credit Facility Agreement ('Barclays Facility') with Barclays Bank PLC ('Barclays Bank'). The Barclays Facility provided commitments from Barclays Bank in an aggregate amount of USD 100.0 million and provided for the issuance and renewal of letters of credit that are used to support the Company's reinsurance obligations.

The Barclays Facility was amended effective 12 September 2014. Under the terms of the amended agreement, the USD 100.0 million commitment remained unchanged and the commitment termination date was extended to 12 September 2017. Under the terms of the amended agreement, letters of credit can now be issued in alternative currencies other than U.S. Dollars. However, another amendment was made effective 23 June 2016, which excludes the Australian Dollar from the alternative currencies.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 26. Commitments (continued)

#### (d) (continued)

Under the Barclays Facility, the Company was required to pledge cash or eligible securities with collateral value (as determined as therein provided) that equals or exceeds 100% of the aggregate amount of its outstanding letters of credit.

As at 31 December 2017, Barclays Bank had issued letters of credit of USD 0.7 million (2016 – USD 0.7 million) in favour of ceding companies under the Barclays Facility. The Company pledged as security USD 14.1 million (2016 – USD 16.7 million) of fixed interest securities and USD 3.1 million (2016 – nil) of cash to collateralise the letters of credit. The Barclays Facility expired on 12 September 2017 and it was not renewed.

Effective 14 May 2012, the Company entered into a Revolving Letter of Credit Facility Agreement ('Mizuho Facility') with Mizuho Corporate Bank Ltd. ('Mizuho Bank'). The Mizuho Facility provided commitments from Mizuho Bank in an aggregate amount of USD 300.0 million and provided for the issuance and renewal of letters of credit that are used to support the Company's reinsurance obligations. The Mizuho Facility was amended effective 21 January 2015 (the 'Amended Mizuho Facility Agreement'). Under the Amended Mizuho Facility Agreement, the Mizuho Facility was increased to USD 600.0 million and letters of credit can be issued in Australian Dollars. The termination date was amended effective 16 January 2016 and extended to 16 January 2017. A further amendment effective 16 January 2017 extended the commitment termination date to 16 January 2019. The Mizuho Facility contains representations, warranties and covenants customary for facilities of this type.

As at 31 December 2017, Mizuho Bank has issued letters of credit of USD 513.0 million (2016 – USD 555.3 million) in favour of ceding companies.

Effective 27 October 2017, the Company entered into a Committed Revolving Standby Letter of Credit Agreement ('Mitsubishi Facility') with Bank of Tokyo-Mitsubishi UFJ – Düsseldorf Branch ('Mitsubishi Bank'). The Mitsubishi Facility provided commitments from Mitsubishi Bank in an aggregate amount of USD 300.0 million and provided for the issuance and renewal of letters of credit which are used to support the Company's reinsurance obligations.

As at 31 December 2017, Mitsubishi Bank has issued letters of credit of USD 250.3 million in favour of ceding companies.



## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 27. Related party disclosures

#### Transactions with affiliates

The following transactions were conducted with related parties during the year and are based on arm's-length arrangements:

- (a) The Company assumed several reinsurance agreements from related parties under common control. The reinsurance premiums assumed under these agreements totalled USD 38.1 million (2016 – USD 40.1 million) with associated acquisition expenses of USD 3.0 million (2016 – USD 3.1 million) and net loss and loss expenses incurred of USD 20.3 million (2016 – USD 7.9 million). As at 31 December 2017, the consolidated balance sheet includes USD 21.5 million (2016 – USD 17.8 million), USD 20.9 million (2016 – USD 18.0 million) and USD 2.2 million (2016 – USD 2.1 million) of premiums receivable, unearned premium and deferred acquisition expenses, respectively.

In addition, the Company assumed a catastrophe swap derivative contract from a related party under common control during the year. The derivative premiums assumed under the agreement totalled USD 6.4 million (2016 – USD 1.5 million).

- (b) Effective 1 July 2015, Tokio Millennium Re AG – U.K. branch ('TMRUK') entered into a loss portfolio transfer agreement ('LPTA') with Tokio Marine Global Re Asia Ltd. ('TMG Re Asia') for a consideration of USD 43.8 million. Reserves (outstanding losses and loss expenses and unearned premiums) were transferred and recorded in TMRUK's balance sheet. The LPTA has been accounted for under insurance accounting.

As at 31 December 2017, the consolidated balance sheet includes USD 29.7 million, USD 21.7 million, USD 1.9 million and USD 1.2 million of cash, outstanding losses and loss expenses, deferred fee income and accounts payable, respectively, in relation to this LPTA. The amortisation of deferred fee income is based on the expected claims payout pattern and settlement period.

As at 31 December 2016, the consolidated balance sheet includes USD 32.9 million, USD 0.3 million, USD 27.8 million, USD 1.6 million and USD 1.5 million of cash, premiums receivable, outstanding losses and loss expenses, deferred fee income and accounts payable, respectively, in relation to this LPTA.

- (c) Effective 1 July 2015, the Company established an investment management agreement with a related party under common control. The Company incurred investment management fees of USD 3.9 million for the year ended 31 December 2017 (2016 – USD 3.2 million). The consolidated balance sheet includes USD 1.0 million of accounts payable and accrued expenses as at 31 December 2017 (2016 – USD 0.8 million).

#### Key management personnel compensation

The aggregate remuneration of directors and key management was as follows:

	2017	2016
Wages and salaries	2,438	2,612
Long-term incentive compensation plan	441	925
Retirement benefit obligation costs	291	302
Bonus and other benefits	1,144	1,653
<b>Total</b>	<b>4,314</b>	<b>5,492</b>

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 28. Statutory requirements

TMR is regulated by the Swiss Financial Market Supervisory Authority ('FINMA'), the Bermuda Monetary Authority ('BMA'), the Australian Prudential Regulation Authority ('APRA'), the New York State Department of Financial Services ('NYDFS'), the Prudential Regulation Authority ('PRA') and the Financial Conduct Authority ('FCA').

The minimum required statutory capital and surplus is the amount of statutory capital and surplus necessary to satisfy regulatory requirements based on the Company's current operations.

#### (a) Switzerland

The Company (since redomestication) and the Swiss operation are regulated by FINMA pursuant to the Insurance Supervision Act. The Company's accounts are prepared in accordance with the Swiss Code of Obligations, the Insurance Supervision Act and the Insurance Supervision Ordinance.

TMR is obligated to maintain a minimum level of capital based on the Swiss Code of Obligations and Insurance Supervision Act. In addition, the Company is required to perform a minimum solvency margin calculation based on the Swiss Solvency Test (SST) regulations as stipulated by the Insurance Supervision Act and the Insurance Supervision Ordinance. The SST is based on an economic view and required capital is derived from a combination of internal and standard models. The amount of dividends that TMR is permitted to distribute is restricted to freely distributable reserves which consist of retained earnings and the current year profit. The solvency and capital requirements must still be met following any distribution.

The Company calculated an SST ratio of 250% for SST 2017. The minimum ratio for the SST is set at 100%. TMR is expected to exceed the minimum ratios for the year ended 31 December 2017.

#### (b) Bermuda

Tokio Millennium Re AG – Bermuda branch ('TMRB') is regulated by the BMA and is registered under The Insurance Act 1978 (Bermuda), Amendments thereto and Related Regulations (the 'Insurance Act') as a Class 3B insurer. The Insurance Act requires companies to prepare and file a statutory financial return on an annual basis. The Insurance Act also requires companies to maintain minimum levels of statutory capital and surplus. TMRB applied for and has been granted an exemption to these requirements for the years ended 31 December 2017 and 2016.

The Insurance Act and related Rules require the filing of a capital and solvency return. TMRB applied for and has been granted a modification to this requirement for the years ended 31 December 2017 and 2016.

TMRB is not required to hold localised assets.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

(Expressed in thousands of United States Dollars)

### 28. Statutory requirements (continued)

#### (c) Australia

Tokio Millennium Re AG – Australia branch ('TMRA') is regulated by APRA and is authorised to carry on insurance business under subsection 12(2) of the Insurance Act 1973. TMRA's regulatory reporting is prepared in accordance with the Australian Accounting Standards and APRA Prudential Standards. TMRA have complied with the APRA requirements in both 2017 and 2016.

APRA Prudential Standards require the maintenance of net assets in Australia in excess of a calculated Prescribed Capital Amount (PCA). The net assets in Australia as at 31 December 2017 were USD 99.0 million (2016 – USD 82.8 million) and resulted in a surplus of USD 60.7 million (2016 – USD 42.9 million) above the PCA of USD 38.3 million (2016 – USD 39.9 million) estimated under the new Prudential Standards.

TMRA has an Internal Capital Adequacy Assessment Process ('ICAAP') to ensure compliance with regulatory capital requirements. In accordance with the ICAAP, TMRA monitors its capital adequacy in order to ensure compliance with the relevant capital targets.

#### (d) United States

Tokio Millennium Re AG – U.S. branch ('TMRUS') is regulated by the NYDFS and is licensed to carry on insurance business under section 1113(a) of the New York Insurance Law. TMRUS is also licensed and/or accredited as a reinsurer in all 50 states. TMRUS is required to file a set of financial statements prepared in accordance with statutory accounting practises prescribed or permitted by the U.S. insurance regulators. Statutory net income and statutory surplus, as reported to the insurance regulatory authorities, differ in certain respect from the amounts prepared in accordance with IFRS and the main differences relate to the treatment of deferred acquisition expenses, deferred income, unrealised appreciation or decline in value of investments and non-admitted assets and deferred income taxes.

Minimum required statutory capital and surplus is based on the greater of the Risk Based Capital (RBC) level that would trigger regulatory action or minimum requirements per state insurance regulation. At both 31 December 2017 and 2016, TMRUS exceeded the minimum required statutory capital and surplus requirement and also exceeded the RBC minimum required level. TMRUS is required to maintain a minimum combined statutory surplus of USD 130.1 million (2016 – USD 109.7 million). As of 31 December 2017, the statutory surplus was USD 231.2 million (2016 – USD 194.7 million).

TMRUS as a U.S. branch does not pay ordinary dividends and would need approval from the NYDFS for any return of capital to TMR. As of 31 December 2017, TMRUS did not return any capital to TMR. Any return of capital in subsequent periods would need to be approved by the NYDFS based on the financial condition of TMRUS.

## Notes to Consolidated Financial Statements (continued)

31 December 2017 and 2016

*(Expressed in thousands of United States Dollars)*

### 28. Statutory requirements (continued)

#### (e) United Kingdom

Tokio Millennium Re AG – U.K. branch ('TMRUK') is authorised by the PRA, and regulated by both the PRA and FCA. As at 31 December 2017 and 2016, TMRUK was subject to the Solvency II regime. TMRUK applied for and has been granted a modification of the rules for the years ended 31 December 2017 and 2016.

TMRUK is not required to hold localised assets.

### 29. Subsequent events

The Company has completed its subsequent events evaluation for the period subsequent to the consolidated balance sheet date of 31 December 2017 through 27 February 2018, the date the consolidated financial statements were authorised for issue. There were no subsequent events that would warrant an adjustment to the consolidated financial statements.

## Historical Financial Data

### Consolidated Balance Sheet

31 December 2017, 2016, 2015, 2014 and 2013  
(Expressed in thousands of United States Dollars)

Assets	2017	2016	2015	2014	2013
Cash and cash equivalents	229,380	313,775	279,037	167,760	127,225
Funds withheld	107,563	71,768	78,996	52,801	49,509
Investments	2,583,273	2,256,285	1,993,777	1,968,316	1,635,738
Deposit assets	348,444	393,823	296,177	337,677	-
Premiums receivable	970,853	856,770	716,399	474,583	355,434
Outstanding losses recoverable from reinsurers	230,177	64,975	52,730	51,473	30,669
Deferred acquisition expenses	333,556	359,834	327,938	201,528	135,916
Other assets	256,597	116,091	105,702	96,318	79,317
<b>Total assets</b>	<b>5,059,843</b>	<b>4,433,321</b>	<b>3,850,756</b>	<b>3,350,456</b>	<b>2,413,808</b>

#### Liabilities

Outstanding losses and loss expenses	1,786,723	1,114,659	857,700	699,305	583,691
Liability for collateral held on behalf of counterparties	159,721	185,536	233,617	315,250	22,878
Reinsurance balances payable	140,212	93,162	89,107	53,023	18,222
Deposit liabilities	348,444	393,823	296,177	337,677	-
Unearned premiums	1,261,200	1,237,051	1,083,347	688,827	483,295
Other liabilities	172,963	88,333	84,914	57,059	32,663
<b>Total liabilities</b>	<b>3,869,263</b>	<b>3,112,564</b>	<b>2,644,862</b>	<b>2,151,141</b>	<b>1,140,749</b>

#### Shareholder's equity

Share capital	250,000	250,000	250,000	250,000	250,000
Contributed surplus	400,000	400,000	400,000	400,000	400,000
Retained earnings	556,194	715,127	600,349	563,807	632,537
Accumulated other comprehensive income	(15,614)	(44,370)	(44,455)	(14,492)	(9,478)
Total shareholder's equity	1,190,580	1,320,757	1,205,894	1,199,315	1,273,059
<b>Total liabilities and shareholder's equity</b>	<b>5,059,843</b>	<b>4,433,321</b>	<b>3,850,756</b>	<b>3,350,456</b>	<b>2,413,808</b>

## Historical Financial Data

### Consolidated Statement of Comprehensive Income

31 December 2017, 2016, 2015, 2014 and 2013  
 (Expressed in thousands of United States Dollars)

Revenue	2017	2016	2015	2014	2013
Net premiums written	1,301,583	1,317,916	1,339,318	1,009,259	779,005
Net premiums earned	1,347,333	1,139,119	931,556	799,803	664,449
Other operating income	7,324	3,835	5,075	5,054	4,303
<b>Total operating income</b>	<b>1,354,657</b>	<b>1,142,954</b>	<b>936,631</b>	<b>804,857</b>	<b>668,752</b>
Net investment income	68,812	60,872	35,310	36,420	34,272
<b>Total revenue</b>	<b>1,423,469</b>	<b>1,203,826</b>	<b>971,941</b>	<b>841,277</b>	<b>703,024</b>
<b>Expenses</b>					
Net loss and loss expenses incurred	1,104,408	666,540	507,430	463,431	308,422
Acquisition expenses	348,292	314,337	251,546	220,927	146,244
General and administrative expenses	110,120	108,616	106,358	83,345	78,158
Net derivative (income) expense	4,279	(2,238)	(8,657)	(18,703)	17,461
Other (income) expense	18,119	(6,871)	6,214	17,763	10,099
<b>Total expenses</b>	<b>1,585,218</b>	<b>1,080,384</b>	<b>862,891</b>	<b>766,763</b>	<b>560,384</b>
<b>Profit before tax</b>	<b>(161,749)</b>	<b>123,442</b>	<b>109,050</b>	<b>74,514</b>	<b>142,640</b>
Tax benefit	2,816	(2,770)	(1,238)	(3,244)	(2,614)
<b>Net profit</b>	<b>(158,933)</b>	<b>120,672</b>	<b>107,812</b>	<b>71,270</b>	<b>140,026</b>



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As a member of the Tokio Marine Group, TMR seeks to always be in line with the greater Tokio Marine Group corporate philosophy, To Be a Good Company, while responding to the specific needs of the reinsurance sector.

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