

# Financial Condition Report 2018



## Zurich Insurance Company Ltd

### Contents

Acronyms	4
Introduction	5
A. Business activities	8
A.1 Company structure and major subsidiaries	8
A.2 Information about the company's strategy, objectives and key business segments	<u></u>
A.3 Information about the company's external auditors as per Article 28 ISA	12
A.4 Significant unusual events	12
B. Performance	13
B.1 Most important markets	<b></b> 13
B.2 Performance overview of ZIC	13
C. Corporate governance and risk management	16
C.1 Corporate governance	<u></u> 16
C.2 Risk management	18
C.3 Internal Control System	19
C.4 Compliance	20
C.5 Internal Audit Function	21
D. Risk profile	22
D.1 Insurance risk	22
D.2 Market risk including investment credit risk	28
D.3 Other credit risk	32
D.4 Operational risk	33
D.5 Liquidity risk	34
D.6 Other material risks	35
E. Valuation	36
E.1 Overarching market-consistent valuation principle	36
E.2 Market-consistent balance sheet following SST principles	37
F. Capital management	47
F.1 Capital management objectives	47
F.2 Capital management framework	47
F.3 Capital management program	47
F.4 Insurance financial strength rating	48
F.5 Regulatory capital adequacy	48
G. Solvency	49
Appendix 1: Quantitative templates	52
Appendix 2: Report of the statutory auditor on the	
Group consolidated financial statements 2018	57

The information published in this report is consistent with the information published in the Annual Reports 2018 of Zurich Insurance Group and Zurich Insurance Company Group, as well as the regulatory reportings of the Zurich Insurance Company Ltd for the year 2018, including the regulatory reporting to the Swiss Financial Market Supervisory Authority FINMA (FINMA) on the Swiss Solvency Test, in accordance with Art. 25 ISA and Art. 53 ISO. While the financial statements and the information therein were subject to audit by the statutory auditor of Zurich Insurance Company Ltd, PricewaterhouseCoopers AG (see Appendix 3), there was no external audit or review of this report. Please further note that while this report has been filed with FINMA, FINMA has not reviewed the report.

Zurich Insurance Company Ltd Financial Condition Report 2018

### Overview

### Business profile

Zurich Insurance Company Ltd (ZIC) is the main operating entity of the Zurich Insurance Group. Zurich Insurance Group is a leading multi-line insurer that services its customers in global and local markets. With about 54,000 employees, it provides a wide range of property and casualty, and life insurance products and services in more than 210 countries and territories. ZIC writes direct property and casualty insurance business mainly in Switzerland, Canada, Hong Kong and Japan.

Total gross written premiums and policy fees

CHF 14.1bn

Net income after taxes

CHF 3.4bn

Net investment result

CHF 3.8bn

# System of governance and enterprise risk management

Good corporate governance enables ZIC to create sustainable value for all its stakeholders.

Our enterprise risk management framework (ERM) supports achievement of the Group's strategy and helps protect capital, liquidity, earnings and reputation.

## Risk profile

Zurich Insurance Group uses its Total Risk Profiling<sup>TM</sup> process to evaluate internal and external risks, both those that are market-wide and those idiosyncratic to Zurich. In deciding how to respond, we take into account the time horizon for risks to potentially materialize, as well as what we can control and what we cannot.

Of the near-to mid-term risks we have identified, two risks have strong technology elements and reflect the rapidly changing environment. The first is the external risk posed by changes in customer expectations, and the corollary internal risk to our ability to engage and provide service to our customers at the desired level. The second is information security and cyber risk.

### Financial condition

ZIC maintained its strong rating level in 2018. As of December 31, 2018, the Insurance Financial Strength rating was 'AA-' by Standard and Poor's, 'Aa3/stable' by Moody's, and 'A+(superior)/stable' by A.M. Best.

Shareholders' equity

CHF 25.0bn

Swiss Solvency Test ratio as of January 1, 2019

SST 225%

Standard & Poor's financial strength rating as of December 31, 2018

AA-/stable

## Acronyms

AC	Audit Committee	IIA	Institute of Internal Auditors
AFR	available financial resources	ISA	Swiss Insurance Supervision Act
AG	Aktiengesellschaft (stock company)	ISDA	Swiss International Swaps and Derivatives
AGM	Annual General Meeting		Association
ALV	Arbeitslosenversicherung (Swiss	ISO	Insurance Supervision Ordinance
	unemployment insurance)	M&A	mergers and acquisitions
Board	Board of Directors	MCBS	market consistent balance sheet
BEL	best estimate liability	P&C	Property and Casualty
bn	billion	PwC	PricewaterhouseCoopers AG
BRL	Brazilian real	Q	quarter
CEO	Chief Executive Officer	QBE	QBE Insurance Group Limited
CFO	Chief Financial Officer	SFCR	Solvency and Financial Condition Report
CHF	Swiss franc	SST	Swiss Solvency Test
CRO	Chief Risk Officer	TRP	Total Risk Profiling™
EMEA	Europe, Middle East & Africa	UK	United Kingdom
ERM	Enterprise Risk Management	UPR	unearrned premium reserves
EUR	euro	USD	U.S. dollar
ExCo	Executive Committee	Z-ECM	Zurich Economic Capital Model
FCR	Financial Condition Report	ZIC	Zurich Insurance Company Ltd
FINMA	Swiss Financial Market Supervisory Authority	ZIG	Zurich Insurance Group
GBP	Great Britain pound	ZLIC	Zurich Life Insurance Company Ltd
Group	Zurich Insurance Group	ZRP	Zurich Risk Policy
IFRS	International Financial Reporting Standards	Zurich	Zurich Insurance Group

Zurich Insurance Company Ltd Financial Condition Report 2018 5

## Introduction

### How to read the report

Zurich Insurance Company Ltd ('ZIC' or 'the Company')'s financial condition report is prepared in compliance with Art. 26 ISO and FINMA's Circular 2016/2 'Disclosure - insurers'. The report focuses on the 2018 financial year, and should be read in conjunction with the Company's Annual Report 2018 (available on www.zurich.com/en/investor-relations/results-and-reports/other-statutory-filings). Wherever applicable, this report makes reference to the Zurich Insurance Group's Financial Condition Report or the Zurich Insurance Group's Annual Report for more information.

We prepared this report on a consolidated basis, using a look-through approach that captures the entire Zurich Insurance Company Group (Zurich Insurance Company Ltd and its subsidiaries, or ZIC Group). With this approach, ZIC:

- Evaluates assets and liabilities of subsidiaries and participations by 'looking through' to their balance sheets. This view is possible as subsidiaries are wholly owned and deliver detailed information about the risk profile and valuation of these assets and liabilities (e.g., an equity exposure held in the balance sheet of a subsidiary is presented in the 'equity line' in the consolidated ZIC Group balance sheet, and therefore subsidiaries are not presented under 'investments in subsidiaries'),
- Aggregates assets and liabilities by type or line items, to create a consolidated view.

The consolidated, look-through approach results, in particular under the Swiss Solvency Test, in an equivalent level of protection of policyholders and equivalent prudential outcome. Only the presentation differs, as it focuses on a ZIC Group view, rather than a ZIC entity view. This approach is consistent with our regulatory SST submissions to FINMA. See section E.2, pages 37 following for more information.

The report presents information following the structure provided in FINMA's circular. It covers ZIC's business activities, performance, corporate governance and risk management, risk profile, valuation, capital management and solvency. Quantitative information refers to different frameworks applicable or mandatory to the Company:

- Business activities' information is presented on a ZIC Group consolidated IFRS basis.
- Performance results are presented with Swiss statutory reporting standards as the basis for ZIC, Ltd results. The disclosure is complemented with information in the quantitative reporting templates (see Appendix 1) based on the Swiss statutory reporting standards applicable to ZIC, Ltd.
- The 'risk profile' section presents information for the ZIC Group under IFRS for insurance and credit risk, and a net economic asset value-based analysis of the market risk.
- 'Valuation' presents the market-consistent balance sheet (MCBS) of the ZIC Group following the Swiss Solvency Test (SST) principles. The SST MCBS is compared with the IFRS balance sheet of the ZIC Group as of December 31, 2018.
- Finally, the 'solvency' section shows the regulatory capital adequacy of the Company based on SST.

Risk and capital are managed at the ZIC Group, region and business unit level according to Zurich Insurance Group's risk and capital management framework. The principles of the Zurich Insurance Group's enterprise risk management described in the 'governance and risk management' section and in the 'risk profile' section are equally applicable to ZIC Group. There is no material difference between how risk and capital are managed at the Zurich Insurance Group and the ZIC Group.

FINMA mandates the disclosure of quantitative templates for insurance companies that are included in Appendix 1.

## Introduction continued

### 1 Executive summary

#### **Business activities**

ZIC is the main operating entity of the Zurich Insurance Group (ZIG, Zurich,or the Group). Zurich is a leading multi-line insurer that serves its customers in global and local markets. With about 54,000 employees, it provides a wide range of property and casualty, and life insurance products and services in more than 210 countries and territories. Zurich's customers include individuals, small businesses, and mid-sized and large companies, as well as multinational corporations.

### Performance: ZIC's financial results overview in 2018

ZIC reported a net income after taxes of CHF 3.4 billion in 2018, a 150 percent increase compared with 2017. This increase is mainly driven by improvements in the underwriting result of CHF 1.4 billion and the net investment result of CHF 583 million.

Total gross written premiums and policy fees decreased by CHF 4.6 billion or 25 percent to CHF 14.1 billion for the year ended December 31, 2018. Direct business gross written premiums and policy fees increased by CHF 92 million to CHF 4.2 billion. Assumed reinsurance gross written premiums and policy fees decreased by CHF 4.7 billion to CHF 9.9 billion.

### Corporate governance and risk management

The Zurich Insurance Group is committed to effective corporate governance for the benefit of its shareholders, customers, employees and other stakeholders based on the principles of fairness, transparency and accountability. Structures, rules and processes are designed to provide proper organization and conduct of business within Zurich and to define the powers and responsibilities of its corporate bodies and employees.

Taking risk is inherent to the insurance business, but such risk-taking needs to be made in an informed and disciplined way, and within a pre-determined risk appetite and tolerance.

### Risk profile

Zurich Insurance Group works to reduce unintended risks of strategic business decisions through its risk management processes and tools, including Total Risk Profiling™ (TRP) process. As part of the regular TRP process the Zurich Insurance Group's Executive Committee (ExCo) identified and assessed risks from both external and internal factors. External risks include changes in inflation or interest rates beyond expected forecasts; geopolitical uncertainities such as Brexit; looming European banking crisis; insurance market trends, and changing customer expectations. Internally, key risks include Zurich's ability to engage and provide service to customers at the desired level; technical excellence in underwriting; information security and cyber threats; challenges related to Zurich's workforce, and managing the growing requirements. Mitigating actions have been assigned to executive owners and their status is reviewed at least quarterly.

ZIC Group's key risks, as measured by the Swiss Solvency Test (SST) target capital, are market risk, premium and reserve risk, and natural catastrophe risk. ZIC Group's risk profile is largely a function of the risks written by its subsidiaries. Premium and reserve risk followed by market risk are the major risk drivers of the business directly written in Switzerland by ZIC. See section G. 'Solvency', pages 49 - 50.

### Valuation

ZIC Group's market-consistent balance sheet (MCBS) values assets and liabilities in accordance with the SST principles. The difference between the value of the assets and the liabilities forms the basis for the calculation of the risk-bearing capital.

The main movements in the MCBS include:

- The market value of Investments decreased by USD 11.4 billion from USD 196.9 billion as of December 31, 2017 to USD 185.5 billion as of December 31, 2018.
- The market-consistent value of total other assets decreased by USD 0.1 billion from USD 28.4 billion in 2017 to USD 28.3 billion in 2018.
- The market value Best estimate of insurance liabilities decreased by USD 25.7 billion from USD 318 billion as of December 31, 2017 to USD 292.3 billion as of December 31, 2018.

Zurich Insurance Company Ltd Financial Condition Report 2018 Introduction

See section 'Valuation' for a presentation of ZIC Group's market-consistent balance sheet and an analysis of change.

### Capital management

The Zurich Insurance Group manages its capital to maximize long-term shareholder value while maintaining financial strength within its 'AA' target range, and meeting regulatory, solvency and rating agency requirements. In particular, the Zurich Insurance Group endeavors to manage its shareholder's equity of USD 30.2 billion, subordinated debts of USD 6.8 billion and senior financial debts not maturing within the next year of USD 2.4 billion were part of the capital available in the Zurich Insurance Group's economic framework. Further adjustments usually include such items as intangible assets, deferred tax assets and liabilities, or allowing for discounting of liabilities and the value of in-force business, as presented in the market-consistent balance sheet.

ZIC maintained its strong rating level in 2018. As of December 31, 2018, the IFSR of Zurich Insurance Company Ltd (ZIC), was 'AA-/Stable' by Standard and Poor's, 'Aa3/Stable' by Moody's, and 'A+ (Superior)/Stable by A.M. Best.

### Solvency

The SST compares risk-bearing capital with target capital through calculation of the SST ratio. This test indicates whether the level of risk-bearing capital is sufficient to ensure that the probability of policyholder impairment is at a level consistent with FINMA's regulatory objectives.

In 2018, Zurich continued to enhance its internal model, advanced the approval process with FINMA, and has received approval for specific enhancements of the model. The model changes implemented in 2018 resulted in an increase of the ZIC SST ratio of 16 percentage points, compared to the ZIC SST ratio of 212% filed with FINMA as of January 1, 2018.

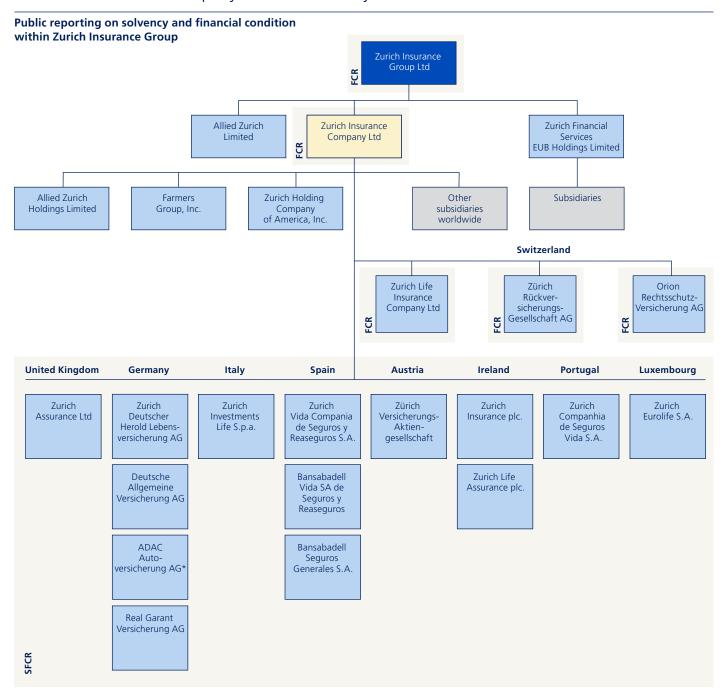
Based on the enhanced SST internal model the SST ratio as of January 1, 2019 stands at 225%, 13 percentage points higher compared to SST ratio as of January 1, 2018. Following the favorable model change impact of 16 percentage points, the ratio decreased by 3 percentage points due to negative financial market movements and financing the external dividend payout during 2018, largely offset by the strong operational capital generation from the businesses net of proposed dividend.

## 2 Approval of the Financial Condition Report

This Report was reviewed and signed-off by the Board of Directors of Zurich Insurance Company Ltd on on April 23, 2019.

## A. Business activities

### A.1 Company structure and major subsidiaries



**SFCR:** Solvency and Financial Condition Report (Solvency II; from 2016) FCR: Financial Condition Report (Swiss regulation; from 2017) Subsidiary

Note: The purpose of the chart above is to provide a simplified overview of the Group's major subsidiaries (as of December 31, 2018), with special focus on the public reporting of their solvency and financial condition. Please note that this is a simplified representation showing entities that must publish such a report and therefore it may not comprehensively reflect the detailed legal ownership structure of the entities included in the overview. The ordering of the legal entities under each country is not indicative of ownership; these are independent legal entities.

☐ Group of subsidiaries

Current disclosure

\*on December 21, 2018, the Group entered into an agreement to sell its 51% participation in ADAC Autoversicherung AG. The sale of the shares in ADAC Autoversicherung AG became effective as of January 1, 2019

Zurich Insurance Company Ltd Financial Condition Report 2018 A. Business activities

ZIC is the main operating carrier of Zurich Insurance Group,a leading multi-line insurer that serves its customers in global and local markets. With about 54,000 employees, Zurich provides a wide range of property and casualty, and life insurance products and services in more than 210 countries and territories. Zurich's customers include individuals, small businesses, and mid-sized and large companies, as well as multinational corporations. The Group is headquartered in Zurich, Switzerland.

As well as being an insurance company, ZIC also acts as the holding company for the subsidiaries of the Group, except for the Group's property loans and banking activities. ZIC pools internal reinsurance and ensures pooling of capital within Zurich. In addition, it is Zurich's main issuer of debt. It also carries the cost of the Corporate Center. Main subsidiaries include Allied Zurich Holdings Limited, Farmers Group, Inc., Zurich Assurance plc (UK), Zurich Insurance plc (Ireland), Zurich Holding Company of America, Inc. (North America), and Zurich Life Insurance Company Ltd (Switzerland).

The ZIC subsidiaries regulated in Switzerland produce their own Financial Condition Report:

- Zurich Life Insurance Company Ltd
- Zurich Reinsurance Company Ltd
- Orion Rechtsschutz-Versicherung AG.

The ZIC subsidiaries based in the European Union produce their own Solvency and Financial Condition Reports under Solvency II regulation. All reports are available on Zurich's website: https://www.zurich.com/en/investor-relations/results-and-reports/other-statutory-filings.

### Transactions in 2018

### Acquisitions

### **Blue Insurance**

On October 3, 2018, Cover-More Australia Pty Ltd, a fully owned subsidiary of Zurich Insurance Company Ltd, completed the acquisition of Blue Insurance Ltd (Blue Insurance), an Irish domiciled insurance intermediary acquired for approximately USD 64 million, subject to performance adjustments. Based on the initial purchase price accounting, goodwill amounted to USD 35 million.

### **Adira Insurance**

On September 27, 2018, ZIC Group entered into agreements to acquire 80 percent of PT Asuransi Adira Dinamika (Adira Insurance) from PT Bank Danamon Indonesia (Bank Danamon) and a minority investor for approximately USD 414 million, with potential future incremental payments based on business performance. The transaction includes two separate long-term strategic cooperation agreements with Bank Danamon and PT Adira Dinamika Multi Finance TbK. The transaction is expected to close in the first half of 2019, subject to regulatory approval.

### EuroAmerica portfolio in Chile

On April 20, 2018, the ZIC Group announced it had entered into an agreement to acquire the individual and group life insurance portfolios as well as the long-term savings operations of EuroAmerica in Chile. The ZIC Group finalized the acquisition on November 5, 2018, for an estimated aggregate price of USD 144 million, subject to closing adjustments. Based on the initial purchase price accounting, goodwill amounted to USD 102 million.

### **Travel Ace and Universal Assistance**

On March 12, 2018, the ZIC Group announced the acquisition of Travel Ace and Universal Assistance, the leading providers of traveler assistance in Latin America for approximately USD 82 million. The transaction encompassed 19 legal entities operating throughout Latin America, most notably in Argentina, Brazil, Chile, Colombia and Mexico. Based on the initial purchase price accounting, goodwill amounted to USD 94 million.

## A. Business activities continued

#### **QBE Latin America**

On February 24, 2018, the ZIC Group entered into an agreement to acquire the Latin American operations of the Australian insurer QBE Insurance Group Limited (QBE) with operations in Argentina, Brazil, Colombia, Ecuador and Mexico, subject to regulatory approvals. On July 2, 2018, the acquisitions of Argentina and Brazil were closed for an amount of USD 196 million and USD 34 million, respectively. The acquisitions of Mexico and Ecuador were closed on August 31, 2018 and October 1, 2018, for an amount of USD 32 million and USD 52 million, respectively. The acquisition of Colombia was completed on February 1, 2019, for an amount of USD 36 million.

QBE Latin America's net income after taxes for the months since the acquisition dates, as included in the ZIC Group consolidated income statements for the year ended December 31, 2018, amounts to USD 3 million including transaction-related costs. Pro-forma net income after taxes for the full 12 months ended December 31, 2018, amounts to approximately USD 21 million, adjusted for transaction-related costs incurred by QBE Latin America. In addition, the Group incurred transaction-related costs of approximately USD 9 million in non-technical expenses in business operating profit (BOP). The majority has been incurred in 2018.

### Update on acquistion of ANZ life and consumer credit insurance business

On December 11, 2017, the ZIC Group announced that it had entered into an agreement to acqire 100 percent of the Australian life insurance and consumer credit business (One Path Life) of Australia and New Zealand Banking Group Limited (ANZ) for AUD 2.85 billion (USD 2 billion), subject to a purchase price adjustment. The transaction, which is subject to regulatory approval, is expected to close during the first half of 2019. In May 2018, the ZIC Group entered into a quota share reinsurance agreement with One Path Life and made an upfront commission payment of USD 754 million.

### Divestments

#### Held for sale

On December 21, 2018, the ZIC Group entered into an agreement to sell its 51 percent participation in ADAC Au-toversicherung AG and the shares in Bonnfinanz AG. The sale of the shares in ADAC Autoversicherung AG became effective as of January 1, 2019, while the sale of Bonnfinanz AG is expected to close in the first half of 2019. As of December 31, 2018, assets and liabilities of USD 431 million and USD 294 million, respectively, were reclassified to held for sale.

On December 14, 2018, Zurich Insurance plc entered into an agreement with Catalina Holdings (Bermuda) Ltd and certain of its subsidiaries to transfer a portfolio of pre-2007 United Kingdom legacy employers' liability policies to Catalina London Limited, subject to regulatory and court approvals. The sale is expected to close in the second half of 2019. As of December 31, 2018, assets and liabilities reclassified to held for sale were USD 260 million and USD 1.8 billion, respectively.

On November 7, 2018, the ZIC Group entered into an agreement to sell its Venezuelan operations, subject to regulatory approval. The Group currently has USD 258 million of negative cumulative translation adjustments which will be recognized in the statement of income upon completion of the sale.

During the 12 months ended December 31, 2017, the ZIC Group entered into an agreement to sell a Life business in the UK. As of December 31, 2018, the related assets and liabilities held for sale decreased by USD 6 billion to USD 23 billion since December 31, 2017.

As of December 31, 2018, the total assets and liabilities reclassified to held for sale were USD 24 billion and USD 26 billion, respectively.

### UK workplace pensions and savings business

On April 3, 2018, Sterling ISA Managers Limited completed the sale of its Corporate Savings Platform together with the associated infrastructure, assets and business to LBG subsidiary, Scottish Widows Administration Services Limited. The remaining business is to be transferred by Zurich Assurance Ltd to Scottish Widows Limited by a UK court process under Part VII of the Financial Services and Markets Act 2000. The target transfer date is July 1, 2019.

#### **Endsleigh Limited**

On March 29, 2018, the ZIC Group completed the sale of the Endsleigh Limited group of companies to A-Plan Holdings. A pre-tax loss of USD 116 million has been recorded within net gains/losses on divestment of businesses, of which USD 97 million were recognized in December 2017 at the time the sale was announced.

Zurich Insurance Company Ltd Financial Condition Report 2018 A. Business activities 11

# A.2 Information about the company's strategy, objectives and key business segments

The Zurich Insurance Company Group's business is focused on provding best-in-class insurance products and services to individuals, small businesses, mid-sized and large companies. Zurich's strategy:

- Focuses on customers improving service quality and customer experience
- Simplifies creating a more agile and responsive organization
- Innovates providing better products, services and customer care.

Zurich's strategy is to deliver long-term competitive advantage focuses on continuing to increase profitability and consolidating the Group's position as a leading global underwriter for property and casualty (P&C) and life insurance. Zurich Insurance Group will expand customer relationships, simplify the business and significantly reduce costs. At the operating level, Zurich will continue to reduce complexity and improve accountability. Zurich will enhance technical excellence and strengthen its go-to-market-approach for commercial customers. It will also seek to enhance its offerings to individuals by monitoring and aiming to increase customer satisfication and retention.

See the Zurich Insurance Group's Annual Report 2018, pages 12 and 13 for more information. Zurich Insurance Company Ltd includes the direct Property & Casualty business in Switzerland and its branches mainly located in Canada, Japan and Hong Kong as well as assumed reinsurance business from its subsidiaries and the Farmers Exchanges¹. It includes the corporate center as well as most of the debt financing of Zurich Insurance Group.

### Group structure

The Zurich Insurance Company Group consists of Zurich Insurance Company Ltd and its subsidiaries (the 'ZIC Group' or 'Zurich Insurance Company Group').

ZIC Group's business is focused on providing best-in-class general and life insurance products and services to individuals, small businesses, mid-sized and large companies.

The operational group structure reflects both, ZIC Group's businesses and geographical regions. ZIC Group pursues a customer-centric strategy, with the Property & Casualty (P&C) and Life businesses which are managed through a regional structure. For details on the activities of the various businesses refer to note 27 of the audited consolidated financial statements.

ZIC Group further divides its P&C business into Retail and Commercial customer units.

ZIC Group has identified the following 13 reportable and operating segments.

### **Group structure**

Businesses	Property & Casualty (P&C)	Life	Farmers	Non-Core Businesses	Group Functions and Operations
Reportable segments	Europe, Middle East & Africa (EMEA) North America Asia Pacific Latin America Group Reinsurance	Europe, Middle East & Africa (EMEA) North America Asia Pacific Latin America Group Reinsurance	Farmers	Non-Core Businesses	Group Functions and Operations
Customer units	Commercial Retail				

<sup>1</sup> The Farmers Exchanges are owned by their policyholders. Farmers Group, Inc., a wholly-owned subsidiary of the Zurich Insurance Group, provides certain non-claims administrative, management and anciliary services to the Farmers Exchanges as attorney-in-fact and receives fees for its services.

## A. Business activities continued

## Operating insurance branches of ZIC Ltd

as of December 31, 2018		Segment
Bahrain		
Zurich Insurance Company Ltd (Bahrain Branch)	Bahrain	Property & Casualty
Bermuda		
Zurich Insurance Company Ltd, Bermuda Branch	Bermuda	Property & Casualty
Canada		
Zurich Insurance Company Ltd, Canadian Branch	Canada	Property & Casualty
Hong Kong		
Zurich Insurance Company Ltd, Hong Kong Branch	Hong Kong	Property & Casualty
Israel		
Zurich Insurance Company Ltd, Israel Branch	Israel	Property & Casualty
Italy		
Zurich Insurance Company Limited - Rappresentanza Generale per l'Italia	Italy	Property & Casualty
Japan		
Zurich Insurance Company Limited	Japan	Property & Casualty
Malaysia		
Zurich Insurance Company Ltd, Labuan Branch	Malaysia	Property & Casualty
Qatar		
Zurich Insurance Company Ltd. QFC Branch	Qatar	Property & Casualty
Singapore		
Zurich Insurance Company Ltd Singapore Branch	Singapore	Property & Casualty
Switzerland		
Zürich Versicherungs-Gesellschaft AG, Regionalsitz Zürich	Switzerland	Property & Casualty
Zürich Versicherungs-Gesellschaft AG, Regionalsitz Bern/Mittelland	Switzerland	Property & Casualty
Zürich Versicherungs-Gesellschaft AG, Regionalsitz Zentral- und Nordwestschweiz	Switzerland	Property & Casualty
Zürich Versicherungs-Gesellschaft AG, Regionalsitz Ostschweiz	Switzerland	Property & Casualty
Zurigo Compagnia di Assicurazioni SA, Sede regionale per il Ticino	Switzerland	Property & Casualty
Zurich Compagnie d'Assurances SA, siège régional pour la Suisse romande	Switzerland	Property & Casualty
United Arab Emirates		
Zurich Insurance Company Ltd. (DIFC Branch)	United Arab Emirates	Property & Casualty

## A.3 Information about the company's external auditors as per Article 28 ISA

Pricewaterhouse CoopersAG (PwC), Birchstrasse 160, in 8050 Zurich, is ZIC's external auditor.

## A.4 Significant unusual events

For significant events during 2018 and thereafter, please refer to the Annual Report 2018 of Zurich Insurance Company Group and Zurich Insurance Group, respectively, as well as to the news releases available at https://www.zurich.com/en/media/news-releases. No other significant events are to be reported.

Zurich Insurance Company Ltd Financial Condition Report 2018

## **B.** Performance

### **B.1** Most important markets

In 2018, the most important markets according to premium income (direct business, excluding subsidiaries) were Switzerland, Canada, Japan and Hong Kong.

### B.2 Performance overview of ZIC

As complementary to the consolidated, look-through perspective presented for ZIC Group, FINMA and the Swiss Statutory Accounting Principle mandates the disclosure of statutory stand-alone information prepared under the ZIC perspective, under local reporting requirements (Swiss Code of Obligations and relevant supervisory law) and in Swiss francs. Based on this perspective, Zurich presents performance information, differentiating between the direct Property & Casualty business written by ZIC in Switzerland and its branches located mainly in Canada, Japan and Hong Kong as well as assumed reinsurance business, reflecting primarily business assumed from ZIC's subsidiaries. Zurich provides this information in appendix 1. A discussion of the main factors affecting performance is outlined in the following commentary.

ZIC reported a net income after taxes of CHF 3.4 billion in 2018, a 150 percent increase compared to 2017. This increase is mainly driven by improvements in the net underwriting result of CHF 1.4 billion and in the net investment result of CHF 583 million.

Total gross written premiums and policy fees decreased by CHF 4.6 billion or 25 percent to CHF 14.1 billion for the year ended December 31, 2018. Direct business gross written premiums and policy fees increased by CHF 92 million to CHF 4.2 billion mainly due to business growth in Japan and Italy. Assumed reinsurance premiums and policy fees decreased by CHF 4.7 billion to CHF 9.9 billion due to the termination of the Whole Account Quota Share (WAQS) reinsurance treaty with Zurich American Insurance Company, an indirect subsidiary of the Company, as of January 1, 2018, as well as the non-renewal of the All Lines Quota Share reinsurance agreement with Farmers Exchanges<sup>1</sup> as of December 31, 2017.

The net insurance reserves increased by CHF 3.8 billion compared with the year ended December 31, 2017. Main driver for the increase is termination of the WAQS reinsurance treaty with Zurich American Insurance Company and the non-renewal of the All Lines Quota Share reinsurance agreement with the Farmers Exchanges<sup>1</sup>. This was partially offset by a new reinsurance treaty with OnePath Life, a part of ANZ Banking Group Limited, and by new Group internal reinsurance treaties.

Additionally, administrative and other expense decreased by CHF 767 million in 2018 as a result of favorable development in foreign exchange rates as well as good progression against savings targets.

The net investment result decreased by CHF 583 million to CHF 3.8 billion, mainly due to higher income from investments in subsidiaries and associates of CHF 1.4 billion and a reduction in write-downs on investments in subsidiaries and associates of CHF 447 million. This was partially offset by a decrease in the value of single investor funds following lower write-ups of debt securities as well as due to the overall stagnation in the equity securities markets during 2018.

### **Direct Swiss Business**

The underwriting result increased by CHF 69 million to CHF 362 million in 2018, mainly as a result of lower levels of natural catastrophe losses that drove improvements in Property insurance compared to 2017 and lower insurance benefits and losses in Casualty insurance. Other technical expenses continued to improve as a result of efficiency efforts.

<sup>1</sup> The Farmers Exchanges are owned by their policyholders. Farmers Group, Inc., a wholly-owned subsidiary of the Zurich Insurance Group, provides certain non-claims administrative, management and anciliary services to the Farmers Exchanges as attorney-in-fact and receives fees for its services.

### B. Performance continued

### **Direct Non-Swiss Business**

The net underwriting result decreased by CHF 110 million to a loss of CHF 26 million in 2018, as net earned premiums and policy fees and net technical expenses decreased. The different branches contributed to this result as follows:

### Japan

Overall gross written premiums and policy fees grew by CHF 56 million with the major portfolios of Accident & Health and Motor performing well. The underwriting result improved slightly from CHF 54 million in 2017 to CHF 57 million in 2018 as the business benefitted from the Group internal cession on Motor.

#### Hong Kong

Net earned premium in 2018 decreased by CHF 3 million as the business continues to focus on profitability. Overall, the underwriting result improved by CHF 3 million following on a corresponding decrease in net insurance benefits and lower costs

#### Canada

Gross written premiums remained broadly stable compared with 2017, however, new Quota Share treaties in the Casualty business and the addition of a new captive business have resulted in a reduction in net earned premium.

Further to this, 2017 benefitted from a non-recurring, positive impact of a claim settlement and as a result there is a significant deterioration in insurance benefits and losses, net of reinsurance in 2018.

#### **Bermuda**

All the direct business in the Company's Bermuda branch is in run-off and in 2017 had no measurable contribution to the Company's result. In 2018, the underwriting result deteriorated to a loss of CHF 23 million due to an increase of reserves for prior year claims in the energy business.

### Other branches

The other foreign branches with direct business – Italy and Singapore – each showed deterioration in their underwriting result compared to 2017. In Italy, the underwriting result decreased CHF 3 million compared with 2017 due to higher net insurance benefits and losses in the Motor business. In Singapore, the underwriting result decreased by CHF 5 million compared to 2017 as the business invests in growth.

### **Indirect business**

The underwriting result improved by CHF 1.4 billion, resulting in a loss of CHF 63 million. This is largely reflecting the impact of the termination of the WAQS treaty with Zurich American Insurance Company and the non-renewal of the All Lines Quota Share reinsurance agreement with the Farmers Exchanges<sup>1</sup>.

#### **Net Investment Result**

Total investment income increased by CHF 672 million or 16 percent to CHF 4.8 billion in 2018. Dividend income from subsidiaries and associates increased by CHF 1.4 million or 77 percent to CHF 3.3 billion in 2018, mainly due to a dividend payment from Zurich Life Insurance Company Ltd of CHF 1.5 billion and to higher dividend income from Farmers Group, Inc., partially offset by lower dividend income from Zurich Holding Ireland Limited and Zurich Reinsurance Company Ltd. The prior year realized gains on investments in subsidiaries and associates were due to the sale of Zurich Insurance (Taiwan) Ltd. to Hotai Motor Co. The lower write-ups on debt securities and equity securities in 2018 were mainly driven by the decrease in the value of the single investor funds as well as the overall deterioration in equity securities markets compared to 2017.

Total investment expenses increased by CHF 89 million or 9 percent to CHF 1.0 billion in 2018, mainly due to higher write-downs on equity securities due to the challenging market environment in 2018. This increase was partially offset by lower write-downs on investments in subsidiaries and associates of CHF 160 million in 2018 compared to CHF 607 million in 2017. In 2018, there were mainly impairments of Zurich Minas Brasil Seguros S.A. as well as of the entity holding the Company's business in Venezuela. The impairments in 2017 were mainly related to subsidiaries in Bermuda and Brazil.

<sup>1</sup> The Farmers Exchanges are owned by their policyholders. Farmers Group, Inc., a wholly-owned subsidiary of the Zurich Insurance Group, provides certain non-claims administrative, management and anciliary services to the Farmers Exchanges as attorney-in-fact and receives fees for its services.

Zurich Insurance Company Ltd Financial Condition Report 2018 B. Performance 15

### Other financial income and expense

Net other financial income and expense improved by CHF 52 million to a net loss of CHF 57 million in 2018 due to lower gains and lower losses on derivative instruments.

### Interest expense on debt and other interest expense

Total interest expense on debt and other interest expense increased by CHF 21 million or 3 percent to CHF 565 million in 2018, mainly due to higher interest rates on Euro issued debt.

### Shareholder's Equity

Shareholder's equity increased by CHF 3.4 billion to CHF 25.0 billion for the year ended December 31, 2018, from CHF 21.6 billion for the year ended December 31, 2017. This increase reflects solely the net income after taxes in 2018 as no dividend has been paid to Zurich Insurance Group Ltd in 2018.

## C. Corporate governance and risk management

### C.1 Corporate governance

Zurich Insurance Company Ltd's (ZIC) corporate governance follows the principles of Zurich Insurance Group. The disclosure below highlights areas of ZIC's corporate governance, in particular where they are specific to Zurich Insurance Company Ltd. It should be read in conjunction with the Zurich Insurance Group's Financial Condition Report 2018, section C.1 Corporate Governance, pages 22 and following.

The Board, under the leadership of the Chairman, is responsible for determining the overall strategy of the Group and supervising senior management. It holds the ultimate decision-making authority for ZIC and ZIC Group. For further information about the Zurich Insurance Group Board's responsibilities, see Zurich Insurance Group's Annual Report 2018, page 52.

The members of the Board are elected by the shareholders at the Annual General Meeting (AGM). The Board constitutes itself in its first meeting after the AGM.

All Directors of Zurich Insurance Group Ltd are also members of the ZIC Board of Directors. Mr. Liès also served as Chairman of that Board since the Annual General Meeting (AGM) of April 4, 2018.

ZIC's corporate bodies include:

- the Chairman
- the Board Governance, Nominations & Sustainability Committee
- the Board Remuneration Committee
- the Board Audit Committee
- the Board Risk and Investment Committee
- the Chief Executive Officer
- the Executive Committee (ExCo).

## Board of Directors as of December 31, 2018

Board of Directors	Expiration of current term of office
Michel M. Liès, Chairman	2019
Christoph Franz, Vice-Chairman	2019
Joan Amble	2019
Catherine Bessant	2019
Dame Alison Carnwath	2019
Jeffrey Hayman	2019
Monica Mächler	2019
Kishore Mahbubani	2019
David Nish	2019

Claudia Biedermann, Company Secretary

At the AGM on April 4, 2018, all Board members were re-elected for another one-year term. Michel Liès was newly elected as member of the Board. The Board constituted itself at its first meeting following the AGM. In this meeting the Chairman, the Vice-Chairman, the Committee Chairpersons and the Committee members are appointed among and by the Board members.

David Nish has decided to retire from the Board as of the AGM 2019 and did not stand for re-election.

The Board proposed to shareholders that they elect or re-elect at the AGM 2019 as follows:

as members: Michel M. Liès, Joan Amble, Catherine Bessant, Dame Alison Carnwath, Christoph Franz, Jeffrey Hayman, Monica Mächler, Kishore Mahbubani, Jasmin Staiblin, Michael Halbherr and Barry Stowe.

All members of the Board were elected or re-elected by the shareholders, as proposed by the Board, at the AGM 2019 which took place on April 3, 2019. In addition, Jasmin Staiblin, Michael Halbherr and Barry Stowe were elected as new members to the Board (for a one-year term).

After the AGM 2019, the Board Committees are composed as follows:

- Governance, Nominations & Sustainability Committee: Michel M. Liès (Chair), Dame Alison Carnwath, Christoph Franz, Jeffrey Hayman, Monica Mächler
- Remuneration Committee: Christoph Franz (Chair), Catherine Bessant, Michel M. Liès, Kishore Mahbubani, Jasmin Staiblin
- Audit Committee: Dame Alison Carnwath (Chair), Catherine Bessant, Jeffrey Hayman, Monica Mächler, Barry Stowe
- Risk and Investment Committee: Jeffrey Hayman (Chair), Joan Amble, Dame Alison Carnwath, Michael Halbherr, Kishore Mahbubani

The ZIC Executive Committee (ExCo) is headed by Mario Greco who also serves as Group CEO for Zurich Insurance Group Ltd (ZIG). The ZIC ExCo composition is equivalent to Zurich Insurance Group ExCo. On October 5, 2018 Amanda Blanc was appointed Chief Executive Officer Europe, Middle East & Africa (CEO EMEA) and became a member of ZIG and ZIC ExCo respectively. Gary Shaughnessy stepped down from his role as CEO EMEA on October 5, 2018, and retired from the ZIG and ZIC Executive Committee, respectively, as of December 31, 2018.

Zurich Insurance Company Executive Committee as of December 31, 2018

Member	Position held
Mario Greco	Chief Executive Officer
Urban Angehrn	Chief Investment Officer
Amanda Blanc	CEO EMEA
Jeff Dailey	CEO of Farmers Group, Inc.
Claudia Dilll	CEO Latin America
Jack Howell	CEO Asia Pacific
Alison Martin	Chief Risk Officer
George Quinn	Chief Financial Officer
Kathleen Savio	CEO North America
Gary Shaughnessy	Senior Advisor
James Shea	CEO Commercial Insurance
Kristof Terryn	Chief Operating Officer

## C. Corporate governance and risk management continued

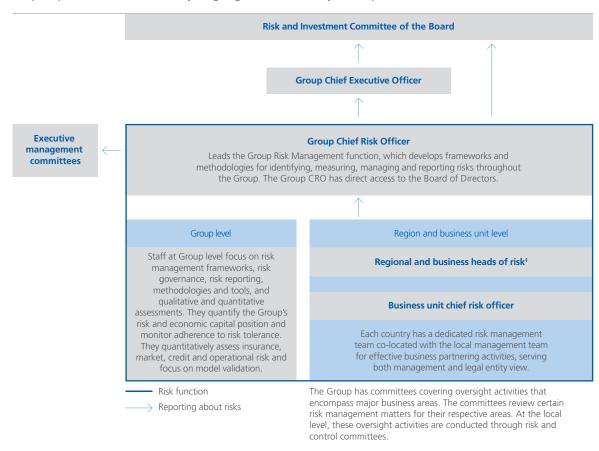
### C.2 Risk management

Risks and capital are managed at Group, regional and business unit level according to the Zurich's risk and capital management framework. The principles of enterprise and risk management are equally applicable to the Zurich Insurance Company Ltd and its subsidiaries (collectively the ZIC Group).

The risk management framework is based on a governance process that sets forth clear responsibilities for taking, managing, monitoring and reporting risks. The following paragraphs explain the essential elements of the risk management framework.

The risk function is independent of the business by being a vertically integrated function where global risk employees directly report into the Group CRO, unless otherwise required by local laws or regulations. Risk officers are embedded in the business, positioning them to support and advise, and independently challenge, business decisions from a risk perspective. As business advisers on risk matters, the risk officers, equipped with technical risk skills as well as business skills, help foster a risk-aware culture in the business.

The Zurich Risk Policy is Zurich Insurance Group's main risk governance document; it sets standards for effective risk management throughout the Zurich Insurance Group. The policy describes the Zurich Insurance Group's risk management framework, identifies Zurich Insurance Group's principal risk types and defines the Zurich Insurance Group's appetite for risks at Group level. Risk-specific policy manuals provide guidelines and procedures to implement the principles in the Zurich Risk Policy. Ongoing assessments verify that requirements are met.



<sup>&</sup>lt;sup>1</sup> Farmers Chief Risk Officer has a matrix reporting line into the Group CRO.

The Group regularly reports on its risk profile at local and Group levels. The Group has procedures to refer risk issues to senior management and the Board of Directors in a timely way. To foster transparency about risk, the Board receives quarterly risk reports and risk updates. In 2018, reporting was supplemented with in-depth risk insights into topics such as macroeconomic developments, information security management, climate change-related risks, and credit risk and country risk.

The Group assesses risks systematically and from a strategic perspective through its proprietary Total Risk Profiling<sup>TM</sup> (TRP) process, which allows Zurich to identify and evaluate the frequency and severity of a risk scenario. The Group then develops, implements and monitors improvements. The TRP process is integral to how Zurich deals with change, and is particularly suited to evaluate strategic risks, as well as risks to Zurich's reputation. At Group level, this process is ongoing, with regular reviews with senior management.

The Group's risk appetite statement includes capital, liquidity, earnings volatility and non-financial metrics. The Group regularly measures and quantifies material risks to which it is exposed. Zurich's policy is to maintain capital consistent with an 'AA' financial strength rating for the Group. The Group translates that goal into a quantified risk tolerance. The primary metric used to steer business is the Zurich Economic Capital Model (Z-ECM) which provides a key input into the Group's strategic planning process as an assessment of the Group's risk profile against the Group's risk tolerance. The Z-ECM forms the basis for optimizing the Group's risk-return profile by providing consistent risk measurement across the Group.

### C.3 Internal Control System

### Risk management and internal controls

At Zurich, various governance and control functions help to ensure that risks are identified and appropriately managed and internal controls are in place and operating effectively. The Board is ultimately responsible for the supervision of these activities. Although each governance and control function maintains its distinct mandate and responsibilities, the functions are closely aligned and co-operate with each other through a regular exchange of information, planning and other activities. This approach supports management in its responsibilities and provides confidence that risks are appropriately addressed and that adequate mitigation actions are implemented. Zurich uses the three-lines-of-defense model in its approach to governance and enterprise risk management. Zurich's three-lines-of defense approach runs through Zurich's governance structure, so that risks are clearly identified, assessed, owned, managed and monitored. For further information please see Zurich Insurance Group's Annual Report 2018, page 72.

The Group considers internal control to be key for managing operational risk. The Board has overall responsibility for the Group's risk management and internal control frameworks. The objectives of the Group's internal control system are to provide reasonable assurance that Zurich's financial statements and disclosures are materially correct, support reliable operations, and to ensure legal and regulatory compliance. The internal control system is designed to mitigate rather than eliminate the material risk that business objectives might not be met. Key controls are assessed for their design and operating effectiveness.

The Group promotes risk awareness and understanding of controls with communication and training. Key risk management and internal control systems are designed at Group level and implemented Group-wide.

Management, as the first line of defense, is responsible for identifying, evaluating and addressing significant risks, and designing, implementing and maintaining internal control. Key processes and controls in the organization are subject to review and challenge by management, Group Risk Management, Group Compliance and Group Audit. Control issues of Group-level significance and associated mitigation actions are reported regularly to the Audit Committee of the Board. The Risk and Investment Committee of the Board reviews the effectiveness of the Group's risk management system, including the Group's risk tolerance and enterprise-wide risk governance framework, in accordance with the charter for each committee.

The Group's Disclosure Committee, chaired by the Head of Group Financial Accounting and Reporting (FAR), is responsible for reviewing all external communications and disclosures that contain information material to the financial position and/or performance of the Group. In particular, it reviews half-year and year-end IFRS financial results as well as the updates for the first three and nine months of the Group and related documents, e.g., related news releases and analysts' information. It reviews other external communications that contain material information as to the financial position and performance of the Group, proposals from Group Compliance regarding projects that have an impact on the Group and respective dealing restrictions as well as controls and procedures regarding the effectiveness of the Group's internal controls over financial reporting. It makes recommendations to the Group CFO.

The internal and external auditors also regularly report conclusions, observations and recommendations that arise as a result of their independent reviews and testing of internal controls over financial reporting and operations.

## C. Corporate governance and risk management continued

## C.4 Compliance

Zurich Insurance Company Group is committed to complying with all applicable laws, regulations, internal requirements, professional and industry standards and its stated corporate values.

Group Compliance is a second-line control function responsible for:

- Enabling the business to manage its compliance risks
- Being a trusted advisor
- Providing independent challenges, monitoring and assurance
- Assisting management to promote a culture of compliance and ethical behaviors.

Group Compliance is vertically integrated to support a global framework and it is led by the Group Chief Compliance Officer (GCCO).

Group Compliance performs its activities according to the global annual compliance plan and reports on progress measured against the plan, as well as outcomes and insights, to management, the Audit Committee of the Board of Directors of ZIC and to the regional and local equivalent bodies.

Each annual compliance plan (global, regional, local) is a risk-based plan and must be prepared on the basis of an independent forward-looking compliance risk assessment, taking into account key risk drivers in both the internal and external environments.

Group Compliance provides an independent compliance view on the key compliance risks to the business and performs independent risk-based monitoring and assurance activities, while challenging the business as necessary. In addition, it provides compliance risk insight through relevant and targeted reporting.

The Group Chief Compliance Officer defines and issues compliance policies relevant to the Group and establishes appropriate processes and guidance.

Group Compliance supports a strong compliance culture across the Group in a changing regulatory environment through training and awareness initiatives in line with our Code of Conduct.

The Group Chief Compliance Officer has direct access to the Group CEO and the Chairman of the ZIC Board Audit Committee and to the ZIC Chairman of the Board; the GCCO has an additional reporting line to the Chairman of the Audit Committee, while maintaining functional independence serves as a second line of defense.

Zurich encourages its employees to speak up and report improper conduct that they believe is illegal, unethical, or violates Zurich's code of conduct or the Zurich Insurance Group's policies. Employees are free to report their concerns to management, human resources, Zurich Insurance Group's legal department, its compliance function, or through the Zurich Ethics Line (or similar service provided locally), a phone and web-based service run by an external specialist provider. Zurich does not tolerate retaliation against any employee who reports such concerns in good faith.

### C.5 Internal Audit Function

Zurich's Insurance Group's internal audit function (Group Audit) is tasked with providing independent and objective assurance to ZIC's Board, Audit Committee, CEO and management, on the adequacy and effectiveness of the Group's risk management, internal control and governance processes.

This is accomplished by developing a risk-based plan, which is updated on an ongoing basis, as the risks faced by the business change. The plan is based on the full spectrum of business risks including concerns and issues raised by the Audit Committee, management and other stakeholders. The Audit Committee approves the annual plan and any changes to it.

Group Audit executes the plan in accordance with defined operating standards, which incorporate and comply with the International Standards for the Professional Practice of Internal Auditing, issued by the Institute of Internal Auditors (IIA).

Group Audit is authorized to review all areas and has full, free and unrestricted access to all activities, accounts, records, property and personnel necessary to fulfill its duties. In the course of its work, Group Audit takes into consideration the work of other assurance functions. In particular, Group Audit coordinates its activities with the external auditors, sharing risk assessments, work plans, audit reports and updates on audit actions.

Group Audit is responsible for ensuring that issues which it identifies that could affect ZIC's operations are communicated to the responsible management, CEO and the Audit Committee. Group Audit issues periodic reports to management and the Audit Committee, summarizing audit findings, the status of corrective actions and the status of plan execution. A member of Group Audit attends each Audit Committee meeting.

Audit staff are expected to be independent and objective in all assignments and to do nothing that might prejudice or be perceived as prejudicing independence or objectivity. Group Audit has no operational responsibilities over the areas it reviews and, to ensure independence, all Group Audit staff report (via audit managers) to the Head of Group Audit.

The Audit Committee assesses the independence of Group Audit and reviews its activities, plans and organization, the quality of its work and its cooperation with the external auditors. As required by the IIA International Standards, an independent qualified assessor reviews the quality of Group Audit at least every five years. This review was conducted most recently in 2016 and 2017, and the findings of the review were reported to the Audit Committee in February 2017. The results confirmed that Group Audit's practices conform to all IIA Standards.

## D. Risk profile

Risk and capital are managed at the Zurich Insurance Group, regional, and business unit level according to Zurich Insurance Group's risk and capital management framework. The principles of the Zurich Insurance Group's enterprise risk management described in this chapter are equally applicable to the Zurich Insurance Company Ltd (ZIC) and its consolidated subsidiaries (collectively the 'ZIC Group'). The figures presented are prepared on a ZIC Group basis.

The significant risks for ZIC, as measured by the SST target capital, are market risk, premium and reserve risk, and natural catastrophe risk. The risk associated with the direct general insurance business in Switzerland and its branches as well as assumed reinsurance business from its subsidiaries makes for approximately 32 percent of the SST target capital. Of that underwriting risk is the single greatest source of potential risk followed by market risk. See section G, 'Solvency', page 49 and 50 for an analysis of the SST target capital contribution.

### D.1 Insurance risk

Zurich Insurance Group diversifies its sources of revenue by geography, line of business, product and customer, and is therefore not exposed to concentrations of insurance risk beyond its risk appetite.

Insurance risk is the inherent uncertainty regarding the occurrence, amount, or timing of insurance cash flows. The profitability of insurance business is also susceptible to business risk in the form of unexpected changes in expenses, policyholders' behavior, and fluctuations in new business volumes. Zurich Insurance Group manages insurance risk through:

- Strong underwriting and claims standards and controls
- Robust reserving processes
- External reinsurance.

In terms of risk associated with the direct property and casualty business in Switzerland, management continuously monitors the reserve adequacy as a key risk. Management monitors in particular developments related to the potential impact of developments in interest rates on the level of reserves for the motor, and property and casualty business.

### D.1.1 Property and casualty insurance risk

Property and casualty insurance risk arises from coverage provided for motor, property, liability, special lines and worker injury. It comprises premium and reserve risk, catastrophe risk, and business risk. Premium and reserve risk covers uncertainties in the frequency of the occurrence of the insured events as well as in the severity of the resulting claims. Catastrophe risk predominantly relates to uncertainty around natural catastrophes. Business risk for property and casualty predominantly relates to unexpected increases in expenses tied to claims handling, underwriting, and administration.

### D.1.2 Management of Property & Casualty business insurance risk

Zurich Insurance Group's underwriting strategy takes advantage of the diversification of Property & Casualty (P&C) risks across lines of business and geographic regions. Zurich Insurance Group's underwriting governance is applicable throughout Zurich Insurance Group. Underwriting discipline is a fundamental part of managing insurance risk. Zurich Insurance Group sets limits on underwriting capacity and delegates authority to individuals based on their specific expertise, and sets appropriate underwriting and pricing guidelines. Technical reviews confirm whether underwriters perform within their authorized roles and adhere to underwriting philosophies and policies.

Property & Casualty insurance reserves are regularly estimated, reviewed and monitored by qualified and experienced actuaries at local, regional and Zurich Insurance Group levels. To arrive at their reserve estimates, the actuaries take into consideration, among other things, the latest available facts, trends and patterns of loss payments. Inflation is monitored with insights feeding into actuarial reserving models and Zurich Insurance Group's underwriting processes and pricing.

To ensure a common understanding of business insights and new trends for reserve analysis, financial plans, underwriting and pricing decisions, Zurich Insurance Group has established a culture of continuous cross-functional collaboration. For this, underwriting, actuarial (pricing and reserving), claims, finance, sales and distribution, risk engineering and risk management contribute to quarterly meetings on local and Zurich Insurance Group levels.

Zurich Insurance Company Ltd Financial Condition Report 2018 D. Risk profile 23

Zurich Insurance Group has an Emerging Risk Group, with cross-functional expertise from core insurance functions such as underwriting, claims and risk management to identify, assess and recommend actions for emerging risks.

Actions are underway to rebalance the portfolio, reducing exposure to long tail lines. Governance is in place to ensure appropriate focus on top-line targets and profitability. Reinsurance is deployed to help manage insurance risk. Group Risk Management also provides independent assurance through risk reviews.

Zurich Insurance Group is exposed to losses that could arise from natural and man-made catastrophes. The main concentrations of risks arising from such potential catastrophes are regularly reported to executive management. In 2018, risk-based capital (RBC) for catastrophe risk increased as a result of growth in short-tailed lines of business. The most important peril regions and natural catastrophes (nat cat) continue to be U.S. and Caribbean windstorm, California earthquake and Europe windstorm.

### **Natural catastrophes**

Zurich Insurance Group uses third-party models (adjusted to Zurich Insurance Group's view) to manage its underwriting and ensure accumulations stay within intended exposure limits. The same view Zurich Insurance Group has on natural catastrophe risk also underpins profitability assessment and strategic capacity allocation and guides the type and quantity of reinsurance Zurich Insurance Group buys.

To ensure global consistency, natural catastrophes exposures are modeled centrally. Potential losses from property policies with material exposure in hazard-prone geographical areas and from worker injury policies with material exposure in U.S. seismic zones are probabilistically modeled. Losses for other lines of business are estimated based on adjustments to these modelled results. Risk modeling mainly addresses climate-induced perils such as windstorm, flood, tornado, and hail, and geologically-induced perils such as earthquake.

Zurich Insurance Group constantly strives to improve its modeling and improve data quality. It supplements internal knowledge with external knowledge (e.g., the Advisory Council for Catastrophes). Zurich Insurance Group is a governor sponsor of the Global Earthquake Model Foundation, a shareholder of PERILS AG, and is a member of the Oasis Loss Modelling Framework.

### Man-made catastrophes

Man-made catastrophes include events such as industrial accidents, terrorism and cyber attacks. For terrorism, worker injury and property risk exposures are analyzed to identify areas with significant risk concentration. Other lines of business are assessed, although the potential exposure is not as significant. A vendor-provided catastrophe model is used to evaluate potential exposures in every major U.S. city and selected cities in Europe. The Zurich Insurance Group's analysis for the P&C business has shown that its exposures outside of North America are lower, in a large part due to government-provided pools. Outside the modeled areas, exposure concentrations are identified in Zurich Insurance Group's Risk Exposure Data Store (REDS). Exposure concentrations for location-based man-made scenarios, other than terrorism, are also identified in REDS, for example industrial explosions at global ports.

Zurich Insurance Group uses third-party models to manage its underwriting and accumulations for cyber and casualty catastrophe. We are actively monitoring and managing our cyber exposure and continue to refine products to ensure their appropriateness. Improving modeling capabilities and data capture for cyber and casualty catastrophe risks are key focus areas.

### D.1.3 Concentration of Property & Casualty business insurance risk

Zurich Insurance Group defines concentration risk in the Property & Casualty (P&C) business as the risk of exposure to increased losses associated with inadequately diversified portfolios. Concentration risk for a property and casualty insurer may arise due to a concentration of business written within a geographical area or of underlying risks covered.

The following tables show the ZIC Group's concentration of risk within the P&C business by region and line of business based on direct written premiums before reinsurance. P&C premiums ceded to reinsurers (including retrocessions) amounted to USD 7.0 billion and USD 6.5 billion for the years ended December 31, 2018 and 2017, respectively. Reinsurance programs are managed on a global basis, and therefore, net premium after reinsurance is monitored on an aggregated basis.

## D. Risk profile continued

Property & Casualty business – Direct written premiums and policy fees by line of business – current period

in USD millions, for the year ended				Special	Worker	
December 31, 2018	Motor	Property	Liability	lines	injury	Total
Europe, Middle East & Africa	4,546	4,118	1,962	1,986	343	12,955
North America <sup>1</sup>	1,422	4,622	2,638	2,494	2,735	13,912
Other regions	1,595	1,402	356	1,769	150	5,272
Total	7,563	10,142	4,957	6,249	3,228	32,139

<sup>1</sup> In 2018, the crop business line in North America was reclassified, resulting in a USD 1.7 billion shift from special lines to property.

Property & Casualty business – Direct written premiums and policy fees by line of business – prior period

in USD millions, for the year ended				Special	Worker	
December 31, 2017	Motor	Property	Liability	lines	injury	Total
Europe, Middle East & Africa	4,459	3,869	1,927	1,895	335	12,486
North America	1,750	2,691	3,175	3,864	2,934	14,414
Other regions	1,472	1,184	341	1,646	138	4,781
Total	7,681	7,745	5,443	7,405	3,408	31,681

### Analysis of sensitivities for Property and Casualty risk

The following tables show the sensitivity of net income before tax and the sensitivity of net assets as a result of adverse developments in the net loss ratio by one percentage point, using the ZIC Group effective income tax rate, as a result of adverse development in the net loss ratio by one percentage point. The sensitivities do not indicate a probability of such an event and do not consider any non-linear effects of reinsurance. Based on the assumptions applied in the sensitivity analysis in the following tables, each additional percentage point increase in the loss ratio would have a linear impact on net income before tax and net assets. Zurich Insurance Group also monitors insurance risk by evaluating extreme scenarios, taking into account the non-linear effects of reinsurance contracts.

Insurance risk sensitivity for the Property & Casualty business – current period

in USD millions, for the year ended December 31, 2018	Europe, Middle East & Africa	North America	Asia Pacific	Latin America	Reinsurance	Total
+1% in net loss ratio						
Net income before tax	(121)	(100)	(23)	(21)	1	(264)
Net assets	(91)	(75)	(17)	(16)	-	(198)

Insurance risk sensitivity for the Property & Casualty business – prior period

in USD millions, for the year ended	Europe, Middle	North	Asia	Latin		
December 31, 2017	East & Africa	America	Pacific	America	Reinsurance	Total
+1% in net loss ratio						
Net income before tax	(119)	(105)	(19)	(19)	1	(260)
Net assets	(81)	(72)	(13)	(13)	1	(179)

### D.1.4 Life insurance risk

The risks associated with life insurance include:

### Life liability risk

- Mortality risk when on average, the death incidence among the policyholders is higher than expected.
- Longevity risk when on average, annuitants live longer than expected.
- Morbidity risk when on average, the incidence of sickness or disability among the policyholders is higher or recovery rates from disability are lower than expected.

Zurich Insurance Company Ltd Financial Condition Report 2018 D. Risk profile 25

#### Business risk

- Policyholder behavior risk on average, the policyholders discontinue or reduce contributions or withdraw benefits prior to the maturity of contracts at a rate that is different from expected.
- Expense risk expenses incurred in acquiring and administering policies are higher than expected.
- New business risk volumes of new business are insufficient to cover fixed acquisition expenses.

#### Market risk

• The risk associated with Zurich Insurance Group's balance sheet positions where the value or cash flow depends on financial markets, which is analyzed in the 'market risk, including investment credit risk' section.

### Credit risk

• The risk associated with a loss or potential loss from counterparties failing to fulfill their financial obligations, which is analyzed in the 'market risk, including investment credit risk', and 'other credit risk' sections.

A more diversified portfolio of risks is less likely than an undiversified portfolio to be affected across the board by a change in any subset of risks. The offsetting effects between unit-linked and traditional business reduce some of the risk associated with the life business.

### D.1.5 Management of Life business insurance risk

Zurich Insurance Group has local product development committees and a Zurich Insurance Group-level committee which analyze potential new life products that could significantly increase or change the nature of the Group's risks. Zurich Insurance Group regularly reviews the continued suitability and the potential risks of existing life products.

Unit-linked products are designed to reduce much of the market and credit risk associated with Zurich Insurance Group's traditional business. Risks that are inherent in these products are largely passed on to policyholders, although a portion of Zurich Insurance Group's management fees are linked to the value of funds under management, and hence are at risk if fund values decrease. To the extent that there are guarantees built into the product design, unit-linked products carry mortality/morbidity risk and market risk. Contracts may have minimum guaranteed death benefits where the sum at risk depends on the fair value of the underlying investments. For certain contracts, these risks are mitigated by mortality and morbidity charges.

Other life insurance liabilities include traditional life insurance products, such as protection and life annuity products. Protection products carry mortality, longevity and morbidity risk, as well as market and credit risk. Changes in medical treatments and lifestyle changes are among the most significant factors that could result in earlier or more claims than expected. Disability, defined in terms of the inability to perform an occupation, could be affected by adverse economic conditions. To reduce pricing cross-subsidies, where permitted, premiums are adjusted for factors such as age, gender and smoker status. Policy terms and conditions and disclosure requirements in insurance applications are designed to mitigate the risk arising from non-standard and unpredictable risks that could result in severe financial loss. In the life annuity business, medical advances and improved social conditions that lead to increased longevity are the most significant insurance risk. Annuitant mortality assumptions include allowance for future mortality improvements.

Zurich Insurance Group is also exposed to risks posed by policyholder behavior and fluctuating expenses. Policyholder behavior risk is mitigated by designing products that, as closely as possible, match revenue and expenses associated with the contract. Expense risk is reduced by carefully controlling expenses, and through regular expense analysis and allocation exercises.

### D.1.6 Concentration of Life business insurance risk

Zurich Insurance Group defines concentration risk in the life business as the risk of exposure to increased losses associated with inadequately diversified portfolios of assets or obligations. Concentration risk for a life insurer may arise with respect to investments in a geographical area, economic sector, or individual issuers, or due to a concentration of business written within a geographic area, of a policy type, or of underlying risks covered.

## D. Risk profile continued

Observing best-estimate assumptions on cash flows related to benefits of insurance contracts gives some indication of the size of the exposure to risks and the extent of risk concentration. The table below shows the ZIC Group's concentration of risk within Life by region and line of business based on reserves for life insurance on a net of reinsurance basis. The life insurance reserves also include policyholder surplus reserves with a loss absorbing capacity,¹ predominantly in Germany for an amount of USD 7.4 billion in 2018 (2017: USD 8.2 billion) and in the UK for an amount of USD 0.5 billion in 2018 (2017: USD 0.6 billion). The ZIC Group's exposure to life insurance risks varies significantly by geographic region and line of business and may change over time. See note 8 of the consolidated financial statements for additional information on reserves for insurance contracts.

Reserves, net of reinsurance, by region

in USD millions, as of December 31		Unit-linked		Other life		
	insuran	ce contracts	insurance liabilities		То	tal reserves
	2017	2018	2017	2018	2017	2018
Life						
Europe, Middle East & Africa	46,802	41,229	81,182	77,756	127,984	118,985
of which:						
United Kingdom	18,699	15,323	3,468	3,271	22,167	18,594
Germany	17,178	15,976	39,638	36,980	56,817	52,956
Switzerland	731	634	18,123	17,294	18,854	17,928
Italy	1,073	1,568	4,155	4,521	5,228	6,089
Ireland	3,133	2,347	2,260	2,021	5,393	4,368
Spain	856	699	11,182	11,415	12,038	12,114
Zurich International	4,784	4,339	277	309	5,061	4,648
Rest of Europe, Middle East & Africa	349	342	2,078	1,946	2,427	2,288
North America	9,298	9,241	841	893	10,139	10,135
Asia Pacific	584	539	2,731	2,791	3,315	3,330
Latin America	13,687	13,159	5,075	5,385	18,762	18,544
Group Reinsurance	_	-	-	2	_	2
Eliminations	_	_	(3)	(13)	(3)	(13)
Subtotal	70,371	64,168	89,826	86,814	160,197	150,982
Other businesses	5,042	4,598	9,404	9,474	14,446	14,072
Total	75,413	68,766	99,230	96,288	174,643	165,054

### Analysis of sensitivities for Life business insurance risk

Zurich Insurance Group uses market-consistent embedded value reporting principles, which allow Zurich Insurance Group to increase its understanding of, and report on, the risk profile of its life products, and how these risks would change under different market conditions. Embedded value is a measure that markets use to value life businesses. For more information, see the 'embedded value report 2018' (unaudited but subject to assurance review) at www.zurich. com/investor-relations/results-and-reports.

Policyholder surplus reserves with loss absorbing capacity refer to funds allocated to the policyholders that can be used by the shareholders, under certain conditions which may require regulatory approval.

Zurich Insurance Company Ltd Financial Condition Report 2018 D. Risk profile 27

### D.1.7 Reinsurance for Property & Casualty and Life busineses

Zurich Insurance Group's objective in purchasing reinsurance is to provide market-leading capacity for customers while protecting the balance sheet, supporting earnings volatility management, and achieving capital efficiency. Zurich Insurance Group follows a centralized reinsurance purchasing strategy for both Property & Casualty (P&C) and Life, and bundles programs, where appropriate, to benefit from diversification and economies of scale. In support of Zurich Insurance Group's empowerment-based management model and to align risk-bearing capacities between Zurich Insurance Group and individual country operations, the internal reinsurance vehicle introduced in 2017 has been successfully implemented and applied to all externally reinsured lines of business. In addition, to actively manage and reduce potential claims-recovery risks on facultative cessions and to support the strategy on operational excellence, Zurich Insurance Group started to tailor specific facultative property and casualty facilities.

Zurich Insurance Group structures and aligns its external reinsurance protection to its capital position to achieve an optimum risk-return ratio. This includes participation in the underlying risks through self-retentions. Zurich Insurance Group manages its central reinsurance purchasing according to these principles. The cession rate for P&C was 21.0 percent and 19.7 percent as of December 31, 2018 and December 31, 2017, respectively. The cession rate for Life was 7.0 percent and 8.0 percent as of December 31, 2018 and December 31, 2017, respectively.

Zurich Insurance Group uses traditional and collateralized reinsurance markets to protect itself against extreme single events, multiple event occurrences across regions, or increased frequency of events. Specifically, to protect Zurich Insurance Group against man-made and natural catastrophe scenarios, Zurich Insurance Group arranges per event and annual aggregate global covers.

Zurich Insurance Group participates in the underlying risks through its retention and through its co-participation in excess layers. The contracts are on a loss-occurrence basis except the Global Aggregate Catastrophe cover, which operates on an annual aggregate basis. The current catastrophe covers are placed annually with the exception of the USD 750 million Global Catastrophe treaty, which is a three-year treaty expiring in 2019. In addition to these covers, Zurich Insurance Group has some local catastrophe covers, a bilateral risk swap, and various line of business-specific risk treaties in place. These covers are reviewed continuously and are subject to change going forward.

Major changes in 2018 among others included the external protection of Zurich Insurance Group's financial lines portfolio to support and strengthen the commercial financial lines portfolio management and strategic execution. The structure chosen provides protection against extreme large loss experience.

To complement existing treaties, Zurich Insurance Group purchases catastrophe reinsurance specific to life insurance for its exposure to natural and man-made catastrophes

## D. Risk profile continued

### D.2 Market risk including investment credit risk

Market risk is the risk associated with Zurich Insurance Group's balance sheet positions where the value or cash flowdepends on financial markets. Risk factors include:

- Equity market prices
- Real estate market prices
- Interest rate risk
- Credit and swap spread changes
- Default of issuers
- Currency exchange rates.

Zurich Insurance Group manages the market risk of assets relative to liabilities on an economic total balance sheet basis. This is done to achieve the maximum risk-adjusted excess return on assets relative to the liability benchmark, while taking into account Zurich Insurance Group's risk appetite and tolerance and local regulatory constraints.

Zurich Insurance Group has policies and limits to manage market risk and keep its strategic asset allocation in line with its risk capacity. Zurich Insurance Group centrally manages certain asset classes to control aggregation of risk, and provides a consistent approach to constructing portfolios and selecting external asset managers. It diversifies portfolios, investments and asset managers, and regularly measures and manages market risk exposure. Zurich Insurance Group has set limits on concentration in investments in single issuers and certain asset classes, as well as by how much asset interest-rate sensitivities can deviate from liability interest-rate sensitivities. Zurich Insurance Group regularly reviews its capacity to hold illiquid investments.

The Asset/Liability Management Investment Committee reviews and monitors Zurich Insurance Group's strategic asset allocation and tactical boundaries, and monitors Zurich Insurance Group asset/liability exposure. Zurich Insurance Group oversees the activities of local asset/liability management investment committees and regularly assesses market risks at both Zurich Insurance Group and local business levels. The economic effect of potential extreme market moves is regularly examined and considered when setting the asset allocation.

Risk assessment reviews include the analysis of the management of interest-rate risk for each major maturity bucket and adherence to the aggregate positions with risk limits. Zurich Insurance Group applies processes to manage market risks and to analyze market risk hotspots. Actions to mitigate risk are taken if necessary to manage fluctuations affecting asset/liability mismatch and risk-based capital.

### D.2.1 Risk from equity securities and real estate

Zurich Insurance Group is exposed to risks arising from price fluctuations in equity securities and real estate. These could affect Zurich Insurance Group's liquidity, reported income, economic surplus and regulatory capital position. Equity risk exposure includes common stocks, including equity unit trusts, private equity, common stock portfolios backing participating-with-profit policyholder contracts, and equities held for employee benefit plans. Exposure to real estate risk includes direct holdings in property, and property company shares and funds. Returns on unit-linked contracts, whether classified as insurance or investment contracts, may be exposed to risks from equity and real estate, but these risks are borne by policyholders. However, Zurich Insurance Group is indirectly exposed to market movements from unit-linked contracts with respect to both earnings and economic capital. Market movements affect the amount of fee income earned when the fee income level is dependent on the valuation of the asset base. Therefore, the value of in-force business for unit-linked business can be negatively affected by adverse movements in equity and real estate markets.

Zurich Insurance Group manages its risks related to equity securities and real estate as part of the overall investment risk management process, and applies limits as expressed in policies and guidelines. Specifically, Zurich Insurance Group limits holdings in equities, real estate and alternative investments. To realize an optimal level of risk diversification, the strategy for equities is defined through a composite of market benchmark indices. Zurich Insurance Group has the capability and processes in place to quickly change the exposure to key equity markets by using derivatives.

For additional information on equity securities and investment property, see note 6 of the consolidated financial statements.

Zurich Insurance Company Ltd Financial Condition Report 2018 D. Risk profile 29

### D.2.2 Risk from interest rates and credit spreads

Interest-rate risk is the risk of loss resulting from changes in interest rates, including changes in the shape of yield curves. Zurich Insurance Group is exposed to interest-rate risk from debt securities, reserves for insurance contracts, liabilities for investment contracts, debt issued by Zurich Insurance Group, commercial and residential mortgages, employee benefit plans, and loans and receivables.

Zurich Insurance Group manages credit-spread risk, which describes the sensitivity of the values of assets and liabilities due to changes in the level or the volatility of credit spreads, over the risk-free interest rate yield curves. Movements of credit spreads are driven by expected probability of default, expected losses in cases of defaults of issuers, the uncertainty of default probabilities and losses.

Returns on unit-linked contracts, whether classified as insurance or investment contracts, are at the risks borne by policyholders; however, Zurich Insurance Group is exposed to fluctuations in interest rates and credit spreads in so far as they affect the amount of fee income earned if the fee income level is derived from the value of the asset base.

## D.2.3 Analysis of market risk sensitivities for interest rate, equity and credit spread risks **Zurich Insurance Company Group investments sensitivities**

The economic market risk sensitivities for the fair value for the ZIC Group investments before tax as of 2018 was a negative USD 9.9 billion (negative USD 10.7 billion as of 2017) for a 100-basis-point increase in interest rates. For a 100-basis-point decrease in interest rates, the sensitivity was USD 11.1 billion (USD 12.0 billion as of 2017). For a 10-percent decline in equity markets, ZIC Group investments would have dropped in value by USD 1.1 billion compared with USD 1.2 billion as of 2017. A 100-basis point increase in credit spreads would have resulted in a decrease of USD 5.2 billion compared with USD 5.4 billion as of 2017.

The following describes limitations of the ZIC Group investment sensitivities. The ZIC Group sensitivities show the effects of a change of certain risk factors, while other assumptions remain unchanged. The interest rate scenarios assume that all interest rates in the respective currencies would move in parallel. They do not take into account the possibility that interest rate changes might differ by rating class; these are disclosed separately as credit spread risk sensitivities. The sensitivity analysis is based on economic assets, and not on shareholders' equity or net income as set out in the consolidated financial statements. The sensitivities only cover the ZIC Group investments, not insurance or other liabilities. The equity market scenarios assume that all stock markets move in the same way. The sensitivity analysis does not take into account actions that might be taken to mitigate losses. Such actions may involve changing the asset allocation, for example, through selling and buying assets. The sensitivities do not indicate the probability of such events occurring in the future. They do not necessarily represent the ZIC Group's view of expected future market changes.

## D.2.4 Risk from defaults of counterparties

#### **Debt securities**

The ZIC Group is exposed to credit risk from third-party counterparties where the ZIC Group holds securities issued by those entities. The default risk is controlled by the ZIC Group counterparty concentration risk limits designed to keep potential losses to an acceptable level.

Debt securities by rating of issuer

as of December 31		2017		2018
	USD millions	% of total	USD millions	% of total
Rating				
AAA	37,426	25.2%	35,283	25.2%
AA	39,664	26.7%	37,362	26.7%
A	26,011	17.5%	20,998	15.0%
BBB	38,360	25.9%	39,529	28.3%
BB and below	6,033	4.1%	5,341	3.8%
Unrated	767	0.5%	1,357	1.0%
Total	148,261	100.0%	139,870	100.0%

The table above shows the credit risk exposure of debt securities, by credit rating. As of December 31, 2018, 95.2 percent of the ZIC Group's debt securities was investment grade and 25.2 percent was rated 'AAA.' As of December 31, 2017, 95.4 percent of debt securities was investment grade and 25.2 percent was rated 'AAA.'

## D. Risk profile continued

Exposure-level limits are based on default and recovery rates and tighten progressively for lower ratings. Where the ZIC Group iden-tifies investments expected to trigger limit breaches, appropriate actions are taken.

The risk-weighted average credit rating of the ZIC Group's debt securities portfolio is 'A-' in 2018, compared with 'A-' in 2017.

As of December 31, 2018, the largest concentration in the ZIC Group's debt securities portfolio was government related at 49 percent of all debt securities. In all other categories, a total of USD 31.4 billion (44 percent) was secured. As of December 31, 2017, 50 percent of the ZIC Group's debt portfolio was invested in government-related securities. In all other categories, a total of USD 30.0 billion (41 percent) was secured. Industry classifications in the fixed income portfolio were revised during 2018 to better align with the management view of the portfolio and financial industry practice. The 2017 figures were restated accordingly.

The second-largest concentration in the ZIC Group's debt securities portfolio is securitized, including structured finance securities and covered bonds.

In addition to debt exposure, the ZIC Group had loan exposure of USD 4.4 billion and USD 4.9 billion to the German central government or the German federal states as of December 31, 2018 and 2017, respectively. For more information on debt exposure, see the 'mortgage loans and other loans' section.

### Cash and cash equivalents

To reduce concentration, settlement and operational risks, Zurich Insurance Group limits the amount of cash that can be deposited with a single counterparty. Zurich Insurance Group also maintains an authorized list of acceptable cash counterparties.

For the ZIC Group, cash and cash equivalents amounted to USD 8.7 billion and USD 8.5 billion as of December 31, 2018 and December 31, 2017, respectively. The risk-weighted average rating of the overall cash portfolio was 'A-' as of December 31, 2018 and December 31, 2017. The ten largest global banks represented 77 percent of the total, whose risk-weighted average rating was 'A+' as of December 31, 2018 and 'A' as of December 31, 2017.

### Mortgage loans and other loans

Mortgage loans amounted to USD 6.6 billion as of December 31, 2018 and USD 7.0 billion as of December 31, 2017. The ZIC Group's largest mortgage loan portfolios are held in Switzerland (USD 3.4 billion) and in Germany (USD 2.3 billion); these are predominantly secured against residential property but also include mortgages secured by commercial property. The ZIC Group invests in mortgages in the U.S. (USD 0.6 billion); these are mainly participations in large mortgage loans secured against commercial property.

The credit risk arising from other loans is assessed and monitored together with the 'debt securities' portfolio. Out of the USD 7.6 billion reported loans as of December 31, 2018, 62 percent are government-related, of which 94 percent are to the German central government or the German federal states. As of December 31, 2018, USD 4.7 billion were rated as 'AAA' (61 percent) compared to 5.1 billion as of December 31, 2017; USD 0.7 billion as 'AA' (10 percent) compared to 0.7 billion as of December 31, 2017; USD 0.3 billion as 'A' (4 percent) compared to with 0.6 billion as of December 31, 2017; USD 1.2 billion as 'BBB' and below (16 percent) compared with 1.2 billion as of December 31, 2017; and USD 0.7 billion as unrated (10 percent) compared with 1.2 billion as of December 31, 2017.

### **Derivatives**

The replacement value of outstanding derivatives represents a credit risk to Zurich Insurance Group. These instruments include interest rate and cross-currency swaps, forward contracts and purchased options. A potential exposure could also arise from possible changes in replacement values. Zurich Insurance Group regularly monitors credit risk exposures arising from derivative transactions. Outstanding positions with external counterparties are managed through an approval process embedded in derivative programs. Risk from currency exchange rates.

To limit credit risk, derivative financial instruments are typically executed with counterparties rated 'A—' or better by an external rating agency, unless collateral is provided as per Zurich Insurance Group's risk policy manuals. Zurich Insurance Group's standard practice is to only transact derivatives with those counterparties for which Group has in place an ISDA master agreement, with a credit support annex. This mitigates credit exposures from over-the-counter transactions due to close-out netting and requires the counterparty to post collateral when the derivative position exceeds an agreed threshold. Zurich Insurance Group further mitigates credit exposures from derivative transactions by using exchange-traded or centrally cleared instruments whenever possible.

Zurich Insurance Company Ltd Financial Condition Report 2018 D. Risk profile 31

### D.2.5 Risk from currency exchange rates

Currency risk is the risk of loss resulting from changes in exchange rates. Zurich Insurance Group operates internationally and therefore is exposed to the financial impact of changes in the exchange rates of various currencies. Zurich Insurance Group's presentation currency is the U.S. dollar, but its assets, liabilities, income and expenses are denominated in many currencies, with significant amounts in euro, Swiss franc and British pound, as well as the U.S. dollar. On local balance sheets a currency mismatch may cause a balance sheet's net asset value to fluctuate, either through income or directly through equity. Zurich Insurance Group manages this risk by matching foreign currency positions on local balance sheets within prescribed limits. Residual local mismatches are reported centrally to make use of the netting effect across Zurich Insurance Group. Zurich Insurance Group hedges these residual local mismatches within an established limit through a central balance sheet. For information on net gains/losses on foreign currency transactions included in the consolidated income statements, see note 1 of the consolidated financial statements. The monetary currency risk exposure on local balance sheets is considered immaterial.

Differences arise when functional currencies are translated into Zurich Insurance Group's presentation currency, the U.S. dollar. Zurich Insurance Group applies net investment hedge accounting to protect against the impact that changes in certain exchange rates might have on selected net investments.

The table below shows the total IFRS equity's sensitivity to changes in exchange rates for the main functional currencies to which the ZIC Group is exposed. Positive values represent an increase in the value of the ZIC Group's total equity. See notes 1, 3 and 7 of the consolidated financial statements for additional information on foreign currency translation and transactions.

Sensitivity of the ZIC Group's total IFRS equity to exchange rate fluctuations

in USD millions, as of December 31	2017	2018
10% increase in		
EUR/USD rate	467	335
GBP/USD rate	232	203
CHF/USD rate	372	344
BRL/USD rate	147	163
Other currencies/USD rates	645	624

The sensitivities show the effects of a change in the exchange rates only, while other assumptions remain unchanged. The sensitivity analysis does not take into account management actions that might be taken to mitigate such changes. The sensitivities do not indicate a probability of such events occurring in the future. They do not necessarily represent the ZIC Group's view of expected future market changes. While table above shows the effect of a 10 percent increase in cur-rency exchange rates, a decrease of 10 percent would have the converse effect.

## D. Risk profile continued

### D.3 Other credit risk

Credit risk is the risk associated with a loss or potential loss from counterparties failing to fulfill their financial obligations. See section 'risks from defaults of counterparties' for market-risk-related asset categories. Zurich Insurance Group's exposure to other credit risk is derived from the following main categories of assets:

- Reinsurance assets
- Receivables.

Zurich Insurance Group's objective in managing credit risk exposures is to maintain them within parameters that reflect Zurich Insurance Group's strategic objectives, and its risk appetite and tolerance. Sources of credit risk are assessed and monitored, and Zurich Insurance Group has policies to manage specific risks within various subcategories of credit risk. To assess counterparty credit risk, Zurich Insurance Group uses ratings assigned by external rating agencies, qualified third parties such as asset managers, and internal rating assessments. If external rating agencies' ratings differ, Zurich Insurance Group generally applies the lowest, unless other indicators justify an alternative, which may be an internal credit rating.

Zurich Insurance Group regularly tests and analyzes credit risk scenarios and prepares possible contingency measures that may be implemented if the credit risk environment worsens.

Zurich Insurance Group actively uses collateral to mitigate credit risks. Nevertheless, underlying credit risks are managed independently from the collateral. Zurich Insurance Group has limits and quality criteria to identify acceptable letter-of-credit providers. Letters of credit enable Zurich Insurance Group to limit the risks embedded in reinsurance captives, deductibles, trade credit and surety.

Zurich Insurance Group has counterparty limits, which are regularly monitored. Exposure to counterparties' parent companies and subsidiaries is aggregated to include reinsurance assets, investments, derivatives, and for the largest counterparties, certain insurance products. There was no unapproved material exposure in excess of Zurich Insurance Group's limits for counterparty aggregation as of December 31, 2018 nor December 31, 2017.

On-balance sheet exposures are the main source of credit risk. Off-balance sheet credit exposures are related primarily to certain insurance products, reinsurance and collateral used to protect underlying credit exposures on the balance sheet. The ZIC Group also has off-balance sheet exposures related to undrawn loan commitments of USD 2 million and USD 16 million as of December 31, 2018 and 2017, respectively. See note 22 of the consolidated financial statements for undrawn loan commitments.

### D.3.1 Credit risk related to reinsurance assets

Zurich Insurance Group's Corporate Reinsurance Security Committee manages the credit quality of cessions and reinsurance assets. Zurich Insurance Group typically cedes new business to authorized reinsurers with a minimum rating of 'A–.' As of December 31, 2018 and 2017, in both years, 52 percent of the exposure ceded to reinsurers rated below 'A-' and those that were unrated were collateralized. Of the exposure ceded to reinsurers that are rated below 'A–' or are not rated, 50 percent was ceded to captive insurance companies in 2018, and 51 percent in 2017.

Reinsurance assets included reinsurance recoverables (the reinsurers' share of reserves for insurance contracts) of USD 21.3 billion and USD 21 billion, and receivables arising from ceded reinsurance of USD 1.1 billion and USD 1.2 billion as of December 31, 2018 and 2017, respectively, gross of allowance for impairment. Reserves for potentially uncollectible reinsurance assets amounted to USD 113 million as of December 31, 2018 and USD 94 million as of December 31, 2017. The ZIC Group's policy on impairment charges takes into account both specific charges for known situations (e.g., financial distress or litigation) and a general, prudent provision for unanticipated impairments.

Reinsurance assets in the following table are shown before taking into account collateral such as cash or bank letters of credit and deposits received under ceded reinsurance contracts. Unsecured reinsurance assets shown are after deducting collateral. Except for an immaterial amount, letters of credit are from banks rated 'A–' or better. Collateral increased by USD 0.2 billion to USD 9.6 billion as of December 31, 2018, compared with December 31, 2017.

The following table shows reinsurance assets and unsecured reinsurance assets split by rating.

Reinsurance assets and unsecured reinsurance assets by rating of reinsurer and captive

as of December 31				2017				2018
	Unsecured reinsurance				Unsecured reinsurance			
	Reinsurance assets assets			Reinsurance assets assets				
	USD	% of	USD	% of	USD	% of	USD	% of
	millions	total	millions	total	millions	total	millions	total
Rating								
AAA	_	0.0%	_	0.0%	9	0.0%	9	0.1%
AA	5,939	26.9%	5,378	42.5%	5,633	25.3%	5,173	40.8%
A	10,562	47.9%	4,619	36.5%	10,882	48.9%	4,740	37.4%
BBB	1,634	7.4%	974	7.7%	1,572	7.1%	983	7.8%
BB	247	1.1%	57	0.5%	447	2.0%	232	1.8%
B and below	638	2.9%	168	1.3%	645	2.9%	37	0.3%
Unrated	3,036	13.8%	1,446	11.4%	3,085	13.9%	1,510	11.9%
Total <sup>1</sup>	22,056	100.0%	12,642	100.0%	22,273	100.0%	12,685	100.0%

<sup>&</sup>lt;sup>1</sup> The value of the collateral received amounts to USD 9.6 billion and USD 9.4 billion as of December 31, 2018 and 2017, respectively.

### D.3.2 Credit risk related to receivables

The ZIC Group's largest credit-risk exposure to receivables is related to third-party agents, brokers and other intermediaries. It arises where premiums are collected from customers to be paid to the ZIC Group, or to pay claims to customers on behalf of the ZIC Group. Zurich Insurance Group has policies and standards to manage and monitor credit risk related to intermediaries. Zurich Insurance Group requires intermediaries to maintain segregated cash accounts for policyholder money. Zurich Insurance Group also requires that intermediaries satisfy minimum requirements of capitalization, reputation and experience, and provide short-dated business credit terms.

Receivables that are past due but not impaired should be regarded as unsecured, but some of these receivable positions may be offset by collateral. Zurich Insurance Group reports internally on Zurich Insurance Group past-due receivable balances and strives to keep the balance of past-due positions as low as possible, while taking into account customer satisfaction.

Receivables from ceded reinsurance are part of reinsurance assets and are managed accordingly. See notes 15 and 24 of the consolidated financial statements for additional information on receivables.

## D.4 Operational risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, systems or from external events such as external fraud, catastrophes, or failure in outsourcing arrangements. Zurich Insurance Group has a framework to identify, assess, quantify, mitigate, monitor and report operational risk within the Group. Within this framework, Zurich Insurance Group:

- Uses a scenario-based approach to assess, model and quantify the capital required for operational risk for business units under extreme circumstances. This approach allows information to be compared across Zurich Insurance Group and highlights the main scenarios contributing to the Z-ECM capital required.
- Documents and reviews loss events exceeding a threshold determined per Zurich's risk policy manuals. Remedial action is taken to avoid a recurrence of such operational loss events.
- Conducts risk assessments where operational risks are identified for key business areas. Risks identified and assessed above a certain threshold must be mitigated. Risk mitigation plans are documented and tracked on an ongoing basis. In the assessments, Zurich Insurance Group uses such sources of information as the Total Risk Profiling™ process, internal control assessments, and audit findings, as well as scenario modeling and loss event data.

Zurich Insurance Group has specific processes and systems in place to focus on high-priority operational matters such as managing information security and third-party suppliers, as well as combating fraud.

## D. Risk profile continued

Managing information security, including cyber risk, remains a key focus for Zurich Insurance Group. To measure the global exposure to this risk, a dedicated framework has been established, resulting in substantial improvements achieved throughout the year. As part of the introduction of this framework, capabilities were upgraded across the risk function and more at-tention was paid to types of risk arising from Zurich Insurance Group's ongoing digital transformation, with particular focus on infor-mation security, emerging technologies, innovation, and third-party management.

Zurich Insurance Group's customer focused organization, with enhanced capabilities and increased attention to operational resilience, maintains our core business services by upgrading our continuous reviews and assurance around our existing business continuity program. Zurich Insurance Group pays increasing attention to the protection and privacy of data for all of our stakeholders. We have done this by revising corresponding risk policies and governance, which has led to a more precise alignment to new legal and regulatory requirements and the changing operating environments.

With the increased use of third parties and suppliers and amid continual changes in regulatory requirements, the Group is providing greater support to the organization in third-party and supplier risk management practices. This is taking place alongside an ongoing focus on critical suppliers. It includes identifying risks and obtaining assurance over key controls to affirm that suppliers can deliver services as required through the entire lifecycle of sourcing arrangements. Assessments include ensuring that suppliers remain financially viable, comply with Zurich's security and resilience requirements, and limit Zurich Insurance Group's exposure to geographic and supplier concentration risks.

Preventing, detecting and responding to fraud are embedded in Zurich Insurance Group's business. Both claims and non-claims fraud are included in the common framework for assessing and managing operational risks. For Z-ECM calculations, claims fraud is part of insurance risk and non-claims fraud is part of operational risk.

## D.5 Liquidity risk

Liquidity risk is the risk that Zurich Insurance Group may not have sufficient liquid financial resources to meet its obligations when they fall due, or would have to incur excessive costs to do so. Zurich Insurance Group's policy is to maintain adequate liquidity and contingent liquidity to meet its liquidity needs under normal conditions and in times of stress. To achieve this, Zurich Insurance Group assesses, monitors and manages its liquidity needs on an ongoing basis.

Zurich Insurance Group-wide liquidity management policies and specific guidelines govern how local businesses plan, manage and report their local liquidity and include regular stress tests for all major carriers within Zurich Insurance Group. The stress tests use a standardized set of internally defined stress events, and are designed to provide an overview of the potential drain on liquidity if Zurich Insurance Group had to recapitalize local balance sheets. Similar guidelines apply at Zurich Insurance Group level, and detailed liquidity forecasts are regularly conducted, based on local businesses' input and Zurich Insurance Group's forecasts. As part of its liquidity management, Zurich Insurance Group maintains sufficient cash and cash equivalents and high-quality, liquid investment portfolios to meet outflows under expected and stressed conditions. Zurich Insurance Group also maintains internal liquidity sources that cover Zurich Insurance Group's potential liquidity needs, including those that might arise in times of stress. Zurich Insurance Group takes into account the amount, availability and speed at which these sources can be accessed. Zurich Insurance Group has access to diverse funding resources to cover contingencies, including asset sales, external debt issuance and making use of committed borrowing facilities or letters of credit. Zurich Insurance Group maintains a range of maturities for external debt securities. A potential source of liquidity risk is the effect of a downgrade of Zurich Insurance Group's credit rating. This could affect Zurich Insurance Group's commitments and quarantees, potentially increasing liquidity needs. This risk, and mitigating actions that might be employed, are assessed on an ongoing basis within Zurich Insurance Group's liquidity framework.

Zurich Insurance Group regularly analyzes the liquidity of the investment assets, and monitors that the liquidity of assets stays in line with the liquidity needs. During 2018, Zurich Insurance Group remained within its limits allotted to the levels of illiquid assets it can hold.

For more information on debt obligation maturities, see note 18 of the consolidated financial statements, and for information on commitments and guarantees, see note 22 of the consolidated financial statements.

Zurich Insurance Company Ltd Financial Condition Report 2018 D. Risk profile 35

Zurich Insurance Group's ongoing liquidity monitoring includes regular reporting to the executive management and quarterly reporting to the Risk and Investment Committee of the Board, covering aspects such as Zurich Insurance Group's actual and forecast liquidity, possible adverse scenarios that could affect Zurich Insurance Group's liquidity and possible liquidity needs from Zurich Insurance Group's main subsidiaries, including under conditions of stress.

For more information on the ZIC Group's other financial liabilities, see note 16 of the consolidated financial statements. See note 6 of the consolidated financial statements for information on the maturity of debt securities.

Zurich Insurance Group has committed to contribute capital to subsidiaries and third parties that engage in making investments in direct private equity and private equity funds. Commitments may be called by the counterparty over the term of the investment (generally three to five years) and must be funded by Zurich Insurance Group on a timely basis. See note 22 of the consolidated financial statements.

### D.6 Other material risks

### D.6.1 Strategic risk

Strategic risk corresponds to the risk of being unable to achieve strategic targets. Strategic risks can arise from:

- Inadequate risk-reward assessment of strategic plans
- Improper implementation of strategic plans
- Unexpected changes to underlying assumptions

Zurich defines the strategy as the long-term plan of action designed to allow Zurich Insurance Group to achieve its goals and aspirations based on Zurich Insurance Group's purpose and values and strategic options.

Zurich Insurance Group works to reduce unintended risks of strategic business decisions through its risk assessment processes and tools, including the Total Risk Profiling™ process. As part of the annual assessment of strategic risks, the Executive Committee (ExCo) assessed potential risks from both external and internal factors, looking at 2019 and beyond. These include: macro-economic risks such as financial stress due to geopolitical uncertainties and monetary policy; long-term capital and liquidity impacts of a new post-Brexit regulatory regime in the UK; changes affecting competitiveness in markets where Zurich is active; information security including cyber risks and digital transformation. The ExCo has defined actions to allow it to respond as appropriate and reviews changes to the key risks and their status at least quarterly.

Zurich Insurance Group evaluates the risks of M&A transactions both from a quantitative and a qualitative perspective. Zurich Insurance Group conducts risk assessments of M&A transactions to evaluate risks specifically related to integrating acquired businesses.

### D.6.2 Risks to the Zurich Insurance Group's reputation

Risks include acts or omissions by Zurich Insurance Group or any of its employees that could damage Zurich Insurance Group's reputation or lead to a loss of trust among its stakeholders. Every risk type has potential consequences for Zurich's reputation. Effectively managing each type of risk helps reduce such threats.

Zurich Insurance Group aims to preserve its reputation by adhering to applicable laws and regulations, and by following the core values and principles of Zurich Insurance Group's code of conduct, which promotes integrity and good business practice. Zurich Insurance Group centrally manages certain aspects of reputation risk, for example, communications, through functions with the appropriate expertise.

## E. Valuation

### E.1 Overarching market-consistent valuation principle

The following section presents ZIC Group's market-consistent balance sheet (MCBS), i.e., the valuation of assets and liabilities in a market-consistent way, including the market-consistent discounting of insurance liabilities. Under the SST, the MCBS is essential in determining the Group's risk-bearing capital.

As an overarching principle, all assets and liabilities are valued in accordance with economic principles in a market-consistent manner. A market-consistent valuation is based on, and does not contradict to, the most recent information that can be obtained from trading in liquid and transparent financial markets.

FINMA stipulates that the SST market-consistent balance sheet value of all insurance and non-insurance liabilities (with the exception of instruments eligible for risk-bearing capital) shall be determined under the assumption that ZIC will fulfill its obligation in full; thus, own credit risk is not considered.

In summary, the following valuation methods apply.

MCBS valuation	Mark-to-market	Highest priority for	Fair value as defined in the consolidated IFRS financial
principles		third-party assets,	statements;
		IFRS equity instruments	
		and eligible capital	
		instruments	
	Mark-to-model	If mark-to-market	Fair value as defined in the consolidated IFRS financial
		cannot be applied	statements; or
			Best estimate valuation using parameter or assumptions explicitly
			stipulated by FINMA (e.g.; liabilities valued at discounted cash
			flows using risk-free rate, thus, without consideration of own
			credit risk).
	IFRS carrying value		As a practical expedient, IFRS carrying value other than fair value
			is used as proxy to market-consistent valuation provided such
			measurement can be considered reasonable. For example, IFRS
			carrying value may be considered as a reasonable proxy based
			on the following considerations:
			- It represents current balances (e.g., cash accounts); or
			- It involves high-frequency turnover with daily settlements (e.g.,
			operational clearing accounts); or
			- It is expected to be settled/realized within relatively short period
			after origination (generally, within three months and always less
			than twelve months) and is exposed to only insignificant risk of
			changes in value.

When applying the mark-to-model method, adequate and best-practice valuation models and methodologies are used and sufficiently documented.

For more information on fair value measurement, see notes 6, 7, and 23 of the consolidated financial statements in the ZIC Group's Annual Report 2018, pages 64 to 66; 67 to 70; 107 to 114. The summary of accounting policies underlying IFRS valuations, as well as significant judgments and assumptions, are included in notes 3 and 4 of the consolidated financial statements in the ZIC's Annual Report 2018, pages 49 to 59.

### E.2 Market-consistent balance sheet following SST principles

FINMA has established the Swiss Solvency Test to assess risk quantitatively. SST calculations are based on a market-consistent valuation of balance sheet positions. The following tables show the main drivers for the differences in valuation between MCBS (used for SST purposes) and the IFRS values, where certain IFRS amounts have been reclassified in order to comply with FINMA requirements.

# Asset valuation MCBS vs IFRS

In USD millions, as of December 31			Evolution		
			2017-2018		Difference 2018
	2017 (SST)	2018 (SST)	(SST)	2018 (IFRS)	(IFRS – SST)
Market-consistent value of investments					
Real estate	12,238	12,351	112	12,351	0
Shareholdings	19	36	17	36	0
Fixed income securities	133,139	124,068	(9,072)	123,163	904
Loans	10,410	9,130	(1,280)	7,614	1,516
Mortgages	7,501	6,934	(566)	6,556	379
Equities	8,519	7,644	(875)	8,339	(695)
Other investments.	25,033	25,298	265	25,283	15
Collective investment schemes	4,159	3,682	(477)	3,667	15
Alternative investments	3,440	3,308	(132)	3,308	0
Other capital investments	17,434	18,308	874	18,308	0
Total Investments	196,860	185,461	(11,399)	183,341	2,119
Financial investments from unit-linked life					
insurance	128,591	133,047	4,457	109,733	23,314
Receivables from derivative financial					
instruments	903	899	(5)	899	0
Market-consistent value of other assets					
Cash and cash equivalents	8,504	8,714	211	8,695	19
Receivables from insurance business	11,237	10,739	(498)	10,571	168
Other receivables	3,367	3,533	166	3,522	11
Other assets	5,245	5,294	49	58,233	(52,939)
Total other assets	28,352	28,281	(72)	81,021	(52,740)
Total market-consistent value of assets	354,706	347,687	(7,019)	374,994	(27,307)
	·				

# E. Valuation continued

MCBS vs IFRS – best estimate liabilities and risk-bearing capital

In USD millions, as of December 31			Evolution		
in oss nimons, as or seccurise s.			2017–2018		Difference 2018
	2017 (SST)	2018 (SST)	(SST)	2018 (IFRS)	(IFRS – SST)
Best estimate liabilities (BEL)	2017 (551)	2010 (331)	(551)	2010 (1113)	(1113 331)
Best estimate of insurance liabilities	(317,983)	(292,304)	25,680	(297,529)	5,225
Direct insurance: life insurance business	(317/303/	(232/301)	25/000	(237/323)	3,223
(excluding ALV)	(98,832)	(94,743)	4,089	(107,320)	12,578
Direct insurance: non-life insurance business	(66,108)	(63,182)	2,926	(73,498)	10,316
Direct insurance: health insurance business	0	0	0	0	0
Direct insurance: unit-linked life insurance		-	-		
business	(146,012)	(129,532)	16,479	(109,954)	(19,578)
Direct insurance: other business	(457)	(470)	(13)	(475)	5
Outward reinsurance: life insurance business	(137)	(17.5)	(13)	()	
(excluding ALV)	(2,215)	(694)	1,521	(2,144)	1,450
Outward reinsurance: non-life insurance	(2/2:3)	(00.)	.,52.	(=/:::/	.,.50
business	(4,353)	(3,676)	676	(4,131)	455
Outward reinsurance: health insurance business	0	0	0	0	0
Outward reinsurance: unit-linked life insurance	-		-		
business	0	1	1	1	0
Outward reinsurance: other business	(6)	(6)	0	(6)	0
Reinsurers' share of best estimate of	(=)	(-)	-	(-)	
insurance liabilities	38.716	17.567	(21,149)	21.197	(3,630)
Direct insurance : life insurance business	00,110	11,001	(= 1,110,		(0,000)
(excluding ALV)	4,998	4,916	(82)	6,204	(1,288)
Direct insurance: non-life insurance business	7,102	7,469	368	8,616	(1,147)
Direct insurance: health insurance business	0	0	0	0	0
Direct insurance : unit-linked life insurance					
business	21,656	(0)	(21,657)	0	(0)
Direct insurance: other business	0	0	0	0	0
Outward reinsurance: life insurance business					-
(excluding ALV)	266	317	51	313	4
Outward reinsurance: non-life insurance					
business	4,695	4,865	171	6,064	(1,199)
Outward reinsurance: health insurance business	0	0	0	0	0
Outward reinsurance: unit-linked life insurance					
business	0	0	0	0	0
Outward reinsurance: other business	0	0	0	0	0
Market consistent value of other liabilities			-		
Non-technical provisions	(4,449)	(3,397)	1,053	(3,795)	399
Interest-bearing liabilities similar to debt capital	(16,920)	(15,078)	1,842	(12,111)	(2,967)
Liabilities from derivative financial instruments	(214)	(325)	(111)	(325)	0
Deposits retained on ceded reinsurance	(431)	(432)	(1)	(612)	180
Liabilities from insurance business	(4,326)	(3,611)	715	(3,583)	(29)
Other liabilities	(15,211)	(14,534)	677	(48,392)	33,859
Total BEL plus market-consistent value of					
liabilities	(320,818)	(312,113)	8,706	(345,150)	33,037
Difference between market-consistent assets					
and market-consistent debt capital	33,888	35,575	1,687	29,844	5,731

#### E.2.1 Evolution of assets since 2017

#### **Total Investments**

The market value of Investments decreased by USD 11.4 billion from USD 196.9 billion as of December 31, 2017 to USD 185.5 billion as of December 31, 2018.

- The movement is primarily driven by a decrease of USD 9 billion in **Fixed income securities** from USD 133.1 billion in December 31, 2017 to USD 124.1 billion in December 31, 2018, due to unfavorable foreign currency translation effects of USD 5 billion, decreases in market values following rising yields mainly in the US of USD 1.6 billion, in Switzerland of USD 1 billion and in Germany of USD 0.7 billion. Furthermore an increase in net sales, as a result of a shift in the strategic asset allocation from debt securities to Equities and Asset backed securities, contributed to the decrease mainly in Switzerland of USD 1.5 billion and in the UK of USD 0.5 billion. These decreases were partially offset by additions in Spain of USD 1 billion, in the US of USD 0.6 billion and the acquisition of Euroamerica assets in Chile of USD 0.6 billion.
- Loans decreased by USD 1.3 billion from USD 10.4 billion in December 31, 2017 to USD 9.1 billion in December 31, 2018. The decrease is largely due to unfavorable currency movement of USD 0.5 billion, maturities and net sales driven by a change in the asset allocation mainly in Switzerland of USD 0.9 billion, in Germany and in the UK of USD 0.5 billion offset by change in fair value of USD 0.8 billion mainly in Switzerland and in the UK.
- Mortgages decreased by USD 0.6 billion from USD 7.5 billion in December 31, 2017 to USD 6.9 billion in December 31, 2018. The decrease is mainly due to an unfavorable currency movements of USD 0.2 billion, maturities mostly in Germany of USD 0.2 billion and net sale in Switzerland of USD 0.1 billion, following a change in the asset allocation.
- Equities decreased by USD 0.9 billion from USD 8.5 billion in December 31, 2017 to USD 7.6 billion in December 31, 2018. The decrease is primarily due to unfavorable currency movements of USD 0.2 billion, a decrease in market values of USD 1.5 billion, despite increased volume of investments mainly in Switzerland, Germany and in the US due to changes in the asset allocation. These decreases were offset by net acquisitions in the US of USD 0.4 billion, Italy of USD 0.2 billion and in Switzerland of USD 0.2 billion.
- These decreases have been partially offset by an increase in **Other Investments** of USD 0.3 billion from USD 25 billion in December 31, 2017 to USD 25.3 billion December 31, 2018 driven by changes in asset allocation of USD 0.6 billion, as offset by negative effects of currency translation of USD 0.3 billion. This increase resulted from increases in Asset backed securities by USD 1 billion mainly in the US due to net acquisition of USD 1.8 billion, partially offset by negative market revaluation of USD 0.6 billion, in Private equity of USD 0.2 billion mostly due to positive market revaluation, offset by a decrease of USD 0.5 billion in Investment Funds. This is mostly due to net sales in the US of USD 0.6 billion and in Spain of USD 0.2 billion, as well as a reduction in fair value of USD 0.3 billion as offset by acquisitions in Italy of USD 0.3 billion and in Germany of 0.3 billion. Additionally a USD 0.3 billion decrease in Hedge funds, due to changes in fair value.
- Real estate increased by USD 0.2 billion from USD 12.2 billion in December 31, 2017 to USD 12.4 billion in December 31, 2018 as a result of increases in fair values across many regions of USD 0.4 billion, net acquisition in Italy of USD 0.2 billion and in the US of USD 0.2 billion mostly offset by an unfavorable currency movements of USD 0.3 billion and net sales of USD 0.4 billion in Switzerland.

#### Financial investments from unit-linked life insurance

Financial investments from unit-linked life insurance increased by USD 4.5 billion from USD 128.6 billion in December 31, 2017 to USD 133.1 billion in December 31, 2018. The increase is driven by the reclassification of USD 21.1 billion from reinsurers' share of best estimate of unit-linked insurance reserves and positive market movements in Brazil of USD 1.3 billion mostly offset by an unfavorable currency movement of USD 8.6 billion and negative market movements and lapses mainly in the UK of USD 9.4 billion.

### E. Valuation continued

#### **Other Assets**

The market-consistent value of total other assets decreased by USD 0.1 billion from USD 28.4 billion in 2017 to USD 28.3 billion in 2018.

- Receivables from insurance business decreased by USD 0.5 billion from USD 11.2 billion in 2017 to USD 10.7 billion in 2018, mostly due to reduction in deposits made under assumed reinsurance treaties.
- Cash and cash equivalents increased by USD 0.2 billion from USD 8.5 billion in 2017 to USD 8.7 billion in 2018, mainly due to higher operational cash resulting from changes in the timing of settlements.

#### E.2.2 Evolution of liabilities since 2017

#### Best estimate of insurance liabilities

The market value Best estimate of insurance liabilities decreased by USD 25.7 billion from USD 318 billion as of December 31, 2017 to USD 292.3 billion as of December 31, 2018.

- **Direct insurance: unit-linked life insurance business** decreased by USD 16.5 from USD 146 billion in December 31, 2017 to USD 129.5 billion in December 31, 2018, mainly due to a favorable currency translation of USD 8.3 billion and by negative market movements and lapses in UK, partially offset by positive market movements in Brazil of USD 1.3 billion.
- Direct insurance: life insurance business (excluding ALV) decreased by USD 4.1 billion from USD 98.8 billion in December 31, 2017 to USD 94.7 billion in December 31, 2018. This is mainly due to a favorable currency translation of USD 3.7 billion, decreases in Switzerland in corporate life and individual savings and annuity products, as well as in Germany, mostly due to higher number of maturities in individual traditional savings business. These decreases are mostly offset by an increase in Spain in individual savings products distributed via Bansabadell Vida.
- **Direct insurance: non-life insurance business** decreased by USD 2.9 billion from USD 66.1 billion in December 31, 2017 to USD 63.2 billion in December 31, 2018 is mainly due to a favorable currency translation of USD 1.6 billion, divestment of non-core business portfolios for a total of USD 0.6 billion, a reduction in the US of USD 0.6 billion, driven by longer payment patterns and higher discount rates offset by an increase of USD 0.3 billion as a result of the acquisition of QBE.
- Outward reinsurance decreased by USD 2.2 billion from USD 6.6 billion in December 31, 2017 to USD 4.4 billion in December 31, 2018.
  - Mainly due to Outward reinsurance: life insurance business (excluding ALV) which decreased by USD 1.5 billion from USD 2.2 billion in December 31, 2017 to USD 0.7 billion in December 31, 2018 reflecting the positive economic value of the reinsurance agreement with OnePath Life entered into in May 2018.
  - Outward reinsurance: non-life insurance business decreased by USD 0.7 billion from USD 4.4 billion in December 31, 2017 to USD 3.7 billion in December 31, 2018 mainly due to the cancellation of the reinsurance agreement with Farmers Exchanges¹ where prior accident year reserves of USD 0.4 billion are in run-off.

#### Reinsurers' share of best estimate of insurance liabilities

Shares of reinsurers in the insurance reserves decreased by USD 21.1 billion from USD 38.7 billion in December 31, 2017 to USD 17.6 billion in December 31, 2018. The decrease is mainly due to a reclassification of USD 21.1 billion from **Direct insurance : unit-linked life insurance business** to Financial investments from unit-linked life insurance. The reclassification has a nil impact to the available financial resources (AFR).

These decreases have been partially offset by an increase in **Direct insurance: non-life insurance business** by USD 0.4 billion from USD 7.1 billion in December 31, 2017 to USD 7.5 billion in December 31, 2018. The increase is mainly due to recoveries on individual large losses in the US. **Outward reinsurance: non-life insurance business** increased by USD 0.2 billion from USD 4.7 billion in December 31, 2017 to USD 4.9 billion in December 31, 2018, driven by changes in loss reserves for large claims.

<sup>1</sup> The Farmers Exchanges are owned by their policyholders. Farmers Group, Inc, a wholly-owned subsidiary of the Group, provides certain non-claims administrative, management, and ancillary services to the Farmers Exchanges as attorney-in-fact and receives fees for its services.

#### Other liabilities

The market value of Other liabilities has decreased by USD 4.2 billion from USD 41.6 billion as of December 31, 2017 to USD 37.4 billion as of December 31, 2018.

- Non-technical provisions decreased by USD 1 billion from USD 4.4 billion in December 31, 2017 to USD 3.4 billion in December 31, 2018. The pension fund liability decreased by USD 1 billion mainly in UK, mostly due to changes in financial assumptions. In addition there was an extraordinary contribution for the Farmers pension plan reducing the net pension obligation.
- A decrease in **Interest-bearing liabilities** of USD 1.8 billion from USD 16.9 billion in December 31, 2017 to USD 15.1 billion in December 31, 2018 mainly due to financing the external dividend payout during 2018.
- Liabilities from insurance business decreased by USD 0.7 billion from USD 4.3 billion in December 31, 2017 to USD 3.6 billion in December 31, 2018 mainly due to a reclassification with an equal and offsetting movement within Other miscellaneous liabilities of USD 1 billion.
- Other liabilities decreased by USD 0.7 billion from USD 15.2 billion to USD 14.5 billion in December 31, 2018, mainly due to a reclassification with an equal and offsetting movement within Liabilities from insurance business of USD 1 billion mainly offset by increases in Current Income Tax Payable of USD 0.3 billion, USD 0.3 billion in Other payables and USD 0.8 billion in affiliated cash pooling liabilities.

#### E.2.3 Market-consistent value of assets

#### Market-consistent value of investments

Under IFRS, investments are measured at fair value, amortized cost or using the equity method. In addition, IFRS requires fair value disclosures for financial assets that are not measured at fair value. The MCBS value of investments reflects fair value determined in accordance with the overarching valuation principles outlined in section E.1.

SST – IFRS	valuation
difference	

in USD millions, as of December 31, 2018		
<b>Total IFRS value of investments</b>	183,341	
	Bonds held-to-maturity measured at fair value in MCBS	537
Fixed income securities	The reclassification to held for sale is not applicable in MCBS	368
Mortgages	Mortgage loans measured at fair value in MCBS	379
	Other loans measured at fair value in MCBS	1,508
Loans	The reclassification to held for sale is not applicable in MCBS	8
	Own shares are not recognised in SST	(695)
Other investments	The reclassification to held for sale is not applicable in MCBS	15
Total market-consistent value o	f Investments (SST)	185,461

### F. Valuation continued

#### Market-consistent value of financial investments from unit-linked life insurance

The investments for unit-linked insurance are designated at fair value through profit or loss in IFRS. Therefore, no measurement difference arises in MCBS. However, under IFRS, the Group reclassified assets of USD 23.3 billion as 'held-for-sale' following agreements to sell certain businesses in the UK. This reclassification is not applicable in MCBS.

# SST – IFRS valuation difference

in USD millions, as of December 31, 2018

Total IFRS value of financial investments from unit-linked life insurance		
Financial investments from		
unit-linked life insurance	The reclassification to held for sale is not applicable in MCBS	23,314
Total market-consistent value of financial investments from unit-linked life insurance (SST)		

#### Market-consistent value of other assets

Under IFRS, other assets include deferred acquisition costs (DAC), deferred tax assets, goodwill and other intangible assets, which are valued at zero in the MCBS. Real estate held for own use is measured at cost less depreciation and impairment, whereas the MCBS value reflects fair value.

Cash and cash equivalents are presented at IFRS carrying value because such balances are current and solely held for the purpose of meeting short-term (operational) cash commitments.

Receivables from insurance business and other receivables are valued at the IFRS carrying value, provided this is a reasonable proxy for fair value (i.e., the balances are subject to only insignificant risk of changes in value and settlement is expected to occur generally within three months and no more than twelve months). In this case, the IFRS carrying value is reported net of credit impairment allowance. Otherwise, the value is based on fair value (including credit risk) using the IFRS valuation principles.

Derivative financial instruments are measured at fair value under both IFRS and MCBS.

The reclassification of assets for USD 23.9 billion to the held for sale category under IFRS is not applicable in MCBS.

# SST – IFRS valuation difference

in USD millions, as of December 31, 2018		
Total IFRS value of other assets		81,021
	Deferred acquisition costs: Value set to zero in MCBS	(19,547)
	Deferred origination costs: Value set to zero in MCBS	(419)
	Deferred tax assets: Value set to zero in MCBS	(1,125)
	Goodwill and other intangible assets: Value set to zero in MCBS	(8,202)
	Property and equipment: Real estate held for own use is at fair value in MCBS	432
	The reclassification to held for sale is not applicable in MCBS	(23,915)
Other assets	Other differences	36
Total market-consistent value of	other assets (SST)	28,281

#### E.2.4 Market-consistent value of liabilities

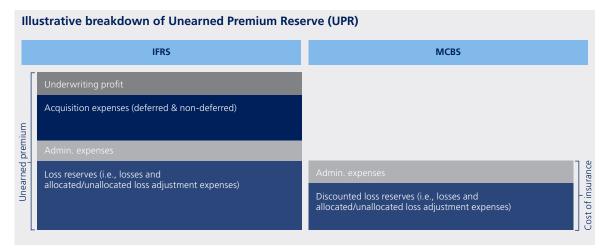
#### Best estimate of insurance liabilities

#### Best estimate of unearned premium reserves

Under IFRS, the unearned premium reserve (UPR) represents the portion of the premiums written related to the unexpired coverage period. This reserve covers expected future losses, loss adjustment and policy administration expenses as well as underwriting profits for contracts in force. To arrive at the MCBS value for UPR, the following adjustments are made:

- Expected future losses (including loss adjustment expenses) are discounted;
- Underwriting profits are not included, as these do not represent future cash flows; and

• Future administration expenses only encompass the estimated costs to administer and maintain the insurance policy over the remaining coverage period. Consequently, any deferred or non-deferred acquisition-related costs (such as commissions, sales and distribution management, underwriting, risk engineering, and marketing costs) are excluded. Further, claims settlements costs are not included in administration expenses as such costs are typically part of future losses. Similarly, amortization of DAC and intangible assets is not included because DAC and intangible assets are set to zero in MCBS.



#### Best estimate of loss reserves

Reserves for losses under IFRS represent estimates of future payments of reported and unreported claims for losses and related expenses, with respect to insured events that have occurred. Such reserves are not discounted, except reserves for claims with payment patterns that are fixed and reasonably determinable. Reserves are held at best estimate including recoverables for salvage and subrogation, supplemented by a provision for model and parameter uncertainty under IFRS.

In order to derive a market-consistent value, best estimate loss reserves are discounted using a risk-free rate whereby the cash-flow pattern (i.e., timing of the estimated future cash flows) is adequately considered. In cases where the reserves are already presented on a discounted basis under IFRS (e.g., non-life annuities), the discounting is reversed and re-performed using the risk-free rate.

SST – IFRS valuation difference

in USD millions, as of December 31, 2018

Total Best estimate of non-Lif	(77,629)	
Valuation differences		12,850
Non-Life insurance liabilities	The reclassification to held for sale is not applicable in MCBS	(2,079)
Total Best estimate of non-Lif	(66,858)	

#### Best estimate of life investment and insurance liabilities

Generally, the SST MCBS value of all unit-linked and non-unit-linked investment, as well as life insurance liabilities, is based on a bottom-up best estimate projection of future cash flows (excluding current policyholder loan balances). Any options and guarantees provided to the policyholder are valued on an economic and market-consistent basis. Specifically, cash flow projections are made over the estimated contract period for the in-force portfolio (i.e., current policyholder base at valuation date) subject to the economic contract boundary and in line with the principles for best estimate:

- Economic assumptions: expected asset return, discount rate, and inflation rate, stochastic economic simulations;
- Non-economic assumptions: demographic assumptions (mortality, morbidity), persistency, expense assumptions, and dynamic bonus rates/profit sharing rates.

### E. Valuation continued

Cash-flow projections may vary, depending on the product. Benefits to be paid to policyholders – whether on surrender, maturity, death, morbidity or disability – increase the best estimate of life investment and insurance liabilities, as do taxes paid on behalf of policyholders, maintenance expenses and future commissions. Projected future premiums, fees and charges expected to be received from policyholders for existing business reduce the best estimate of life investment and insurance liabilities.

Best estimate of life insurance liabilities can be negative, for example, in protection business where projected regular premiums may often exceed expected death benefits and expenses on a best-estimate basis. Because the transfer value of an insurance or reinsurance obligation may be lower than the surrender values of the underlying contracts, no implicit or explicit surrender value floor is assumed for the market-consistent value.

Realistic assumptions about management's behavior are used, e.g., assuming management discretion when capital gains on invested assets are realized or changes in asset allocation are made. In cases where management actions, as considered in the scenario modeling, would be subject to regulatory approval (e.g., potential cancellation of policyholder dividends), the assumptions used when interpreting local supervisory guidance are verified by the local regulator or external audit.

# SST – IFRS valuation difference

in USD millions, as of December 31, 2018				
Total Best estimate of life insurance liabilities (IFRS)				
Life insurance liabilities Valuation differences				
Direct insurance: unit-linked life	The reclassification to held for sale is not applicable in MCBS	(23,709)		
insurance business	Market movements	4,130		
Total Best estimate of life insur	(224,970)			

#### Reinsurers' share of best estimate of liabilities

Similar to IFRS, the calculation of the best estimate for reinsurance assets and insurance liabilities is performed on a gross basis in MCBS (i.e., no offsetting of assets with liabilities). However, the MCBS valuation is based on the actuarial discounted best estimate of future cash flows, taking into account the expected credit losses. The calculation of the expected credit loss allowance considers the rating of the reinsurance counterparty, the expected timing of future recoveries and the expected value of any collateral held.

#### Reinsurers' share of best estimate UPR

Under IFRS, the reinsurers' share of UPR represents the portion of the ceded premiums related to the unexpired coverage period. The adjustments performed to arrive at the MCBS value for UPR are illustrated below.

Illustrative breakdown of ceded UPR				
IFRS	MCBS			
Ceded profit				
Reinsurance commission received				
Future claims recoveries	Discounted future claims recoveries			

#### Reinsurers' share of property and casualty loss reserves

Under IFRS, reinsurance assets for ceded loss reserves are already held at best estimate (i.e., sum of all expected future recoveries), but generally not discounted. To make these assets market-consistent, the future cash flows are discounted while taking into account the timing of these future cash flows.

#### Reinsurers' share of life benefits

In order to determine the SST MCBS value of best estimate ceded reserves of life insurance and investment contracts, the following generally applies:

- The best estimate of future cash flows is based on the principles discussed in the 'best estimate of life investment and insurance liabilities' section;
- The SST MCBS value for ceded reserves only reflects the market-consistent value for future claims recoveries, i.e., only present value of future cash flows to be reimbursed by the reinsurer; and
- If the reinsurer's credit risk is not included in the best-estimate future cash flows, the expected credit loss allowance is considered.

### SST – IFRS valuation difference

in USD millions, as of December 31, 2018

in obd millions, as of December 51, 2010	,		
Total Best estimate of Reinsurers' share of best estimate of insurance liabilities (IFRS)			
Reinsurers' share of best estimate of Valuation differences			
insurance liabilities -unit-linked life			
insurance business	The reclassification to held for sale is not applicable in MCBS	234	
Total Best estimate of Reinsurers' share of best estimate of insurance liabilities (SST)		17.567	

#### Market-consistent value of other liabilities

Interest-bearing liabilities include subordinated debt instruments eligible as supplementary capital<sup>2</sup> under SST. Such interest-bearing liabilities are subject to a market-consistent valuation based on risk-free rates, where the future cash flows are considered over the remaining period until the earliest contractual redemption date. In cases where a quoted market price is available and used, the market price is adjusted to eliminate own credit spread.

Other liabilities include deferred front-end fees and deferred taxes (other than deferred tax on Swiss real estate transfers attributable to shareholders) that are valued at zero in the MCBS.

Non-technical provisions include liabilities for defined benefit pension plans measured using actuarial techniques under IFRS. Such liabilities are held at the IFRS carrying value in the MCBS.

Other non-technical provisions are held at best estimate under IFRS. To the extent such provisions are discounted, the market-consistent value is calculated by reversing the discounting effect and re-performing discounting using risk-free rates.

Derivative financial instruments are measured at fair value under both IFRS and MCBS.

Liabilities from the insurance business are valued at IFRS carrying value as the balances are expected to be subject to only insignificant risk of changes in value and settled within a relatively short time frame (generally, within three months and under no circumstances exceeding twelve months).

The market-consistent value of other liabilities is generally determined using IFRS carrying value in accordance with the overarching valuation principles outlined in section E.1.

The reclassification of liabilities for USD 25.8 billion as held for sale under IFRS is not applicable in MCBS.

<sup>&</sup>lt;sup>2</sup> Supplementary capital is defined in Art. 49 of Insurance Supervision Ordinance (ISO) and includes risk-absorbing capital instruments that fulfill the definition in Art. 22a ISO and are approved by the FINMA.

### E. Valuation continued

# SST – IFRS valuation difference

in USD millions, as of December 31, 2	2018	
Total IFRS value of other lial	bilities	(68,818)
Interest bearing liabilities	Valuation differences	(2,967)
	Deferred front-end fees: Value set to zero in MCBS	5,177
	The reclassification to held for sale is not applicable in MCBS	25,788
	Deferred taxes (other than deferred tax on Swiss real estate transfers	
Other Liabilities	attributable to shareholders): Valued set to zero in MCBS	3,439
Other differences		4
Total market-consistent valu	(37,376)	

#### E.2.5 Other information

In accordance with industry practice, the Group's internal valuation models use swap rates for liability discounting. Swap curves are also used in the SST MCBS and target capital as the risk-free rates for Zurich in line with the possibility of using 'own yield curves' in the SST according to paragraph 46 of SST circular 2017/03.

#### Methodology for Zurich's curves derivation

The tables below give an overview of the yield curve methodology used in Zurich's SST internal model for both available financial resources and the target capital. These yield curves are consistently used in the Z-ECM.

Zurich risk-free yield curve methodology for January 1, 2019 SST and Z-ECM

	Entry point to					
	extrapolation		Method of	Method of	Ultimate forward rate	Smith Wilson
Currency	(years)	Market data	interpolation	extrapolation	(annually compounded)	alpha
EUR	50	Raw market	Smith Wilson g	jiving smooth	1.38% (50-year market spot rate)	0.2
USD	50	mid-swap	forward and sp	oot curves passing	2.78% (50-year market spot rate)	0.2
GBP	50	rates from	exactly through	n market data	1.48% (50-year market spot rate)	0.2
CHF	30	Bloomberg			0.84% (30-year market spot rate)	0.2

# F. Capital management

With regard to the enterprise risk management, the principles of Zurich Insurance Group's capital management are equally applicable to the Zurich Insurance Company Ltd and its consolidated subsidiaries (collectively the 'ZIC Group'). This section should therefore be read in conjunction with Zurich Insurance Group's Financial Condition Report, section F. 'Capital management', pages 61 to 66.

### F.1 Capital management objectives

Zurich Insurance Group manages its capital to maximize long-term shareholder value while maintaining financial strength within its 'AA' target range, and meeting regulatory, solvency and rating agency requirements. In particular, Zurich Insurance Group endeavors to manage its shareholders' equity under IFRS to balance maximization of shareholder value and constraints imposed by its economic framework, rating agencies and regulators. As of December 31, 2018, shareholders' equity of USD 30.2 billion, subordinated debt of USD 6.8 billion and senior financial debt not maturing within the next year of USD 2.4 billion (since the second quarter 2018, excluding net new issued senior debt) were part of the capital available in Zurich Insurance Group's economic framework. Further adjustments usually include such items as intangible assets, deferred tax assets and liabilities, allowing for discounting of liabilities and the value of in-force business or excluding net new senior debt issues. For more information, see 'analysis of Zurich Insurance Group's Z-ECM available financial resources' (unaudited).

Zurich Insurance Group strives to simplify its legal entity structure to reduce complexity and increase fungibility of capital.

### F.2 Capital management framework

Zurich Insurance Group's capital management framework forms the basis for actively managing capital within Zurich. Zurich Insurance Group uses a number of different capital models, taking into account economic, regulatory, and rating agency constraints. Zurich Insurance Group's capital and solvency position is monitored and regularly reported to the Executive Committee (ExCo).

Zurich Insurance Group's policy is to allocate capital to businesses earning the highest risk-adjusted returns, and to pool risks and capital as much as possible to operationalize its risk diversification.

Zurich Insurance Group's executive management determines the capital management strategy and sets the principles, standards and policies to execute the strategy. Group Treasury and Capital Management executes the strategy.

### F.3 Capital management program

Zurich Insurance Group's capital management program comprises various actions to optimize shareholders' total return and to meet capital needs, while enabling Zurich Insurance Group to take advantage of growth opportunities. Such actions include paying and receiving dividends, capital repayments, share buy-backs, issuance of shares, issuance of senior and hybrid debt, securitization and purchase of reinsurance.

Zurich Insurance Group seeks to maintain a balance between higher returns for shareholders on equity held, and the security a sound capital position provides. Dividends, share buy-backs, and issuances and redemption of debt have a significant influence on capital levels. In 2018, Zurich Insurance Group paid a dividend out of retained earnings and the capital contribution reserve, executed a share repurchase program, issued senior debt to finance redemptions and investments in Zurich Insurance Group's development, and called hybrid debt that was re-financed during 2018.

### F. Capital management continued

The Swiss Code of Obligations stipulates that dividends may only be paid out of freely distributable reserves or retained earnings. Apart from what is specified by the Swiss Code of Obligations, Zurich Insurance Company Ltd (ZIC) faces no legal restrictions on dividends it may pay to its shareholders. As of December 31, 2018, the amount of the statutory general legal reserve was more than 40 times the paid-in share capital. The ability of the ZIC subsidiaries to pay dividends may be restricted or indirectly influenced by minimum capital and solvency requirements imposed by insurance and other regulators in the countries in which the subsidiaries operate. Other limitations or considerations include foreign exchange control restrictions in some countries, and rating agencies' methodologies.

For details on issuance and redemption of debt, see note 18 of the consolidated financial statements.

### F.4 Insurance financial strength rating

Zurich Insurance Group has interactive relationships with three global rating agencies: Standard & Poor's, Moody's, and AM Best. The insurance financial strength rating (IFSR) of Zurich Insurance Company Ltd (ZIC), Zurich Insurance Group's main operating entity, is an important element of Zurich Insurance Group's competitive position. Zurich Insurance Group's credit ratings derived from the financial strength ratings also affect the cost of capital.

In October 2018, Standard & Poor's affirmed ZIC's 'AA—' IFSR with a stable outlook and stated that "Zurich Insurance Group's performance (...) proves its management's ability to control the strategic plan's execution and adjust it accordingly." As a result, Standard & Poor's reassessed the management and governance factor in the rating analysis to strong from satisfactory.

Standard & Poor's sees Zurich Insurance Group's enterprise risk management as 'very strong,' based on a positive view of our risk management culture, risk controls, emerging risk management, risk models and strategic risk assessment.

As of December 31, 2018, the IFSR of ZIC, the main operating entity of Zurich Insurance Group, was 'AA–/Stable' by Standard and Poor's, 'Aa3/Stable' by Moody's, and 'A+ (Superior)/Stable' by A.M. Best.

### F.5 Regulatory capital adequacy

Zurich Insurance Group endeavors to manage its capital so that all of its regulated entities meet local regulatory capital requirements at all times.

In each country in which Zurich Insurance Group operates, the local regulator specifies the minimum amount and type of capital that each of the regulated entities must hold in addition to their liabilities. In addition to the minimum capital required to comply with the solvency requirements, Zurich Insurance Group aims to hold an adequate buffer to ensure regulated subsidiaries meet local capital requirements.

Under the Swiss Solvency Test (SST), insurance companies and insurance groups can apply to use company-specific internal models to calculate risk-bearing and target capital, as well as the SST ratio. The SST ratio has to be calculated as per January 1 and must be submitted to the Swiss Financial Market Supervisory Authority (FINMA).

In 2018, Zurich Insurance Group continued to enhance its internal model, advanced the approval process with FINMA, and has received approval for specific enhancements of the model. The model approval process continues for other parts of the internal model. The 2019 model changes will primarily address new regulatory requirements that enter into force in 2020 and that have not yet been implemented into Zurich Insurance Group's internal model. Zurich intends to file these modules for FINMA's approval during the course of 2019.

# G. Solvency

The Swiss Solvency Test (SST) is a principle-based, risk-sensitive supervision framework reflecting:

- A market-consistent view of the financial resources available to meet policyholder obligations described as risk-bearing capital or RBC
- An economic view of the impact of the potential risks inherent in the regulated business described as target capital and defined as an expected shortfall at a 99 percent confidence level over a one year time horizon.

The SST compares risk-bearing capital with target capital by calculating of a ratio (the 'SST ratio'). The solvency test indicates whether the level of risk-bearing capital is sufficient to reduce the probability of policyholder impairment to a level consistent with regulatory objectives.

Zurich Insurance Company Ltd uses an adaptation of its internal Zurich Economic Capital Model to comply with the Swiss Solvency Test (SST) requirements and files results with FINMA annually. ZIC calculates its solvency figures on a legal entity view and takes into account risk types that are consistent with SST requirements as well as the affiliated credit default risk. Additionally, the cost of all future capital requirements needed to support the current insurance portfolio in case the firm would stop writing any new business and go into a run-off is accounted for as Risk Margin.

In 2018, Zurich continued to enhance its internal model, advanced the approval process with FINMA, and has received approval for specific enhancements of the model. The model approval process continues for other parts of the internal model. The 2019 model changes will primarily address new regulatory requirements that enter into force in 2020 and that have not yet been implemented into the Zurich Insurance Group internal model. Zurich intends to file these modules for FINMA's approval during the course of 2019.

The model changes implemented in 2018 lead to an increase of the ZIC SST ratio by 16 percentage points, compared to the ZIC SST ratio of 212% filed with FINMA as of January 1, 2018.

Based on the enhanced SST internal model the SST ratio as of January 1, 2019 stands at 225%. It decreased by 3 percentage points compared to the SST ratio as of January 1, 2018 after the model change. The strong operational capital generation from the businesses is offset by negative market movements (largely due to credit and Italian government spread widening and falls in equity markets), dividend accrual and financing the external dividend payout during 2018.

#### **Solvency**

	Adjustments	
2017	Previous year	2018
33,888		35,575
(2,770)		(2,795)
31,117		32,780
12,063		8,847
43,181		41,628
10,582		10,193
10,592		10,101
(3,801)		(3,918)
3,987		6,493
3,213		(589)
24,573		22,280
212%		225%
	33,888 (2,770) 31,117 12,063 43,181 10,582 10,592 (3,801) 3,987 3,213 24,573	33,888 (2,770) 31,117 12,063 43,181  10,582 10,592 (3,801) 3,987 3,213 24,573

<sup>1</sup> Risk margin accounts for USD 6,781 million, other effects on target capital include diversification effects between credit risk and other risk types, and other risk models.
2 SST ratio is defined in the SST Circular 2017/3 as a ratio of Risk Bearing Capital less Risk Margin to Target Capital less Risk Margin.

### G. Solvency continued

Whereas ZIC analyzes the SST target capital mainly based on a look-through approach, the SST model allows the identification of the main sources of contribution to the target capital. The table below shows the contribution of the direct property & casualty business written in Switzerland and its branches as well as the assumed reinsurance business from its subsidiaries, the Farmers Exchanges<sup>1</sup> and the contribution of the subsidiaries to the target capital.

SST target capital, split by source of risk contribution and risk type<sup>1</sup>

In USD millions, as of December 31, 2017	From ZIC Ltd		
	(solo)	From subsidiaries	Total
Underwriting risk	2,705	5,446	8,151
Market risk	1,640	6,375	8,015
Credit risk	618	2,399	3,017
Risk margin and other effects on target capital	3,103	2,287	5,390
Total target captial	8,066	16,507	24,573
Contribution to total	32%	68%	100%

SST target capital, split by source of risk contribution and risk type<sup>1</sup>

In l	JSD millions, as of December 31, 2018	From ZIC Ltd		
k		(solo)	From subsidiaries	Total
<b>k</b> Ur	nderwriting risk	2,546	4,755	7,300
Ma	arket risk	1,706	6,481	8,187
Cr	edit risk	926	3,578	4,503
Ris	k margin and other effects on target capital	1,974	315	2,289
To	tal target captial	7,151	15,129	22,280
Co	ntribution to total	32%	68%	100%

¹In 2018, investment credit default risk has been re-classified from Market Risk to Credit Risk. Figures for 2017 have been aligned accordingly,

<sup>1</sup> The Farmers Exchanges are owned by their policyholders. Farmers Group, Inc, a wholly-owned subsidiary of the Group, provides certain non-claims administrative, management, and ancillary services to the Farmers Exchanges as attorney-in-fact and receives fees for its services.

THIS PAGE HAS INTENTIONALLY BEEN LEFT BLANK

# Appendix 1: Quantitative templates

Income Statement Zurich Insurance Company Ltd Total and Direct Swiss Business

	In CHF millions, for the years ended December 31		_			
			Total		Accident	
		2017	2018	2017	2018	
1	Gross written premiums and policy fees	18,748	14,101	343	323	
2	Premiums ceded to reinsurers	(3,181)	(3,484)	(6)	(7)	
3	Net written premiums and policy fees (1 + 2)	15,568	10,616	337	316	
4	Change in reserves for unearned premiums, gross	536	29	(2)	(1)	
5	Change in reserves for unearned premiums, ceded	66	108	_	_	
6	Net earned premiums and policy fees (3 + 4 + 5)	16,170	10,754	335	315	
7	Other income <sup>1</sup>	1,258	1,069	23	25	
8	Total technical income (6+7)	17,427	11,823	358	339	
9	Claims paid, annuities and loss adjustment expenses, gross	(12,440)	(12,233)	(296)	(298)	
10	Claims paid, annuities and loss adjustment expenses, ceded	1,629	1,983	4	5	
11	Change in insurance reserves, gross	(1,407)	2,676	6	22	
12	Change in insurance reserves, ceded	612	473	1	_	
13	Change in actuarial provisions for unit-linked contracts					
	Insurance benefits and losses, net of reinsurance					
14	(9 + 10 + 11 + 12 + 13)	(11,606)	(7,101)	(285)	(271)	
15	Underwriting & policy acquisition costs, gross	(4,716)	(3,147)	(33)	(30)	
16	Underwriting & policy acquisition costs, ceded	436	572	_	_	
17	Underwriting & policy acquisition costs, net of reinsurance (15 + 16)	(4,280)	(2,575)	(33)	(30)	
18	Administrative and other expense <sup>1</sup>	(2,640)	(1,873)	(48)	(43)	
	Total technical expense					
19	(14 + 17 + 18) (non-life insurance only)	(18,526)	(11,550)	(366)	(344)	
20	Investment income	4,176	4,848			
21	Investment expenses	(951)	(1,040)			
22	Net investment result (20 + 21)	3,225	3,808			
23	Net investment result on unit-linked investments					
24	Other financial income	274	221			
_	Other financial expense	(382)	(278)			
	Operating result (8 + 14 + 17 + 18 + 22 + 23 + 24 + 25)	2,018	4,025		<u>.</u>	
27	Interest expense on debt and other interest expense	(544)	(565)			
28	Other income		_			
29	Other expense	_	_			
	Extraordinary income/expense					
31	Net income before taxes (26 + 27 + 28 + 29 + 30)	1,474	3,459			
_	Direct tax expenses	(130)	(101)			
33	Net income after taxes (31 + 32)	1,344	3,358			

 $<sup>^{\</sup>scriptscriptstyle 1}$  Line items 7 and 18: lines of business allocated according to the gross written premium

						Fine metrine	l banavda	Camanal di	hind manter	Direct Swiss	business
	Illeann	Mad	tor vehicle		Tuenenent	Fire, natura	-	General ti	hird-party	Other	. hwa wala aa
2017	Illness				Transport		/ damage	2047	liability		branches
2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
282	315	1,068	1,022	26	26	339	330	305	312	97	99
		(3)	(1)	(4)	(4)	(12)	(15)	(23)	(33)	(11)	(13)
282	315	1,065	1,020	22	22	328	315	282	280	86	86
(1)	_	4	2		_	2	2	11	(7)	4	(5)
_	_		_	_	_	(4)	3	2	6	(2)	(1)
281	316	1,069	1,023	22	22	325	320	285	278	88	81
19	24	72	77	2	2	23	25	20	24	7	8
300	339	1,140	1,100	24	24	348	345	306	302	94	88
(243)	(267)	(643)	(660)	(10)	(13)	(190)	(209)	(164)	(133)	(59)	(48)
-		1	1	-	1	_	6	1	1	1	4
9	(3)	79	112	(4)	2	(47)	3	(3)	(3)	(2)	10
2	(2)	1	(3)	1	(1)	7	2	1	(14)	3	(4)
(231)	(272)	(562)	(550)	(12)	(11)	(230)	(198)	(165)	(150)	(57)	(38)
(23)	(23)	(171)	(171)	(4)	(5)	(83)	(72)	(56)	(49)	(23)	(19
_	_	1	_	1	1	2	1	2	1	1	2
(23)	(23)	(170)	(171)	(3)	(4)	(81)	(71)	(55)	(48)	(22)	(17)
(40)	(42)	(150)	(136)	(4)	(3)	(48)	(44)	(43)	(42)	(14)	(13
, , , ,	,,	,/	,,	( - /	(-)	(12)	( /	,/	, ·-/		(,,,
(294)	(337)	(882)	(857)	(19)	(18)	(360)	(313)	(263)	(240)	(93)	(68)
(=3-1)	(551)	(502)	(031)	(13)	(10)	(500)	(515)	(203)	(=+0)	(33)	(00)

# Appendix 1: Quantitative templates continued

Income Statement Zurich Insurance Company Ltd Direct Foreign Business and Assumed Business

	In CHF millions, for the years ended December 31			
		Direct i	non-Swiss	
		busii	ness, total	
		2017	2018	
1	Gross written premiums and policy fees	1,615	1,740	
2	Premiums ceded to reinsurers	(834)	(944)	
3	Net written premiums and policy fees (1 + 2)	781	796	
4	Change in reserves for unearned premiums, gross	55	(7)	
5	Change in reserves for unearned premiums, ceded	18	22	
6	Net earned premiums and policy fees (3 + 4 + 5)	853	811	
7	Other income <sup>1</sup>	108	132	
8	Total technical income (6+7)	962	943	
9	Claims paid, annuities and loss adjustment expenses, gross	(1,000)	(1,294)	
10	Claims paid, annuities and loss adjustment expenses, ceded	290	643	
11	Change in insurance reserves, gross	123	(198)	
12	Change in insurance reserves, ceded	66	251	
13	Change in actuarial provisions for unit-linked contracts			
	Insurance benefits and losses, net of reinsurance			
	(9 + 10 + 11 + 12 + 13)	(520)	(598)	
_	Underwriting & policy acquisition costs, gross	(432)	(438)	
16	Underwriting & policy acquisition costs, ceded	301	298	
_	Underwriting & policy acquisition costs, net of reinsurance (15 + 16)	(130)	(140)	
18	Administrative and other expense <sup>1</sup>	(227)	(231)	
	Total technical expense			
	(14 + 17 + 18) (non-life insurance only)	(878)	(969)	
20	Investment income			
	Investment expenses			
	Net investment result (20 + 21)			
_	Net investment result on unit-linked investments			
	Other financial income			
	Other financial expense			
	Operating result (8 + 14 + 17 + 18 + 22 + 23 + 24 + 25)			
_	Interest expense on debt and other interest expense			
_	Other income			
_	Other expense			
	Extraordinary income/expense			
	Net income before taxes (26 + 27 + 28 + 29 + 30)			
	Direct tax expenses			
33	Net income after taxes (31 + 32)			

<sup>&</sup>lt;sup>1</sup> Line items 7 and 18: lines of business allocated according to the gross written premium6

					<u> </u>							Indirect	business
D			II Ial-			Marine,	-		D		Cle		
Personal		2017	Health	2017	Motor		ransport	2017	Property	2017	Casualty		ellaneous
2017 1,273	<b>2018</b> 297	2017	<b>2018</b> 34	2017	<b>2018</b> 1.491	2017 503	<b>2018</b> 257	2017 4.707	<b>2018</b> 3.364	2017	<b>2018</b> 1.677	2017	2018
(4)	(5)	(1)		2,573 (42)	(37)	(91)	(84)	(1,465)	(1,507)	2,943 (315)	(350)	2,461 (371)	2,814 (484)
1,269	292	213	34	2,532	1,453	412	173	3,242	1.857	. ,	1,327	(- /	
(12)	292	16	4	2,532	1,453	(7)	7	3,242	(17)	2,628	52	2,090 (75)	2,330 (36)
(12)		-	- 4	205	(1)	3	(4)	2	(3)	(37)	8	46	79
1,256	316	229	37	2,796	1,464	409	176	3,570	1,836	2,592	1,386	2,060	2,374
85	22	14	3	173	113	34	170	316	255	197	127	165	213
1,341	338	243	40	2,969	1,577	442	195	3,886	2,091	2,790	1,513	2,225	2,587
(657)	(593)	(285)	(122)	(2,125)	(1,531)	(356)	(283)	(2,871)	(2,430)	(2,237)	(2,378)	(1,306)	(1,975)
1	1	(203)	(122)	27	24	93	94	634	723	190	151	387	330
(30)	540	266	94	(34)	538	(3)	329	(625)	399	(590)	1,613	(552)	(781)
-	(3)	_		3	3	(28)	(211)	503	320	40	99	11	35
	(-)					()	(= : :)						
(686)	(55)	(19)	(28)	(2,130)	(966)	(293)	(71)	(2,359)	(988)	(2,596)	(514)	(1,459)	(2,391)
(392)	(97)	(47)	(13)	(861)	(493)	(129)	(62)	(1,175)	(671)	(787)	(430)	(500)	(573)
_	_	1	_	3	2	7	6	82	88	12	17	25	156
(392)	(97)	(47)	(13)	(859)	(492)	(122)	(57)	(1,093)	(583)	(775)	(413)	(475)	(417)
(179)	(39)	(30)	(4)	(362)	(198)	(71)	(34)	(663)	(447)	(414)	(223)	(347)	(374)
(1,257)	(191)	(96)	(45)	(3,351)	(1,656)	(486)	(162)	(4,115)	(2,018)	(3,786)	(1,150)	(2,281)	(3,182)
					<u> </u>								

# Appendix 1: Quantitative templates continued

Market-Consistent Balance Sheet

·		
- tal prod market condition value of madified	(520/510)	(312,111
Total BEL plus market-consistent value of liabilities	(13,211)	(312,11
Other liabilities	(4,320)	(14,53
Liabilities from insurance business	(4,326)	(3,61
Deposits retained on ceded reinsurance	(431)	(43
Liabilities from derivative financial instruments	(214)	(32
Interest-bearing liabilities similar to debt capital	(16,920)	(15,07
Non-technical provisions	(4,449)	(3,39
Market consistent value of other liabilities		
Outward reinsurance: other business	0	
Outward reinsurance: meanth insurance business  Outward reinsurance: unit-linked life insurance business	0	
Outward reinsurance: health insurance business	0	
Outward reinsurance: non-life insurance business (excluding ALV)	4,695	4,86
Outward reinsurance: life insurance business (excluding ALV)	266	31
Direct insurance: drift initied inc insurance business	0	
Direct insurance: ricatal insurance business	21,656	(
Direct insurance: health insurance business	0	,,
Direct insurance: non-life insurance business	7,102	7,46
Direct insurance: life insurance business (excluding ALV)	4,998	4,91
Reinsurers' share of best estimate of insurance liabilities	38,716	17,56
Outward reinsurance: other business	(6)	
Outward reinsurance: unit-linked life insurance business	0	
Outward reinsurance: health insurance business	0	(5,07
Outward reinsurance: non-life insurance business	(4,353)	(3,67
Outward reinsurance: life insurance business (excluding ALV)	(2,215)	(69
Direct insurance: other business	(457)	(47
Direct insurance: unit-linked life insurance business	(146,012)	(129,53
Direct insurance: health insurance business	0	(33)10
Direct insurance: non-life insurance business	(66,108)	(63,18
Direct insurance: life insurance business (excluding ALV)	(98,832)	(94,74
Best estimate of insurance liabilities	(317,983)	(292,30
Best estimate liabilities (BEL)		
Total market-consistent value of assets	354,706	347,68
Total other assets	28,352	28,28
Other assets	5,245	5,29
Other receivables	3,367	3,53
Receivables from insurance business	11,237	10,73
Cash and cash equivalents	8,504	8,71
Market-consistent value of other assets		
Receivables from derivative financial instruments	903	89
Financial investments from unit-linked life insurance	128,591	133,04
Total Investments	196,860	185,46
Other capital investments	17,434	18,30
Alternative investments	3,440	3,30
Collective investment schemes	4,159	3,68
Other investments.	25,033	25,29
Equities	8,519	7,64
Mortgages	7,501	6,93
Loans	10,410	9,13
Fixed income securities	133,139	124,06
Shareholdings	19	12,55
Real estate	12,238	12,35
Market-consistent value of investments		
	2017 previous period	20

# Appendix 2: Report of the statutory auditor on the Group consolidated financial statements 2018

The Financial Condition Report is not audited.

The consolidated financial statements of Zurich Insurance Company Ltd and its subsidiaries (the Group), which comprise the consolidated income statement, consolidated statement of comprehensive income, consolidated balance sheet, consolidated statement of cash flows, consolidated statement of changes in equity and notes to the consolidated financial statements for the year ended December 31, 2018 (Zurich Insurance Company Group Annual Report 2018, page 142) are audited and the report from the statutory auditor of ZIC Group can be find at:

https://www.zurich.com/en/investor-relations/results-and-reports/other-statutory-filings.

### Disclaimer and cautionary statement

Certain statements in this document are forward-looking statements, including, but not limited to, statements that are predictions of or indicate future events, trends, plans or objectives of Zurich Insurance Group Ltd or the Zurich Insurance Group (the Group). Forward-looking statements include statements regarding the Group's targeted profit, return on equity targets, expenses, pricing conditions, dividend policy and underwriting and claims results, as well as statements regarding the Group's understanding of general economic, financial and insurance market conditions and expected developments. Undue reliance should not be placed on such statements because, by their nature, they are subject to known and unknown risks and uncertainties and can be affected by other factors that could cause actual results and plans and objectives of Zurich Insurance Group Ltd or the Group to differ materially from those expressed or implied in the forward-looking statements (or from past results). Factors such as (i) general economic conditions and competitive factors, particularly in key markets; (ii) the risk of a global economic downturn; (iii) performance of financial markets; (iv) levels of interest rates and currency exchange rates; (v) frequency, severity and development of insured claims events; (vi) mortality and morbidity experience; (vii) policy renewal and lapse rates; and (viii) changes in laws and regulations and in the policies of regulators may have a direct bearing on the results of operations of Zurich Insurance Group Ltd undertakes no obligation to publicly update or revise any of these forward-looking statements, whether to reflect new information, future events or circumstances or otherwise.

All references to 'Farmers Exchanges' mean Farmers Insurance Exchange, Fire Insurance Exchange, Truck Insurance Exchange and their subsidiaries and affiliates. The three Exchanges are California domiciled interinsurance exchanges owned by their policyholders with governance oversight by their Boards of Governors. Farmers Group, Inc. and its subsidiaries are appointed as the attorneys-in-fact for the Farmers Exchanges and in that capacity provide certain non-claims administrative, management, and ancillary services to the Farmers Exchanges. Neither Farmers Group, Inc., nor its parent companies, Zurich Insurance Company Ltd and Zurich Insurance Group Ltd, have any ownership interest in the Farmers Exchanges. Financial information about the Farmers Exchanges is proprietary to the Farmers Exchanges, but is provided to support an understanding of the performance of Farmers Group, Inc. and Farmers Reinsurance Company.

It should be noted that past performance is not a guide to future performance.

Persons requiring advice should consult an independent advisor.

This communication does not constitute an offer or an invitation for the sale or purchase of securities in any jurisdiction.

THIS COMMUNICATION DOES NOT CONTAIN AN OFFER OF SECURITIES FOR SALE IN THE UNITED STATES; SECURITIES MAY NOT BE OFFERED OR SOLD IN THE UNITED STATES ABSENT REGISTRATION OR EXEMPTION FROM REGISTRATION, AND ANY PUBLIC OFFERING OF SECURITIES TO BE MADE IN THE UNITED STATES WILL BE MADE BY MEANS OF A PROSPECTUS THAT MAY BE OBTAINED FROM THE ISSUER AND THAT WILL CONTAIN DETAILED INFORMATION ABOUT THE COMPANY AND MANAGEMENT, AS WELL AS FINANCIAL STATEMENTS.

