Zurich Insurance Group

ZURICH®

Financial Condition Report 2017

Zurich Insurance Group

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The information published in this report is consistent with the information published in the Annual Report 2017 of Zurich Insurance Group and the regulatory reportings of the Zurich Insurance Group for the year 2017, including the regulatory reporting to the Swiss Financial Market Supervisory Authority (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 Group, 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.

Overview

Business profile

Zurich Insurance Group (Zurich) is a leading multi-line insurer that serves its customers in global and local markets. With about 53,000 employees, it provides a wide range of property and casualty, and life insurance products and services in more than 210 countries and territories.

Total revenues
USD 64.0 bn

Business operating profit
USD 3.8 bn

Total Group investments
USD 194 bn

System of governance

Good corporate governance enables Zurich to create sustainable value for its shareholders, customers, employees and other stakeholders.

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

Risk profile

The Group's Z-ECM ratio has increased from 125 percent as of January 1, 2017 to 132 percent as of January 1, 2018. The increase was driven mainly by positive financial market performance and economic profit generation.

Zurich Economic Capital Model ratio as of January 1, 2018
Z-ECM 132%

Financial condition

The Group maintained its strong rating level in 2017. As of December 31, 2017, the Insurance Financial Strength Rating of Zurich Insurance Company Ltd (ZIC), the main operating entity of the Group, was 'AA–/Stable' by Standard and Poor's, 'Aa3/Stable' by Moody's, and 'A+ (Superior) /Stable by A.M. Best.

Shareholders' equity
USD 33.1 bn

Swiss Solvency Test ratio as of January 1, 2018
SST 216%

Standard and Poor's financial strength rating as of December 31, 2017
AA–/Stable

Acronyms

ABS	Asset-backed securities
AEC	Ordinance Against Excessive Compensation
AFR	available financial resources
AG	Aktiengesellschaft (stock company)
AGM	Annual General Meeting
AIF	attorney-in-fact
ALV	Arbeitslosenversicherung (Swiss unemployment insurance)
APAC	Asia Pacific
APE	annual premium equivalent
BEL	best estimate liability
bn	billion
BOP	business operating profit
BRL	Brazilian real
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CHF	Swiss franc
CIO	Chief Investment Officer
COO	Chief Operating officer
CRNHR	cost of residual non-hedgeable risks
CRO	Chief Risk Officer
EMEA	Europe, Middle East & Africa
ERM	enterprise risk management
EUR	euro
ExCo	Executive Committee
FCR	Financial Condition Report
FGI	Farmers Group, Inc.
FINMA	Swiss Financial Market Supervisory Authority
GBP	Great Britain pound
HK	Hong Kong
IBNR	estimated cost of incurred but not reported claims
IFRS	International Financial Reporting Standards
IIA	Institute of Internal Auditors
ISA	Swiss Insurance Supervision Act
ISDA	International Swaps and Derivatives Association
ISO	Insurance Supervision Ordinance
LAE	loss adjustment expenses
Ltd	Limited
M&A	mergers & acquisitions
MBS	mortgage-backed securities
MCBS	market consistent balance sheet
MCEV	market consistent embedded value
MVM	market value margin
NBM	new business margin
NBV	new business value
NIAS	net income attributable to shareholders
PH div	policyholder dividends
P&C	property and casualty
PV	present value
PVFP	present value of future profits
PwC	PricewaterhouseCoopers AG
Q	quarter
RCIS	Rural Community Insurance Services
SFCR	Solvency and Financial Condition Report
SIX	Swiss stock exchange
SPV	special purpose vehicle
SST	Swiss Solvency Test
TRP	Total Risk Profiling™
UK	United Kingdom
UPR	unearned premium reserves
U.S.	United States
USD	United States dollar
Z-ECM	Zurich Economic Capital Model
ZIC	Zurich Insurance Company Ltd
ZIG	Zurich Insurance Group Ltd (holding company)

Introduction

How to read the report

Zurich Insurance Group's financial condition report is prepared in compliance with ISA art. 26 and FINMA's Circular 16/2 'Disclosure - insurers'. The report focuses on the 2017 financial year, and should be read in conjunction with the Annual report 2017 of Zurich Insurance Group (available on www.zurich.com/en/investor-relations). Wherever applicable, this report makes reference to the Group annual report for more information.

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

- 'Business activities'-related and 'Performance results' are presented based on International Financial Reporting Standards (IFRS).
- The 'Risk profile' chapter makes reference to the Zurich Economic Capital Model (Z-ECM), the Group's own internal model. The Z-ECM and the Swiss Solvency Test (SST) model are based on the same fundamentals and are largely aligned. The risk profile analysis is supported with Z-ECM results per risk type. Z-ECM results are also used to present the economic capital adequacy of the Group, in the 'Capital management' chapter.
- 'Valuation' presents the market-consistent balance sheet (MCBS) of the Group following Swiss Solvency Test (SST) principles. The SST MCBS is compared with the IFRS balance sheet as of December 31, 2017.
- Finally, the 'Solvency' chapter also shows the regulatory capital adequacy, supported by the results of the SST.

The report discusses the main differences between the Z-ECM and the SST model on page 73. In accordance with the Group annual report, the reference currency is the U.S. dollar. Zurich calculates Z-ECM results quarterly; however, only results as of January 1 and July 1 are published each year. SST ratios are calculated as of January 1, following FINMA requirements.

FINMA mandates the disclosure of quantitative templates for insurance groups that are presented in Appendix 1.

1 Executive summary

Business activities

Zurich Insurance Group (Zurich) is a leading multi-line insurer that serves its customers in global and local markets. With about 53,000 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.

Company results

The Group's business operating profit of USD 3.8 billion decreased by USD 0.7 billion or 15 percent in U.S. dollar terms and 8 percent on a local currency basis. This decrease reflects the impacts of catastrophe and weather related events beyond a normal level, in particular the hurricanes impacting the U.S. in the third quarter, Harvey, Irma and Maria. In addition, business operating profit was adversely affected by a change to capital gains tax indexation relief in the UK and measures related to the Group's restructuring.

Adjusted for the impact of the U.S. hurricanes, the change to capital gains tax indexation relief in the UK and the measures related to the Group's restructuring, business operating profit increased by USD 267 million compared to 2016, with improved performance of the Life business across all segments on a local currency basis and improvements of the Property & Casualty (P&C) loss ratio. Excluding the one-time pension plan curtailment gain in 2016, Farmers[1] business operating profit also improved, benefiting from a lower combined ratio in Farmers Re and a strong result of Farmers Life. In addition, accumulated expense savings of around USD 700 million against the 2015 baseline have been achieved.

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

Introduction *continued*

Corporate governance and risk management

The Zurich Insurance Group, consisting of Zurich Insurance Group Ltd and its subsidiaries (the 'Group' or 'Zurich'), 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.

The Group pursues a customer-centric strategy and is managed by regions with the addition of the Farmers and Commercial Insurance businesses.

The Executive Committee (ExCo) is chaired by the Group CEO. As of December 31, 2017, to reflect both lines of business and geography, members of the ExCo included the CEO EMEA (Europe, Middle East & Africa), the CEO North America, the CEO-Designate North America, the CEO Latin America, the CEO Asia Pacific, the CEO of Farmers Group Inc. and the CEO Commercial Insurance. The Group CFO, the Group CIO, the Group COO, the Group CRO and the Group CRO-Designate were also members of the ExCo as of December 31, 2017.

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

Risk profile

The Group assesses risks systematically and from a strategic perspective through its proprietary Total Risk Profiling™ (TRP) process, which allows Zurich to identify and evaluate the probability and severity of a risk scenario. The Group then develops, implements and monitors improvements.

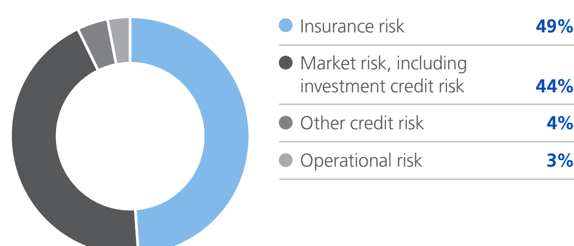
Of the near-to mid-term risks we have identified, two risks have strong technology elements and reflect the rapidly changing environment. The first is the external risk posed by changes in customer expectations, and the corollary internal risk to our ability to engage and provide service to our customers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

In 2017, reporting was enhanced with in-depth risk insights into ongoing topics such as information security and cyber risk; insurance market trends; the potential adverse impact that accelerating inflation and expectations about inflation could have on reserves; and the potential effects on Zurich of such topical issues as the Brexit negotiations and geopolitical developments in Asia and Latin America.

Economic risk profile

Zurich's main quantitative risk management tool is our internal economic capital model Z-ECM. Z-ECM provides a key input into the Group's strategic planning process as an assessment between the Group's risk profile and 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.

Total Z-ECM capital required: USD 30.6 billion
%, as of January 1, 2018



The Group's Z-ECM ratio has increased from 125 percent as of January 1, 2017 to 132 percent as of January 1, 2018. The increase was driven mainly by positive financial market performance and economic profit generation.

Valuation for SST purposes

Assets and liabilities are derived and valued in accordance with FINMA guidelines and are then matched to calculate the risk-bearing capital from the Group's market-consistent balance sheet (MCBS).

The market value of total investments increased by USD 11.3 billion from USD 185.6 billion in 2016 to USD 196.9 billion in 2017.

The market-consistent value of Total other assets increased by USD 0.5 billion from USD 27.6 billion in 2016 to USD 28.1 billion in 2017.

The market value of best estimate of insurance liabilities has increased by USD 30.5 billion from USD 287.5 billion in 2016 to USD 318.0 billion in 2017. Reinsurers' share of best estimate for insurance liabilities increased by USD 5.7 billion from USD 33 billion in 2016 to USD 38.7 billion in 2017. The market-consistent value of other liabilities increased by USD 0.8 billion from USD 27.3 billion in 2016 to USD 28.1 billion in 2017.

Solvency

FINMA has established the Swiss Solvency Test (SST) to assess risk quantitatively. Zurich reports the SST ratio annually to FINMA. The risk categories follow FINMA guidelines and focus on insurance, market and credit risk.

The Group uses an adaptation of its internal Zurich Economic Capital Model (Z-ECM) to comply with the Swiss Solvency Test (SST) requirements.

In 2017, Zurich enhanced its internal model and submitted it to FINMA for approval. Enhancements include changes that were necessary to meet evolving FINMA requirements.

Based on the new SST internal model the SST ratio as of January 1, 2018 stands at 216%, 12 percentage points higher compared to the new model based SST ratio as of January 1, 2017. The increase is driven mainly by favorable economic and business changes, partially offset by a higher dividend base.

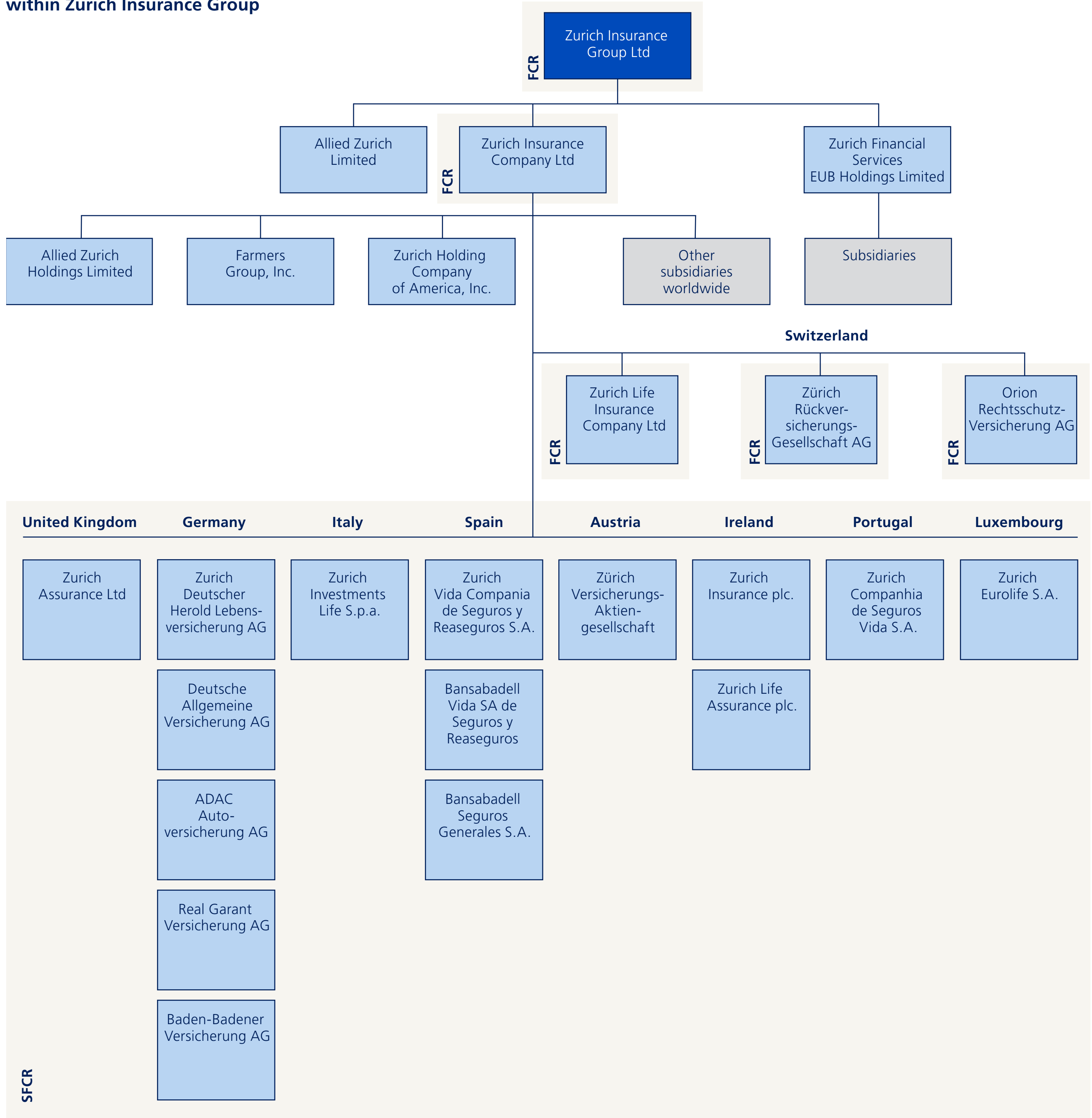
2 Approval of the Financial Condition Report

This Report was reviewed and signed-off by the Board of Directors of Zurich Insurance Group Ltd on April 25, 2018.

A. Business activities

A.1 Legal structure and major subsidiaries and branches

Chart 1: Public reporting on solvency and financial condition within Zurich Insurance Group



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

☐ Subsidiary ☐ Group of subsidiaries

Note: The purpose of the chart above is to provide a simplified overview of the Group's major subsidiaries (as reported at April 30, 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.

Zurich Insurance Group is a leading multi-line insurer that serves its customers in global and local markets. With about 53,000 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. The Group is headquartered in Zurich, Switzerland, where it was founded in 1872.

Zurich Insurance Group consists of Zurich Insurance Group Ltd (holding entity ZIG) and its subsidiaries. Zurich Insurance Company Ltd (ZIC) is the principal operating insurance company of ZIG. ZIC and its subsidiaries are collectively referred to as 'Zurich Insurance Company Group' or 'ZIC Group.'

The subsidiaries of ZIC in scope of the public disclosure requirements under Swiss regulation are:

- 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 accessible through Zurich's website https://www.zurich.com/en/investor-relations/results-and-reports/other-statutory-filings.

The significant subsidiaries of Zurich Insurance Group are presented in Appendix 2 of this document.

Transactions in 2017

Acquisitions

Bright Box

On December 22, 2017, the Group announced it has acquired 100 percent of the shares of Bright Box HK Limited (Bright Box) and its subsidiaries, a provider of telematics solutions linking vehicle drivers, dealers and manufacturers.

ANZ's life and consumer credit insurance businesses[1]

On December 11, 2017, the Group announced it has entered into an agreement to acquire 100 percent of the Australian life insurance and consumer credit businesses (OnePath Life) of Australia and New Zealand Banking Group Limited (ANZ) for AUD 2.85 billion (USD 2 billion) subject to a purchase price adjustment. Both parties expect the transaction, which is subject to regulatory approvals, to be completed by the end of 2018.

Cover-More

On April 13, 2017, the Group completed the acquisition of all the shares in Cover-More Group Limited (Cover-More), a travel insurance and assistance solutions provider listed on the Australian Securities Exchange, with main operations in Australia, India and the U.S. In conjunction with this acquisition, the Group also acquired Halo Insurance Services Limited (Halo), a distributor of vehicle hire related insurance in the UK.

The final purchase price for Cover-More and Halo amounted to USD 580 million gross of a pre-closing dividend of USD 14 million. Based on the initial purchase accounting, the fair value of net tangible assets acquired amounted to negative USD 99 million and identifiable intangible assets estimated at USD 163 million, gross of related deferred tax liabilities of USD 49 million. Residual goodwill amounted to USD 566 million which represents the future growth potential of the travel insurance assistance business, the value of the workforce with their distribution capabilities and related know-how and synergies with the Group.

Cover-More's net income after taxes for the nine months since the acquisition date, as included in the Group consolidated income statements for the year ended December 31, 2017, amounts to USD 17 million including transaction-related costs. Pro-forma net income after taxes for the full twelve months ended December 31, 2017, amounts to approximately USD 24 million, adjusted for transaction-related costs incurred by Cover-More.

In addition, the Group incurred transaction-related costs of approximately USD 10 million in non-technical expenses in BOP. The majority has been incurred in 2017.

[1] Not considered in SST calculation.

A. Business activities *continued*

Divestments

Held for sale[2]

During the twelve months ended December 31, 2017, the Group entered into various agreements to sell Property & Casualty (P&C) and Life businesses in the UK. On January 2, 2018, the Group announced the sale of the Endsleigh group of companies to A-Plan Holdings (except for Endsleigh Financial Services Limited and Endsleigh Pension Trustee Limited), subject to regulatory approval. On October 12, 2017, the Group announced a strategic deal under which Lloyds Banking Group (LBG) will acquire the UK workplace pensions and savings business. The assets and liabilities of both transactions have been reclassified to held for sale. As of December 31, 2017, the total assets and total liabilities reclassified were USD 29 billion and USD 29 billion, respectively. Re-measurements of assets held for sale resulted in a pre-tax loss of USD 97 million which is recorded within net gains/(losses) on divestment of businesses. These transactions are expected to close during 2018.

Middle East operations

On June 19, 2017, the Group closed the sale of its P&C insurance operations in the Middle East to Cigna International Corporation for a sales price of approximately USD 48 million subject to a purchase price adjustment. A pre-tax gain of USD 10 million has been recorded within net gains/(losses) on divestment of businesses.

Taiwan operations

On January 17, 2017, the Group closed the sale of its P&C insurance operations in Taiwan to Hotai Motor Co., Ltd for a sales price of approximately USD 213 million. A pre-tax loss of USD 9 million has been recorded within net gains/(losses) on divestment of businesses.

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

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

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

Zurich's strategy 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. The 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-marketapproach for commercial customers. It will also seek to enhance its offerings to individuals by monitoring and aiming to increase customer satisfaction and retention. The Farmers Exchanges will continue to focus on improving customer satisfaction and retention rates.

For additional information on the Group's strategy, see pages 12 and 13 of the Annual Report 2017.

Group structure

During 2016, a new structure was created by combining the life and non-life insurance businesses under common leadership structures, thereby providing a unified go-to-market approach. The Group also combined its mid-sized commercial and large corporate businesses into Commercial Insurance, bringing global corporate and commercial insurance expertise together under a single umbrella.

The Group's operating structure reflects the businesses operated by the Group and how these are strategically managed to offer different products and services to specific customer groups. The operational group structure became fully effective in the financial year 2017. The Group's reportable segments for 2017 are as follows:

[2] Not considered in SST calculation.

- **Regions (EMEA, North America, Latam and APAC):** segments through which the Group provides a variety of property and casualty and life products to retail and commercial customers as well as reinsurance propositions. **Commercial Insurance** brings together corporate and commercial insurance expertise worldwide under a single umbrella.
  - Property and casualty is the business through which the Group provides a variety of motor, home and commercial products and services for individuals, as well as small, mid-sized and large businesses.
  - The life business pursues a strategy with market-leading propositions in unit-linked and protection products as well as fee-based solutions managed through three global pillars (Bank Distribution, Corporate Life & Pensions and Other Retail) to develop leading positions in its target markets.
- **Farmers** provides, through Farmers Group, Inc. (FGI) and its subsidiaries, non-claims related, administrative and management services to the Farmers Exchanges as attorney-in-fact. FGI receives fee income for the provision of services to the Farmers Exchanges, which are owned by their policyholders and managed by Farmers Group, Inc. a wholly owned subsidiary of the Group. This segment also includes all reinsurance assumed from the Farmers Exchanges by the Group. Farmers Exchanges are prominent writers of personal and small commercial lines of business in the U.S.
- **Group Functions and Operations** comprise the Group's Holding and Financing and Headquarters activities. Certain alternative investment positions not allocated to business operating segments are included within Holding and Financing. In addition, this segment includes operational technical governance activities relating to technology, underwriting, claims, actuarial and pricing.
- **Non-Core Businesses** include insurance and reinsurance businesses that the Group does not consider core to its operations and that are therefore mostly managed to achieve a beneficial run-off. Non-core businesses are mainly situated in the U.S., Bermuda and the UK.

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

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

The 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				

A list of the Group's significant subsidiaries can be found in Appendix 2.

A. Business activities *continued*

Joint ventures and distribution networks
Zurich can reach over 60 million customers in major markets in 15 countries through our bank distribution networks. This approach is particularly popular in southern Europe and Latin America for customers seeking life insurance and savings products, as well as general insurance products. Many banks also see this as a way to develop key products to meet the needs of their customers.

We continue to grow our business through such agreements. Our most significant relationships include joint ventures with Banco Santander S.A. in Latin America and Banco Sabadell S.A. in Spain, as well as a strategic cooperation with Deutsche Bank in Germany, Italy and Spain. These three major agreements contributed more than USD 500 million to Zurich's business operating profit in 2017 across Life and Property & Casualty. In December 2017 Zurich announced the purchase of ANZ's life insurance business in Australia, pending regulatory approval. This agreement includes a long-term distribution arrangement that will give Zurich access to ANZ's six million customers.

Information about major shareholders within the meaning of Article 4 para. 2 let. f. ISA 21
According to the rules regarding the disclosure of significant shareholdings of Swiss companies listed in Switzerland, disclosure has to be made if certain thresholds starting at 3 percent are reached or if the shareholding subsequently falls below those thresholds. Options and other financial instruments are added to any share position, even if they allow for cash settlement only. Disclosure must be made separately for purchase positions (including shares, long call options and short put options) and sale positions (including long put options and short call options). The percentage thresholds are calculated on the basis of the total amount of voting rights according to the number of shares issued as disclosed in the commercial register.

Zurich Insurance Group Ltd is obliged to announce shareholdings by third parties in its shares when notification is received from a third party that a threshold has been reached. During 2017, the Group received several new notifications.

As of December 31, 2017, Zurich Insurance Group Ltd was not aware of any person or institution, other than BlackRock, Inc., New York (> 5 percent) and The Capital Group Companies, Inc., Los Angeles (> 3 percent), which, directly or indirectly, had an interest as a beneficial owner in shares, option rights and/or conversion rights relating to shares of Zurich Insurance Group Ltd exceeding the relevant thresholds prescribed by law.

The announcements related to these notifications can be found via the search facility on the SIX Disclosure Office's platform: www.six-exchange-regulation.com/de/home/publications/significant-shareholders.html.

Zurich Insurance Group Ltd is not aware of any person or institution which, as of December 31, 2017, directly or indirectly, alone or with others, exercised or was a party to any arrangements to exercise control over Zurich Insurance Group Ltd.

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

PricewaterhouseCoopers AG (PwC), Birchstrasse 160, in 8050 Zurich, is Zurich Insurance Group Ltd's external auditor.

PwC assumes all auditing functions which are required by law and by the Articles of Association of Zurich Insurance Group Ltd. The external auditors are appointed by the shareholders of Zurich Insurance Group Ltd annually. At the Annual General Meeting on March 29, 2017, PwC was re-elected by the shareholders of Zurich Insurance Group Ltd.

A.4 Significant unusual events

Significant events in 2017 included a powerful earthquake in central Mexico and wildfires in California. But it was also a year of major storms. Cyclone Debbie hit Australia's northeast coast in March 2017. There were devastating storms and typhoons in South East Asia, major storms in Mexico and Latin America, and in Europe. In the Atlantic Basin there were an above-average 16 named storms including hurricanes.

For significant events during 2017 and thereafter, see also the Annual Report 2017 of Zurich Insurance Group and the news releases available at https://www.zurich.com/en/media/news-releases. No other significant events are to be reported.

B. Performance

The Group uses business operating profit (BOP), new business measures and other performance indicators to enhance the understanding of its results. Details of these additional measures are set out in the glossary of the Annual report, pages 302-303. These should be viewed as complementary to, and not as substitutes for the IFRS figures.

Financial highlights

in USD millions, for the years ended December 31, unless otherwise stated	2017	2016	Change[1]
Business operating profit	**3,803**	4,495	(15%)
Net income attributable to shareholders	**3,004**	3,211	(6%)
P&C business operating profit	**1,546**	2,437	(37%)
P&C gross written premiums and policy fees	**33,024**	33,122	–
P&C combined ratio	**100.9%**	98.1%	(2.7 pts)
Life business operating profit	**1,258**	1,130	11%
Life gross written premiums, policy fees and insurance deposit	**33,242**	29,323	13%
Life new business annual premium equivalent (APE)[2]	**4,868**	4,686	4%
Life new business margin, after tax (as % of APE)[2]	**23.3%**	19.4%	3.9 pts
Life new business value, after tax[2]	**999**	782	28%
Farmers business operating profit	**1,691**	1,722	(2%)
Farmers Management Services management fees and other related revenues	**2,892**	2,867	1%
Farmers Management Services managed gross earned premium margin	**7.0%**	7.0%	–
Farmers Re gross written premiums and policy fees	**995**	1,587	(37%)
Farmers Life new business annual premium equivalent (APE)[2]	**91**	94	(3%)
Average Group investments[3]	**189,723**	184,003	3%
Net investment result on Group investments	**7,249**	7,034	3%
Net investment return on Group investments[4]	**3.8%**	3.8%	–
Total return on Group investments[4]	**4.1%**	4.4%	(0.4 pts)
Shareholders' equity[5]	**33,062**	30,660	8%
Z-ECM[6]	**132%**	125%	7.0 pts
Return on common shareholders' equity (ROE)[7]	**10.9%**	11.8%	(0.9 pts)
Business operating profit (after tax) return on common shareholders' equity (BOPAT ROE)[7]	**9.2%**	11.5%	(2.2 pts)

1 Parentheses around numbers represent an adverse variance.
2 Details of the principles for calculating new business are included in the embedded value report in the annual results 2017. New business value and new business margin are calculated after the effect of non-controlling interests, whereas APE is presented before non-controlling interests.
3 Including investment cash.
4 Calculated on average Group investments.
5 As of December 31, 2017 and December 31, 2016, respectively.
6 Ratios as of January 1, 2018 and January 1, 2017, respectively.
7 Shareholders' equity used to determine ROE and BOPAT ROE is adjusted for net unrealized gains/(losses) on available-for-sale investments and cash flow hedges.

Performance overview

The Group's business operating profit of USD 3.8 billion decreased by USD 0.7 billion or 15 percent in U.S. dollar terms and 8 percent on a local currency basis. This decrease reflects the impacts of catastrophe and weather related events beyond a normal level, in particular the hurricanes impacting the U.S. in the third quarter, Harvey, Irma and Maria. In addition, business operating profit was adversely affected by a change to capital gains tax indexation relief in the UK and measures related to the Group's restructuring.

Adjusted for the impact of the U.S. hurricanes, the change to capital gains tax indexation relief in the UK and the measures related to the Group's restructuring, business operating profit increased by USD 267 million compared to 2016, with improved performance of the Life business across all segments on a local currency basis and improvements of the Property & Casualty (P&C) loss ratio. Excluding the one-time pension plan curtailment gain in 2016, Farmers business operating profit also improved, benefiting from a lower combined ratio in Farmers Re and a strong result of Farmers Life. In addition, accumulated expense savings of around USD 700 million against the 2015 baseline have been achieved.

Net income attributable to shareholders of USD 3.0 billion decreased by USD 207 million, or by 6 percent in U.S dollar terms and by 1 percent on a local currency basis. The decrease is primarily the result of lower business operating profit and higher income tax expense which were only partly offset by higher net realized capital gains.

Shareholders' equity increased by USD 2.4 billion to USD 33.1 billion during the year, with net income for the period more than offsetting the cost of the dividend approved in March 2017. Additionally, positive currency translation adjustments and net actuarial gains on pension plans further contributed to the increase in shareholders' equity.

Business operating profit of USD 3.8 billion decreased USD 0.7 billion with improvements in all businesses other than P&C and Farmers.

- **P&C** business operating profit decreased by USD 892 million to USD 1.5 billion. Natural catastrophes and other weather events were above normal expected levels, the largest part of which related to the USD 700 million for the hurricanes Harvey, Irma and Maria, impacting North America and EMEA with reinsurance recoveries reflected in the Group Reinsurance segment.
- **Life** business operating profit increased by USD 129 million to USD 1.3 billion, or 11 percent both in U.S. dollar terms and on a local currency basis. On a local currency basis, all segments showed increases except EMEA, with the largest improvement driven by North America. Overall business operating profit benefited from growth resulting in higher loadings and fees net of acquisition costs, as well as improved technical margin and investment margin, partly offset by increases in policyholder taxes.
- **Farmers** business operating profit decreased by USD 31 million to USD 1.7 billion, a decrease of 2 percent in U.S. dollar terms. An increase in Farmers Life primarily due to the favorable impact of actuarial assumption changes, as well as an increase in Farmers Re driven by an improved combined ratio, were more than offset by the effect of a pension plan curtailment gain in 2016, which benefited Farmers Management Services and Farmers Life.
- **Group Functions and Operations (GF&O)** business operating loss reduced to USD 731 million due to administration cost savings and lower financing costs, partially offset by lower recharges to business units.
- **Non-Core Businesses** business operating profit increased by USD 54 million to USD 39 million driven by reserve releases in run-off books.

B. Performance *continued*

The Group progressed against its financial targets in 2017:

BOPAT ROE decreased to 9.2 percent as a result of lower business operating profit caused in particular by the hurricanes affecting the U.S., the impact of the change to the UK capital gains tax indexation relief and the measures related to the Group's restructuring. These impacts also added to a higher effective tax rate. The lower business operating profit, coupled with a higher tax rate and a higher average equity led to the decrease of 2.2 percentage points. Adjusted for the hurricanes and the other aforementioned impacts, the annualized BOPAT ROE amounted to 12.1 percent, in line with the Group's target of 12 percent and growing over the 2017–2019 period.

The Group's capital and solvency positions remained strong and enabled the Board of Directors to propose a dividend of CHF 18 per share. Solvency measured on an economic basis as determined under the **Zurich Economic Capital Model (Z-ECM)** was 132 percent as of December 31, 2017, well above the target range of 100–120 percent, and increased by 7 percentage points from January 1, 2017.

Building on the **expense savings** achieved in 2016, the Group has made further progress toward meeting its 2019 expense target of USD 1.5 billion against the 2015 baseline. Accumulated savings of around USD 700 million have been achieved as of December 31, 2017.

Cash remittances of USD 3.7 billion were achieved during 2017, consistent with the target to deliver remittances in excess of USD 9.5 billion over the cycle.

The **shareholders' effective tax rate** increased to 33.2 percent for the period ended December 31, 2017 compared with 30.7 percent for the same period of 2016. This increase is explained by adverse impacts of the catastrophe events (mainly Hurricanes Harvey, Irma and Maria), several non-recurring charges in 2017, which did not attract tax relief and changes in the geographical profit mix. This was partially offset by the one-off US tax reform impact from the re-measurement of the deferred tax position of the Group's U.S. entities.

NIAS ROE decreased by 0.9 percentage points to 10.9 percent due to the reduction in net income attributable to shareholders coupled with a higher average shareholders' equity.

B.1 Underwriting performance

- Property & Casualty (P&C) gross written premiums were stable over the year at a reported level and show a 1% increase on a like for like basis, with an improvement in the second half of the year. **Property & Casualty net underwriting result** decreased by USD 716 million to a loss of USD 231 million, with an overall combined ratio of 100.9 percent, 2.7 percentage points higher than in 2016. Adjusted for the impact of the U.S. hurricanes Harvey, Irma and Maria of USD 700m, the combined ratio was 98.2 percent, with the loss ratio in line with prior year.
- **Life Gross written premiums, policy fees and insurance deposits** increased by USD 3.9 billion to USD 33.2 billion, or by 13 percent both in U.S. dollar terms and on a local currency basis. Improvements occurred in North America, driven by a large contribution to an existing corporate protection scheme, subsequent to a transfer of that business from the Non-Core segment, and improved corporate savings sales across EMEA. The latter was partly offset by an expected reduction of sales of individual savings products in Spain and Italy. Net policyholder flows of USD 7.7 billion remained flat compared with 2016, substantially reflecting the same factors.
- **Farmers Management Services management fees and other related revenues** of USD 2.9 billion increased USD 25 million, or 1 percent, due to growth in gross earned premiums of the Farmers Exchanges. **Management and other related expenses** of USD 1.5 billion remained flat. The managed gross earned premium margin remained unchanged at 7.0 percent.

For additional information on the underwriting performance of the Group, see Appendix 1 of this report and the Annual report, pages 158-159 and 175.

B.2 Investment Performance

The **net investment result on Group investments,** before allocations to policyholders, of USD 7.2 billion increased by USD 215 million, or by 3 percent in U.S. dollar terms and 2.5 percent on a local currency basis, resulting in a **net investment return on average Group investments** of 3.8 percent, in line with the same period of 2016. **Net investment income,** predominantly included in the core business results, of USD 5.2 billion decreased by USD 259 million, or 5 percent in both U.S. dollar terms and on a local currency basis as a result of the continued low-yield environment. **Net capital gains on investments and impairments** included in the net investment result increased by USD 474 million to USD 2 billion, mainly due to sales of equity securities compared with the prior period. **Total return on average Group investments** was 4.1 percent, compared with 4.4 percent in the same period of 2016. Total return includes the net investment result, net capital gains and the favorable impact from net unrealized capital gains before allocations to policyholders reported in shareholders' equity, which were USD 486 million compared with USD 1.1 billion in 2016. This decline was mainly a result of rising European government bond yields after yields fell in 2016.

B. Performance *continued*

Net investment result on Group investments

in USD millions, for the years ended December 31	Net investment income		Net capital gains/(losses) and impairments		Net investment result		of which impairments	
	2017	2016	**2017**	2016	**2017**	2016	**2017**	2016
Investment cash	11	2	–	–	11	2	–	–
Equity securities	402	489	1,422	542	1,824	1,031	(77)	(168)
Debt securities	3,942	4,034	558	789	4,500	4,823	–	(12)
Investment property[1]	463	440	355	408	818	848	–	–
Mortgage loans	198	222	–	5	198	227	–	5
Other loans	415	417	9	17	424	434	8	(1)
Investments in associates and joint ventures	3	3	–	3	3	6	–	–
Derivative financial instruments	–	–	(310)	(203)	(310)	(203)	–	–
Investment result, gross, for Group investments	5,433	5,607	2,034	1,560	7,467	7,167	(69)	(176)
Investment expenses for Group investments	(218)	(134)	–	–	(218)	(134)	–	–
Investment result, net, for Group investments	5,215	5,474	2,034	1,560	7,249	7,034	(69)	(176)

[1] Rental operating expenses for investment property amounted to USD 91 million and USD 88 million for the years ended December 31, 2017 and 2016, respectively.

Net unrealized gains/(losses) on Group investments included in equity

in USD millions, as of December 31	Total	
	2017	2016
Equity securities: available-for-sale	1,862	1,341
Debt securities: available-for-sale	9,720	9,637
Other	350	468
Gross unrealized gains/(losses) on Group investments	11,932	11,447
Less amount of unrealized gains/(losses) on investments attributable to:		
Life policyholder dividends and other policyholder liabilities	(6,779)	(6,500)
Life deferred acquisition costs and present value of future profits	(702)	(696)
Deferred income taxes	(928)	(1,006)
Non-controlling interests	(36)	(17)
Total[1]	**3,488**	**3,228**

[1] Net unrealized gains/(losses) on Group investments include net gains arising on cash flow hedges of USD 398 million and USD 418 million as of December 31, 2017 and 2016, respectively.

B.3 Performance of businesses

Property & Casualty (P&C)

in USD millions, for the years ended December 31	Total			Of which Commercial[1]		
	2017	2016	Change	**2017**	2016	Change
Gross written premiums and policy fees	33,024	33,122	–	15,852	15,873	–
Net earned premiums and policy fees	26,033	26,102	–	11,007	11,739	(6%)
Insurance benefits and losses, net of reinsurance	17,996	17,345	(4%)	9,213	8,427	(9%)
Net underwriting result	(231)	485	n.m.	(1,252)	90	n.m.
Net investment result	2,038	1,958	4%	1,271	1,186	7%
Business operating profit	**1,546**	**2,437**	**(37%)**	**(45)**	**1,315**	**(103%)**
Loss ratio	69.1%	66.4%	(2.7 pts)	83.7%	71.8%	(11.9 pts)
Expense ratio	31.8%	31.7%	(0.1 pts)	27.7%	27.4%	(0.2 pts)
Combined ratio	**100.9%**	**98.1%**	**(2.7 pts)**	**111.4%**	**99.2%**	**(12.1 pts)**

[1] Excluding Group Reinsurance and intersegment eliminations.

BOP by segment

in USD millions, for the years ended December 31	Business operating profit (BOP)			Net underwriting result		
	2017	2016	Change	**2017**	2016	Change
Europe, Middle East & Africa (EMEA)	259	1,054	(75%)	(175)	348	n.m.
North America	800	1,207	(34%)	(296)	242	n.m.
Asia Pacific	155	270	(43%)	90	210	(57%)
Latin America	177	196	(10%)	45	27	69%
Group Reinsurance[1]	155	(289)	n.m.	105	(343)	n.m.
Total	**1,546**	**2,437**	**(37%)**	**(231)**	**485**	**n.m.**

[1] Including intersegment elimination.

Business operating profit decreased by USD 892 million to USD 1.5 billion, heavily affected by catastrophe losses beyond a normal level, in particular hurricanes Harvey, Irma and Maria during the third quarter of 2017, with a total net loss of USD 700 million impacting North America, EMEA and Group Reinsurance. Adjusted for the U.S. hurricanes and the impact of measures related to the Group's restructuring of USD 99 million, business operating profit decreased by USD 93 million compared with the prior year. Non-technical expenses increased compared with 2016, impacted by lower foreign exchange gains, and other negative non-recurring items. This was partly offset by an improvement in net investment result due to hedge fund gains, mostly in North America.

EMEA business operating profit decreased by USD 795 million, due to higher catastrophe and weather related losses, and was further affected by lower volumes and higher non-technical expenses, the latter reflecting mainly the impacts of measures related to the Group's restructuring. In **North America**, business operating profit decreased by USD 407 million, reflecting improved underlying loss experience, lower other underwriting expenses and higher hedge fund gains compared with 2016, only partly offsetting the impact of the hurricane losses. In **Asia Pacific,** business operating profit decreased by USD 115 million, as 2016 benefited from higher favorable development of loss reserves established in prior years. This was only partly offset by improved underlying loss experience mostly in Australia and Japan. **Latin America** declined by USD 19 million, as foreign exchange gains decreased compared with 2016, in particular in Venezuela. The improvement in **Group Reinsurance** reflected mainly a recovery on hurricane losses.

Commercial Insurance business operating loss stemmed from catastrophe losses, including the impact of hurricanes in the U.S. during the third quarter of 2017. The result also reflected a lower level of favorable development of loss reserves established in prior years, partly related to higher loss reserve releases in 2016 in Asia Pacific. An increase in non-technical expenses in UK and Venezuela, the latter due to lower foreign exchange gains, was partly offset by hedge fund gains in North America.

B. Performance *continued*

Gross written premiums and policy fees remained broadly flat in U.S. dollar terms and on a local currency basis. Excluding businesses exited in South Africa, Morocco, Taiwan and the Middle East over the last eighteen months, gross written premiums and policy fees increased by 1 percent on a local currency basis. Growth in Latin America was mainly driven by the mass-consumer business in Brazil and motor insurance in Mexico. In Asia Pacific the acquisition of Cover-More contributed to the growth. EMEA and North America's large commercial book showed decreases, impacted by soft market conditions. Overall, rates rose by around 2 percent in 2017.

The **net underwriting result** decreased by USD 716 million to a loss of USD 231 million, with an overall combined ratio of 100.9 percent, 2.7 percentage points higher than in 2016. Adjusted for the impact of the U.S. hurricanes Harvey, Irma and Maria of USD 700m, the combined ratio was 98.2 percent, with the loss ratio in line with prior year. An improvement in the underlying loss experience was offset by higher other catastrophe and weather-related losses and lower favorable development of loss reserves established in prior years. The other underwriting expense ratio improved by 1.2 percentage points compared with 2016, benefiting from a lower expense base as a result of initiatives to reduce costs, while commissions increased across the segments, reflecting changes in the business mix, resulting in a slightly lower expense ratio.

The net underwriting result in **EMEA** decreased by USD 523 million due to higher catastrophe and weather related losses, unfavorable development in loss reserves established in prior years compared to favorable development in prior year, and lower net premium volumes, partly due to higher internal reinsurance cessions. The expense ratio remained broadly flat, with an increase in commissions offset by lower other underwriting expenses. **North America** decreased by USD 539 million, heavily affected by catastrophe losses in the third quarter of 2017. This was partly offset by an improvement in underlying loss experience, mainly on workers compensation and property lines of business, as well as higher gains on crop business, mostly due to higher retention. Other underwriting expenses also improved, benefiting from initiatives to reduce costs and lower corporate center charges, only partially offset by an increase in commissions due to changes in business mix. **Asia Pacific** was USD 121 million lower than in 2016, which benefited from higher favorable development of loss reserves established in prior years. The result was also affected by an increase in large losses, partly offset by improved underlying loss experience, mostly in Australia's property and motor lines of business and Japan. The net underwriting result in **Latin America** improved by USD 19 million, reflecting higher volumes and improvements in the underlying loss experience, only partly offset by a lower level of favorable development of reserves established in prior years, higher catastrophe losses, and higher commissions and other underwriting expenses.

Life

in USD millions, for the years ended December 31	2017	2016	Change
Insurance deposits	19,172	14,666	31%
Gross written premiums and policy fees	14,070	14,657	(4%)
Net investment income on Group investments	2,925	2,993	(2%)
Insurance benefits and losses, net of reinsurance	(9,259)	(11,130)	17%
Business operating profit	**1,258**	**1,130**	**11%**
Net policyholder flows[1]	7,705	7,804	(1%)
Assets under management[2, 3]	269,836	248,899	8%
Total reserves for life insurance contracts, net of reinsurance, and liabilities for investment contracts (net reserves)[3]	214,626	203,039	6%

[1] Net policyholder flows are defined as the sum of gross written premiums and policy fees and deposits, less policyholder benefits.
[2] Assets under management comprise on balance sheet Group investments and unit-linked investments plus assets that are managed by third parties, on which fees are earned.
[3] As of December 31, 2017 and December 31, 2016, respectively.

BOP by segment

in USD millions, for the years ended December 31	2017	2016	Change
Europe, Middle East & Africa (EMEA)	831	889	(7%)
North America	(2)	(85)	98%
Asia Pacific	132	76	73%
Latin America	296	249	19%
Group Reinsurance[1]	1	–	n/a
Total	**1,258**	**1,130**	**11%**

[1] Including intersegment elimination.

Business operating profit increased by USD 129 million to USD 1.3 billion, or 11 percent both in U.S. dollar terms and on a local currency basis, with increases on a local currency basis in all segments except EMEA. Adjusted for USD 121 million reflecting both the impact of the UK capital gains tax indexation relief and measures related to the Group's restructuring, business operating profit increased by USD 250 million compared to prior year, or 22 percent in U.S. dollar terms, with increases in all segments. A significant portion of the increase occurred in North America, driven by improved claims experience, in addition 2016 was impacted by an adverse variance resulting from a review of expected persistency in certain universal life books of business. Asia Pacific benefited from both organic and inorganic growth across the region, as well as improved persistency in Hong Kong. In Latin America higher overall volumes were the main contributors on a local currency basis. These positive contributions were partly offset by a deterioration in **EMEA**, largely due to the effect of the change to UK capital gains tax indexation relief.

Gross written premiums, policy fees and insurance deposits increased by USD 3.9 billion to USD 33.2 billion, or by 13 percent both in U.S. dollar terms and on a local currency basis. Improvements occurred in North America, driven by a large contribution to an existing corporate protection scheme, subsequent to a transfer of that business from the Non-Core segment, and improved corporate savings sales across EMEA. The latter was partly offset by an expected reduction of sales of individual savings products in Spain and Italy. Net policyholder flows of USD 7.7 billion remained flat compared with 2016, substantially reflecting the same factors.

Assets under management increased by 8 percent in U.S. dollar terms, but decreased 1 percent on a local currency basis compared with December 31, 2016. On a local currency basis, favorable market movements and positive net policyholder flows were offset by a reclassification of approximately USD 29 billion to held for sale of assets related to the disposal of the UK workplace pensions and savings business to Lloyds Banking Group (LBG). In U.S. dollar terms, a further improvement stemmed from the impact of the weaker U.S. dollar against the euro and the British pound on investments denominated in those currencies compared with December 31, 2016.

B. Performance *continued*

Source of earnings[1]

in USD millions, for the years ended December 31	2017	2016	Change
Loadings and fees	3,484	3,282	6%
Investment margin	642	546	18%
Technical margin	946	842	12%
Operating and funding costs	(1,490)	(1,419)	(5%)
Acquisition costs	(2,488)	(2,361)	(5%)
Impact of deferrals	164	240	(31%)
Business operating profit	**1,258**	**1,130**	**11%**

[1] Each line represents the Group's interest after deducting non-controlling interests, amounting in total to USD 289 million in 2017 and USD 255 million in 2016 in business operating profit.

Viewed by profit sources and on a local currency basis, business operating profit benefited from growth resulting in higher loadings and fees net of acquisition costs, as well as improvements in the investment margin and the technical margin. Expense savings were more than offset by an increase in policyholder taxes leading to higher operating costs.

Loadings and fees improved by 6 percent both in U.S dollar terms and on a local currency basis. Growth in Asia Pacific, which benefited from the 2016 acquisitions of MAA Takaful Berhad in Malaysia and the retail life insurance protection business of Macquarie Group in Australia, higher volumes in Latin America and a large contribution to an existing corporate protection scheme in North America were the main drivers. These positive factors were partially offset by lower fee revenue in Germany due to a decrease in single premium business volume. **Investment margin** improved by 18 percent in U.S. dollar terms, and 16 percent on a local currency basis. All segments improved, with the highest contribution from EMEA, where lower policyholder crediting rates in Germany were the main contributor. **Technical margin** improved by 12 percent in U.S dollar terms and 11 percent on a local currency basis, driven by the growing life insurance protection business in Asia Pacific, predominantly in Australia and Japan, and improved claims experience in North America and Latin America.

Operating and funding costs deteriorated by 5 percent in U.S dollar terms and on a local currency basis. In EMEA savings were achieved despite the negative impact which resulted from the change to UK capital gains tax indexation relief. Higher operating and funding costs in Asia Pacific, largely resulted from growth initiatives and the costs related to integrating the recently acquired businesses. In North America the increase was driven by premium taxes resulting from a large contribution to an existing corporate protection scheme. **Acquisition costs** increased by 5 percent both in U.S dollar terms and on a local currency basis. The increase on a local currency basis reflected higher volumes of business in Asia Pacific and Latin America. EMEA was broadly flat. The positive contribution from the **impact of deferrals** decreased by 31 percent in U.S. dollar terms and 30 percent on a local currency basis, mainly in EMEA, driven by an update of expected reinvestment rates, partially offset by the positive effect in North America, where prior year was impacted by the review of expected persistency in certain universal life books of business.

NBV, APE and NBM by segment

in USD millions, for the years ended December 31

	New business value, after tax (NBV)[1]		New business annual premium equivalent (APE)[2]		New business margin, after tax (as % of APE) (NBM)[3]	
	2017	2016	**2017**	2016	**2017**	2016
Europe, Middle East & Africa (EMEA)	605	541	3,333	3,238	19.1%	18.3%
North America	66	25	224	62	29.3%	40.8%
Asia Pacific	165	88	195	155	85.8%	57.8%
Latin America	164	126	1,117	1,231	23.2%	14.7%
Total	**999**	**782**	**4,868**	**4,686**	**23.3%**	**19.4%**

NBV, APE and NBM by line of business

in USD millions, for the years ended December 31

	New business value, after tax (NBV)[1]		New business annual premium equivalent (APE)[2]		New business margin, after tax (as % of APE) (NBM)[3]	
	2017	2016	**2017**	2016	**2017**	2016
Protection	736	615	1,698	1,645	54.3%	45.9%
Corporate Pensions	108	124	1,399	1,186	7.8%	10.5%
Unit Linked	167	97	1,252	1,024	14.6%	10.5%
Annuities and Savings	(12)	(54)	519	831	(3.0%)	(9.4%)
Total	**999**	**782**	**4,868**	**4,686**	**23.3%**	**19.4%**

[1] New business value is calculated on embedded value principles net of non-controlling interests.
[2] APE is shown gross of non-controlling interests.
[3] New business margin is calculated using new business value as a percentage of APE based on figures net of non-controlling interests for both metrics.

APE improved by USD 183 million to USD 4.9 billion, or 4 percent both in U.S. dollar terms and on a local currency basis. On a local currency basis, the largest improvements occurred in North America, driven by a large contribution to an existing corporate protection scheme, subsequent to a transfer of that business from the Non-Core segment, and in EMEA, where higher corporate and unit-linked retail sales were only partly offset by reductions in sales of individual savings products in Spain and Italy. Asia Pacific also improved, reflecting both the impact of the MAA Takaful Berhad acquisition in Malaysia and organic growth. These positive impacts were partly offset by lower new business sales in Latin America, where growth in sales of individual protection products in Zurich Santander Brazil was more than offset by a reduction in the Zurich operations in Chile, where 2016 included the effect of a large corporate contract.

New business value increased by USD 218 million to USD 1 billion, or 28 percent both in U.S. dollar terms and on a local currency basis. On a local currency basis, new business value benefited from higher volumes of new business in EMEA and North America, and an improved product mix in EMEA. In addition, Asia Pacific benefited from a positive change in operating assumption in Japan.

New business margin improved by 3.9 percentage points to 23 percent, with improvements in all segments except North America. The most notable improvements occurred in Asia Pacific following the positive impact of assumptions changes in Japan. In Latin America, declining interest rates in Brazil resulted in an improved margin on individual protection business. In EMEA, improvements in Italy and Spain, resulting from a shift in sales away from individual savings, were partly offset by an overall increase in sales of lower margin corporate business.

B. Performance *continued*

Farmers

in USD millions, for the years ended December 31	**2017**	2016	Change
Farmers Management Services (FMS)	1,415	1,478	(4%)
Farmers Re	57	42	36%
Farmers Life[1]	220	202	9%
Total business operating profit	**1,691**	**1,722**	**(2%)**

[1] Reflects management view and contains the ongoing business and certain closed books of Farmers New World Life Insurance Company (FNWL)

Farmers business operating profit decreased by USD 31 million to USD 1.7 billion, or by 2 percent. **Farmers Management Services** business operating profit decreased by USD 64 million to USD 1.4 billion. Higher revenues from premium growth at the Farmer Exchanges[1] in 2017 partly offset a one-time USD 86 million favorable impact in 2016 from a pension curtailment gain related to changes in the Farmers pension plan. Farmers Life business operating profit increased by USD 17 million to USD 220 million, primarily due to the impact of updated actuarial assumptions to industry mortality tables, partly offset by the 2016 pension curtailment gain of USD 10 million. Farmers Re business operating profit increased by USD 15 million to USD 57 million, driven by an improved underwriting result, partially offset by lower investment income.

Farmers Management Services

in USD millions, for the years ended December 31	**2017**	2016	Change
Management fees and other related revenues	2,892	2,867	1%
Management and other related expenses	1,503	1,500	–
Gross management result	1,389	1,367	2%
Managed gross earned premium margin	7.0%	7.0%	–

Management fees and other related revenues of USD 2.9 billion increased USD 25 million, or 1 percent, due to growth in gross earned premiums of the Farmers Exchanges. **Management and other related expenses** of USD 1.5 billion remained flat.

The managed gross earned premium margin remained unchanged at 7.0 percent.

Farmers Re

in USD millions, for the years ended December 31	**2017**	2016	Change
Gross written premiums and policy fees	995	1,587	(37%)
Net underwriting result	(1)	(51)	97%
Loss ratio	68.1%	71.3%	3.2 pts
Expense ratio	32.0%	32.0%	–
Combined ratio	**100.1%**	**103.3%**	**3.2 pts**

Gross written premiums and policy fees decreased by USD 592 million to USD 995 million, or by 37 percent, mainly due to a portfolio transfer as a result of the reduced participation in the All Lines quota share reinsurance agreement with the Farmers Exchanges to 1.0 percent effective December 31, 2017 from 8.0 percent previously.

The **net underwriting result** improved by USD 49 million to a loss of USD 1 million reflected in a 3.2 percentage point improvement in the combined ratio. The loss ratio decreased 3.2 percentage points as a result of an improved underlying loss ratio, favorable development of loss reserves established in prior years and slightly lower impact from catastrophe events. The expense ratio remained flat at 32 percent.

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

Farmers Life

in USD millions, for the years ended December 31	2017	2016	Change
Insurance deposits	149	151	(1%)
Gross written premiums and policy fees	877	873	–
New business annual premium equivalent (APE)	91	94	(3%)
New business value (NBV)	100	85	18%
Assets under management[1, 2]	5,415	6,823	(21%)
Total reserves for life insurance contracts, net of reinsurance, and liabilities for investment contracts (net reserves)[2]	4,679	6,085	(23%)

[1] Assets under management comprise on balance sheet Group investments and unit-linked investments plus assets that are managed by third parties, on which fees are earned.
[2] As of December 31, 2017 and December 31, 2016, respectively.

Insurance deposits decreased by USD 2 million to USD 149 million. Gross written premiums and policy fees increased by USD 4 million to USD 877 million.

APE was lower mainly due to lower cross-sell opportunities. **NBV** increased largely due to improved persistency and mortality, favorable sales mix and lower acquisition expenses, partially offset by lower sales volumes and the negative impact of higher interest rates on certain individual protection business.

Assets under management decreased by USD 1.4 billion to USD 5.4 billion and total reserves decreased by USD 1.4 billion to USD 4.7 billion. Reductions in both items were related to an agreement signed in the second quarter of 2017 with Reinsurance Group of America to reinsure a portion of Farmers Life's closed U.S. annuity book.

Farmers Exchanges

Financial information about the Farmers Exchanges, which are owned by their policyholders, is proprietary to the Farmers Exchanges, but is provided to support an understanding of the performance of Farmers Group, Inc. and Farmers Re.

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

in USD millions, for the years ended December 31	2017	2016	Change
Gross written premiums	19,908	19,714	1%
Gross earned premiums	19,841	19,528	2%

Gross written premiums in the Farmers Exchanges increased by USD 194 million to USD 19.9 billion, or by 1 percent. Continuing operations[2] were up 3 percent, with growth across most books of business, driven primarily by rate increases in the auto lines of business.

Gross earned premiums in the Farmers Exchanges increased by USD 312 million to USD 19.8 billion, or by 2 percent.

[2] Continuing operations exclude 21st Century outside of California and Hawaii and other discontinued operations.

B. Performance *continued*

Group Functions and Operations

in USD millions, for years ended December 31	**2017**	2016	Change
Holding and Financing	(450)	(549)	18%
Headquarters	(281)	(230)	(22%)
Total business operating profit	**(731)**	**(779)**	**6%**

Holding and Financing business operating loss of USD 450 million improved by USD 100 million or 18 percent in U.S. dollar terms and 18 percent on a local currency basis. The main factors driving the improvement were savings in administration costs and lower financing costs, partly offset by lower foreign exchange gains than in the previous year.

Headquarters recorded a business operating loss of USD 281 million, USD 51 million higher compared to 2016, or 22 percent both in U.S. dollar terms and in local currency. Underlying expense savings were more than offset by lower recharges to business units and a software impairment.

Non-Core Businesses

in USD millions, for the years ended December 31	**2017**	2016	Change
Zurich Legacy Solutions	(8)	(24)	67%
Other run-off	47	9	n.m.
Total business operating profit	**39**	**(15)**	**n.m.**

Zurich Legacy Solutions, which predominantly comprises P&C run-off portfolios, reported a business operating loss of USD 8 million, an improvement of USD 16 million driven by net reserve releases in run-off portfolios.

Other run-off, which largely comprises U.S. life insurance and annuity portfolios, reported a USD 38 million increase in business operating profit. This arose primarily from the release of long-term reserves as a consequence of in-force management activities in a closed Life book, market value volatility, partly offset by lower releases of long-term reserves compared to prior year.

C. Corporate governance and risk management

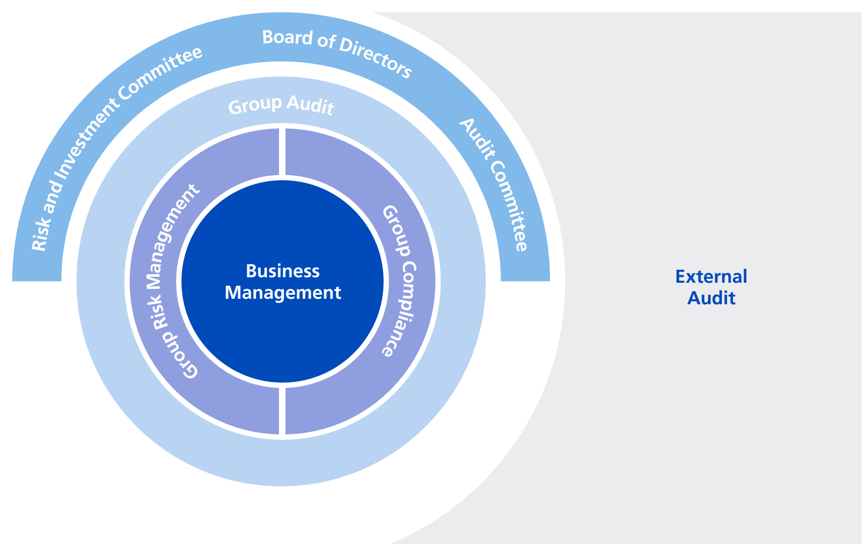
C.1 Corporate governance

C.1.1 Corporate governance

The Zurich Insurance Group, consisting of Zurich Insurance Group Ltd and its subsidiaries (the 'Group' or 'Zurich'), 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 enable proper conduct of business by defining the powers and responsibilities of its corporate bodies and employees.

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.

Three lines of defense at Zurich Insurance Group
as of December 31, 2017



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.

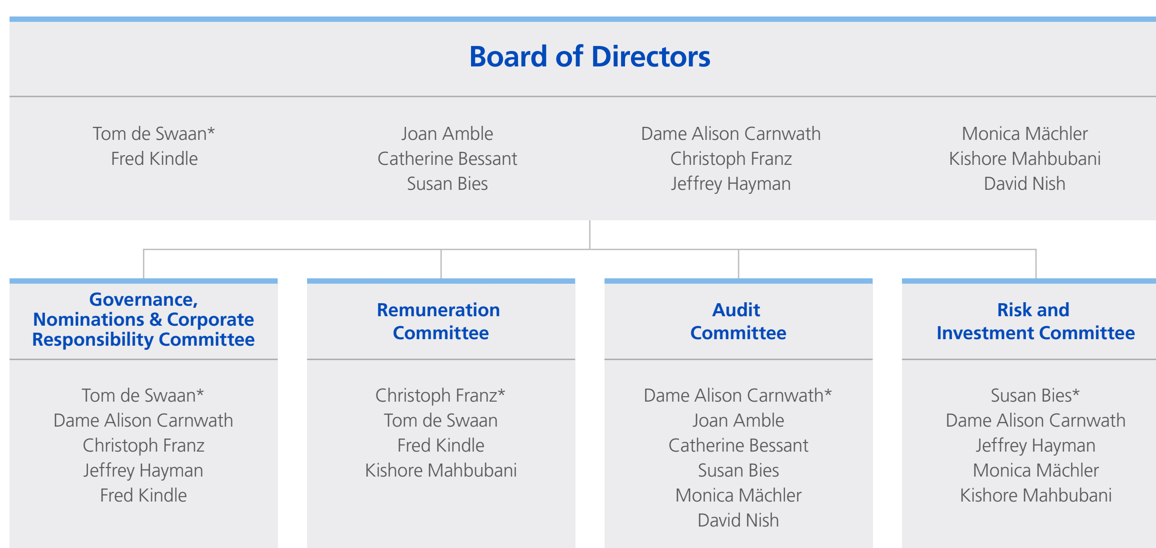
- **1st line: Business Management**
  The first line of defense consists of business management and all functions except Group Risk Management, Group Compliance and Group Audit. The first line takes risks and is responsible for day-to-day risk management (i.e. risks are identified and monitored, mitigation actions are implemented and internal controls are in place and operating effectively).
- **2nd line: Group Risk Management and Group Compliance**
  The second line of defense consists of the two control functions, Group Risk Management and Group Compliance.
  Group Risk Management is responsible for Zurich's enterprise risk management framework. The Group Chief Risk Officer regularly reports risk matters to the Group CEO, senior management committees and the Risk and Investment Committee of the Board.
  Group Compliance is responsible for providing assurance to management that compliance risks within its mandate are appropriately identified and managed. The Group Chief Compliance Officer regularly provides reports to the Audit Committee and has an additional reporting line to the Chairman of the Audit Committee and appropriate access to the Chairman of the Board.
- **3rd line: Group Audit**
  The third line of defense consists of the assurance function Group Audit.
  Group Audit is responsible for auditing risk management, control and governance processes. The Head of Group Audit reports functionally to the Chairman of the Audit Committee and administratively to the Group CEO, and meets regularly with the Chairman of the Board and the Chairman of the Audit Committee and attends each meeting of the Audit Committee.
- **Board – Audit Committee and Risk and Investment Committee**
  The Board is ultimately responsible for the supervision of the control and assurance activities. Its Audit and Risk and Investment committees receive regular updates from Group Risk Management, Group Compliance, Group Audit and external audit throughout the year.
- **External audit**
  External audit is responsible for auditing the Group's financial statements and for auditing Zurich's compliance with specific regulatory requirements. The Audit Committee regularly meets with the external auditors.

C. Corporate governance and risk management *continued*

C.1.2 Board of Directors

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 Zurich Insurance Group Ltd, except for decisions on matters reserved for the shareholders.

Board of Directors and its Committees
as of December 31, 2017



* Chairman of Board or Board Committee, respectively.

The members of the Board are elected by the shareholders at the AGM. The Board constitutes itself in its first meeting after the AGM, except for the Chairman and the members of the Remuneration Committee who, as required by the Ordinance Against Excessive Compensation (AEC), in force since January 1, 2014, are elected by the shareholders.

The term of office of a Board member ends after completion of the next AGM. As a consequence, each member of the Board must be re-elected at the AGM each year.

Board of Directors, as of December 31, 2017

Board of Directors	Expiration of term of office
Tom de Swaan, Chairman	2018
Fred Kindle, Vice Chairman	2018
Joan Amble	2018
Catherine Bessant	2018
Susan Bies	2018
Dame Alison Carnwath	2018
Christoph Franz	2018
Jeffrey Hayman	2018
Monica Mächler	2018
Kishore Mahbubani	2018
David Nish	2018

Adrian Peyer, Corporate Secretary

Key governance developments in 2017 – at a glance
as of December 31, 2017

Board of Directors	Executive Committee
Election	**New appointments**
→ Catherine Bessant, elected as a new member (as of March 29, 2017)	→ Alison Martin, Group Chief Risk Officer-Designate (as of October 1, 2017)
	→ Kathleen Savio, CEO-Designate North America (as of October 1, 2017)
	Resignations
	→ Mike Foley, CEO North America (effective March 1, 2018)
	→ Cecilia Reyes, Group Chief Risk Officer (effective March 1, 2018)

At the AGM on March 29, 2017, all Board members were re-elected for another one-year term. Ms. Catherine Bessant was newly elected. The shareholders re-elected Mr. Tom de Swaan as Chairman. As members of the Remuneration Committee, they elected Mr. Christoph Franz, Mr. Tom de Swaan, Mr. Fred Kindle and Mr. Kishore Mahbubani. As independent voting rights representative, the shareholders elected Mr. lic. iur. Andreas G. Keller, attorney at law.

Mr. Tom de Swaan, Mr. Fred Kindle, and Ms. Susan Bies have decided to retire from the Board as of the AGM 2018 and did not stand for re-election.

The Board proposed to shareholders that they elect or re-elect as follows:

- as members: Mr. Michel M. Liès, Ms. Joan Amble, Ms. Catherine Bessant, Dame Alison Carnwath, Mr. Christoph Franz, Mr. Jeffrey Hayman, Ms. Monica Mächler, Mr. Kishore Mahbubani and Mr. David Nish
- as Chairman: Mr. Michel M. Liès
- as members of the Remuneration Committee: Ms. Catherine Bessant, Mr. Christoph Franz, Mr. Michel M. Liès and Mr. Kishore Mahbubani
- as independent voting rights representative: Mr. lic. iur. Andreas G. Keller, attorney at law

All members of the Board were elected or re-elected by the shareholders, as proposed by the Board, at the AGM 2018 which took place on April 4, 2018. In addition, Mr. Michel Liès was elected as new member to the Board (for a one-year term). Mr. Michel Liès was elected as new Chairman of the Board.

After the AGM 2018, the Board Committees are composed as follows:

- **Governance, Nominations & Corporate Responsibility Committee:** Mr. Michel Liès (Chair), Dame Alison Carnwath, Mr. Christoph Franz, Mr. Jeffrey Hayman, Ms. Monica Mächler
- **Remuneration Committee:** Mr. Christoph Franz, Ms. Catherine Bessant, Mr. Michel Liès, Mr. Kishore Mahbubani
- **Audit Committee:** Dame Alison Carnwath (Chair), Ms. Catherine Bessant, Ms. Monica Mächler, Mr. David Nish
- **Risk and Investment Committee:** Mr. Jeffrey Hayman (Chair), Ms. Joan Amble, Dame Alison Carnwath, Mr. Kishore Mahbubani, Mr. David Nish

C. Corporate governance and risk management *continued*

C.1.3 Executive Management

To the extent not reserved to the Board, management is delegated to the Group CEO. The Group CEO has overall responsibility and accountability for the Group's management and the performance. The ExCo serves the Group CEO as the core management team in matters of Group-wide strategic, financial and business-policy relevance, including consolidated performance, capital allocation and mergers and acquisitions.

The ExCo is chaired by the Group CEO. As of December 31, 2017, to reflect both lines of business and geography, members of the ExCo included the CEO EMEA (Europe, Middle East & Africa), the CEO North America, the CEO-Designate North America, the CEO Latin America, the CEO Asia Pacific, the CEO of Farmers Group Inc. and the CEO Commercial Insurance. The Group CFO, the Group CIO, the Group COO, the Group CRO and the Group CRO-Designate were also members of the ExCo as of December 31, 2017.

Executive Committee

Member	Position held
Mario Greco	Group Chief Executive Officer
Urban Angehrn	Group Chief Investment Officer
Jeff Dailey	CEO of Farmers Group, Inc.
Claudia Dill	CEO Latin America
Mike Foley	CEO North America
Jack Howell	CEO Asia Pacific
Alison Martin	Group Chief Risk Officer-Designate
George Quinn	Group Chief Financial Officer
Cecilia Reyes	Group Chief Risk Officer
Kathleen Savio	CEO-Designate North America
Gary Shaughnessy	CEO EMEA (Europe, Middle East & Africa)
James Shea	CEO Commercial Insurance
Kristof Terryn	Group Chief Operating Officer

Changes to the Executive Committee (ExCo)

On October 1, 2017, Alison Martin and Kathleen Savio were appointed Group Chief Risk Officer-Designate and CEO-Designate North America respectively and became members of the ExCo. Cecilia Reyes, former Group Chief Risk Officer, and Mike Foley, former CEO North America, have retired from the ExCo effective March 1, 2018.

Gary Shaughnessy will step down from his role as Chief Executive Officer Europe, Middle East & Africa (EMEA), and as a member of Zurich's Executive Committee in the fourth quarter of 2018. Amanda Blanc will succeed Gary Shaughnessy as CEO EMEA and as member of the Executive Committee in the fourth quarter of 2018.

The following cross-functional committees have been established for key areas to facilitate the coordination and alignment of recommendations to the Group CEO for approval on specific subjects.

Group Management
as of December 31, 2017

For additional information on Corporate Governance, see the Annual Report 2017.

C. Corporate governance and risk management *continued*

C.2 Risk management

Objectives of risk management

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

The major risk management objectives at Zurich Insurance Group (Zurich, or the Group) are to:

- Support achievement of the Group strategy and protect capital, liquidity, earnings and reputation by monitoring that risks are taken within the Group's risk tolerance
- Enhance value creation by embedding disciplined risk taking in the company culture and contributing to an optimal risk-return profile where risk reward trade-offs are transparent, understood, and risks are appropriately rewarded
- Efficiently and effectively diversify risk and mitigate unrewarded risks
- Encourage openness and transparency to enable effective risk management
- Support decision-making processes by providing consistent, reliable and timely risk information
- Protect Zurich's reputation and brand by promoting a sound culture of risk awareness, and disciplined and informed risk taking

C.2.1 Risk management framework

The risk management framework is based on a governance process that sets forth clear responsibilities for taking, managing, monitoring and reporting risks.

The Zurich Risk Policy is the Group's main risk governance document; it sets standards for effective risk management throughout the Group. The policy describes the Group's risk management framework, identifies Zurich's principal risk types and defines the 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.

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 2017, reporting was enhanced with in-depth risk insights into ongoing topics such as information security and cyber risk; insurance market trends; the potential adverse impact that accelerating inflation and expectations about inflation could have on reserves; and the potential effects on Zurich of such topical issues as the Brexit negotiations and geopolitical developments in Asia and Latin America.

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). The Z-ECM provides a key input into the Group's strategic planning process as an assessment between the Group's risk profile and 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.

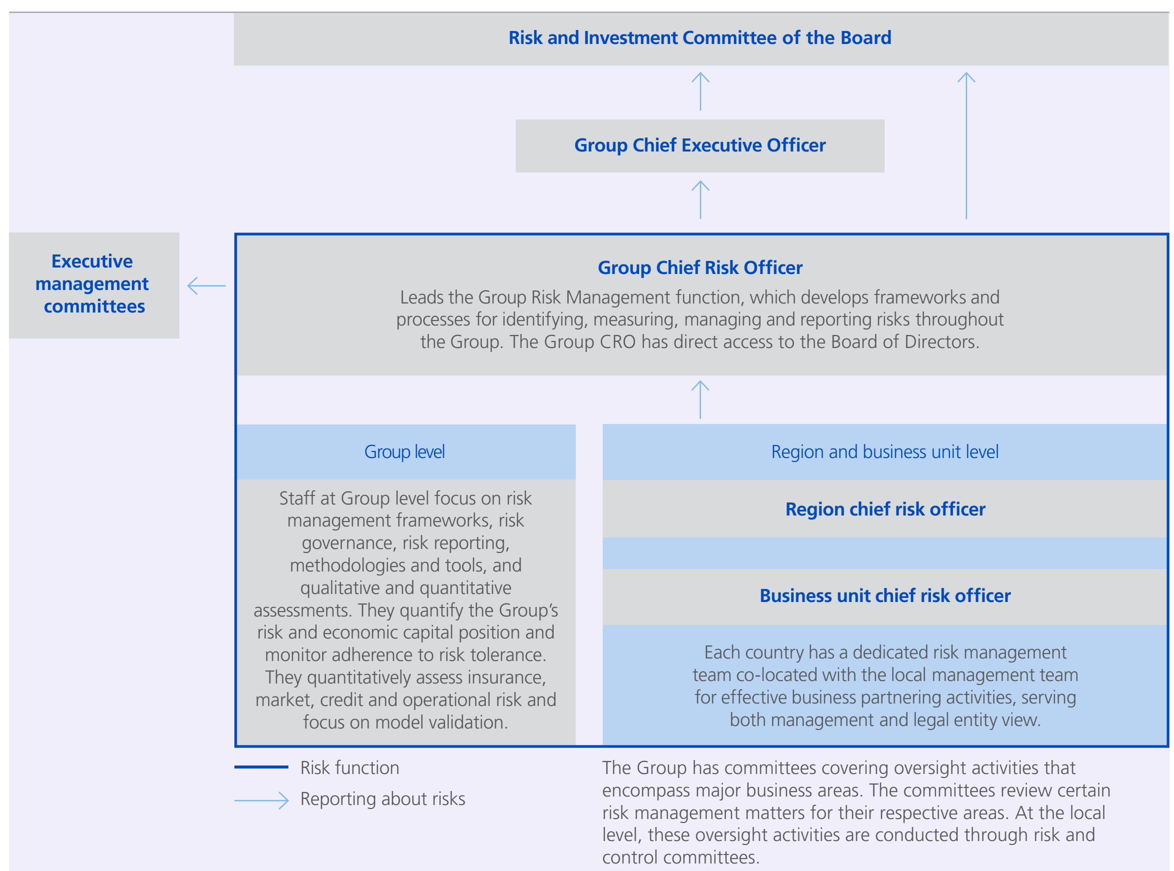
Group's Z-ECM overall risk appetite and tolerance

<90%	90–100%	100–120%	120–140%	>140%
Z-ECM ratio below Group risk tolerance level, requiring appropriate remedial actions	Position may be tolerated for a certain length of time depending on the risk environment	'AA' target range No action required as within stated objective and equivalent to 'AA' rating	Consider increased risk taking or remedial actions	Z-ECM ratio indicating over capitalization, requiring implementation of mitigating actions

Z-ECM ratio

Risk-based remuneration
Based on the Group's remuneration rules, the Board of Directors designs and structures remuneration arrangements that support the achievement of strategic and financial objectives and ensures they do not encourage inappropriate risk taking. With regard to the latter, the Group Chief Risk Officer (Group CRO) consults with the other assurance, control and governance functions to provide the CEO with a review of risk factors to consider in the annual variable-compensation process. In consultation with these functions, the Group CRO also provides an individual assessment of Group key risk takers as part of their annual individual performance assessment. For more information on Zurich's remuneration system, see the 'remuneration report.'

C.2.2 Risk management organization
The Group Risk Management function is a global function, led by the Group CRO.



The risk function is independent of the business by being a vertically integrated function where all risk employees globally directly report into the Group CRO. 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.

C.2.3 Risk assessment and reporting
The Group assesses risks systematically and from a strategic perspective through its proprietary Total Risk Profiling™ (TRP) process, which allows Zurich to identify and evaluate the probability 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.

C. Corporate governance and risk management *continued*

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 2017, page 74.

The Group considers controls to be key instruments for managing operational risk. The Board has overall responsibility for the Group's risk management and internal control frameworks, in particular for their adequacy and integrity. The Group's internal control system increases the reliability of Zurich's financial reporting, makes operations more effective, and aims to ensure legal and regulatory compliance. The internal controls system is designed to mitigate rather than eliminate the material risk that business objectives might not be met. It provides reasonable assurance against material financial misstatements or operational losses.

The Group promotes risk awareness and understanding of controls with communication and training. Primary 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 controls. Key processes and controls in the organization are subject to reviews by management, Group Risk Management, Group Compliance, and Group Audit. Significant risks and associated mitigation actions are reported regularly to the Risk and Investment Committee and the Audit Committee of the Board.

In 2017, the Group further enhanced specific areas of the internal control framework, focusing on key financial reporting controls as well as controls to ensure the integrity of our regulatory and internal capital calculations. Key controls are assessed for their design and operating effectiveness. Key control issues or issues affecting more than one business unit may be categorized as having Group-level significance. The Risk and Investment Committee of the Board and the Audit Committee of the Board monitor resolution of such issues. Key controls are assessed for design and operating effectiveness.

The Group's Disclosure Committee, chaired by the Head of Group Financial Accounting and Reporting, assesses the content, accuracy and integrity of the disclosures and the effectiveness of the internal controls over financial reporting. The conclusions result in a recommendation to the Group Chief Financial Officer to release the financial disclosures to the Audit Committee of the Board, which may challenge further. The Board reviews and approves results announcements and the annual report. This ensures that both the Board and management have sufficient opportunity to review and challenge the Group's financial statements and other significant disclosures before they are made public.

The Risk and Investment Committee of the Board has reviewed the effectiveness of the Group's risk management system, including the Group's risk tolerance and enterprise-wide risk governance framework, and the Audit Committee of the Board has reviewed the effectiveness of the system of control over financial reporting for the calendar year 2017 and has reported to the Board accordingly. Issues identified have been communicated to the Board and have been or are being addressed by the Group.

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.4 Compliance

The Group is committed to complying with applicable legal, regulatory and internal requirements, professional and industry standards. Accordingly, the Group's core values are founded on the principle that it acts lawfully and seeks to do what is right. The Compliance function is a control function responsible for:

- delivering compliance solutions by providing expertise regarding the management and maintenance of policies, practical guidance, training, and controls and processes relating to compliance risks
- providing assurance, as part of the second line of defense, to management that compliance risks within the scope of the function are appropriately identified and managed
- assisting management to promote the ethics-based foundation of Zurich's corporate culture

This operationalization of the compliance framework relies on regular global compliance risk and assurance assessments which support the compliance function's risk-based strategic and annual planning conducted in consultation with business partners as well as its monitoring activities. The risk and assurance assessment is presented annually to the Audit Committee. Through a comprehensive program, the compliance function implements, embeds and monitors internal compliance policies and guidelines. As part of that program, compliance officers introduce new employees to applicable rules and are involved in the integration of newly-acquired companies. To help employees understand their responsibilities under Zurich's code of conduct and internal compliance policies, all employees receive yearly ethical and compliance training. In addition, each year all Zurich employees confirm their understanding of, and compliance with Zurich's code of conduct and internal policies.

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 our Group's policies. Employees are free to report their concerns to management, Human Resources, the 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.

The Group's compliance function, which consists of compliance professionals around the world, is overseen by the Group Chief Compliance Officer, who reports to the Group General Counsel and regularly provides reports to the Group's Audit Committee. The Group Chief Compliance Officer has an additional reporting line to the Chairman of the Audit Committee and appropriate access to the Chairman of the Board.

C.5 Internal Audit function

The Group's internal audit function (Group Audit) is tasked with providing independent and objective assurance to the Board, the Audit Committee, the Group CEO and management and to the boards and audit committees of subsidiary companies. This is accomplished by developing a risk-based plan, which is updated continuously 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. 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). Key issues raised by Group Audit are communicated to the responsible management function, the Group CEO and the Audit Committee using a suite of reporting tools.

The Audit Committee, boards and audit committees of subsidiary companies and Group CEO are regularly informed of important audit findings, including adverse opinions, mitigation actions and attention provided by management. Group Audit is responsible for ensuring that issues identified by Group Audit, that could have an impact on the Group's operations are brought to the attention of the Audit Committee and appropriate levels of management and that timely follow-up action occurs. This is supported by the attendance of the Head of Group Audit at each meeting of the Audit Committee. In addition, the Head of Audit meets with the Chairman of the Audit Committee each month.

C. Corporate governance and risk management *continued*

Group Audit is authorized to review all areas of the Group and has unrestricted access to all Group 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 co-ordinates its activities with the external auditors, sharing risk assessments, work plans, audit reports and updates on audit actions. Group Audit and the external auditors meet regularly at all levels of the organization to optimize assurance provision and efficiency.

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 Institute of Internal Auditors (IIA) International Standards, the Internal Audit function is quality-reviewed at least every five years by an independent qualified assessor. This review was conducted most recently in 2016. The results confirmed that Group Audit's practices conform to all IIA Standards.

The Audit Committee approves the Group Audit Plan annually, and reviews reports from the function on its activities and significant risk, control and governance issues, at least three times per annum. The Head of Group Audit reports functionally to the Chairman of the Audit Committee and administratively to the Group CEO, and meets regularly with the Chairman of the Board and the Chairman of the Audit Committee. 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. In some instances, country audit managers also have a reporting line to the local CEO to comply with regulatory requirements.

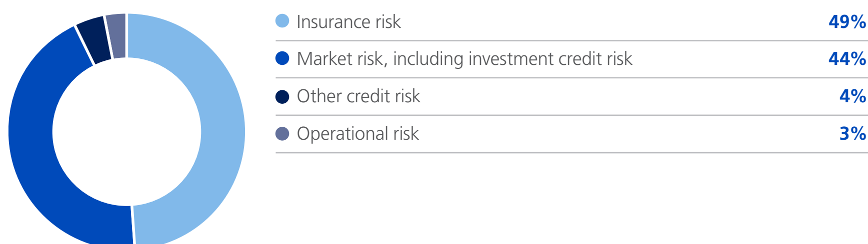
D. Risk profile

Internally, the Group uses its Zurich Economic Capital Model (Z-ECM), which also forms the basis of the Swiss Solvency Test (SST) model. Z-ECM targets a total capital level that is calibrated to an 'AA' financial strength. Zurich defines the Z-ECM capital required as being the capital required to protect the Group's policyholders in order to meet all of their claims with a confidence level of 99.95 percent over a one-year time horizon.

The Group uses Z-ECM to assess the economic capital consumption of its business based on a one-balance-sheet approach. Z-ECM is an integral part of how the Group is managed. It is embedded in the Group's organization and decision-making processes, and is used in capital allocation, business performance management, pricing, and communication. Z-ECM quantifies the capital required for insurance-related risk (including premium and reserve, natural catastrophe, business and life insurance), market risk including investment credit risk, reinsurance credit risk, other credit risk, and operational risk.

The chart below shows the Z-ECM capital required, split by risk type as of January 1, 2018. As of January 1, 2018, the largest proportion of Z-ECM capital required arose from insurance risk which comprised 49 percent of the total. Capital required for market risk was the second-largest, comprising 44 percent.

Total Z-ECM capital required: USD 30.6 billion
%, as of January 1, 2018

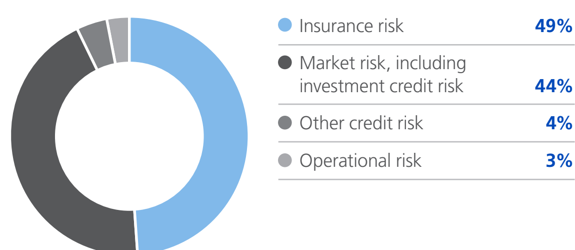


D. Risk profile *continued*

D.1 Insurance risk

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

Total Z-ECM capital required: USD 30.6 billion
%, as of January 1, 2018



Insurance risk	49%
Market risk, including investment credit risk	44%
Other credit risk	4%
Operational risk	3%

Key risk and capital indicators
Z-ECM, in USD billions

	Q4 2015	Q4 2016	Q4 2017
Business risk	2.8	3.0	3.6
Life liability risk	1.5	1.7	1.5
Premium & reserve risk	7.7	7.1	7.5
Natural catastrophe risk	2.4	1.8	2.5

Insurance risk is the inherent uncertainty regarding the occurrence, amount or timing of insurance cashflows. 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. The exposure is transferred to Zurich through the underwriting process. Zurich actively seeks to write those risks it understands and that provide a reasonable opportunity to earn an acceptable profit. Zurich manages the customer risks it assumes, and minimizes unintended underwriting risks, through such means as:

- Establishing limits for underwriting authority
- Requiring specific approvals for transactions above established limits or new products
- Using a variety of reserving and modeling methods
- Ceding insurance risk through external proportional or non-proportional reinsurance treaties and facultative single-risk placement. The Group centrally manages reinsurance treaties.

D.1.1 Property and casualty insurance risk

Property and casualty risk 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. Business risk for property & casualty predominantly relates to unexpected increases in the expenses relating to claims handling, underwriting, and administration. The following provides an overview of the Group's main lines of business:

- Motor includes automobile physical damage, loss of the insured vehicle and automobile third-party liability insurance.
- Property includes fire risks (e.g., fire, explosion and business interruption), natural perils (e.g., earthquake, windstorm and flood), engineering lines (e.g., boiler explosion, machinery breakdown and construction) and marine (e.g., cargo and hull).
- Liability includes general/public and product liability, excess and umbrella liability, professional liability including medical malpractice, and errors and omissions liability.
- Special lines includes directors and officers, credit and surety, crime and fidelity, accident and health, and crop.
- Worker injury includes workers' compensation and employers' liability.

The Group's underwriting strategy aims to take advantage of the diversification of property and casualty risks across lines of business and geographic regions. Zurich's underwriting governance is applicable throughout the Group.

Underwriting discipline is a fundamental part of managing insurance risk. The Group sets limits on underwriting capacity, and delegates authority to individuals based on their specific expertise. The Group sets appropriate pricing guidelines, which are monitored regularly. Technical reviews are implemented to confirm whether underwriters perform within their authorities and adhere to underwriting philosophies and policies. The Group has governance procedures to review and approve potential new products, in order to evaluate whether the risks are well understood and justified by the potential rewards.

Actual losses on claims provisions may be higher or lower than anticipated. Property and casualty insurance reserves are therefore regularly estimated, reviewed and monitored. The total loss and loss adjustments expense reserves are based on work performed by qualified and experienced actuaries at local, regional and Group levels.

To arrive at their reserves estimates, the actuaries take into consideration, among other things, the latest available facts, historical trends and patterns of loss payments, exposure growth, court decisions, economic conditions, inflation, and public attitudes that may affect the ultimate cost of claim settlement. Inflation is monitored on a country basis; the monitoring process relies on both Zurich's economic view on inflation and specific claims activity, and feeds into actuarial models and Zurich'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, the Group has established a culture of continous 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 Group level.

In most cases, these actuarial analyses are conducted at least twice a year for on-going business according to agreed timetables. Analyses are performed by product line, type and extent of coverage and year of occurrence. As with any projection, claim reserve estimates are inherently uncertain due to the fact that the ultimate liability for claims will be affected by trends as yet unknown, including future changes in the likelihood of claimants bringing suit, the size of court awards, and claimants' attitudes toward settlement of their claims.

The Group monitors potential new emerging risk exposures. Zurich 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 such risks.

In addition to the specific risks insured, the 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. The most important peril regions and natural catastrophes are U.S. and Caribbean tropical cyclone, Europe windstorm and California earthquake.

Tables 1.a and 1.b show the Group's concentration of risk within the Property & Casualty business by region and line of business based on direct written premiums before reinsurance. Property & Casualty premiums ceded to reinsurers (including retrocessions) amounted to USD 6.5 billion and USD 7.0 billion for the years ended December 31, 2017 and 2016, respectively. Reinsurance programs are managed on a global basis, and therefore, net premium after reinsurance is monitored on an aggregated basis.

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

Table 1.a

in USD millions, for the year ended December 31, 2017	Motor	Property	Liability	Special lines	Worker 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**

D. Risk profile *continued*

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

Table 1.b

in USD millions, for the year ended December 31, 2016	Motor	Property	Liability	Special lines	Worker injury	Total
Europe, Middle East & Africa	4,715	4,045	2,026	1,955	361	13,102
North America	1,689	2,733	3,258	3,819	2,844	14,342
Other regions	1,382	1,196	357	1,249	143	4,326
Total	**7,785**	**7,973**	**5,641**	**7,023**	**3,347**	**31,770**

Analysis of sensitivities for property and casualty risks

Tables 2.a and 2.b show the sensitivity of net income before tax and the sensitivity of net assets, using the Group effective income tax rate, as a result of adverse development in the net loss ratio by one percentage point. Such an increase could develop either due to the insured events happening more frequently or due to resulting claims becoming more severe, or from a combination of frequency and severity. 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 tables 2.a and 2.b, each additional percentage point increase in the loss ratio would have a linear impact on net income before tax and net assets. The 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

Table 2.a

in USD millions, for the year ended December 31, 2017	**Europe, Middle East & Africa**	**North America**	**Asia Pacific**	**Latin America**	**Reinsurance**	**Total**
+1% in net loss ratio						
Net income before tax	(119)	(105)	(19)	(19)	1	(260)
Net assets	(79)	(70)	(13)	(13)	1	(174)

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

Table 2.b

in USD millions, for the year ended December 31, 2016	Europe, Middle East & Africa	North America	Asia Pacific	Latin America	Reinsurance	Total
+1% in net loss ratio						
Net income before tax	(128)	(100)	(19)	(16)	2	(261)
Net assets	(89)	(69)	(13)	(11)	2	(181)

D.1.2 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

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 the 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 the risks. As a result, the offsetting effects between unit-linked and traditional business reduce some of the risk associated with the life business.

The Group has local product development committees and a Group-level product approval committee to analyze potential new life products that could significantly increase or change the nature of its risks. The 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 the Group's traditional business. Risks that are inherent in these products are largely passed on to the policyholder, although a portion of the Group's management fees is linked to the value of funds under management, and hence is 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. Epidemics 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 ability to perform an occupation, could be affected by 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 (beneficiary) mortality assumptions include allowance for future mortality improvements.

The 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.

Interest rate guarantees (with concentration in traditional, guaranteed business in Germany and Switzerland or variable annuity business in the U.S. containing minimum guaranteed death benefits) expose Zurich to financial losses that may arise as a result of adverse movements in interest rates. These guarantees are managed through a combination of asset-liability matching and hedging.

The Group defines concentration risk in the life business as the risk of the 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 geographical area, of a policy type, or of underlying risks covered.

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.

Table 3 shows the Group's concentration of risk within Life by region and line of business based on reserves for life insurance on a net basis. These reserves for life insurance also include policyholder surplus reserves with a loss absorbing capacity, predominantly in Germany (USD 8.2 billion) and the UK (USD 0.6 billion). The Group's exposure to life insurance risks varies significantly by geographic region and line of business and may change over time.

D. Risk profile *continued*

Reserves, net of reinsurance, by region

Table 3

in USD millions, as of December 31	Unit-linked insurance contracts		Other life insurance liabilities		Total reserves	
	2017	2016	**2017**	2016	**2017**	2016
Life						
Europe, Middle East & Africa	46,802	40,668	80,499	72,666	127,302	113,333
of which:						
United Kingdom	18,699	17,359	3,051	2,618	21,750	19,977
Germany	17,178	14,183	39,593	35,159	56,771	49,341
Switzerland	731	718	18,063	17,586	18,794	18,304
Italy	1,073	394	4,148	3,046	5,220	3,440
Ireland	3,133	2,832	2,143	1,909	5,276	4,740
Spain	856	813	11,157	10,320	12,014	11,133
Zurich international	4,784	4,068	212	334	4,996	4,402
Rest of Europe, Middle East & Africa	349	302	2,131	1,694	2,480	1,996
North America[1]	9,298	885	840	503	10,138	1,388
Asia Pacific	584	469	2,667	2,513	3,251	2,982
Latin America	13,687	11,961	5,021	4,657	18,708	16,618
Subtotal	70,371	53,983	89,027	80,339	159,398	134,322
Other businesses[1, 2]	**5,042**	**11,546**	**7,733**	**10,205**	**12,775**	**21,752**
Total	**75,413**	**65,530**	**96,760**	**90,544**	**172,173**	**156,074**

[1] In 2017, the Group transferred a portfolio of stable value products (SVP) marketed with life insurance policies (Bank Owned Life Insurance, BOLI) from Non-Core Businesses (part of Other businesses) to Life. The change resulted in a transfer of USD 8.3 billion of investments for unit-linked contracts and of reserves for unit-linked contracts.
[2] The Other businesses are defined in note 27 of the consolidated financial statements of the Annual Report 2017 of Zurich Insurance Group.

Modeling natural catastrophes

While specific catastrophes are unpredictable, modeling helps to determine potential losses and the likelihood of such losses. The Group uses adjusted third-party models to manage its underwriting and accumulations to stay within intended exposure limits and to guide how much reinsurance Zurich buys.

Risks from man-made catastrophes

Man-made catastrophes include such risks as industrial accidents, terrorism and cyber attacks. Zurich's experience in monitoring potential exposures to natural catastrophes is also applicable to threats posed by man-made catastrophes.

For more iniformation, see the Annual Report 2017, page 138.

Reinsurance for property & casualty and life

The 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. The Group follows a centralized reinsurance purchasing strategy for both Property and Casualty (P&C) and Life, and bundles programs, where appropriate, to benefit from diversification and economies of scale. In support of the Group's empowerment-based management model and to align risk-bearing capacities between the Group and individual country operations, a new internal reinsurance vehicle was introduced in 2017. In addition, to actively manage and reduce potential claims-recovery risks on facultative cessions and to support the strategy on operational excellence, the Group started to tailor specific facultative property and casualty facilties. Operational excellence was also the driver for the consolidation of several individual 'property per risk' treaties into one global protection.

The Group structures and aligns its external reinsurance protection to its capital position to achieve an optimum risk-return ratio. This includes a participation in the underlying risks through self-retentions. The Group manages its central reinsurance purchasing according to these principles.

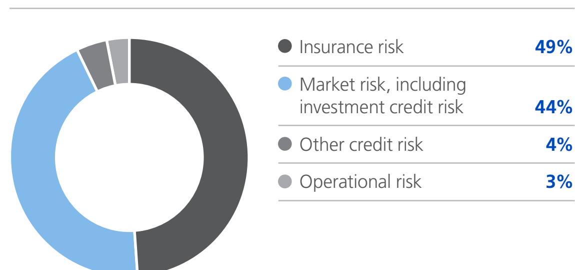
For more information, see Zurich Insurance Group's Risk review 2017, pages 21 and 22.

D. Risk profile *continued*

D.2 Market risk including investment credit risk

Market risk continued to decrease in 2017 following a period of active de-risking in the second half of 2016.

Total Z-ECM capital required: USD 30.6 billion
%, as of January 1, 2018



Key risk and capital indicators
Z-ECM, in USD billions

	Q4 2015	Q4 2016	Q4 2017
Market risk	16.5	14.9	13.6

Market risk is the risk associated with the Group's balance sheet positions where the value or cash flow depends 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

The 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 the Group's risk appetite and tolerance and local regulatory constraints.

The Group has policies and limits to manage market risk and keep its strategic asset allocation in line with its risk capacity. Zurich 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. The Group has set limits on concentration in investments in single issuers and certain asset classes, as well by how much asset interest rate sensitivities can deviate from liability interest-rate sensitivities. The Group regularly reviews its capacity to hold illiquid investments.

The Asset/Liability Management Investment Committee reviews and monitors Group strategic asset allocation and tactical boundaries, and monitors Group asset/liability exposure. The Group oversees the activities of local asset/liability management investment committees and regularly assesses market risks at both 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. The 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.

The Group may use derivative financial instruments to limit market risks arising from changes in currency exchange rates, interest rates and equity prices, from credit quality of assets, and from commitments to third parties. The Group enters into derivative financial instruments mostly for economic hedging purposes and, in limited circumstances, the instruments may also meet the definition of an effective hedge for accounting purposes.

Risk from equity securities and real estate

The Group is exposed to risks from price fluctuations on equity securities and real estate. These could affect the 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, the 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.

The Group manages its risks from 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 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. The Group has the capability and processes in place to change the exposure to the key equity markets within a short time frame through the use of derivatives.

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. The Group is exposed to interest-rate risk from debt securities, reserves for insurance contracts, liabilities for investment contracts, debt issued by Group, commercial and residential mortgages, employee benefit plans, and loans and receivables.

The 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 risk of the policyholder; however, the 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 dependent on the valuation of the asset base.

Analysis of market risk sensitivities for interest rate, equity and credit spread risks

Group investments sensitivities

The economic market risk sensitivities for the fair value for Group investments before tax as of 2017 is USD (10.7) billion (USD (10.4) billion as of 2016) for a 100-basis-point increase in interest rate. For a 100-basis-point decrease in interest rate, the sensitivity is USD 12.0 billion (USD 11.9 billion as of 2016). For a 10% decline in equity market, Group investments drop in value by USD 1.2 billion compared to USD 1.1 billion as of 2016.

Group economic net asset sensitivities

Basis of presentation - property & casualty, life, and rest of the business

The basis of the presentation for tables 4, 5, and 6 is an economic valuation represented by the fair value for Group investments. IFRS insurance liabilities are discounted at risk-free market rates to reflect the present value of insurance liability cash flows and other liabilities, for example, own debt. The Group describes risk-free market rates as swap rates. In the sensitivities, own debt does not include subordinated debt, which Zurich considers available to protect policyholders in a worst-case scenario.

The basis of presentation for the Life business to financial market movements uses replicating portfolios. The replicating portfolios are portfolios of assets that replicate the cash flows or present values of the life insurance liabilities under stochastic scenarios from the embedded value models. They are calibrated to match dependencies of life insurance liabilities on developments in the financial markets, in respect of interest rates, equity and property. The options and guarantees of the underlying life insurance liabilities are captured through the inclusion of options in the replicating portfolios The methodology for embedded value models was enhanced during 2017 to allow for negative interest rates. This caused a change in interest rate sensitivities for the Life business; see table 4.

D. Risk profile *continued*

Tables 4, 5 and 6 show the estimated economic market risk sensitivities of the net impact. Positive values represent an increase in the balance, and values in parentheses represent a decrease. Mismatches in changes in value of assets relative to liabilities represent an economic risk to the Group. The net impact – the difference between the impact on Group investments and liabilities – represents the economic risk related to changes in market risk factors that the Group faces.

In determining the sensitivities, investments and liabilities are fully re-valued in the given scenarios. Each instrument is re-valued separately, taking the relevant product features into account. Non-linear effects, where they exist, are reflected in the model. The sensitivities are shown before tax. They do not include the impact of transactions within the Group.

Sensitivities for the rest of the business include Farmers, Group Finance and Operations, and Non-Core Businesses.

The sensitivities for 2016 reflect the new basis of presentation (net impact before tax) and include the latest liability information available for that time.

Analysis of economic sensitivities for interest-rate risk

Table 4 shows the estimated impacts of a 100 basis point increase/decrease in yield curves after consideration of hedges in place, as of December 31, 2017 and 2016.

* Economic interest rate sensitivities

Table 4

In USD millions, as of December 31	**2017**	2016
100 basis point increase in the interest rate yield curves		
Property & Casualty		
Net impact before tax	(278)	(323)
Life[1]		
Net impact before tax	244	(414)
Rest of the business		
Net impact before tax	(275)	(150)
100 basis point decrease in the interest rate yield curves		
Property & Casualty		
Net impact before tax	100	204
Life[1]		
Net impact before tax	(1,127)	(553)
Rest of the business		
Net impact before tax	236	166

[1] Modeling enhancements introduced in 2017 for the Life business reflect model revisions to allow for the introduction of negative interest rates. 2016 sensitivities presented are based on replicating portfolios calibrated to embedded value models using floored interest rate models.

Analysis of economic sensitivities for equity risk

Table 5 shows the estimated impacts from a 10 percent decline in stock markets, after consideration of hedges in place, as of December 31, 2017 and 2016.

* Economic equity price sensitivities

Table 5

In USD millions, as of December 31	**2017**	2016
10% decline in stock markets		
Property & Casualty		
Net impact before tax	(642)	(558)
Life		
Net impact before tax	(422)	(283)
Rest of the business		
Net impact before tax	(74)	(50)

Analysis of economic sensitivities for credit spread risk

Table 6 shows the estimated impacts of a 100 basis point increase in corporate credit spreads, as of December 31, 2017 and 2016. The sensitivities apply to all fixed income instruments, excluding government, supranational and similar debt securities. For Life business the loss absorbing capacity of liabilities for losses on credit spreads are not included as they are not modelled in the replicating portfolios.

Table 6

*** Economic credit spread sensitivities**

In USD millions, as of December 31	**2017**	2016
100 basis point increase in credit spreads		
Property & Casualty		
Net impact before tax	(1,694)	(1,642)
Life		
Net impact before tax	(3,095)	(3,197)
Rest of the business		
Net impact before tax	(564)	(384)

*Limitations of the economic sensitivities: same limitations apply as for Group investments sensitivities except that the above sensitivities are based on economic net assets including liability representation see 'basis of representation'.

Risk from defaults of counterparties

Debt securities

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

Table 7

Debt securities by rating of issuer

as of December 31	**2017**		2016	
	USD millions	**% of total**	USD millions	% of total
Rating				
AAA	37,426	25.2%	28,503	20.3%
AA	39,664	26.7%	46,497	33.2%
A	26,011	17.5%	23,133	16.5%
BBB	38,360	25.9%	35,733	25.5%
BB and below	6,033	4.1%	5,193	3.7%
Unrated	767	0.5%	1,122	0.8%
Total	**148,261**	**100.0%**	**140,181**	**100.0%**

Table 7 shows the credit risk exposure of debt securities, by issuer credit rating. As of December 31, 2017, 95.4 percent of the Group's debt securities was investment grade and 25.2 percent was rated 'AAA'. As of December 31, 2016, 95.5 percent of debt securities was investment grade and 20.3 percent was rated 'AAA'. The shift in portfolio exposure from AA to AAA largely reflects the outcome of a review of the ratings assigned to the U.S. agency mortgage-backed-securities, which moved assets from AA+ to AAA.

Exposure-level limits are in place and are based on default and recovery rates that tighten progressively for lower ratings. Where the Group identifies investments expected to trigger limit breaches, appropriate actions are implemented.

The risk-weighted average issuer credit rating of the Group's debt securities is 'A-' in 2017, compared with 'BBB+' in 2016.

D. Risk profile *continued*

As of December 31, 2017, the largest concentration in the Group's debt securities portfolio was in governments, supranationals and similar at 47.6 percent. In all other categories, a total of USD 31.7 billion (40.8 percent) was secured. As of December 31, 2016, 47.5 percent of the Group's debt portfolio was invested in governments, supranationals and similar. In all other categories, a total of 31.3 billion (42.5 percent) was secured.

The Group's debt exposure to eurozone governments and supranationals and similar

Table 8

in USD millions, as of December 31	**2017**	2016
Germany	4,352	3,269
France	6,689	6,159
Austria	2,344	1,934
Belgium	2,506	2,267
Netherlands	1,303	1,273
Greece	–	–
Ireland	629	521
Italy	9,756	9,128
Portugal	773	551
Spain	7,989	6,804
Rest of eurozone	680	742
Eurozone supranationals and similar	1,639	1,388
Total	**38,658**	**34,037**

In addition to debt exposure, the Group had loan exposure of USD 4.9 billion and USD 4.3 billion to the German Central Government or the German Federal States as of December 31. 2017 and 2016, respectively. For more information, see the 'Mortgage loans and other loans' section.

The second largest concentration in the Group's debt securities portfolio is in financial institutions (including banks), at 19.6 percent, of which 38.4 percent is secured.

The third-largest concentration in the Group's debt securities portfolio is in structured finance securities (mortgage-backed securities (MBS)/asset-backed securities (ABS) and similar).

Cash and cash equivalents

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

Cash and cash equivalents amounted to USD 8.2 billion as of December 31, 2017 and USD 7.2 billion as of December 31, 2016. The risk-weighted average rating of the overall cash portfolio is 'A-' as of December 31, 2017 and December 31, 2016. 74 percent of the total was with the 10 largest global banks, whose risk-weighted average rating is 'A' as of December 31, 2017 and December 31, 2016.

Mortgage loans and other loans

The Group's largest mortgage loan portfolios are held in Germany (USD 2.6 billion) and in Switzerland (USD 3.6 billion); these are predominantly secured against residential property but also include mortgages secured by commercial property. The 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: 59.6 percent of the reported loans are to governments, supranationals and similar, of which 94.2 percent are to the German federal government or the German federal states. As of December 31, 2017, USD 5.1 billion were rated as 'AAA' (58.1 percent) compared with 3.9 billion as of December 31, 2016, USD 0.7 billion as 'AA' (7.7 percent) compared to 0.6 billion as of December 31, 2016, USD 0.6 billion as 'A' (6.8 percent) compared to 3.3 billion as of December 31, 2016, USD 1.2 billion as 'BBB' and below (13.5 percent) compared with 1.3 billion as of December 31, 2016, and USD 1.2 billion as unrated (14.0 percent) compared with none as of December 31, 2016.

Derivatives

The replacement value of outstanding derivatives represents a credit risk to the 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. The 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.

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's risk policy manuals. The Group's standard practice is to only transact derivatives with those counterparties for which the Group has 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. The Group further mitigates credit exposures from derivative transactions by using exchange-traded instruments whenever possible.

Risk from currency exchange rates

Table 9 shows the total IFRS equity's sensitivity to changes in exchange rates for the main functional currencies to which the Group is exposed. Positive values represent an increase in the value of the Group's total equity.

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

Table 9

in USD millions, as of December 31	**2017**	2016
10% increase in		
EUR/USD rate	467	515
GBP/USD rate	245	208
CHF/USD rate	447	457
BRL/USD rate	147	139
Other currencies/USD rates	645	546

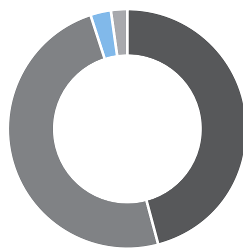
The sensitivities show the effects of a change in the exchange rates only, while other assumptions remain unchanged. The sensitivity analysis does not take into account management actions that might be taken to mitigate such changes. The sensitivities do not indicate a probability of such events occurring in the future. They do not necessarily represent Zurich's view of expected future market changes. While table 9 shows the effect of a 10 percent increase in currency exchange rates, a decrease of 10 percent would have the converse effect.

D. Risk profile *continued*

D.3 Other credit risk

The overall credit quality of the reinsurance assets portfolio remains high and stable.

Total Z-ECM capital required: USD 30.6 billion
%, as of January 1, 2018



Insurance risk	49%
Market risk, including investment credit risk	44%
Other credit risk	4%
Operational risk	3%

Key risk and capital indicators
Z-ECM, in USD billions

	Q4 2015	Q4 2016	Q4 2017
Reinsurance credit risk	0.7	0.8	1.2

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. The Group's exposure to other credit risk is derived from the following main categories of assets:

- Reinsurance assets
- Receivables

The Group's objective in managing credit risk exposures is to maintain them within parameters that reflect the Group's strategic objectives, and its risk appetite and tolerance. Sources of credit risk are assessed and monitored, and the Group has policies to manage specific risks within various subcategories of credit risk. To assess counterparty credit risk, the 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, the Group generally applies the lowest, unless other indicators justify an alternative, which may be an internal credit rating.

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

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

Credit risk concentration

The 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 the Group's limits for counterparty aggregation as of December 31, 2017 or December 31, 2016.

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 Group also has off-balance sheet exposures related to undrawn loan commitments of USD 16 million and USD 7 million as of December 31, 2017 and 2016, respectively

Credit risk related to reinsurance assets

The Group's Corporate Reinsurance Security Committee manages the credit quality of cessions and reinsurance assets. The Group typically cedes new business to authorized reinsurers with a minimum rating of 'A–.' As of December 31, 2017 and 2016 respectively, 52 percent and 66 percent of the exposure ceded to reinsurers that are rated below'A–' or are not rated is collateralized. Of the exposure ceded to reinsurers that are rated below 'A–' or are not rated, 51 percent was ceded to captive insurance companies, in 2017 and 32 percent in 2016.

Reinsurance assets included reinsurance recoverables (the reinsurers' share of reserves for insurance contracts) of USD 21 billion and USD 18.4 billion, and receivables arising from ceded reinsurance of USD 1.2 billion and USD 1.4 billion as of December 31, 2017 and 2016, respectively, gross of allowance for impairment. Reserves for potentially uncollectible reinsurance assets amounted to USD 94 million as of December 31, 2017 and 2016. The 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 table 10 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. Compared with December 31, 2016, collateral increased by USD 1.0 billion to USD 9.4 billion.

Table 10 shows reinsurance assets and unsecured reinsurance assets split by rating.

Table 10

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

as of December 31	2017				2016			
	Reinsurance assets		Unsecured reinsurance assets		Reinsurance assets		Unsecured reinsurance assets	
	USD millions	% of total	USD millions	% of total	USD millions	% of total	USD millions	% of total
Rating								
AAA	–	0.0%	–	0.0%	29	0.1%	29	0.3%
AA	5,939	26.9%	5,378	42.5%	5,402	27.4%	4,479	39.5%
A	10,562	47.9%	4,619	36.5%	8,625	43.7%	4,903	43.3%
BBB	1,634	7.4%	974	7.7%	1,366	6.9%	877	7.7%
BB	247	1.1%	57	0.5%	566	2.9%	311	2.7%
B and below	638	2.9%	168	1.3%	395	2.0%	160	1.4%
Unrated	3,036	13.8%	1,446	11.4%	3,367	17.0%	576	5.1%
Total[1]	**22,056**	**100.0%**	**12,642**	**100.0%**	**19,749**	**100.0%**	**11,335**	**100.0%**

[1] The value of the collateral received amounts to USD 9.4 billion and USD 8.4 billion as of December 31, 2017 and 2016, respectively.

Credit risk related to receivables

The 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 Group, or to pay claims to customers on behalf of the Group. The Group has policies and standards to manage and monitor credit risk related to intermediaries. The Group requires intermediaries to maintain segregated cash accounts for policyholder money. The 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. The Group reports internally on 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.

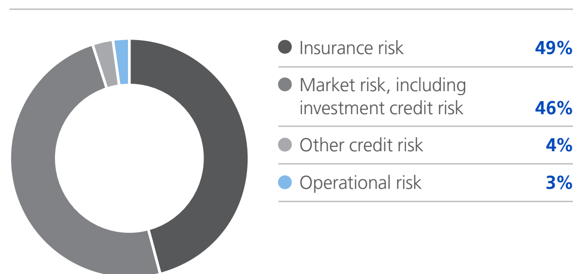
Receivables from ceded reinsurance are part of reinsurance assets and are managed accordingly.

D. Risk profile *continued*

D.4 Operational risk

The Group uses a scenario-based approach to quantify the capital required for operational risk. The top three risk-scenario clusters relate to regulatory compliance, business conduct and M&A transactions.

Total Z-ECM capital required: USD 30.6 billion
%, as of January 1, 2018



Key risk and capital indicators
Z-ECM, in USD billions

	Q4 2015	Q4 2016	Q4 2017
Operational risk	0.7	0.7	0.8

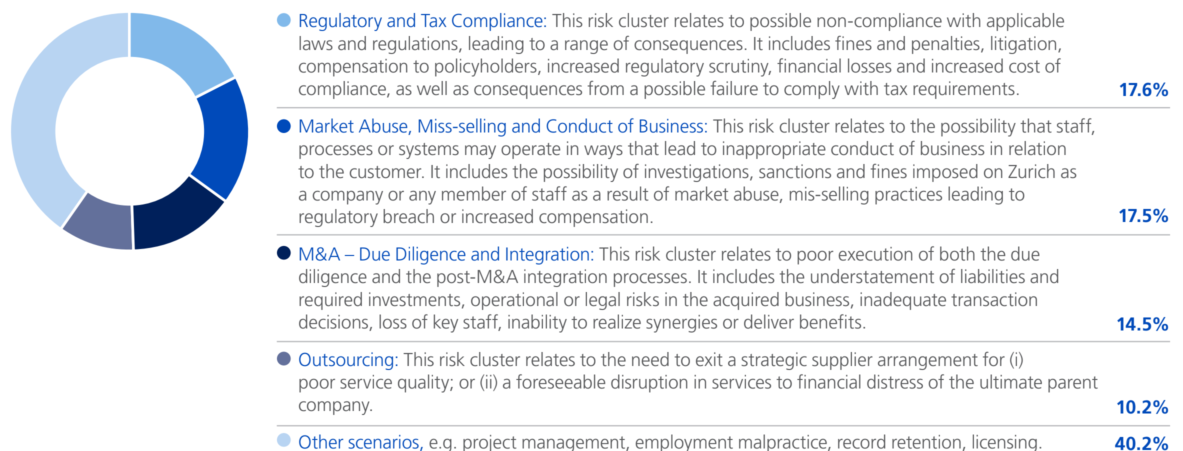
Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, systems or from external events such as external fraud, catastrophes, or failure in outsourcing arrangements.

Zurich has a comprehensive framework with a common approach to identify, assess, quantify, mitigate, monitor and report operational risk within the Group. Within this framework, the 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 the 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, the 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.

Z-ECM capital required for operational risk, split by risk scenario clusters (standalone, before any diversification) as of January 1, 2018

Risk scenario clusters contributing to the Z-ECM capital required for operational risk



The 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.

Zurich mitigates and responds to cyber risks and threats to data security. Data held by Zurich's business partners are protected through contractual arrangements and controls that are built into 'cloud governance' procedures designed to secure Zurich's data in accordance with regulatory requirements and the Group's information security policies.

The Group regularly assesses risks associated with strategic suppliers to verify that suppliers remain financially viable and able to deliver services, and that the Group is not exposed to geographic and supplier concentration risks.

Preventing, detecting and responding to fraud are embedded in Zurich'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.

As part of Z-ECM, the Group uses a scenario-based approach to assess, model and quantify the capital required for operational risk under extreme circumstances and with a very slight probability of occurrence. The chart above shows the operational risk scenarios that have the highest impact on Z-ECM capital required.

D.5 Liquidity risk

Liquidity risk is the risk that the 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'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, the Group assesses, monitors and manages its liquidity needs on an ongoing basis.

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

The Group regularly analyzes the liquidity of the investment assets, and monitors that the liquidity of assets stays in line with the liquidity needs. During 2017, Zurich Insurance Group was within its capacity to hold illiquid assets.

The 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 the Group's actual and forecast liquidity, possible adverse scenarios that could affect the Group's liquidity and possible liquidity needs from the Group's main subsidiaries, including under conditions of stress.

The 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 the Group on a timely basis.

D. Risk profile *continued*

D.6 Other material risks

D.6.1 Strategic risk

Strategic risk corresponds to the risk that Zurich is unable to achieve strategic targets. Strategic risks can arise from:

- Inadequate assessment of strategic plans
- Ineffective implementation of strategic plans
- Unexpected changes to assumptions underlying strategic plans

Zurich defines the strategy as the long-term plan of action designed to allow the Group to achieve its goals and aspirations.

The 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 regular TRP process, in 2017 the Executive Committee (ExCo) assessed the key strategic risk scenarios, looking at 2018 and beyond. The Group TRP 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 and complexity of the global regulatory landscape. Mitigating actions have been assigned to executive owners and their status is reviewed at least quarterly.

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

D.6.2 Risks to the Group's reputation

Risks include acts or omissions by the Group or any of its employees that could damage the 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 threats to Zurich's reputation.

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

D.6.3 Climate-change Risk

Climate change is perhaps the most complex risk facing society today: it is inter-generational, international and interdependent. As a global insurer, Zurich faces risks from climate change. In 2017 Zurich conducted its first Group-wide analysis of climate change related risks and identified a set of actions to address them.

Zurich uses the framework of the Financial Stability Board's Task Force on Climated-Related Financial Disclosures (TCFD) to distinguish between two types of climate-related risks:

- Transition risk - risks associated with the transition to a low carbon economy
- Physical risks - risks associated with physical manifestations of excessive warming

Zurich based its analysis on two scenarios to represent an archetypical transition pathway and a physical risk pathway, and applied a scorecard approach to assess the relative likelihood of the two scenarios, and their progression along pathways over time. The two scenarios are not mutually exclusive as transition risks and physical risks coexist, but Zurich's initial assessment shows a physical risk pathway currently is significantly more likely than a transition pathway.

Overall the Group considers its near-term (less than five years) climate change-relates risks to be manageable and forseeable, whereas long-term (more than 10-15 years) risks to be elevated and highly uncertain.

The Group analyzed the effect of climate-change risk on its major risk types:

- Underwriting risk:
  - Physical risks: Generally, annual policy renewals provide a degree of insulation against increasing physical risks for short-tail business. Initial analysis suggests that property, motor and crop lines of business are potentially most at risk from climate change, with rainfall, cyclone and hail as the driving perils. While standard industry natural catastrophe models are regularly updated and designed to reflect today's risk, including climate change, potential gaps are addressed as part of Zurich's model validation process and the 'Zurich View' approach, leveraging both internal and external expertise. For long-tail business, legal liability represents the most significant potential risk from climate change. However, based on Zurich's current assessment, this and related risks are not material at this time, although climate-change related legal action could become more frequent going forward.
  - Transition risk: Specific lines of business may be at risk from transition effects. Initial assessment suggests that this risk is contained. Zurich has considerable expertise in providing insurance solutions for green assets but not all types of 'green' assets represent, to date, profitable business opportunities.
- Investment risks: Zurich analyzed physical and transition risks for selected parts of its investment portfolio. While Zurich is exposed to both near-term transition and long-term physical risk, initial analysis suggests that very significant impairments would be required for the Zurich portfolio to be materially impacted. The Group does not consider such impairments currently likely, and exposure is expected to be further mitigated with ongoing implementation of Zurich's responsible investment and climate change investment strategies.
- Operational risks: Given the low carbon nature of Zurich's business, continous progress on energy and carbon reduction targets, Zurich's voluntary carbon offsetting scheme, and strong disaster and recovery planning in place for all facilities, Zurich does not consider operational risks related to climate change to be material.

Efforts are underway to further assess climate change-related risk exposures for underwriting and investment portfolios. Among its follow-up actions, the Group plans to further analyze its underwriting portfolio for transition risk, amend its governance requirements to reflect climate risk in catastrophe modeling, and monitor and assess opportunities in green assets.

In addition, the Group is integrating climate and sustainability risk assessments into its standard enterprise risk management framework and tools to consistently identify risks and create mitgating actions over time. For more information about Zurich's assessment of climate risk, see www.zurich.com/en/knowledge/articles/2017/11me-topic-navigating-climate-change.

E. Valuation

E.1 Overarching valuation principle

The following section presents the 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 the insurance liabilities. Under the SST, the MCBS is essential to determine 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 in accordance with, and not at variance from, information that can be gleaned from trade in liquid 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 ZIG will fulfill its obligation in full; thus, own credit risk is not considered.

In summary, the following valuation methods apply:

MCBS valuation principles

Mark-to-market	Highest priority for third-party assets, IFRS equity instruments and eligible capital instruments	Fair value as defined in the consolidated IFRS financial statements
Mark-to-model	If mark-to-market cannot be applied	Fair value as defined in the consolidated IFRS financial 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: - 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 12 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 Annual report 2017, pages 203; 206; 247 to 254). The summary of accounting policies underlying IFRS valuations, as well as significant judgements and assumptions, are included in notes 3 and 4 of the consolidated financial statements in the Annual Report 2017, pages 188 to 198.

E.2 Data adjustments 2017

Reclassification and other adjustments affect the presentation of the income statement for Group and segments (IFRS), as presented in Appendix 1 to this report.

Reclassifications in consolidated financial statements (IFRS)

Changes in presentation

Cash and cash equivalents are shown outside of total investments and income from operating cash and cash equivalents is included in other income (non-technical) rather than in investment income. Insurance liability related balances in the total amount of USD 1 billion as of December 31, 2016, were reclassified from receivables and other assets, reserve for premium refunds and other liabilities to liabilities for insurance contracts. In addition, accrued investment income and accrued liabilities were merged with receivables and other assets and other liabilities, respectively. Accrued liabilities were split into accrued liabilities and other financial liabilities according to their nature, within note 16 to the Consolidated financial statements of Zurich Insurance Group (see Annual report). Prior year comparative figures were revised accordingly (see note 15 and 16).

Reclassification of unwind of discounted reserves for losses and loss adjustment expenses

The Group has changed its presentation of the unwind of discount and changes in discount rates. As a consequence there was a shift of USD 50 million within business operating profit (BOP) between losses and loss-adjustment expenses and interest credited to policyholders and other interest (included in the non-technical result) for the period ended December 31, 2016. Prior-year comparative figures have been revised accordingly.

Change in the structure of the Group

Following the changes to the Group's management effective July 1, 2016, reportable segments and their composition have been changed in accordance with IFRS 8. Prior year comparative figures have been revised accordingly (see note 27).

Other adjustments

Change in the Group's BOP policy

As of January 1, 2017, the Group amended its policy relating to BOP. The amendments mainly relate to certain litigation, earn-out and acquisition expenses which will no longer be eligible for exclusion from BOP. Prior-year comparative figures have been revised accordingly, resulting in a reduction in BOP of USD 36 million for the period ended December 31, 2016.

E.3 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.

E. Valuation *continued*

Asset valuation MCBS vs IFRS

In USD millions, as of December 31	**2017 (SST)**	2016 (SST)	Evolution 2016–2017 (SST)	**2017 (IFRS)**	Difference 2017 (IFRS – SST)
Market-consistent value of investments					
Real estate	12,238	10,562	1,676	12,238	–
Shareholdings	19	19	0	21	(2)
Fixed income securities	133,139	125,559	7,580	132,495	644
Loans	10,410	10,909	(499)	8,730	1,680
Mortgages	7,501	7,330	170	7,047	453
Equities	8,519	7,194	1,325	8,519	–
Other investments.	25,033	24,006	1,026	25,033	–
Collective investment schemes	4,159	3,586	573	4,159	–
Alternative investments	3,440	3,263	177	3,440	–
Other capital investments	17,434	17,158	277	17,434	–
Total Investments	**196,860**	**185,580**	**11,280**	**194,084**	**2,776**
Financial investments from unit-linked life insurance	128,591	108,892	19,699	121,143	7,447
Receivables from derivative financial instruments	903	968	(64)	903	–
Market-consistent value of other assets					
Cash and cash equivalents	8,269	7,197	1,072	8,228	40
Receivables from insurance business	11,237	10,991	247	11,151	86
Other receivables	3,374	4,015	(642)	3,372	2
Other assets	5,244	5,418	(173)	62,479	(57,235)
Total other assets	**28,124**	**27,620**	**503**	**85,230**	**(57,106)**
Total market-consistent value of assets	**354,477**	**323,060**	**31,418**	**401,360**	**(46,883)**

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

In USD millions, as of December 31	**2017 (SST)**	2016 (SST)	Evolution 2016–2017 (SST)	**2017 (IFRS)**	Difference 2017 (IFRS – SST)
Best estimate liabilities (BEL)					
Best estimate of insurance liabilities	**(317,983)**	**(287,178)**	**(30,805)**	**(316,440)**	**(1,544)**
Direct insurance: life insurance business (excluding ALV)	(98,832)	(95,337)	(3,494)	(110,402)	11,570
Direct insurance: non-life insurance business	(66,108)	(62,517)	(3,592)	(77,492)	11,384
Direct insurance: health insurance business					
Direct insurance: unit-linked life insurance business	(146,012)	(122,063)	(23,949)	(120,897)	(25,114)
Direct insurance: other business	(457)	(503)	46	(492)	35
Outward reinsurance: life insurance business (excluding ALV)	(2,215)	(2,264)	49	(2,213)	(2)
Outward reinsurance: non-life insurance business	(4,353)	(4,489)	136	(4,937)	584
Outward reinsurance: health insurance business					
Outward reinsurance: unit-linked life insurance business	–	–	–	–	–
Outward reinsurance: other business	(6)	(6)	–	(6)	–
Reinsurers' share of best estimate of insurance liabilities	**38,716**	**32,990**	**5,726**	**20,918**	**17,798**
Direct insurance : life insurance business (excluding ALV)	4,998	4,996	2	6,463	(1,465)
Direct insurance: non-life insurance business	7,102	6,612	490	8,388	(1,287)
Direct insurance: health insurance business			–		
Direct insurance : unit-linked life insurance business	21,656	17,102	4,555	–	21,656
Direct insurance: other business	–	–	–	–	–
Outward reinsurance: life insurance business (excluding ALV)	266	187	79	262	4
Outward reinsurance: non-life insurance business	4,695	4,094	601	5,805	(1,111)
Outward reinsurance: health insurance business					
Outward reinsurance: unit-linked life insurance business	–	–	–	–	–
Outward reinsurance: other business	–	–	–	–	–
Market consistent value of other liabilities					
Non-technical provisions	(4,450)	(5,093)	644	(4,513)	64
Interest-bearing liabilities similar to debt capital	(4,020)	(4,398)	378	(10,784)	6,765
Liabilities from derivative financial instruments	(214)	(345)	131	(214)	–
Deposits retained on ceded reinsurance	(431)	(488)	58	(512)	81
Liabilities from insurance business	(4,327)	(4,701)	375	(4,294)	(33)
Other liabilities	(13,632)	(12,554)	(1,077)	(52,459)	38,827
Total BEL plus market-consistent value of liabilities	(306,340)	(281,768)	(24,572)	(368,298)	61,958
Difference between market-consistent assets and market-consistent debt capital	**48,138**	**41,292**	**6,846**	**33,062**	**15,075**

E. Valuation *continued*

SST – IFRS valuation difference

In USD millions, as of December 31

SST MCBS line item	SST – IFRS Valuation difference	
Total market-consistent value of assets (IFRS)		**401,360**
Fixed income securities	Bonds HTM held at FV in SST	644
Loans	Loans held at FV in SST	1,680
Mortgage	Mortgage held at FV in SST	453
	The Group under IFRS reclassified assets of USD 29 billion, to held for sale based on agreements to sell businesses in the UK, this reclass is not applicable under SST.	29,103
Financial investments from unit-linked life insurance	UK unit-linked funds reinsurance contracts are presented as reinsurance recoverables under SST.	(21,656)
	Deferred acquisition costs: Value set to zero in SST.	(18,663)
	Deferred origination costs: Value set to zero in SST.	(460)
	Deferred tax assets: Value set to zero in SST.	(1,076)
	Property and equipment: Real estate held for own use is at fair value in SST.	423
Other assets	Other intangible assets: Not to be valued in SST (i.e., value set to zero)	(8,140)
	The Group under IFRS reclassified assets of USD 29 billion, to held for sale based on agreements to sell businesses in the UK, this reclass is not applicable under SST.	(29,103)
Other valuation differences		(88)
Total market-consistent value of assets SST		**354,477**

SST MCBS line item	SST – IFRS Valuation difference	
Total BEL plus market-consistent value of other liabilities (IFRS)		**(368,298)**
Life insurance liabilities	The SST MCBS value of best estimate life insurance liabilities is determined through a bottom-up projection of the present value of the corresponding cash flows on the same best estimate, risk-neutral unadjusted swaps basis as for Market Consistent Embedded Value (MCEV) with 0 liquidity premium. Please refer to section E.2.3 for more details on valuation differences.	14,094
Non-Life insurance liabilities	The SST MCBS value of non-life insurance liabilities is comprised of best estimate reserve for losses and unearned premium reserve (UPR). Best estimate reserve for losses are discounted using risk-free rates whereby the timing of estimated future cash flows is adequately considered. The MCBS value of UPR reflects the discounted costs of insurance, i.e., expected future loss reserves (incl. loss adjustment expenses (LAE)) and administration expenses, that can arise from the unexpired risk. Please refer to section E.2.3 for more details on valuation differences.	9,570
Direct insurance: unit-linked life insurance business	The Group under IFRS reclassified liabilities of USD 29 billion, to held for sale based on agreements to sell businesses in the UK, this reclass is not applicable under SST.	(29,103)
Reinsurers' share of best estimate of insurance liabilities	UK unit-linked funds reinsurance contracts are presented as reinsurance recoverables under SST.	21,656
Interest bearing liabilities	Market-consistent valuation based on risk-free rate, whereby the future cash flows shall be considered over the remaining earliest contractual redemption date. In case a quoted market price is available and used, then the market price has to be adjusted to eliminate own credit spread.	6,765
	Deferred front-end fees: Not to be valued in SST (i.e., value set to zero)	5,429
	The Group under IFRS reclassified liabilities of USD 29 billion, to held for sale based on agreements to sell businesses in the UK, this reclass is not applicable under SST.	29,103
Other Liabilities:	This is the difference between Deferred tax liabilities (IFRS) which is not valued in SST (i.e., value set to zero) and Deferred tax on Swiss real estate transfers attributable to shareholders reported under SST.	3,859
Other valuation differences		585
Total BEL plus market-consistent value of other liabilities (SST)		**(306,340)**

E.3.1 Market-consistent value of investments

Valuation

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

Evolution since 2016

The market value of investments increased by USD 11.3 billion from USD 185.6 billion in 2016 to USD 196.9 billion in 2017.

The increase includes a USD 7.5 billion increase in fixed income securities from USD 125.6 billion in 2016 to USD 133.1 billion in 2017, mainly due to favorable currency translation effects as the Euro and British pound strengthened against the U.S. dollar, as well as purchases of corporate debt securities in Switzerland. These increases were partially offset by changes in the Group's portfolio, following a shift in the strategic asset allocation from debt securities to equities and real estate investments. The main decreases during 2017 occured in Germany, where the value of debt securities was negatively impacted by increases in interest rates, and in Bermuda due to net sales of debt securities to fund dividend payments to Group. Additionally, Farmers New World Life entered into a USD 2.3 billion retrospective annuity reinsurance agreement with a third party. As part of the agreement, liabilities on annuity in-force policies of USD 2.2 billion were transferred along with the corresponding invested assets.

Real estate increased by USD 1.6 billion from USD 10.6 billion in 2016 to USD 12.2 billion in 2017, mainly driven by a shift in the strategic asset allocation toward real estate, with acquisitions in Europe and the U.S. In addition, increases in market values across many regions, as well as the strengthening of the euro and Swiss franc against the U.S. dollar, also contributed favorably.

Equities increased by USD 1.3 billion from USD 7.2 billion in 2016 to USD 8.5 billion in 2017. The increase is mainly due to a shift in the strategic asset allocation toward equities, improved market conditions and favorable currency translation effects from Euro dominated investments.

Other investments increased by USD 1.0 billion from USD 24.0 billion in 2016 to USD 25.0 billion in 2017. Collective investment schemes increased by USD 0.6 billion reflecting new investments in U.S. money market funds. Other capital investments increased by USD 0.3 billion mainly in Bermuda.

These increases were partially offset by a decrease in loans by USD 0.5 billion from USD 10.9 billion in 2016 to USD 10.4 billion in 2017, following a surplus note principal pay down of USD 0.6 billion by Farmers and matured loans in Zurich Insurance Company Ltd of USD 1.0 billion, partially offset by new loans in ZIC of USD 300 million and favorable currency movements.

Financial investments from unit-linked life insurance increased by USD 19.7 billion from USD 108.9 billion in 2016 to USD 128.6 billion in 2017, reflecting favorable foreign currency translation effects, and new business and market growth in Ireland, the UK, Brazil Santander and Germany.

E.3.2 Market-consistent value of other assets

Valuation

Cash and cash equivalents is presented at IFRS carrying value because such balances are current and solely held for the purpose of meeting sort-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 subject to only insignificant risk of changes in value and settlement is expected to occur generally within three months and no more than 12 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.

Under IFRS other assets include deferred acquisition costs (DAC), deferred tax assets, goodwill and other intangible assets, which are valued at zero in MCBS.

E. Valuation *continued*

Real estate held for own use is measured at cost less depreciation and impairment, whereas the MCBS value reflects fair value.

Evolution since 2016

The market-consistent value of total other assets increased by USD 0.5 billion from USD 27.6 billion in 2016 to USD 28.1 billion in 2017.

Cash and cash equivalents increased by USD 1.1 billion from USD 7.2 billion in 2016 to USD 8.3 billion in 2017, mainly due to higher levels of operational cash resulting from changes in the timing of settlements.

These increases were partially offset by a decrease in other receivables of USD 0.6 billion from USD 4.0 billion in 2016 to USD 3.4 billion in 2017, mainly due to matured repo contract agreements in Spain.

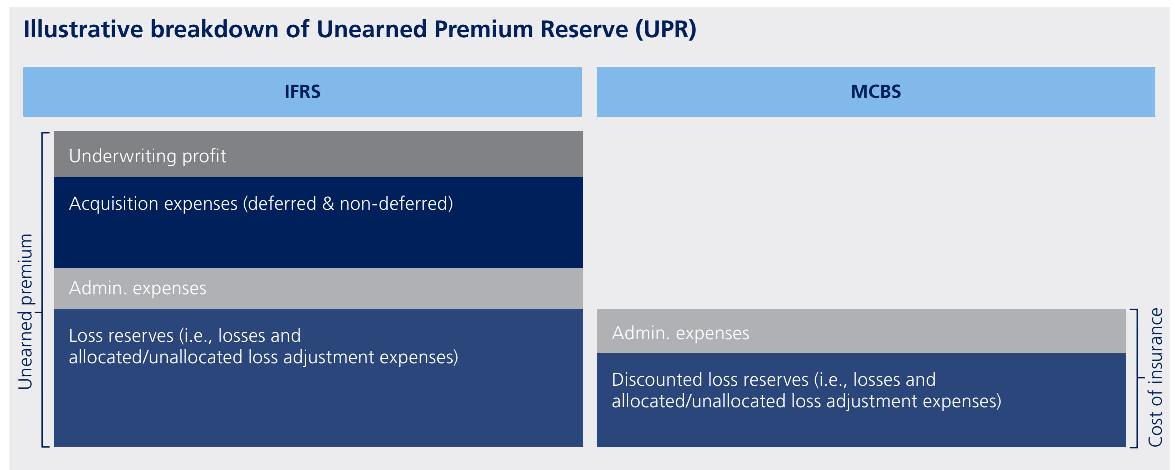
E.3.3 Best-estimate of insurance liabilities

Valuation

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 adjustements are made:

- Expected future losses (including loss adjustement expenses) are discounted
- Underwriting profits are not included, as these do not represent future cash flows
- Future administration expenses only encompass the estimated costs to administer and maintain the insurance policy over the remaining coverage period. Consequently, any acquisition-related costs (such as commissions, sales and distribution management, underwriting, risk engineering, and marketing costs) are excluded. 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 case 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.

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 estimates:

- 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.

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. On the other hand, projected future premiums, fees and charges projected 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 of management's behavior for e.g., management discretion to distribute profits or to change asset allocation, are used. In case of management actions, where the scenario modeling would be subject to regulatory approval (e.g., potential cancellation of policyholder dividends), the assumption used when interpreting local supervisory guidance is verified by the local regulator or external audit.

Reinsurers' share of best-estimate of liabilities

For SST MCBS the calculation of the best estimate for reinsurance assets and insurance liabilities is performed on a gross basis (i.e., no offsetting of assets with liabilities). As expected credit risk is not directly included in the actuarial discounted best estimate of future cash flows; for MCBS purposes a credit valuation allowance.

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.

Ceded 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 considering the timing of these future cash flows.

Illustrative breakdown of ceded UPR

IFRS	MCBS
Ceded profit	
Reinsurance commission received	
Future claims recoveries	Discounted future claims recoveries

E. Valuation *continued*

Ceded reserves on Life ceded benefits

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

- The best estimate of future cash flows is based on the principles discussed in the section 'best estimate of life investment and insurance liabilities
- 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
- If the reinsurer's credit risk in not included in the best estimate future cash flows, the expected loss impairment allowance is considered.

Evolution since 2016

Best estimate of insurance liabilities

The market value of best estimate of insurance liabilities increased by USD 30.8 billion from USD 287.2 billion in 2016 to USD 318 billion in 2017.

The market value of the total of 'direct insurance: unit-linked life insurance business' and 'outward reinsurance: unit-linked life insurance business' increased by USD 23.9 billion from USD 122.1 billion in 2016 to USD 146.0 billion in 2017, reflecting unfavorable foreign currency translation effects from the U.S. dollar weakening against a number of currencies, particularly the euro and British pound, and new business and market growth in Ireland, the UK, Brazil Santander and Germany.

The market value of the total of 'direct insurance: non-life insurance business' and 'outward reinsurance: non-life insurance business' increased by USD 3.5 billion from USD 67.0 billion in 2016 to USD 70.5 billion in 2017, reflecting unfavorable currency translation effects, and the impact of Hurricanes Harvey, Irma and Maria, and adverse claims experience in financial lines, motor, engineering lines and liability businesses in France. These adverse developments were partially offset by improved loss experience in Italy and Switzerland motor businesses and the U.S. crop business.

The market value of the total of 'direct insurance: life insurance business (excluding ALV)' and 'outward reinsurance: life insurance business (excluding ALV)' increased by USD 3.4 billion from USD 97.6 billion in 2016 to USD 101.0 billion in 2017 mainly due to unfavorable currency translation effects, which have been partially offset by changes in interest rates in the UK, Germany and Switzerland. In addition to this, a portfolio revaluation and expense reductions in Australia and a reinsurance agreement between Spain and a third-party reinsurer resulted in a reduction of USD 0.6 billion.

Reinsurers' share of best estimate for insurance liabilities

Reinsurers' share of best estimate for insurance liabilities increased by USD 5.7 billion from USD 33 billion in 2016 to USD 38.7 billion in 2017.

'Direct insurance: unit-linked life insurance business' and 'outward reinsurance: unit-linked life insurance business' increased by USD 4.6 billion from USD 17.1 billion in 2016 to USD 21.7 billion in 2017 mainly due to unit-linked fund reinsurance where there have been large increases in bonds and equities, as well as new business in the UK coupled with favorable currency translation effects.

'Outward reinsurance: non-life insurance business' increased by USD 0.6 billion from USD 4.1 billion in 2016 to USD 4.7 billion in 2017 reflecting unfavorable development in financial lines in the UK and France, liability business in Spain, and recoveries of U.S. hurricane losses.

'Direct insurance: non-life insurance business' increased by USD 0.5 billion from USD 6.6 billion in 2016 to USD 7.1 billion in 2017 as a result of favorable currency translation effects, and increases related to Zurich North America's property, motor and workers' compensation business, partially offset by a reduction in ceded Crop insurance, whereby Zurich North America now retains a larger share of the business.

E.3.4 Market-consistent value of other liabilities

Valuation

Non-technical provisions include liabilities for defined benefit pension plans measured using actuarial techniques under IFRS. Such liabilities are held at 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 derived by reversing the effect and re-performing discounting using risk-free rates.

Interest-bearing liabilities exclude subordinated debt instruments eligible as supplementary capital[1] under SST. Such interest-bearing liabilities are subject to a market-consistent valuation based on risk-free rates whereby 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. 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 12 months).

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 MCBS.

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

Evolution since 2016

The market-consistent value of other liabilities decreased by USD 0.5 billion from USD 27.6 billion in 2016 to USD 27.1 billion in 2017.

The non-technical provisions decreased by USD 0.6 billion from USD 5.1 billion in 2016 to USD 4.5 billion in 2017, reflecting amendments to assumptions and curtailments in the Swiss and U.S. pension plans. In Switzerland, plan amendments, coupled with favorable plan asset returns resulted in the Swiss plan being in a net funded status as of December 31, 2017 and as such the balance is reclassified to 'All other assets' (USD 0.2 billion). Curtailments to the ZNA pension plan reduced the net pension obligation by USD 81 million.

Interest-bearing liabilities similar to debt capital decreased by USD 0.4 billion from USD 4.4 billion in 2016 to USD 4.0 billion in 2017.

Liabilities from insurance business decreased by USD 0.4 billion from USD 4.7 billion in 2016 to USD 4.3 billion in 2017.

Other liabilities increased by USD 1.1 billion from USD 12.6 billion in 2016 to USD 13.7 billion in 2017, mainly due to currency translation effects, increases in current income tax payable of USD 0.3 billion, and accrued premiums of USD 0.2 billion.

[1] 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*

E.3.5 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 Zurich Economic Capital Model.

Zurich risk-free yield curve methodology for January 1, 2018 SST and Zurich Economic Capital Model

Currency	Entry point to extrapolation (years)	Market data	Method of interpolation	Method of extrapolation	Ultimate forward rate (annually compounded)	Smith Wilson alpha
EUR	50	Raw market mid-swap rates from Bloomberg	Smith Wilson giving smooth forward and spot curves passing exactly through market data		1.51% (50-year market spot rate)	0.2
USD	50				2.49% (50-year market spot rate)	0.2
GBP	50				1.27% (50-year market spot rate)	0.2
CHF	30				0.76% (30-year market spot rate)	0.2

F. Capital management

Objectives of capital management

The 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 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, 2017, shareholders's equity of USD 33.1 billion, subordinated debts of USD 6.9 billion and senior financial debts not maturing within the next year of USD 2.9 billion were part of the capital available in the 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.

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

Capital structure

Share capital

As of December 31, 2017, the ordinary share capital of Zurich Insurance Group Ltd amounted to CHF 15,133,985.10 divided into 151,339,851 fully paid registered shares with a nominal value of CHF 0.10 each. At the Annual General Meeting on April 4, 2018, the shareholders approved a dividend of CHF 18 per share, of which CHF 16.60 are paid out of the available earnings and CHF 1.40 out of the capital contribution reserve.

Authorized and contingent share capital as of December 31, 2017

At the Annual General Meeting of March 29, 2017, shareholders approved to increase the authorized and contingent share capital as specified in Article 5bis and 5ter of the Articles of Association. At the Annual General Meeting of April 4, 2018, the shareholders extended the existing authorization to issue shares out of authorized capital for two years, until April 4, 2020.

Up to and including April 4, 2020, the Board of Zurich Insurance Group Ltd is authorized to increase the authorized share capital (Art. 5bis) by an amount not exceeding CHF 4,500,000 by issuing up to 45,000,000 fully paid registered shares with a nominal value of CHF 0.10 each. This authorized share capital equates to about 30 percent of the current total registered shares issued. Share issuances out of authorized share capital where the shareholders' subscription rights are restricted or excluded are limited to 15,000,000 shares (i.e., less than 10 percent of the current total registered shares issued).

The contingent share capital of Zurich Insurance Group Ltd (Art. 5ter 1a) may be increased by an amount not exceeding CHF 3,000,000 by issuing of up to 30,000,000 fully paid registered shares with a nominal value of CHF 0.10 each by the voluntary or mandatory exercise of conversion and/or option rights, which are granted in connection with the issuance of loans, bonds, similar debt instruments, equity-linked instruments or other financial market instruments (collectively, the 'financial instruments') by Zurich Insurance Group Ltd or one of its Group companies, or by mandatory conversion of financial instruments issued by Zurich Insurance Group Ltd or one of its Group companies, that allow for contingent mandatory conversion into shares of Zurich Insurance Group Ltd, or by exercising option rights which are granted to the shareholders. This contingent share capital equates to about 20 percent of the current total registered shares issued.

Up to and including April 4, 2020, the total number of new shares which could be issued from (i) authorized share capital under Art. 5bis where the subscription rights are restricted or excluded and (ii) contingent share capital in connection with financial instruments under Art. 5ter 1a where the advance subscription rights are restricted or excluded is limited to 30,000,000 shares (i.e., less than 20 percent of the current total registered shares issued).

Moreover, there is an additional contingent share capital (Art. 5ter 2a) of CHF 495,540.80, representing 4,955,408 fully paid registered shares with a nominal value of CHF 0.10 each, which may be issued to employees of Zurich Insurance Group Ltd or one of its Group companies. For further information on the capital structure and the authorized and contingent share capital, see the audited consolidated financial statements of the Annal Report, note 19 on pages 232 to 234. This contingent share capital equates to about 3.3 percent of the current total registered shares issued.

For further information please see Article 5bis and 5ter of the Articles of Association, as published under the following link: www.zurich.com/en/investor-relations/our-shares/articles-of-association.

F. Capital management *continued*

Changes to share capital during 2017
During 2017, a total of 732,445 shares were issued to employees out of contingent share capital. As a result, on December 31, 2017, the share capital amounted to CHF 15,133,985.10 (151,339,851 shares). The authorized share capital (Art. 5bis 1) amounted to CHF 4,500,000 (45,000,000 shares). The contingent share capital for Financial Instruments (Art. 5ter 1a) amounted to CHF 3,000,000 (30,000,000 shares) and the contingent share capital for employees (Art. 5ter 2a) amounted to CHF 495,540.80 (4,955,408 shares).

Zurich Insurance Group Ltd has launched its public share buy-back program of up to 1.74 million shares on April 11, 2018. All required regulatory approvals have been obtained. The Board of Directors intends to propose to the Annual General Meeting 2019 that Zurich's ordinary share capital be reduced via the cancellation of the shares repurchased under the share buy-back program.

Convertible bonds and options
Zurich Insurance Group Ltd had no public convertibles or options outstanding as of December 31, 2017. For information on employee share plans, see the audited consolidated financial statements of the Annual Report, note 21 on pages 243 to 244.

For more information on the structure, level and quality of the equity capital, see pages 41-42 and the note 19 to the Consolidated financial statements in the Annual report.

Zurich's capital structure changes over the year. We inform all our stakeholders via news release available on Zurich's website (www.zurich.com).

Capital management framework

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

Zurich'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.

The 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.

Capital management program

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

The 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 2017, the Group paid a dividend out of retained earnings and the capital contribution reserve, redeemed senior debt, and called hybrid debts that had been pre-financed during 2016.

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 Group Ltd faces no legal restrictions on dividends it may pay to its shareholders. As of December 31, 2017, the amount of the general legal reserve exceeded 20 times the paid-in share capital. The ability of the Group's 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 the impact of capital management actions on the market-consistent value of other liabilities including interest-bearing liabilities similar to debt capital, see section E. 'Valuation'.

Economic capital adequacy and overall risk appetite and tolerance

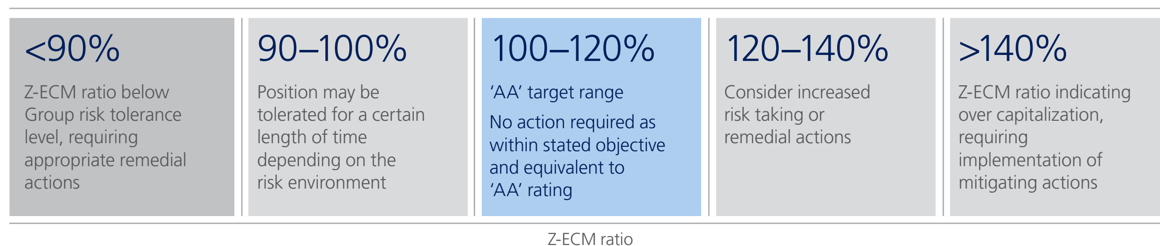
Internally, the Group uses its Zurich Economic Capital Model (Z-ECM), which also forms the basis of the Swiss Solvency Test (SST) model. Z-ECM targets a total capital level that is calibrated to an 'AA' financial strength. Zurich defines the Z-ECM capital required as being the capital required to protect the Group's policyholders in order to meet all of their claims with a confidence level of 99.95 percent over a one-year time horizon.

The Group uses Z-ECM to assess the economic capital consumption of its business on a one-balance-sheet approach. Z-ECM is an integral part of how the Group is managed. It is embedded in the Group's organization and decision-making processes, and is used in capital allocation, business performance management, pricing, and communication. Z-ECM quantifies the capital required for insurance-related risk (including premium and reserve, natural catastrophe, business and life insurance), market risk including investment credit risk, reinsurance credit risk, other credit risk, and operational risk.

At the Group level, Zurich compares Z-ECM capital required to the Z-ECM available financial resources (Z-ECM AFR) to derive an economic solvency ratio (Z-ECM ratio). Z-ECM AFR reflects financial resources available to cover policyholder liabilities in excess of their expected value. It is derived by adjusting the IFRS shareholders' equity to reflect the full economic capital base available to policyholders to absorb any unexpected volatility in the Group's business activities.

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). The Z-ECM provides a key input into the Group's strategic planning process as an assessment between the Group's risk profile and 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.

Group's Z-ECM overall risk appetite and tolerance

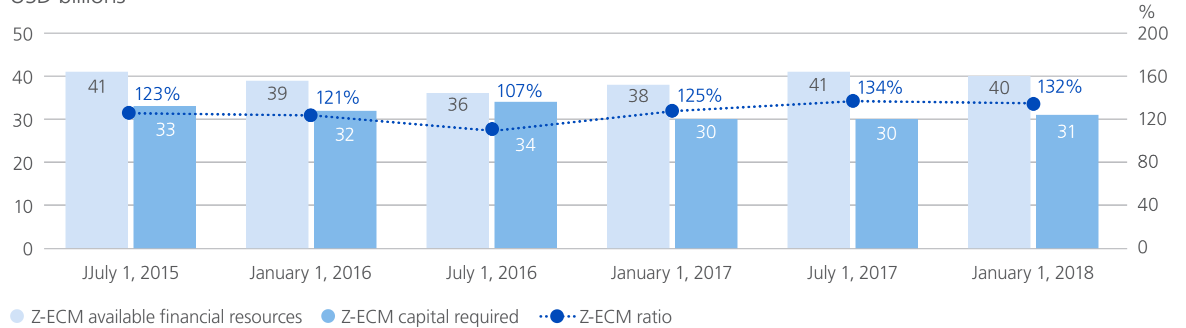


The Z-ECM forms the basis for optimizing the Group's risk-return profile by providing consistent risk measurement across the Group.

The chart below shows the development of the Group's Z-ECM AFR, Z-ECM capital required and Z-ECM ratio over time. As of January 1, 2018, the Z-ECM ratio was 132%.

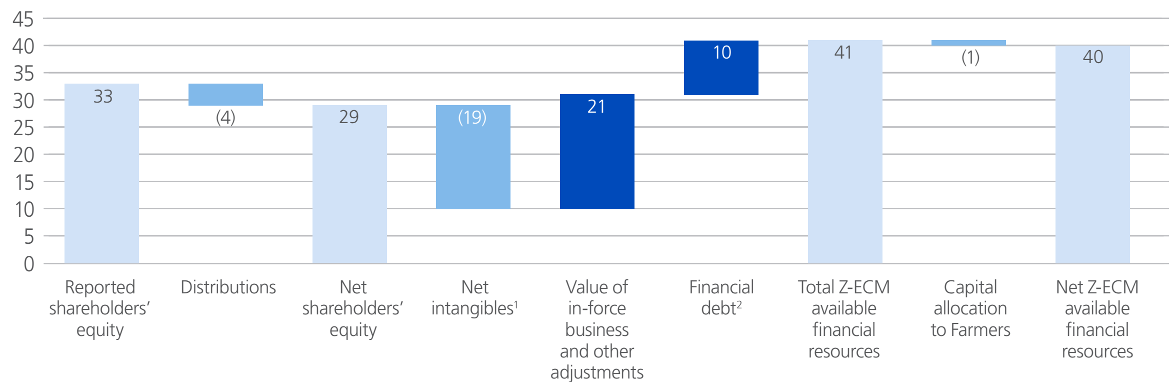
F. Capital management *continued*

Analysis of the Group's Z-ECM available financial resources and Z-ECM capital required
USD billions



The chart below shows an analysis of the composition of the Group's Z-ECM available financial resources as of January 1, 2018.

Analysis of the Group's Z-ECM available financial resources
USD billions, as of January 1, 2018



[1] Shareholders' intangible assets including deferred tax assets less deferred front-end fees and deferred tax liabilities
[2] All debt issues (senior and subordinated) excluding those classified as operational debt or maturing within one year

The chart below shows the Z-ECM capital required, split by risk type as of January 1, 2018. As of January 1, 2018, the largest proportion of Z-ECM capital required arose from insurance risk which comprised 49 percent of the total. Capital required for market risk was the second-largest, comprising 44 percent.

Total Z-ECM capital required: USD 30.6 billion
%, as of January 1, 2018

Insurance financial strength rating

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

The Group maintained its strong rating level in 2017. On December 8, 2017, AM Best modified the rating outlook from negative to stable while reaffirming the A+ (Superior) Financial Strength Rating (FSR) and aa- Issuer Credit Rating (ICR) of the Group and of its subsidiaries rated by AM Best. With this, AM Best recognized "the positive impact of the strong corrective actions management has taken on the Group's Property & Casualty (P&C) operations." This change is also based on the recognition of the Group's diversified sources of earnings in terms of businesses and geographies, as well as the strength of the balance sheet.

Standard & Poor's sees Zurich's ERM 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, 2017, the IFSR of Zurich Insurance Company Ltd (ZIC), the main operating entity of the Group, was 'AA–/Stable' by Standard and Poor's, 'Aa3/Stable' by Moody's, and 'A+ (Superior) /Stable by A.M. Best.

Regulatory capital adequacy

The 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 the 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. Besides the minimum capital required to comply with the solvency requirements, the Group aims to hold an adequate buffer to ensure regulated subsidiaries meet local capital requirements.

Regulatory requirements in Switzerland

Under the Swiss Solvency Test (SST), insurance companies and insurance groups can apply to use of 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). Zurich filed with FINMA an SST ratio of 216% as of January 1, 2018[1].

1 The Swiss Solvency Test (SST) ratio as of January 1, 2018 is calculated based on the Group's internal model, which is subject to the review and approval of FINMA. The full year ratio is filed with FINMA and is subject to its approval.

F. Capital management *continued*

Given its international range, Zurich chose an internal model to adequately reflect its global business and risk profile. The FINMA models do not capture the Non-Life and Life business in one model and are therefore not adequate for an international insurance group like Zurich. Zurich's internal model in contrast captures the Non-Life and Life business within a consistent framework. Insurance risk is the primary risk taken by Zurich. In line with the principle of pooling risks, Zurich aims for a wide level of diversification of its risks in terms of both geographies and underlying sources of risk. With the SST internal model, Zurich can appropriately capture the resulting diversification effects as well as the risk concentrations within its multinational portfolio. Zurich's internal model is fully embedded within its risk and capital management framework and within the decision-making processes of the Group and local units and provides the right risk incentives as it is tailored to the actual risks taken by Zurich.

Z-ECM and SST

The SST model and the internal Z-ECM model are based on the same fundamentals and are largely aligned; the main differences are:

- Z-ECM assesses the solvency position for rarer extreme scenarios by using a different risk measure (value-at-risk 99.95%) compared to SST (expected shortfall 99%)
- Z-ECM includes operational risk losses, which is not required under the SST framework
- Z-ECM accounts senior debt as available capital
- Z-ECM reflects the risk from a management perspective, while the SST calculation follows the legal structure of the Group

Differences are highlighted in the following table and graph.

Main differences between Z-ECM and SST

	Z-ECM	SST
Solvency ratio components	Available financial resources (AFR) less risk risk margin, over risk-based capital	Risk-bearing capital minus risk margin, over target capital minus risk margin
Risk measure	Value-at-Risk 99.95% (~AA)	Expected shortfall 99%
Differences in risk-types coverage	Additional risk types compared to SST • P&C Expense Risk • Operational Risk	Additional risk types compared to Z-ECM • Unearned premium reserves (UPR) risk
Senior debt	Valued as available capital	Valued as liability
Granularity	Management view • Internal reinsurance not relevant • Full Group diversification (i.e., both across risk types and legal entities) taken into account and allocated back to business units	Legal entity view • Internal reinsurance considered • Only diversification within legal entity taken into account • Risk of subsidiaries included (with limited liability)

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 – referred to as risk-bearing capital
- A view of the impact of the potential risks inherent to the regulated business – referred to 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 through calculation 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.

The Group uses an adaptation of its internal Zurich Economic Capital Model (Z-ECM) to comply with the Swiss Solvency Test (SST) requirements and files results with FINMA annually. The Group calculates its solvency figures on a consolidated basis, and uses risk types that are consistent with SST requirements.

With the revision of the ISO per July 2015 and the publication of the 'Wegleitung zum Genehmigungsprozess eines internen Modells' on February 26, 2016, FINMA requested a re-launch of the internal model approval processes for the Swiss insurance industry. In 2017, Zurich enhanced its internal model and submitted it to FINMA for approval. Enhancements include changes that were necessary to meet evolving FINMA requirements.

The risk margin (market value margin under SST) methodology follows the cost of capital approach, in accordance with the FINMA Circular 2017/3. The market value margin reflects 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. Given the long-term nature of the insurance liabilities (e.g. annuities) these future capital requirements are discounted consistently with the MCBS liabilities. The cost of capital rate is set to 6%.

The model changes lead to a reduction of the ZIC SST ratio, it stood at 194%[1, 2] as of January 1, 2017. This was a 26[1] percentage point decrease compared to the SST ratio of 220%[1] filed with FINMA as of January 1, 2017 (before model change). The decrease is driven by adjustments to the value attributed to the Farmers attorney-in-fact service contract and by reduced diversification benefits between market and credit risk.

Based on the new SST internal model the SST ratio as of January 1, 2018 stands at 216%[1, 2], 12 percentage points higher compared to the new model based SST ratio as of January 1, 2017.

The increase is driven mainly by favorable economic and business changes, partially offset by a higher dividend base.

1 The Swiss Solvency Test (SST) ratio a January 1, 2018 is calculated based on the Group's internal model, which is subject to the review and approval of FINMA. The full year ratio is filed FINMA and subject to approval.
2 The restated SST calculation and SST ratio as of January 1, 2017 (after model change) were not subject to regulatory review by FINMA. This footnote has been included on July 25, 2018 for the purpose of further clarification.

G. Solvency *continued*

Solvency

in USD millions, for the years ended December 31	2016[2]	Adjustments Previous year	2017
Derivation of risk-bearing capital			
Market-consistent value of assets minus total from best estimate liabilities plus market-consistent value of other liabilities	41,292		48,138
Deductions	(2,498)		(3,791)
Core capital	**31,077**		**36,622**
Supplementary capital	7,716		7,724
Risk-bearing capital	**38,794**		**44,347**
Derivation of target capital			
Underwriting risk	10,099		10,609
Market risk	10,027		10,575
Diversification effects	(3,746)		(3,805)
Credit risk	3,890		3,993
Risk margin and other effects on target capital	949		1,824
Target capital	**21,219**		**23,196**
SST ratio	**204%**		**216%**

[2] The restated SST calculation and SST ratio as of January 1, 2017 (after model change) were not subject to regulatory review by FINMA. This footnote has been included on July 25, 2018 for the purpose of further clarification.

Target capital by risk type

in USD millions, for the years ended December 31	2016	Adjustments previous period	2017
Insurance risk derivation of target capital			
Premium and reserve risk (including UPR risk)	7,536		7,887
Nat Cat	3,078		3,329
Life insurance liabilities	2,686		2,764
Business risk	3,961		4,293
Diversification	(7,162)		(7,663)
Total	**10,099**		**10,609**
	–		–
Market risk derivation of target capital	–		–
Equity risk	3,141		3,772
Interest rate risk	4,764		4,254
Exchange rate risk	2,426		2,423
Credit spread risk	6,709		6,831
Other	4,837		4,864
Diversification	(9,685)		(9,650)
Total (including investment credit risk)	**12,192**		**12,493**
thereof	–		–
Market risk (excluding investment credit risk)	10,027		10,575
Investment credit risk	3,724		3,816
	–		–
Credit risk derivation of target capital	–		–
Investment credit risk	3,724		3,816
Reinsurance credit risk & receivables	961		993
Diversification	(794)		(815)
Total	**3,890**		**3,993**

Appendix 1: Quantitative templates

Income statement Group and segments (IFRS)

in USD millions, for the years ended December 31

	Total	
	2016	**2017**
Gross written premiums	48,208	46,685
Policy fees	2,407	2,429
Gross written premiums and policy fees	**50,615**	**49,114**
Less premiums ceded to reinsurers	(7,843)	(7,977)
Net written premiums and policy fees	**42,772**	**41,136**
Net change in reserves for unearned premiums	(150)	(79)
Net earned premiums and policy fees	**42,622**	**41,057**
Farmers management fees and other related revenues	2,867	2,892
Net investment result on Group investments	**7,034**	**7,249**
Net investment income on Group Investments	5,474	5,215
Net cap gains/losses & imp. on Group investments	1,560	2,034
Net investment result on unit-linked investments	13,613	11,664
Net gain/(loss) on divestments of businesses	(89)	(84)
Other income	1,199	1,183
Total revenues	**67,245**	**63,961**
Insurance benefits and losses, gross of reinsurance	35,123	34,894
Less ceded insurance benefits and losses	(4,682)	(6,252)
Insurance benefits and losses, net of reinsurance	30,441	28,643
PH div & particip. in profits, net	14,519	12,984
Underwriting and policy acqu. costs, net	8,538	9,039
Administrative and other operating expense	7,478	7,212
Interest expense on debt	423	411
Interest credited to policyholders and other interest	525	546
Total benefits, losses and expenses	**61,924**	**58,835**
Net income before income taxes	**5,321**	**5,125**
Income tax expense	(1,843)	(1,816)
– attributable to policyholders	(304)	(171)
– attributable to shareholders	(1,539)	(1,645)
Net income after taxes	3,478	3,309
Attributable to minority interests	268	305
Attributable to shareholders	3,211	3,004

Property & Casualty		Life		Farmers		Group Functions and Operations		Non-Core Businesses/ Eliminations	
2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**
33,122	33,024	12,851	12,034	2,149	1,561	48	48	38	18
–	–	1,806	2,036	311	310	–	–	290	83
33,122	**33,024**	**14,657**	**14,070**	**2,459**	**1,871**	**48**	**48**	**328**	**100**
(7,014)	(6,492)	(684)	(1,128)	(189)	(195)	(43)	(42)	88	(120)
26,108	**26,532**	**13,973**	**12,942**	**2,270**	**1,676**	**6**	**6**	**416**	**(19)**
(6)	(499)	(119)	(132)	(65)	546	–	–	40	5
26,102	**26,033**	**13,854**	**12,810**	**2,205**	**2,223**	**6**	**6**	**456**	**(14)**
–	–	–	–	2,867	2,892	–	–	–	–
2,456	**3,010**	**3,788**	**3,813**	**281**	**252**	**250**	**115**	**258**	**60**
1,891	1,847	2,993	2,925	262	215	228	170	101	58
566	1,163	795	888	19	36	23	(55)	157	2
–	–	13,259	10,892	39	136	–	–	315	636
(134)	(96)	47	7	–	–	(2)	5	–	–
708	751	716	641	177	153	1,135	243	(1,537)	(606)
29,132	**29,698**	**31,663**	**28,164**	**5,569**	**5,655**	**1,389**	**369**	**(508)**	**76**
21,205	22,729	11,729	10,222	1,674	1,590	13	13	502	341
(3,860)	(4,734)	(599)	(963)	(209)	(156)	(14)	(13)	(1)	(386)
17,345	17,996	11,130	9,259	1,465	1,434	–	–	501	(45)
7	7	14,067	12,095	47	144	–	–	398	737
5,765	5,970	2,155	2,489	614	582	–	1	4	(3)
3,135	3,045	2,324	2,136	1,562	1,681	1,406	389	(949)	(38)
97	100	10	9	–	–	727	710	(411)	(408)
153	218	307	315	148	109	120	119	(203)	(215)
26,502	**27,337**	**29,993**	**26,303**	**3,836**	**3,950**	**2,253**	**1,218**	**(660)**	**28**
2,631	**2,361**	**1,670**	**1,861**	**1,734**	**1,705**	**(864)**	**(849)**	**151**	**48**

Appendix 1: Quantitative templates *continued*

Income statement Group and major international markets (IFRS)

in USD millions, for the years ended December 31

	Total	
	2016	**2017**
Gross written premiums	48,208	46,685
Policy fees	2,407	2,429
Gross written premiums and policy fees	**50,615**	**49,114**
Less premiums ceded to reinsurers	(7,843)	(7,977)
Net written premiums and policy fees	**42,772**	**41,136**
Net change in reserves for unearned premiums	(150)	(79)
Net earned premiums and policy fees	**42,622**	**41,057**
Farmers management fees and other related revenues	2,867	2,892
Net investment result on Group investments	**7,034**	**7,249**
Net investment income on Group Investments	5,474	5,215
Net cap gains/losses & imp. on Group investments	1,560	2,034
Net investment result on unit-linked investments	13,613	11,664
Net gain/(loss) on divestments of businesses	(89)	(84)
Other income	1,199	1,183
Total revenues	**67,245**	**63,961**
Insurance benefits and losses, gross of reinsurance	35,123	34,894
Less ceded insurance benefits and losses	(4,682)	(6,252)
Insurance benefits and losses, net of reinsurance	30,441	28,643
PH div & particip. in profits, net	14,519	12,984
Underwriting and policy acqu. costs, net	8,538	9,039
Administrative and other operating expense	7,478	7,212
Interest expense on debt	423	411
Interest credited to policyholders and other interest	525	546
Total benefits, losses and expenses	**61,924**	**58,835**
Net income before income taxes	**5,321**	**5,125**
Income tax expense	(1,843)	(1,816)
– attributable to policyholders	(304)	(171)
– attributable to shareholders	(1,539)	(1,645)
Net income after taxes	3,478	3,309
Attributable to minority interests	268	305
Attributable to shareholders	3,211	3,004

Europe, Middle East & Africa Property & Casualty		North America Property & Casualty		Europe, Middle East & Africa Life		Farmers		Other	
2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**
14,688	14,075	15,167	15,137	9,911	8,364	2,149	1,561	6,293	7,547
–	–	–	–	1,539	1,605	311	310	557	514
14,688	**14,075**	**15,167**	**15,137**	**11,450**	**9,969**	**2,459**	**1,871**	**6,850**	**8,061**
(2,088)	(2,209)	(5,159)	(4,549)	(509)	(732)	(189)	(195)	103	(292)
12,600	**11,866**	**10,008**	**10,588**	**10,941**	**9,236**	**2,270**	**1,676**	**6,953**	**7,769**
179	(1)	11	(132)	(24)	3	(65)	546	(251)	(494)
12,779	**11,865**	**10,019**	**10,456**	**10,917**	**9,239**	**2,205**	**2,223**	**6,702**	**7,275**
–	–	–	–	–	–	2,867	2,892	–	–
935	**1,055**	**1,212**	**1,599**	**3,234**	**3,231**	**281**	**252**	**1,371**	**1,112**
732	647	922	964	2,521	2,430	262	215	1,037	959
203	408	290	636	713	802	19	36	335	153
–	–	–	–	11,822	9,279	39	136	1,752	2,249
(137)	(88)	2	–	47	7	–	–	(1)	(4)
487	405	51	27	605	506	177	153	(122)	92
14,064	**13,237**	**11,285**	**12,083**	**26,625**	**22,262**	**5,569**	**5,655**	**9,702**	**10,724**
9,836	9,841	9,957	11,154	10,328	8,380	1,674	1,590	3,329	3,930
(1,235)	(1,363)	(3,010)	(3,237)	(486)	(626)	(209)	(156)	257	(869)
8,601	8,478	6,947	7,917	9,842	7,754	1,465	1,434	3,586	3,061
1	(1)	6	8	12,572	10,423	47	144	1,893	2,409
2,317	2,223	2,366	2,461	1,011	1,173	614	582	2,230	2,600
2,032	1,893	585	438	1,645	1,509	1,562	1,681	1,654	1,692
14	15	9	–	10	9	–	–	390	387
118	185	30	31	238	235	148	109	(9)	(14)
13,083	**12,792**	**9,943**	**10,855**	**25,318**	**21,103**	**3,836**	**3,950**	**9,745**	**10,135**
981	**444**	**1,342**	**1,228**	**1,307**	**1,159**	**1,734**	**1,705**	**(42)**	**589**

Appendix 1: Quantitative templates *continued*

Market-Consistent Balance Sheet

in USD millions, for the years ended December 31	2016	Adjustments previous period	2017
Market-consistent value of investments			
Real estate	10,562		12,238
Shareholdings	19		19
Fixed income securities	125,559		133,139
Loans	10,909		10,410
Mortgages	7,330		7,501
Equities	7,194		8,519
Other investments.	24,006		25,033
Collective investment schemes	3,586		4,159
Alternative investments	3,263		3,440
Other capital investments	17,158		17,434
Total Investments	**185,580**		**196,860**
Financial investments from unit-linked life insurance	108,892		128,591
Receivables from derivative financial instruments	968		903
Market-consistent value of other assets			
Cash and cash equivalents	7,197		8,269
Receivables from insurance business	10,991		11,237
Other receivables	4,015		3,374
Other assets	5,418		5,244
Total other assets	**27,620**		**28,124**
Total market-consistent value of assets	**323,060**		**354,477**
Best estimate liabilities (BEL)			
Best estimate of insurance liabilities	**(287,178)**		**(317,983)**
Direct insurance: life insurance business (excluding ALV)	(95,337)		(98,832)
Direct insurance: non-life insurance business	(62,517)		(66,108)
Direct insurance: health insurance business			
Direct insurance: unit-linked life insurance business	(122,063)		(146,012)
Direct insurance: other business	(503)		(457)
Outward reinsurance: life insurance business (excluding ALV)	(2,264)		(2,215)
Outward reinsurance: non-life insurance business	(4,489)		(4,353)
Outward reinsurance: health insurance business			
Outward reinsurance: unit-linked life insurance business	–		–
Outward reinsurance: other business	(6)		(6)
Reinsurers' share of best estimate of insurance liabilities	**32,990**		**38,716**
Direct insurance: life insurance business (excluding ALV)	4,996		4,998
Direct insurance: non-life insurance business	6,612		7,102
Direct insurance: health insurance business			
Direct insurance: unit-linked life insurance business	17,102		21,656
Direct insurance: other business	–		–
Outward reinsurance: life insurance business (excluding ALV)	187		266
Outward reinsurance: non-life insurance business	4,094		4,695
Outward reinsurance: health insurance business			
Outward reinsurance: unit-linked life insurance business	–		–
Outward reinsurance: other business	–		–
Market consistent value of other liabilities			
Non-technical provisions	(5,093)		(4,450)
Interest-bearing liabilities similar to debt capital	(4,398)		(4,020)
Liabilities from derivative financial instruments	(345)		(214)
Deposits retained on ceded reinsurance	(488)		(431)
Liabilities from insurance business	(4,701)		(4,327)
Other liabilities	(12,554)		(13,632)
Total BEL plus market-consistent value of liabilities	**(281,768)**		**(306,340)**
Difference between market-consistent assets and market-consistent debt capital	**41,292**		**48,138**

Solvency

in USD millions, for the years ended December 31	2016[1]	Adjustments Previous year	2017
Derivation of risk-bearing capital			
Market-consistent value of assets minus total from best estimate liabilities plus market-consistent value of other liabilities	41,292		48,138
Deductions	(2,498)		(3,791)
Core capital	**31,077**		**36,622**
Supplementary capital	7,716		7,724
Risk-bearing capital	**38,794**		**44,347**
Derivation of target capital			
Underwriting risk	10,099		10,609
Market risk	10,027		10,575
Diversification effects	(3,746)		(3,805)
Credit risk	3,890		3,993
Risk margin and other effects on target capital	949		1,824
Target capital	**21,219**		**23,196**
SST ratio	**204%**		**216%**

[1] The restated SST calculation and SST ratio as of January 1, 2017 (after model change) were not subject to regulatory review by FINMA. This footnote has been included on July 25, 2018 for the purpose of further clarification.

Appendix 2: Interest in subsidiaries

Significant subsidiaries are defined as those subsidiaries which either individually or in aggregate, contribute significantly to gross written premiums, shareholder's equity, total assets or net income attributable to shareholders.

Significant subsidiaries – non-listed

Table 28.1

as of December 31, 2017

	Registered office	Voting rights %	Ownership interest %	Nominal value of share capital (in local currency millions)	
Australia					
Cover-More Group Limited	Sydney	100	100	AUD	939.2
Zurich Australia Limited	Sydney	100	100	AUD	426.5
Zurich Australian Insurance Limited	Sydney	100	100	AUD	6.6
Zurich Financial Services Australia Limited	Sydney	100	100	AUD	1,348.8
Austria					
Zürich Versicherungs-Aktiengesellschaft	Vienna	99.98	99.98	EUR	12.0
Brazil					
Zurich Santander Brasil Seguros e Previdência S.A.	Sao Paulo	51	51	BRL	1,659.2
Zurich Minas Brasil Seguros S.A.	Belo Horizonte	100	100	BRL	3,109.6
Zurich Resseguradora Brasil S.A.	Sao Paulo	100	100	BRL	204.0
Chile					
Chilena Consolidada Seguros de Vida S.A.	Santiago	98.99	98.99	CLP	44,718.8
Zurich Santander Seguros de Vida Chile S.A.	Santiago	51	51	CLP	24,252.9
Germany					
Deutscher Herold Aktiengesellschaft	Bonn	100	100	EUR	18.4
Zürich Beteiligungs-Aktiengesellschaft (Deutschland)	Frankfurt	100	100	EUR	152.9
Zurich Deutscher Herold Lebensversicherung Aktiengesellschaft	Bonn	100	100	EUR	68.5
Ireland					
Zurich Life Assurance plc	Dublin	100	100	EUR	17.5
Zurich Holding Ireland Limited	Dublin	100	100	EUR	0.1
Zurich Insurance plc	Dublin	100	100	EUR	8.2
Italy					
Zurich Investments Life S.p.A.	Milan	100	100	EUR	164.0
Luxembourg					
Zurich Eurolife S.A.	Leudelange	100	100	EUR	39.0
REX-ZDHL S.C.S. SICAV-SIF	Leudelange	100	100	EUR	849.5
Malaysia					
Zurich Insurance Malaysia Berhad	Kuala Lumpur	100	100	MYR	579.0
Mexico					
Zurich Santander Seguros México, S.A.[1]	Mexico City	99.99	99.99	MXN	190.0

Significant subsidiaries – non-listed (continued)

Table 28.1
as of December 31, 2017

	Registered office	Voting rights %	Ownership interest %	Nominal value of share capital (in local currency millions)	
Spain					
Bansabadell Pensiones, E.G.F.P, S.A.[2]	Barcelona	50	50	EUR	7.8
Bansabadell Seguros Generales, S.A. de Seguros y Reaseguros[2]	Barcelona	50	50	EUR	10.0
Bansabadell Vida S.A. de Seguros y Reaseguros[2]	Barcelona	50	50	EUR	43.9
Zurich Latin America Holding S.L. - Sociedad Unipersonal	Barcelona	100	100	EUR	43.0
Zurich Santander Holding (Spain), S.L.	Boadilla del Monte	100	100	EUR	94.3
Zurich Santander Holding Dos (Spain), S.L.	Madrid	100	100	EUR	40.0
Zurich Santander Insurance America, S.L.	Madrid	51	51	EUR	177.0
Zurich Vida, Compañía de Seguros y Reaseguros, S.A. - Sociedad Unipersonal	Madrid	100	100	EUR	56.4
Switzerland					
Genevoise Real Estate Company Ltd	Geneva	100	100	CHF	20.4
Zurich Finance Company AG	Zurich	100	100	CHF	0.2
Zurich Insurance Company Ltd	Zurich	100	100	CHF	825.0
Zurich Investment Management AG	Zurich	100	100	CHF	10.0
Zurich Life Insurance Company Ltd	Zurich	100	100	CHF	60.0
Zürich Rückversicherungs-Gesellschaft AG	Zurich	100	100	CHF	11.7
Turkey					
Zurich Sigorta A.S.	Istanbul	100	100	TRY	168.9
United Kingdom					
Allied Zurich Holdings Limited	St. Hélier	100	100	GBP	90.7
Zurich Assurance Ltd	Cheltenham, England	100	100	GBP	236.1
Zurich Employment Services Limited	Cheltenham, England	100	100	GBP	182.4
Zurich Financial Services (UKISA) Limited	Cheltenham, England	100	100	GBP	1,652.1
Zurich Holdings (UK) Limited	Fareham, England	100	100	GBP	147.8
Zurich International Life Limited	Douglas, Isle of Man	100	100	GBP	123.4
Zurich UK General Services Limited	Fareham, England	100	100	GBP	258.2
Zurich Finance (UK) plc	Cheltenham, England	100	100	GBP	0.1

Appendix 2: Interest in subsidiaries *continued*

Significant subsidiaries – non-listed (continued)

Table 28.1

as of December 31, 2017

	Registered office	Voting rights %	Ownership interest %	Nominal value of share capital (in local currency millions)	
United States of America					
Farmers Group, Inc.[3]	Reno, NV	100	100	USD	0.001
Farmers Reinsurance Company[3]	Woodland Hills	87.90	95.38	USD	58.8
Farmers New World Life Insurance Company[3]	Mercer Island, WA	100	100	USD	6.6
Zurich American Corporation	Wilmington, DE	100	100	USD	0.00001
Zurich American Insurance Company (and subsidiaries)	New York, NY	100	100	USD	5.0
Rural Community Insurance Company	Anoka, MN	100	100	USD	3.0
Zurich American Life Insurance Company	Schaumburg, IL	100	100	USD	2.5
Zurich Holding Company of America, Inc.[4]	Wilmington, DE	100	100	USD	–
ZCM Matched Funding Corp.	George Town, Cayman Islands	100	100	USD	0.00001
Centre Group Holdings (U.S.) Limited	New York, NY	100	100	USD	0.000001
ZCM (U.S.) Limited	Wilmington, DE	100	100	USD	0.00001
Zurich Capital Markets Inc.	Wilmington, DE	100	100	USD	0.00001
Zurich Structured Finance, Inc.	Wilmington, DE	100	100	USD	0.012

[1] The controlling shareholder of this subsidiary is Zurich Santander Holding Dos (Spain), S.L.
[2] Relates to Bansabadell insurance entities which are controlled by the Group.
[3] The ownership percentages in Farmers Group, Inc. and its fully owned subsidiaries have been calculated based on the participation rights of Zurich Insurance Group in a situation of liquidation, dissolution or winding up of Farmers Group, Inc.
[4] Shares have no nominal value in accordance with the company's articles of incorporation and local legislation.

Appendix 3: Report of the statutory auditor on the Group Annual Report 2017

The Financial Condition Report is not audited.

The consolidated financial statements of Zurich Insurance Group 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, 2017 are audited. Please refer to the report of the statutory auditor in the Zurich Group Annual Report 2017, pages 280 to 285.

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

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 and its Group and on whether the targets will be achieved. 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 and management 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.

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