

# Risk review

Zurich Insurance Group  
Annual Report 2014

# Risk review

Zurich's approach to risk management aims to protect the Group's capital, enhance value creation, optimize its risk-return profile, support decision making and protect Zurich's reputation and brand. The risk review describes the Group's risk management framework and risk governance, reports on capital management and capital adequacy, and presents an analysis of its main risks.

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The Risk review is an integral part of the consolidated financial statements (only the information marked "audited").



The risk review is structured differently this year in order to discuss a particular risk alongside important contextual information, such as Z-ECM capital required. As a consequence, audited and unaudited information is presented together. To address this, audited information is highlighted. The folded corner indicates that the information contained within the shaded panel is audited and forms an integral part of the consolidated financial statements.

## Executive summary

### Enterprise risk management

**Zurich uses a comprehensive risk management framework throughout the Group.**

In 2014, the Group focused on significant financial reporting controls, and operational key controls for underwriting and claims.

Internal reporting was enriched by including in-depth risk insights into topics such as operational risk and corporate responsibility.

We expanded our training program to support local risk management teams, especially in the areas of quantifying operational risk, implementing controls, and complying with developing regulatory requirements.

### Financial condition

**The Group is well within its target capital level, which is calibrated to a 'AA' financial strength.**

As of July 1, 2014, the Group had a Zurich Economic Capital Model (Z-ECM) ratio of 126%, and was well above the Swiss Solvency Test requirements with a ratio of 215%. As of December 31, 2014, the Group's Solvency I ratio was 307%. See note 29 for an update on the January 15, 2015 SNB action on the Swiss franc.

**126%**

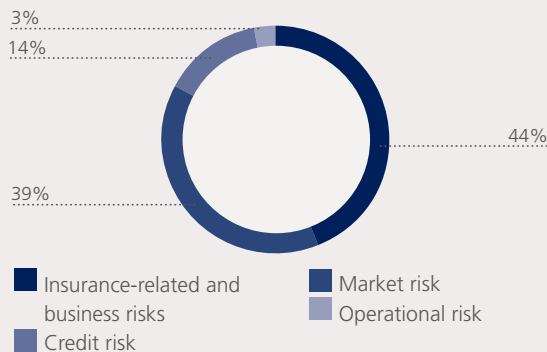
Z-ECM ratio (as of July 1, 2014)

**AA-/positive**

Standard & Poor's financial strength rating of Zurich Insurance Company Ltd (as of December 31, 2014)

### Economic risk profile

**Insurance-related and business risks are the main drivers of the Group's required capital.**



As of July 1, 2014, insurance-related and business risks contribute 44% of the Z-ECM capital required. 52% of the total capital allocated to the segments goes to General Insurance, 33% to Global Life and 7% to Farmers.

### Financial condition under stressed perspective

**Zurich uses scenario analyses to assess the potential impact of conditions under stress.**

The Group identifies plausible threat scenarios, and quantifies their potential impact on financial resources. Depending on the outcome, the Group then develops, implements and monitors appropriate actions.

In 2014, the Z-ECM ratio was analyzed for sensitivity to three new scenarios: two related to monetary policy errors by central banks that trigger market corrections, and the third a macro-economic crisis. While under two of the scenarios the Z-ECM ratio would remain within the "AA" range, one of the potential policy error scenarios would cause the Z-ECM ratio to exceed our target range.

## Risk review *continued*

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### Risk and capital management

#### Mission and objectives of risk management

The mission of risk management at Zurich Insurance Group (Zurich, or the Group) is to promptly identify, measure, manage, report and monitor risks that affect whether, and how, strategic, operational and financial objectives are achieved. This includes adjusting the risk profile in line with the Group's stated risk tolerance to respond to new threats and opportunities, and to optimize returns.

The Group's major risk management objectives are to:

- Protect the capital base by monitoring that risks are not taken beyond the Group's risk tolerance
- Enhance value creation and contribute to an optimal risk-return profile by providing the basis for an efficient capital deployment
- 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

#### 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 specifies the Group's risk tolerance, risk limits and authorities, reporting requirements, procedures to approve any exceptions and procedures for referring risk issues to senior management and the Board of Directors. Limits are specified per risk type. In 2014, the Zurich Risk Policy was updated in several areas, including life insurance risk, general insurance underwriting risk, information risk, credit risk in treasury transactions and asset/liability risk. 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 additional updates. In 2014, reporting was enhanced by including in-depth risk insights into topics such as operational risk and corporate responsibility.

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 evaluating strategic risks as well as risks to Zurich's reputation. At Group level this process is conducted annually, reviewed regularly and tied to the planning process.

Group's Risk Tolerance	
140%	>140% Z-ECM ratio indicating over capitalization, requiring implementation of mitigation actions
120%	120-140% Consider increased risk taking or remedial actions
100%	<b>100-120% "AA" target range</b> <b>No action required as within stated objective and equivalent to "AA" rating</b>
90%	90-100% Position may be tolerated for a certain length of time depending on the risk environment
0%	<90% Z-ECM ratio below Group risk tolerance level, requiring appropriate remedial actions and implementation of de-risking measures

Z-ECM ratio

In addition to this qualitative approach, 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 Zurich Economic Capital Model (Z-ECM) provides a key input into the Group's strategic planning process as it allows an assessment as to whether the Group's risk profile is in line with the Group's risk tolerance. Z-ECM forms the basis for optimizing the Group's risk-return profile by providing consistent risk measurement across the Group.

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Based on the Group's remuneration rules, the Board of Directors designs and structures remuneration arrangements to ensure they do not encourage inappropriate risk taking. 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 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.'

## Risk governance and risk management organization

For information on the Group's overall governance, including the Board of Directors and Group executive level, see the 'corporate governance report (unaudited).'

### Group Risk Management organization

The Group Chief Risk Officer leads the Group Risk Management function, which develops methods and processes for identifying, measuring, managing, monitoring and reporting risks throughout the Group. The Group Chief Risk Officer is responsible for oversight of risks across the Group, regularly reporting risk matters to the Chief Executive Officer, senior management committees and the Risk Committee of the Board.

The Group Risk Management organization consists of central functions at Group level and a decentralized risk management network at segment, regional, business unit and functional levels.

At Group level, the risk analytics department and risk and control department comprise the two centers of expertise. The risk analytics department makes quantitative assessments of insurance, financial market and asset/liability, credit and operational risks and is the Group's center of excellence for risk quantification, modeling and model validation. The risk and control department includes operational risk management, risk reporting, risk governance and tools and methodologies. The risk management network consists of the Chief Risk Officers (CROs) of the Group's segments and regions, and the Local Risk Officers (LROs) of the business units and functions and their staff. The risk officers are part of the management teams in their respective businesses and are thus embedded in the business. The LROs also report to the segment or regional CROs, who in turn report to the Group's Chief Risk Officer.

The Group also has audit committees at the major business level. The committees are responsible for overseeing risk management and control functions including monitoring adherence to policies and periodic risk reporting. At the local level, these oversight activities are conducted through risk and control committees or quarterly meetings between senior executives and the local heads of governance functions.

## 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 capital so that the Group and all its regulated entities meet relevant regulatory capital adequacy requirements.

Zurich strives to simplify the Group's legal entity structure to reduce complexity and increase fungibility of capital. The Group pools risk, capital and liquidity centrally as much as possible.

## Risk review *continued*

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### 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 pools 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, issuances 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 2014, the Group paid a dividend out of the capital contribution reserve, and replaced maturing senior debt and callable hybrid debt with new senior and hybrid debt.

The Swiss Code of Obligations stipulates the dividends may only be paid out of freely distributable reserves or retained earnings. Apart from what is specified by the Code, Zurich Insurance Group Ltd faces no legal restrictions on dividends it may pay to its shareholders. As of December 31, 2014, the amount of the general legal reserve exceeded 20 percent of the paid-in share capital.

The ability of the Group's subsidiaries to pay dividends may be restricted or – while dividend payments as such may be legally permitted – may be indirectly influenced by minimum capital and solvency requirements imposed by insurance and other regulators in the countries in which the subsidiaries operate. Other limitations, such as foreign exchange control restrictions, exist in some countries.

For details on issuances and redemptions of debt, see note 19 of the consolidated financial statements.

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## Analysis of capital adequacy

### Insurance financial strength rating

The Group has active relationships with three global rating agencies: Standard & Poor's, Moody's and A.M. 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 2014. As of December 31, 2014 the IFSR of Zurich Insurance Company Ltd (ZIC), the main operating entity of the Group, was 'AA-' by Standard and Poor's, 'Aa3' by Moody's and 'A+ (superior)' by A.M. Best. While Moody's and AM Best have their rating outlooks as "stable," S&P revised its outlook for Zurich Insurance Group and all its core entities to "positive" on October 1, 2014. The outlook revision reflects S&P's growing confidence in the relative credit strength of ZIC compared with similarly rated peers. This follows S&P's review of the Group's non-life reserves and internal economic capital model.

### 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. The Group is subject to different capital requirements depending on the countries in which it operates.

Zurich pools risk and capital as much as possible at a Group level, creating diversification benefits for the Group. This also allows the Group to take into account the benefits that arise in regions where these benefits are recognized under the capital adequacy regime, e.g., in the U.S., Ireland, and Switzerland.

#### Regulatory requirements in Switzerland

Insurance entities operating in Switzerland are required to maintain minimum solvency margins according to the existing Solvency I legislation. Under the Swiss Solvency Test (SST), groups, conglomerates and reinsurers are required to use company-specific internal models to calculate risk-bearing and target capital. Internal models must be approved by the Swiss Financial Market Supervisory Authority (FINMA). The model approval process continues with FINMA, which approved the use of Zurich's internal model for 2014 on a provisional basis, without prejudicing the final approval. Zurich has filed an SST ratio with FINMA in excess of the regulatory requirements, both as of January 1, 2014 and as of July 1, 2014 (subject to FINMA approval). For more details, see the 'Swiss Solvency Test requirement (unaudited)' section.

## Risk review *continued*

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### Solvency I requirements at Group level

The Group continues to be subject to Solvency I requirements based on the Swiss Insurance Supervisory Law. Table 1 sets out the Solvency I position as drafted for filing with the Swiss regulator for 2014 and the position for 2013.

The Group's  
Solvency I  
composition

Table 1		2014	2013
in USD millions, as of December 31			
Eligible equity			
<b>Total equity</b>		<b>36,830</b>	<b>34,734</b>
Net of intangibles and other assets		(7,722)	(7,996)
Free reserves for policyholder dividends		7,918	4,954
Subordinated debt <sup>1</sup>		5,591	5,815
Deferred policyholder acquisition costs non-life insurance		(3,268)	(3,231)
Dividends <sup>2</sup>		(2,538)	(2,817)
<b>Total eligible equity</b>		<b>36,810</b>	<b>31,460</b>
<b>Total required solvency capital</b>		<b>11,976</b>	<b>12,201</b>
<b>Excess margin</b>		<b>24,835</b>	<b>19,259</b>
<b>Solvency I ratio</b>		<b>307%</b>	<b>258%</b>

<sup>1</sup> Dated subordinated debt issuances are admissible up to 25 percent of the capital requirement, undated issuances up to 50 percent of the capital requirement.

<sup>2</sup> Amount for dividend reflects the proposed dividend for the financial year 2014, not yet approved by the Annual General Meeting, calculated at year-end exchange rates.

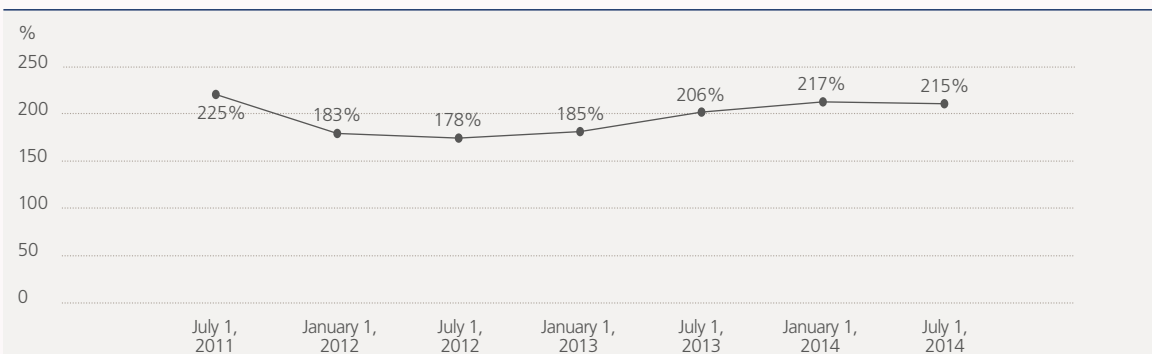
As of December 31, 2014 and 2013 respectively, the Group and its material, regulated subsidiaries complied with the applicable regulatory minimum capital requirements.



### Swiss Solvency Test requirements

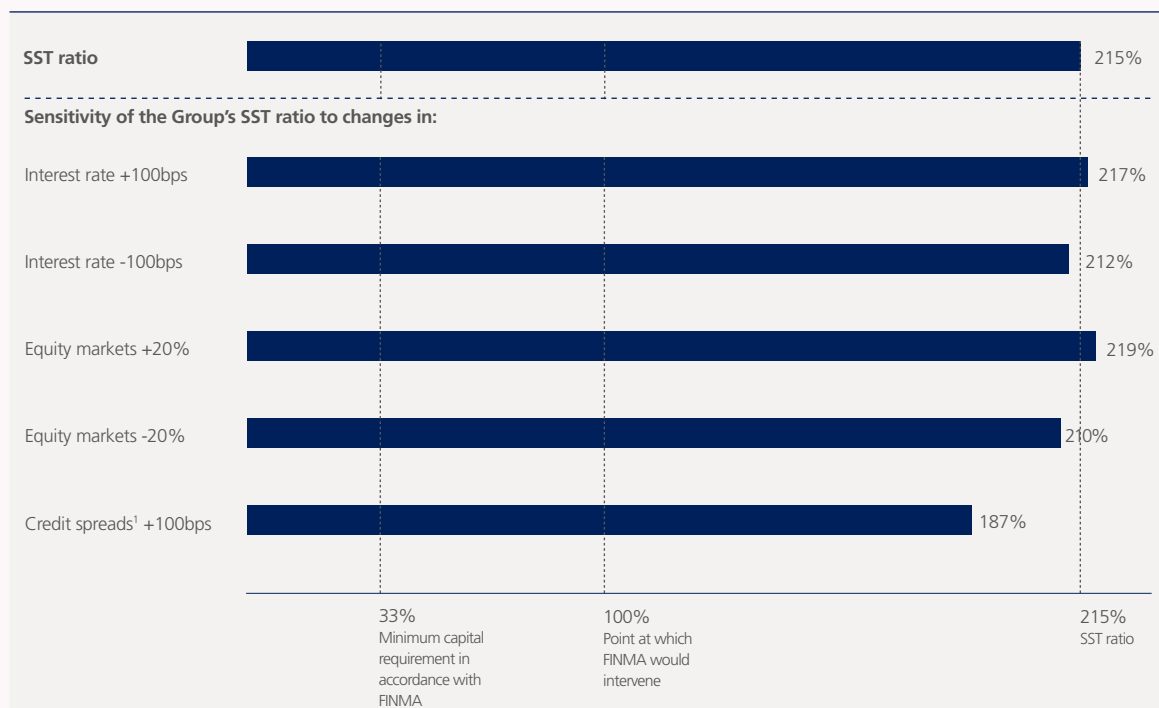
The Group uses an adaptation of its internal Zurich Economic Capital Model (Z-ECM) to comply with the Swiss Solvency Test (SST) requirements and runs a full SST calculation twice a year. The model and ratio are subject to FINMA's review and approval.

Development of the Group's Swiss Solvency Test ratio  
(in %, as filed with FINMA)



The following chart shows the estimated impact on the Group's SST ratio of a one percentage point increase/decrease in yield curves, a separate 20 percent rise/decline in all stock markets, after consideration of hedges in place and a separate one percentage point change in credit spreads, as of July 1, 2014. The sensitivities are considered separate but instantaneous scenarios.

Sensitivities for the Group's Swiss Solvency Test ratio  
(as of July 1, 2014)



<sup>1</sup> The credit spread sensitivity is applied to corporate debt, mortgages and Euro currency government debt (excluding Germany). The credit spread sensitivity does not take into account the buffering effect of policyholder participation.

## Risk review *continued*

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### Regulatory requirements in other countries

#### **Regulatory requirements in the European Economic Area**

In countries of the EEA, insurance entities are required to maintain minimum solvency margins according to the existing Solvency I legislation. Solvency I capital is calculated as a fixed percentage of premiums, claims, reserves and net amounts at risk. The same minimum capital requirements are applicable for insurance entities operating in Switzerland. In certain European countries, both EU and non-EU, further requirements have been imposed by regulators.

The directive on Solvency II was adopted on November 25, 2009. The complete framework will be introduced on January 1, 2016. Solvency II is designed to be more risk-sensitive and sophisticated in its approach than Solvency I. Solvency II capital requirements also take into account all material risks and how these interact. Under Solvency II, every insurance and reinsurance entity will be required to conduct its own risk and solvency assessment, including taking into account specific risk profiles. Under disclosure provisions, companies will have to publicly report their solvency and financial condition.

Zurich is fully engaged in order to meet Solvency II requirements when they enter into force. The Group intends to use its internal model, which aligns the Solvency II approach with that used for Z-ECM, for Zurich Insurance plc (Ireland) while other subsidiaries will use the Solvency II standard formula. The Group is in the pre-application process to gain regulatory approval for the internal model from the Central Bank of Ireland.

#### **Regulatory requirements in the U.S.**

In the U.S., required capital is determined to be 'company action level risk-based capital' calculated using the National Association of Insurance Commissioners' risk-based capital model. This method, which builds on regulatory accounts, measures the minimum amount of capital for an insurance company to support its overall business operations by taking into account its size and risk profile.

#### **Regulatory requirements in Asia-Pacific, Latin America and Middle East and Africa**

Every country has a capital standard for insurance companies. Some jurisdictions, including Japan, Mexico and South Africa, are reviewing their economic capital requirements, considering similar approaches to Solvency II.

## Economic capital adequacy

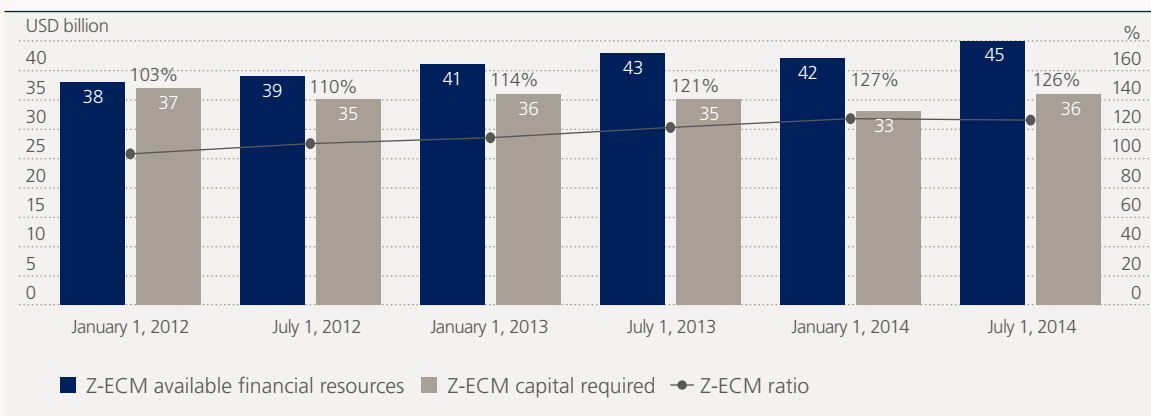
Internally, the Group uses its Zurich Economic Capital Model (Z-ECM), which also forms the basis of the SST model. The Z-ECM targets a total capital level that is calibrated to an "AA" financial strength. Zurich defines the Z-ECM capital required as being the capital required to protect the Group's policyholders 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, reinsurance purchasing, transaction evaluation, risk optimization, and regulatory, investor, and rating agency communication. Z-ECM quantifies the capital required for insurance-related risk (including premium and reserve, natural catastrophe, business and life insurance), market risk (market/ALM), credit risk (including reinsurance credit and investment credit) and operational risks. In 2014, Zurich strengthened the validation of Z-ECM.

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 absorb any unexpected volatility in the Group's business activities.

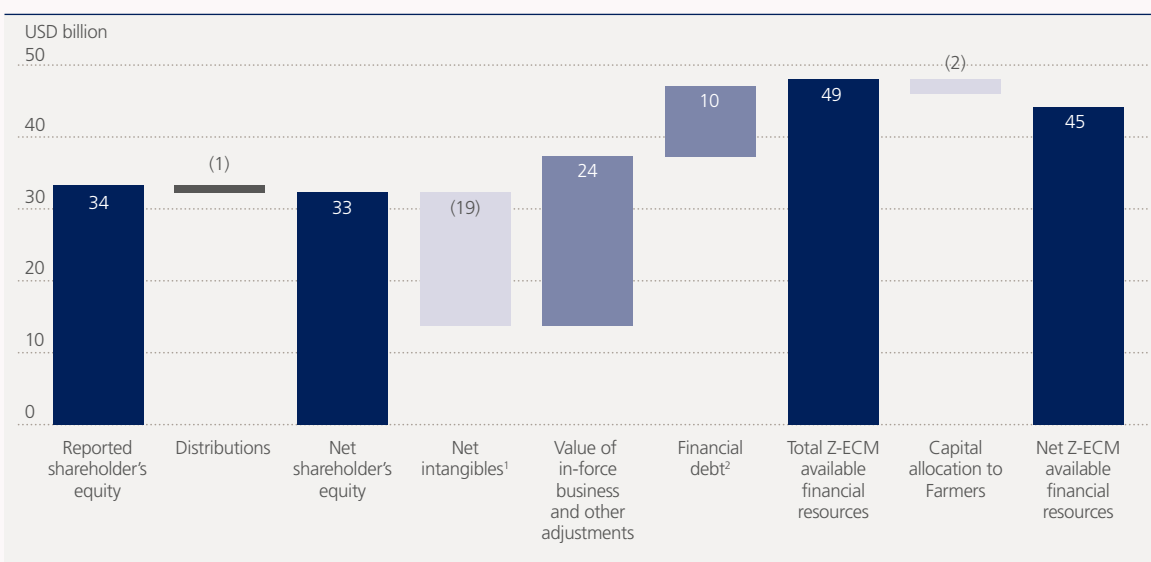
The chart below shows the development of the Group's Z-ECM available financial resources, Z-ECM capital required and Z-ECM ratio over time. As of October 1, 2014, the Z-ECM ratio was 127 percent.

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



The chart below shows an analysis of the composition of the Group's Z-ECM available financial resources as of July 1, 2014.

Analysis of the Group's Z-ECM available financial resources (in USD billions as of July 1, 2014)

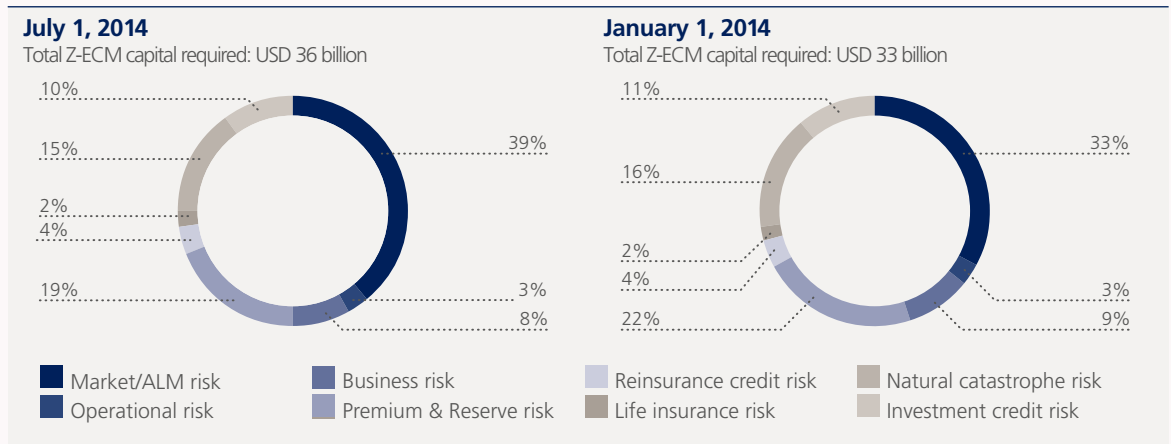


<sup>1</sup> Shareholders' intangible assets adjusted for taxes less deferred front-end fees and deferred tax liabilities  
<sup>2</sup> All debt issues (senior and subordinated) excluding those classified as operational debt or maturing within one year

## Risk review *continued*

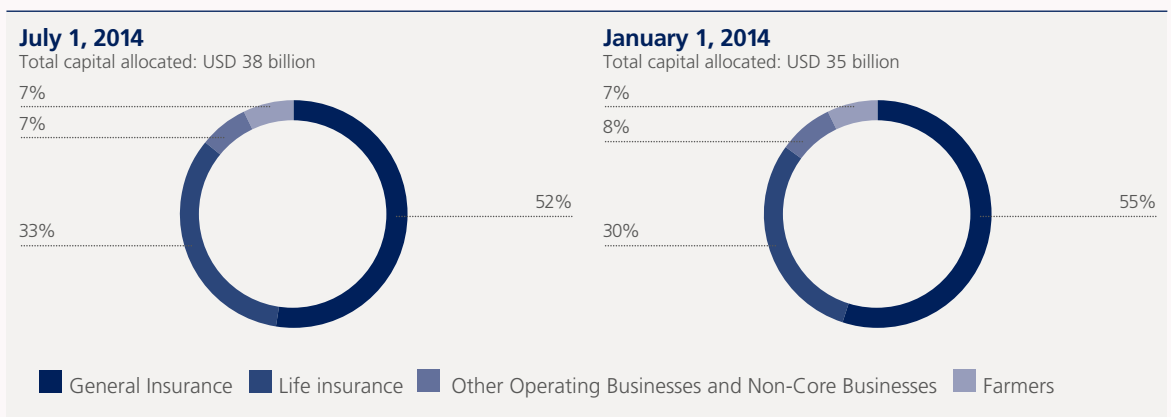
The chart below shows the Z-ECM capital required split by risk type as of July 1, 2014 and as of January 1, 2014 respectively. As of July 1, 2014, the largest proportion of Z-ECM capital required arose from Market/ALM risk which comprised 39 percent of the total. Premium & Reserve risk was the second-largest, comprising 19 percent.

Z-ECM capital required split by risk type  
(%, as of July 1 and January 1, 2014)



The following chart shows the Z-ECM capital required allocated to the segments as of July 1, 2014 and as of January 1, 2014. As of July 1, 2014, the largest proportion of Z-ECM capital required was allocated to General Insurance, which comprised 52 percent of the total, followed by Global Life with 33 percent of the total. Total allocated capital as of July 1, 2014 equaled USD 38 billion Z-ECM capital required plus USD 2 billion direct allocation to Farmers.

Total capital allocated, by segment  
(%, as of July 1 and January 1, 2014)

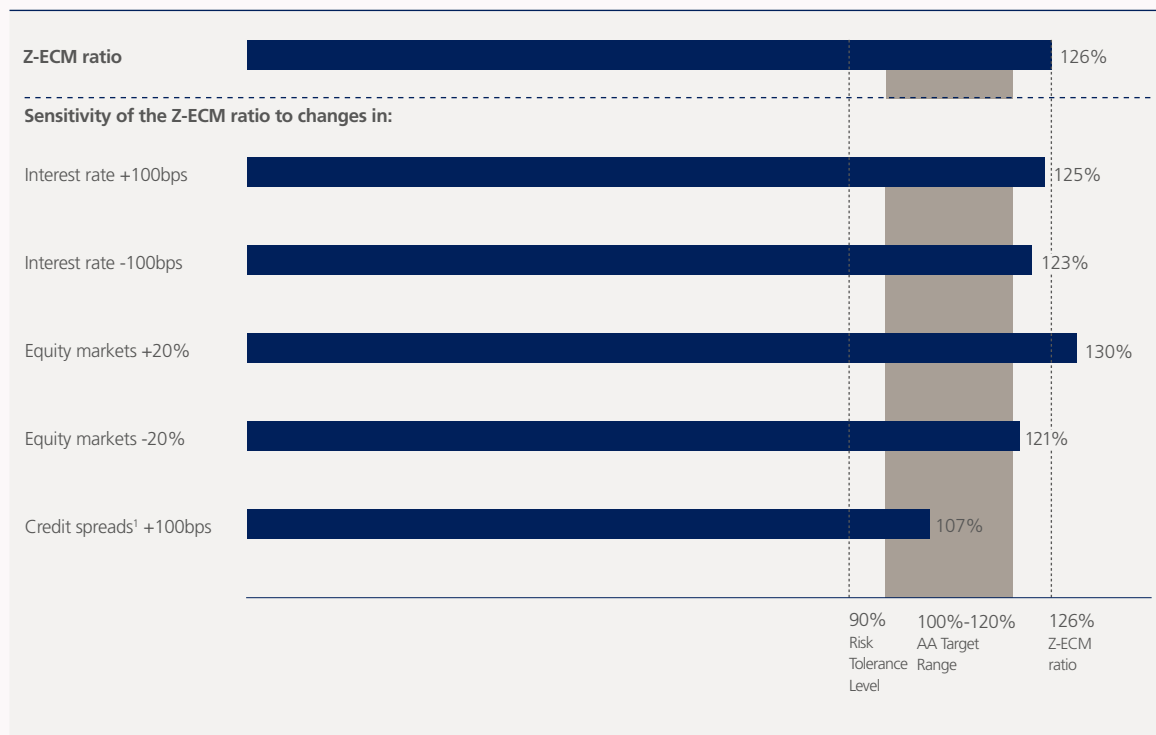


The chart below shows the estimated impact on the Group's Z-ECM ratio of:

- A one percentage point increase/decrease in yield curves
- A 20 percent rise/decline in all stock markets, after consideration of hedges in place
- A one percentage point change in credit spreads

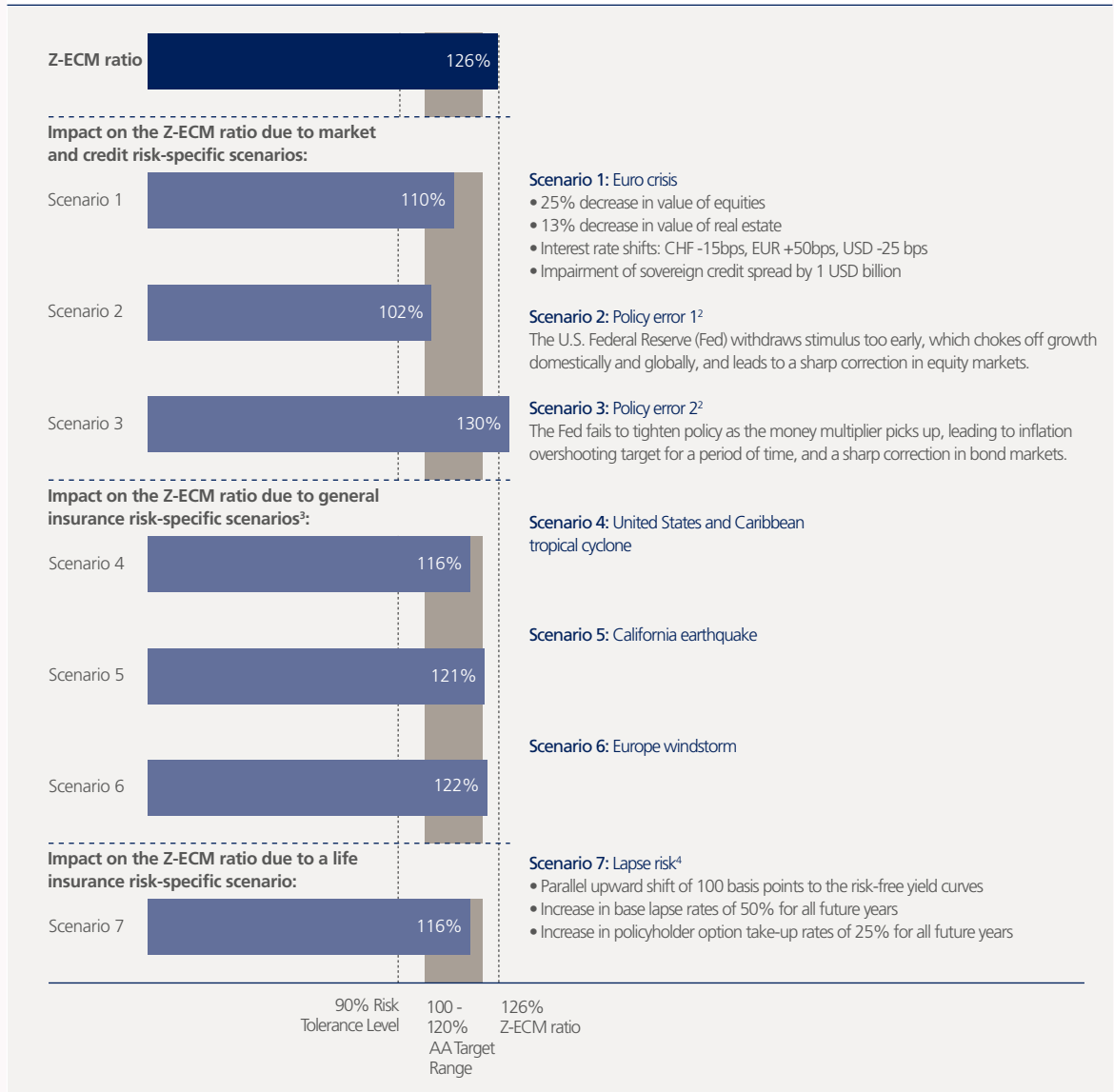
The sensitivities are considered as separate but instantaneous scenarios.

**Sensitivities for the Z-ECM ratio**  
(as of July 1, 2014)



<sup>1</sup> The credit spread sensitivity is applied to corporate debt, mortgages and Euro currency government debt (excluding Germany). The credit spread sensitivity does not take into account the buffering effect of policyholder participation.

In addition to the sensitivities shown in the preceding section, the Group also evaluates certain stress scenarios on the Z-ECM ratio. Scenarios are defined as events that have a very small probability of occurring but that could, if realized, negatively affect the Group's Z-ECM available financial resources. The chart below shows three groups of scenarios: market- and credit risk-specific, general insurance risk-specific and life insurance risk-specific. In the current market environment, two categories of threat scenarios have been identified: monetary policy errors of central banks (triggering market corrections) and a generic macro-economic crisis. The general insurance risk-specific scenarios present the three largest natural catastrophe events to which the Group is exposed. Lapse risk represents the Group's largest life insurance risk-specific exposure.

Risk review *continued*Impact of market, credit, and insurance scenarios on Z-ECM<sup>1</sup>  
as of July 1, 2014

<sup>1</sup> The impact of scenarios on changes to the Z-ECM capital required is not included in the sensitivities for the Z-ECM ratio as the impact is expected to be small and positive. Scenario 1 and Scenario 2 do not take into account the buffering effect of policyholder participation.

<sup>2</sup> Scenarios 2 and 3 focus on potential monetary policy errors. For scenario 2, parameters include a 28 percent decrease in value of equities, a 6-7 percent decrease in value of real estate, interest rate shifts (CHF -60bps, EUR -60bps, USD -120bps, GBP -120 bps), and a 90-94 bps increase in corporate credit spreads. For scenario 3, parameters include an 18 percent increase in value of equities, a 6 percent increase in value of real estate, interest rate shifts (CHF +120bps, EUR +120bps, USD +130bps, GBP +80 bps), and a 16-20 basis points decrease in corporate credit spreads.

<sup>3</sup> The general insurance risk-specific scenarios relate to natural catastrophe events that are estimated on a modeled 250-year net aggregate loss (equivalent to a 99.6% probability of non-exceedance).

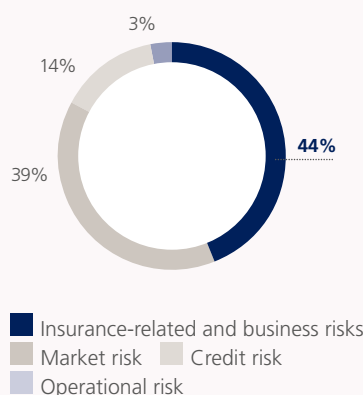
<sup>4</sup> The second assumption under the lapse risk scenario, "increase in base lapse rates of 50 percent for all future years," is applied in a similar manner as the Embedded Value sensitivity, "10 percent increase in voluntary discontinuance rates"; however the former is pre-tax while the latter is post-tax. (For more details, see the "Embedded value report.") Also, combining the assumptions in the lapse risk scenario introduces potential non-linear effects, which makes it difficult to directly compare the scenario with the embedded value sensitivity.

## Analysis by risk type

### Insurance risk

#### Section highlights

Total Z-ECM capital required: USD 36 billion  
(as per July 1, 2013)



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

	Q2 2012	Q2 2013	Q2 2014
Business risk	<b>4.3</b>	<b>3.7</b>	<b>3.0</b>
Life insurance risk	<b>0.8</b>	<b>1.0</b>	<b>0.7</b>
Premium and reserve risk	<b>7.7</b>	<b>7.4</b>	<b>6.9</b>
Natural catastrophe risk	<b>5.1</b>	<b>4.8</b>	<b>5.4</b>

- The Group diversifies its sources of revenues by geographies, lines of business, products, and customers. Therefore, Zurich is not exposed to concentrations of insurance risk beyond its risk appetite.

Insurance risk is the inherent uncertainty regarding the occurrence, amount or timing of insurance liabilities.

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.

#### General insurance risk

General insurance risk includes the reasonable possibility of significant loss due to uncertainty in the frequency of the occurrence of the insured events as well as in the severity of the resulting claims. 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 (for example fire, explosion and business interruption), natural perils (for example earthquake, windstorm and flood), engineering lines (for example boiler explosion, machinery breakdown and construction) and marine (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 include directors and officers, credit and surety, crime and fidelity, accident and health, and crop.
- Worker injury includes workers compensation and employers liability.

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## Risk review *continued*

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The Group's underwriting strategy aims to take advantage of the diversification of general insurance risks across lines of business and geographic regions. The Group seeks to optimize shareholder value by achieving its mid-term return on equity target. The Group's major processes for underwriting governance – underwriting strategy, authorities, referrals and reviews – are implemented at Group and local levels.

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. These guidelines generally include a technical price set in line with common standards to allow a return on risk-based capital in line with the Group's target. The ratio of actual premium to technical price is a key performance metric, which is monitored regularly. Technical reviews confirm whether underwriters perform within authorities and adhere to underwriting philosophies and policies. The Group has governance procedures to review and approve potential new products 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. General insurance reserves are therefore regularly measured, reviewed and monitored. The total loss and loss adjustment expense reserves are based on work performed by qualified and experienced actuaries at local, regional and Group levels.

To arrive at their reserve 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, in particular 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 such as technical price reviews.

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 closely 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 to identify, assess and recommend actions for such risks.

In addition to the specific risks insured, each line of business could expose the Group 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 senior management. The most important peril regions and risks are U.S. and Caribbean tropical cyclone, Europe windstorm and California earthquake, as well as potential terrorism exposures.

Tables 2.a and 2.b show the Group's concentration of risk within the General Insurance business by region and line of business based on direct written premiums before reinsurance. General insurance premiums ceded to reinsurers (including retrocessions) amounted to USD 5.5 billion and USD 6.0 billion for the years ended December 31, 2014 and 2013, respectively. Reinsurance programs are managed on a global basis, and therefore, net premium after reinsurance is monitored on an aggregated basis.

Table 2.a

General Insurance – Direct written premiums and policy fees by line of business – current period	in USD millions, for the year ended December 31, 2014						
	Motor	Property	Liability	Special lines	Worker injury	Total	
North America	1,492	3,310	3,529	1,790	2,613	12,734	
Europe, Middle East & Africa	6,077	5,026	2,554	2,208	522	16,387	
Other regions	2,018	1,477	431	1,148	157	5,230	
<b>Total</b>	<b>9,587</b>	<b>9,813</b>	<b>6,515</b>	<b>5,146</b>	<b>3,291</b>	<b>34,351</b>	



General Insurance –  
Direct written  
premiums and  
policy fees by line  
of business – prior  
period

Table 2.b

in USD millions, for the year ended  
December 31, 2013

	Motor	Property	Liability	Special lines	Worker injury	Total
North America	1,414	3,501	3,454	1,695	2,558	12,621
Europe, Middle East & Africa	6,163	5,003	2,480	2,154	485	16,286
Other regions	2,168	1,591	442	958	174	5,333
<b>Total</b>	<b>9,746</b>	<b>10,095</b>	<b>6,376</b>	<b>4,806</b>	<b>3,217</b>	<b>34,240</b>

### Analysis of sensitivities for general insurance risk

Tables 3.a and 3.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 3.a and 3.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 non-linear effects of reinsurance contracts.

Table 3.a

in USD millions, for the year ended December 31, 2014

Insurance risk  
sensitivity for the  
General Insurance  
business – current  
period

	Global Corporate	North America Commercial	Europe, Middle East & Africa	International Markets
+1% in net loss ratio				
Net income before tax	(63)	(77)	(122)	(38)
Net assets	(46)	(56)	(89)	(28)

Table 3.b

in USD millions, for the year ended December 31, 2013

Insurance risk  
sensitivity for the  
General Insurance  
business – prior period

	Global Corporate	North America Commercial	Europe, Middle East & Africa	International Markets
+1% in net loss ratio				
Net income before tax	(61)	(76)	(122)	(38)
Net assets	(46)	(57)	(92)	(29)

### Modeling natural catastrophes

While specific catastrophes are unpredictable, modeling helps to determine potential losses should catastrophes occur. 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.

To have a consistent approach and form a global perspective on accumulations, the Group models exposures in a center of excellence, which works with local businesses to help improve the overall quality of data. The Group models potential losses from property policies in hazard-prone areas with material exposure and from workers' compensation policies covering earthquakes in California. Other non-property-related losses are estimated based on adjustments. Risk modeling mainly addresses climate-induced perils such as windstorms, river floods, tornadoes and hail, and geologically-induced perils such as earthquakes. The Group constantly seeks to improve its modeling, fill in gaps in models with additional assessments, and increase the granularity of data collection. It uses internal and external knowledge in modeling accumulations. One such source of external knowledge is the Natural Catastrophe Advisory Council, a group of scientists associated with research organizations such as the U.S. National Center for Atmospheric Research, the U. S. Geological Survey and the Intergovernmental Panel on Climate Change. Zurich further validates modeling results by comparing them with claims experience.

## Risk review *continued*

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### Risks from man-made catastrophes

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

The Group reviews and aggregates worker injury and property exposures to identify areas of significant concentration and assesses other lines of business, such as liability and auto, although the potential exposure is not as significant. The data allows underwriters to evaluate how insuring a particular customer's risk might affect Zurich's overall exposure. In North America, Zurich uses a vendor-provided catastrophe model to evaluate potential exposures in every major U.S. city. The Group undertakes more detailed and frequent analyses for cities in which Zurich has greater exposure.

The Group's analysis has shown that its exposures outside North America are lower, in large part due to government-provided pools; even so, the Group assesses the risk for countries with the next-greatest potential net exposure. The Group periodically monitors accumulation limits for these and other areas.

### Life insurance risk

The risks associated with life insurance include:

- Mortality risk – actual policyholder death experience on life insurance policies is higher than expected.
- Longevity risk – annuitants live longer than expected.
- Morbidity risk – policyholder health-related claims are higher than expected.
- Policyholder behavior risk – policyholders' behavior in discontinuing and reducing contributions or withdrawing benefits prior to the maturity of contracts is worse than expected. Poor persistency rates may lead to fewer policies remaining on the books to defray future fixed expenses and therefore reduce the future positive cash flows from the business written, potentially affecting Zurich's ability to recover deferred acquisition expenses.
- Expense risk – expenses incurred in acquiring and administering policies are higher than expected.
- 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' 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 'credit risk' section.

A more diversified portfolio of risks is less likely 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 Global 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.

The Group uses market-consistent embedded value reporting principles, which allow Zurich to increase understanding, and report on, the risk profile of its life products, and how these risks would change under different market conditions. Embedded value is the measure that markets use to value life businesses. For more information, see the 'embedded value report.'

From a risk-management perspective, 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 are linked to the value of funds under management, and hence are at risk if fund values decrease. To the extent that there are guarantees built into the product design, unit-linked products carry mortality/morbidity risk and market risk. Contracts may have minimum guaranteed death benefits where the sum at risk depends on the fair value of the underlying investments. For certain contracts these risks are mitigated by explicit 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.

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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 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.

Liabilities have been recorded for some life insurance contracts that contain guarantees for additional benefits and minimum guarantees; these are primarily in the subsidiary Zurich American Life Insurance Company (ZALICO), which in the past wrote variable annuity contracts that provide policyholders with certain guarantees related to minimum death and income benefits. After 2001, ZALICO stopped issuing new policies with such features. The Group has a dynamic hedging strategy to manage its economic exposure and reduce the volatility associated with its closed book of variable annuities products within its U.S. life business. New life products developed with financial guarantees are subject to review and approval by the Group-level product approval committee. The Group is also exposed to risks arising out of bank-owned life insurance contracts sold in the U.S. See heading 'other contracts' in note 7 of the consolidated financial statements for additional information.

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

Zurich is exposed to two main types of concentration risk in its Global Life business:

- From a market risk perspective, interest rate guarantees in Germany and Switzerland expose Zurich to financial losses that may arise as a result of adverse movements in interest rates. The Group also wrote a small book of variable annuity business in the U.S. with minimum guaranteed death benefits, but ceased writing new business in 2012. The management of these guarantees is a combination of asset-liability matching and hedging; see the 'market risk' section.
- From an insurance risk perspective, the main factors that would affect concentration risk include mortality risk, morbidity risk, longevity risk, policyholder behavior risk (lapse, anti-selection) and expense risk. Due to diversification across geographical regions, lines of business and even across different insurance risk factors, Zurich is not exposed to significant concentrations of insurance risk.

Table 4 shows the Group's concentration of risk within the life business by region and line of business based on reserves for life insurance on a net basis. The Group's exposure to life insurance risks varies significantly by geographic region and line of business and may change over time. See note 8 of the consolidated financial statements for additional information on reserves for insurance contracts.

Risk review *continued*

Table 4  
in USD millions, as of December 31

Reserves, net  
of reinsurance,  
by region

	Unit-linked insurance contracts		Other life insurance liabilities		Total reserves	
	2014	2013	2014	2013	2014	2013
Global Life						
North America	1,024	730	5,469	5,473	6,492	6,204
Latin America	9,897	9,416	4,917	5,336	14,814	14,751
Europe	44,190	48,939	78,366	82,007	122,556	130,945
of which						
United Kingdom	23,367	26,452	5,119	5,001	28,485	31,453
Germany	13,818	13,437	41,237	43,728	55,055	57,165
Switzerland	737	767	18,427	20,074	19,164	20,841
Ireland	2,897	2,660	2,123	1,971	5,020	4,631
Spain	2,729	4,737	6,418	6,189	9,147	10,926
Italy	279	885	3,138	3,069	3,416	3,955
Rest of Europe	364	–	1,905	1,974	2,269	1,974
Asia-Pacific and Middle East	4,293	3,927	2,788	2,860	7,081	6,787
Other	27	16	376	350	403	366
<b>Subtotal</b>	<b>59,431</b>	<b>63,028</b>	<b>91,914</b>	<b>96,025</b>	<b>151,345</b>	<b>159,053</b>
Other segments	11,970	11,844	4,718	4,076	16,688	15,921
<b>Total</b>	<b>71,400</b>	<b>74,873</b>	<b>96,632</b>	<b>100,101</b>	<b>168,033</b>	<b>174,974</b>

#### Analysis of sensitivities for life insurance risk

The Group reports the Global Life business's sensitivities to changes in economic and operating risk factors in Embedded Value and New Business Value. The operating risk factors include discontinuance rates, expenses, mortality and morbidity. The embedded value methodology adopted by the Group is based on a market-consistent approach to explicitly allow for market risks. See the 'embedded value report' for more information on the Global Life business's sensitivities to economic and operating risk factors.

#### Reinsurance for general insurance and life insurance

The Group's objective in purchasing reinsurance is to provide market-leading capacity for customers while protecting the balance sheet and achieving capital efficiency. The Group follows a centralized reinsurance treaty purchasing strategy for both General Insurance and Global Life, and bundles programs, where appropriate, to benefit from diversification and economies of scale. For General Insurance, these efforts have led to a decreasing expenditure for treaty reinsurance over the last few years. Reinsurance cessions to captives and co-reinsurer panels on individual Global Corporate accounts have grown in line with growth in the General Insurance captive and Global Corporate business.

Due to its strong balance sheet, Zurich is able to structure and align its reinsurance programs to achieve an optimum risk-return ratio. Zurich manages its central reinsurance purchasing according to these principles. The Group is thus able to manage its risks to retain a significant and stable portion of its risk exposure. The cession rate for General Insurance was 15.1 percent and 16.4 percent as of December 31, 2014 and December 31, 2013, respectively. The cession rate for Global Life was 4.6 percent and 5.0 percent as of December 31, 2014 and December 31, 2013, respectively.

The Group continues to use traditional reinsurance markets and other alternatives, such as catastrophe bonds, to protect against extreme single events and increased frequency of events. In particular the Group is able to use its global reach for catastrophe protection. It has a combination of 'per event' and annual aggregate covers. This protects the Group's business by event and region, and also if multiple events occur across regions.

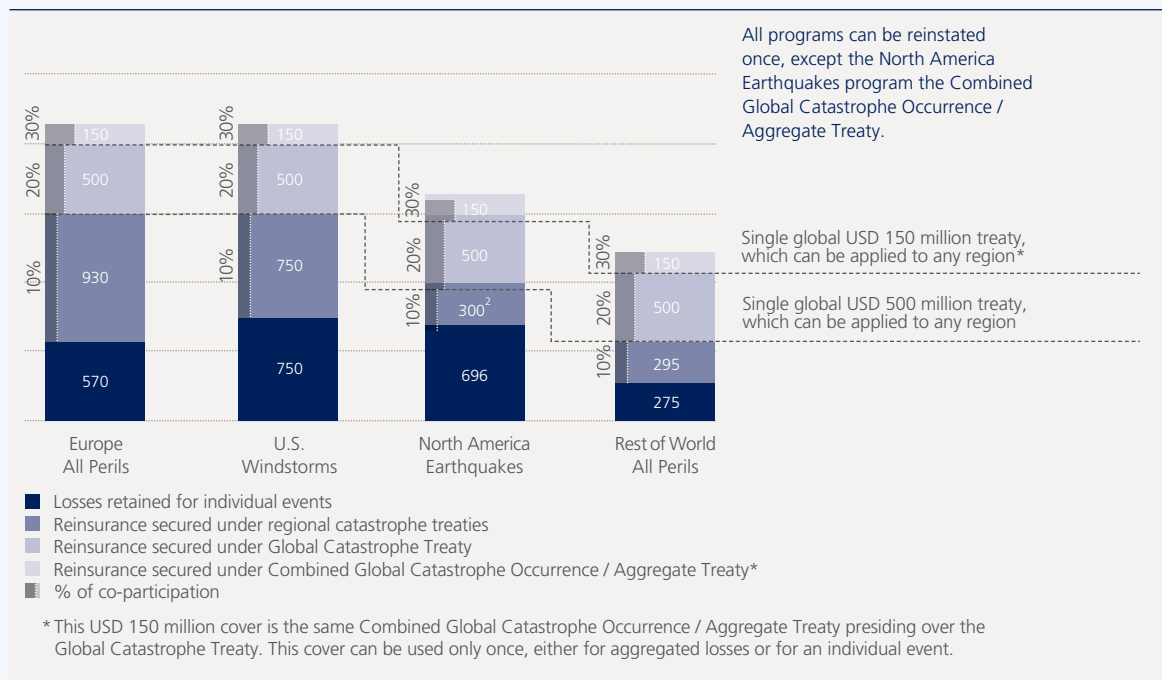
The Group uses reinsurance to manage risk related to unusually severe or frequent events, through the main in-force reinsurance covers. The chart below shows cover for natural catastrophe events as of December 31, 2014.

The Group participates in the underlying risks through its retention and through its co-participation in the excess layers. The contracts are on a loss-occurrence basis except the aggregate catastrophe cover Lakeside Re III Cat bond and the Global Aggregate Catastrophe cover which operate on an annual aggregate basis. In addition to these covers, the Group has per risk programs, some local catastrophe covers and a bilateral risk swap in place. These covers are reviewed continuously and are subject to change going forward. The current catastrophe covers are placed annually: January 1 for the U.S. program and the Global Aggregate Catastrophe cover; April 1 for the European program and the Global Catastrophe treaty, and July 1 for the rest of the world program.

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In 2014, the Group further fine-tuned its reinsurance covers for natural catastrophe events. While the treaty structures of most catastrophe covers, including the regional retentions, remained stable, Zurich reduced the attachment point of the Global Aggregate Catastrophe treaty to achieve an enhanced earnings protection for higher frequency scenarios within the retention of the regional covers.

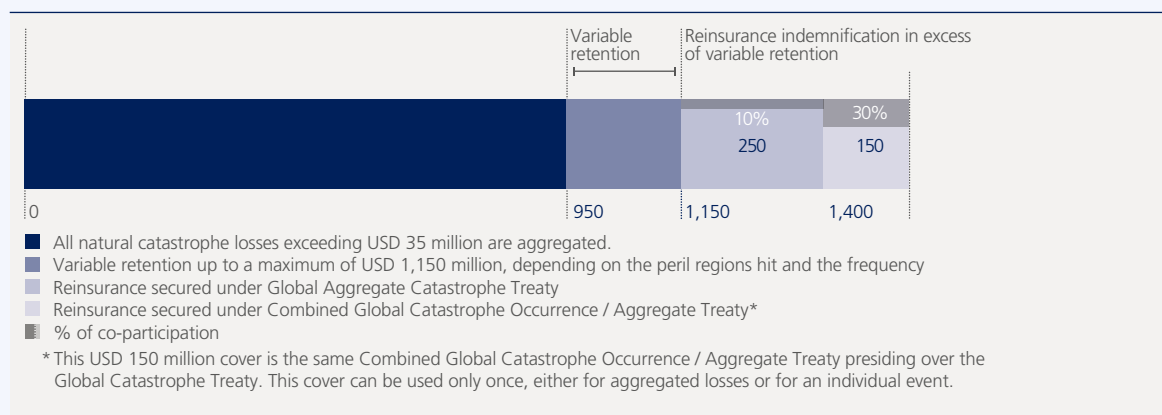
**Reinsurance for natural catastrophes by region – unusually severe catastrophe events<sup>1</sup>**  
(in USD millions, as of December 31, 2014)



<sup>1</sup> U.S. Catastrophe Treaty and Global Aggregate Catastrophe Treaty renewed on January 1, 2014; Europe Catastrophe Treaty and Global Catastrophe Treaty renewed on April 1, 2014; and International Catastrophe Treaty renewed on July 1, 2014.

<sup>2</sup> Lakeside Re III – Cat Bond.

**Reinsurance for natural catastrophes, aggregated – unusually frequent catastrophe events**  
(in USD millions, as of December 31, 2014)

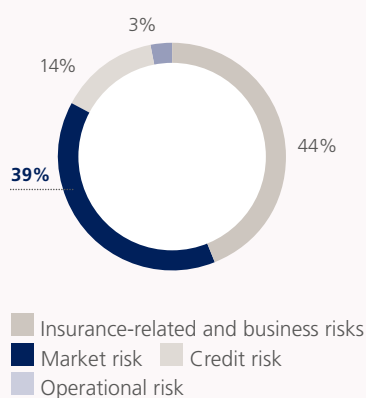


## Risk review *continued*

### Market risk

#### Section highlights

Total Z-ECM capital required: USD 36 billion  
(as per July 1, 2014)



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

	Q2 2012	Q2 2013	Q2 2014
ALM risk	<b>11.2</b>	<b>12.5</b>	<b>14.0</b>

- The Group manages the market risk of assets relative to liabilities on an economic total balance sheet basis.
- In 2014, the Group gradually increased investment risk, in particular with equities and corporate bonds.

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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
- Property market prices
- Interest rates and credit spreads
- 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 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. To control risk aggregation and ensure a consistent approach to constructing portfolios and choosing external asset managers, 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 also limits 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.

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The Group uses 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 liabilities and 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. The latter include cross-currency interest rate swaps in fair value hedges and cross-currency swaps in cash flow hedges of Zurich's borrowings, in order to mitigate exposure to foreign currency and interest rate risk. In compliance with Swiss insurance regulation, the Group's policy prohibits speculative trading in derivatives, meaning a pattern of "in and out" activity without reference to an underlying position. Derivatives are complex financial transactions; therefore, the Group addresses the risks arising from derivatives through a stringent policy that requires approval of a derivative program before transactions are initiated, and by subsequent regular monitoring by Group Risk Management of open positions and annual reviews of derivative programs.

For more information on the Group's investment result, including impairments and the treatment of selected financial instruments, see note 6 of the consolidated financial statements. For more information on derivative financial instruments and hedge accounting, see note 7 of the consolidated financial statements.

### Risk from equity securities and property

The Group is exposed to risks from price fluctuations on equity securities and property which could affect the Group's liquidity, reported income, surplus and regulatory capital position. Equity risk exposure includes common stocks, including equity unit trusts, common stock portfolios backing participating-with-profit policyholder contracts, and equities held for employee benefit plans. Exposure to property risk includes direct holdings in property, listed property company shares and funds, as well as property debt securities such as commercial and residential mortgages, commercial and residential mortgage-backed securities and mezzanine debt. Returns on unit-linked contracts, whether classified as insurance or investment contracts, may be exposed to risks from equity and property, 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 property markets.

The Group manages its risks from equity securities and property 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.

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

### Risk from interest rate and credit spread

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 including from debt securities, reserves for insurance contracts, liabilities for investment contracts, employee benefit plans and loans and receivables.

Zurich has limits on holdings in real assets and limits on deviations of asset interest rate sensitivities from liability interest rate sensitivities. The Group also 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.

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 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.

During 2014, the Group gradually increased investment risk, in particular with equities and corporate bonds.

## Risk review *continued*

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### Analysis of market risk sensitivities

#### **Basis of presentation – General Insurance and rest of the business**

The basis of the presentation for tables 5, 6 and 7 is an economic valuation represented by the fair value for Group investments, IFRS insurance liabilities discounted at risk-free market rates (the Group describes risk-free market rates as swap rates) to reflect the present value of insurance liability cash flows and other liabilities, for example own debt. In the sensitivities, own debt does not include subordinated debt, which Zurich considers available to protect policyholders in a worst-case scenario.

Table 5, 6 and 7 shows the estimated economic market risk sensitivities of Group investments, including investment property, liabilities, including insurance and financial liabilities, and the net impact for General Insurance and the rest of the business. 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 after tax. They do not include the impact of transactions within the Group.

Sensitivities for the rest of the business include Farmers, Other Operating Businesses and Non-Core Businesses. In 2013, the analysis for Non-Core Businesses that included business with life insurance characteristics was based on market-consistent embedded value market-risk sensitivities. In 2014, the basis of presentation for this business is the same as for General Insurance and the rest of the business.

#### **Basis of presentation – Global Life**

Tables 5, 6 and 7 show the estimated economic sensitivity of the embedded value of the Global Life business to financial market movements. Actions that would be taken by management or policyholders are considered. For contracts with financial options and guarantees, such as some participating business, movements in financial markets can change the nature and value of these benefits. The dynamics of these liabilities are captured so that this exposure is quantified, monitored, managed and where appropriate, mitigated.

For more information, see the 'embedded value report'.



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### Analysis of economic sensitivities for interest rate risk

Table 5 shows the estimated impacts of a 100 basis point increase/decrease in yield curves after consideration of hedges in place, as of December 31, 2014 and 2013, respectively.

Table 5		2014	2013
Economic interest rate sensitivities	In USD millions, as of December 31		
	100 basis points increase in the interest rate yield curves		
	<b>General Insurance business</b>		
	Net impact after tax	(220)	(509)
	<b>Global Life business</b>		
	Total impact on Embedded Value	(65)	(425)
	<b>Rest of the business</b>		
	Net impact after tax	(47)	(172)
	100 basis points decrease in the interest rate yield curves		
	<b>General Insurance business</b>		
	Net impact after tax	(17)	434
	<b>Global Life business</b>		
Total impact on Embedded Value	(222)	437	
<b>Rest of the business</b>			
Net impact after tax	143	234	

### Analysis of economic sensitivities for equity risk

Table 6 shows the estimated impacts from a 10 percent decline in stock markets, after consideration of hedges in place, as of December 31, 2014 and 2013, respectively.

Table 6		2014	2013
Economic equity price sensitivities	In USD millions, as of December 31		
	10% decline in stock markets		
	<b>General Insurance business</b>		
	Net impact after tax	(541)	(394)
	<b>Global Life business</b>		
	Total impact on Embedded Value	(301)	(279)
	<b>Rest of the business</b>		
Net impact after tax	(61)	(85)	

## Risk review *continued*

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### Analysis of economic sensitivities for credit spread risk

Table 7 shows the estimated impacts from a 100 basis points increase in corporate credit spreads, as of December 31, 2014 and 2013, respectively. The sensitivities apply to all fixed income instruments, excluding government, supranational and similar debt securities.

Table 7

Economic credit spread sensitivities

In USD millions, as of December 31	2014	2013
<b>100 basis points increase in credit spreads</b>		
<b>General Insurance business</b>		
Net impact after tax	<b>(1,383)</b>	(1,310)
<b>Global Life business</b>		
Total impact on Embedded Value	<b>(884)</b>	(901)
<b>Rest of the business</b>		
Net impact after tax	<b>(421)</b>	(285)

Limitations of the analysis for General Insurance and rest of the business:

- The sensitivities show the effects of a change of certain risk factors, while other assumptions remain unchanged.
- The interest rate scenarios assume a parallel shift of all interest rates in the respective currencies. They do not take into account the possibility that interest rate changes might differ by rating class; these are disclosed separately as credit spread risk sensitivities.
- The sensitivity analysis is based on economic net assets, and not on shareholders' equity or net income as set out in the consolidated financial statements.
- The sensitivity analysis is calculated after tax; the Group effective tax rate is 27.3 percent for 2014 and 24.9 percent for 2013.
- The equity market scenarios assume a concurrent movement of all stock markets.
- The sensitivity analysis does not take into account actions that might be taken to mitigate losses. Actions may involve changing the asset allocation, for example through selling and buying assets.
- The sensitivities do not indicate a probability of such events occurring in the future. They do not necessarily represent the Group's view of expected future market changes. In addition to the sensitivities, management uses stress scenarios to assess the impact of more severe market movements on the Group's financial condition. For more information on stress scenarios, see table 'impact of market, credit, and insurance scenarios on Z-ECM (unaudited)'.

Limitations of the analysis for Global Life:

- The sensitivities show the effects of a change in certain risk factors, while other assumptions remain unchanged, except where they are directly affected by the revised conditions.
- The market risk scenarios assume a concurrent movement of all stock markets and an unrelated parallel shift of all interest rates in different currencies.
- The assumptions on policyholder behavior, such as lapsing of policies, included in the sensitivity analysis for Global Life may be different from actual behavior. Therefore, the actual impact may deviate from the analysis.

### Currency risk

Currency risk is the risk of loss resulting from changes in exchange rates. The Group operates internationally and therefore is exposed to the financial impact arising from changes in the exchange rates of various currencies. The Group's presentation currency is the U.S. dollar, but its assets, liabilities, income and expenses are denominated in many currencies, with significant amounts in the euro, Swiss franc and British pound, as well as the U.S. dollar.

On local balance sheets a currency mismatch may cause a balance sheet's net asset value to fluctuate, through either income or directly through equity. The Group manages this risk by matching foreign currency positions on local balance sheets within prescribed limits. Residual local mismatches are reported centrally to make use of the netting effect across the Group. Zurich hedges these residual local mismatches within an established limit through a central balance sheet. The monetary currency risk exposure on local balance sheets is considered immaterial.

Differences arise when functional currencies are translated into the Group's presentation currency, the U.S. dollar. The Group applies net investment hedge accounting to protect against the impact that changes in certain exchange rates might have on selected net investments. The Group takes no speculative positions on foreign currency market movements. Using constant exchange rates from one year to the next, the Group's 2014 net income attributable to shareholders would have been higher by USD 22 million (applying 2013 exchange rates to the 2014 result). In 2013, the result would have been lower by USD 6 million (applying 2012 exchange rates to the 2013 results).

Table 8 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.

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See notes 1, 3 and 7 of the consolidated financial statements for additional information on foreign currency translation and transactions.

Table 8			
in USD millions, as of December 31			
		2014	2013
Sensitivity of the Group's total IFRS equity to exchange rate fluctuations	10% increase in		
	EUR/USD rate	825	915
	GBP/USD rate	302	311
	CHF/USD rate	(176)	(382)
	Other currencies/USD rates	730	760

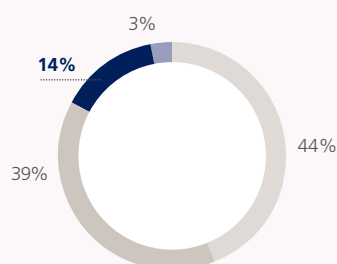
The sensitivities show the effects of a change of the exchange rates only, while other assumptions remain unchanged. The sensitivity analysis does not take into account management actions that might be taken to mitigate such changes. The sensitivities do not indicate a probability of such events occurring in the future. They do not necessarily represent Zurich's view of expected future market changes. While table 8 shows the effect of a 10 percent increase in currency exchange rates, a decrease of 10 percent would have the converse effect.

## Risk review *continued*

### Credit risk

#### Section highlights

Total Z-ECM capital required: USD 35 billion  
(as per July 1, 2014)



■ Insurance-related and business risks  
■ Market risk ■ Credit risk  
■ Operational risk

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

	Q2 2012	Q2 2013	Q2 2014
Investment credit risk	<b>3.6</b>	<b>3.4</b>	<b>3.7</b>
Reinsurance credit risk	<b>1.1</b>	<b>1.1</b>	<b>1.4</b>

- In 2014, the overall credit quality of the reported exposures remained materially unchanged.
- The increase in Z-ECM relates to model enhancements.

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Credit risk is the risk associated with a loss or potential loss from counterparties failing to fulfill their financial obligations. The Group's exposure to credit risk is derived from the following main categories of assets:

- Cash and cash equivalents
- Debt securities
- Reinsurance assets
- Mortgage loans
- Other loans
- Receivables
- Derivatives

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

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 limits and regularly monitors credit exposures to individual and related counterparties. The Group's exposure to counterparties' parent companies and subsidiaries is aggregated to include reinsurance assets, investments, certain insurance products and derivatives. There is no unapproved material exposure in excess of the Group's limits for counterparty aggregation as of December 31, 2014 or December 31, 2013.

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On-balance sheet exposures are the main source of credit risk. Off-balance sheet exposures are related primarily to 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 3 million and USD 8 million as of December 31, 2014 and 2013, respectively. See note 23 of the consolidated financial statements for undrawn loan commitments.

#### Credit risk related to 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 7.6 billion as of December 31, 2014 and USD 7.2 billion as of December 31, 2013. The risk-weighted average rating of the overall cash portfolio remained stable at "BBB+" from December 31, 2013 to December 31, 2014. 57 percent of the total was with the ten largest global banks, whose average rating increased from "A-" to "A" from December 31, 2013 to December 31, 2014.

#### Credit risk related to debt securities

The Group is exposed to credit risk from third-party counterparties where the Group holds securities issued by those entities.

Table 9

Debt securities by rating of issuer

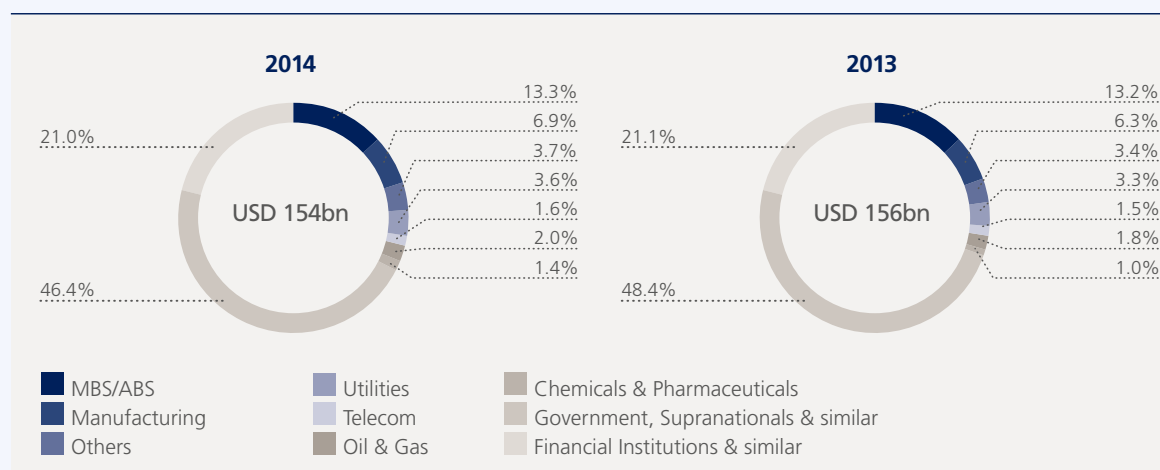
as of December 31	2014		2013	
	USD millions	% of total	USD millions	% of total
Rating				
AAA	30,298	19.7%	37,010	23.7%
AA	58,011	37.8%	57,985	37.1%
A	27,513	17.9%	26,992	17.2%
BBB	33,962	22.1%	31,170	19.9%
BB and below	2,356	1.5%	2,360	1.5%
Unrated	1,508	1.0%	939	0.6%
<b>Total</b>	<b>153,648</b>	<b>100.0%</b>	<b>156,456</b>	<b>100.0%</b>

Table 9 shows the credit risk exposure on debt securities, by issuer credit rating. As of December 31, 2014, 97.5 percent of the Group's debt securities is investment grade and 19.7 percent is rated "AAA." The downgrades of several Eurozone governments and related entities caused breaches of internal rating category limits, which were managed as circumstances allowed. As of December 31, 2013, 97.9 percent of debt securities was investment grade and 23.7 percent was rated "AAA." The Group's investment policy prohibits non-investment-grade investments, unless specifically authorized. Where the Group identifies investments expected to be downgraded, it implements appropriate actions.

The risk-weighted average issuer credit rating of the Group's debt securities portfolio was "BBB+" in 2014 and 2013.

Risk review *continued*

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Debt securities – credit risk concentration by industry  
(%, as of December 31)

As of December 31, 2014, the largest concentration in the Group's debt securities portfolio was in governments, supranationals and similar at 46.4 percent. In all other categories, a total of USD 35.9 billion or 44 percent is secured. As of December 31, 2013, 48.4 percent of the Group's debt portfolio was invested in governments, supranationals and similar. In all other categories, a total of USD 37.9 billion or 47 percent was secured.

Table 10

The Group's debt exposure to Eurozone governments and supranationals & similar

in USD millions, as of December 31	2014	2013
Germany	5,665	7,873
France	6,239	5,191
Austria	2,657	3,108
Belgium	2,184	2,305
Netherlands	2,041	2,093
Peripheral countries	14,847	14,351
Greece	–	–
Ireland	573	491
Italy	9,286	8,885
Portugal	532	530
Spain	4,456	4,445
Rest of Eurozone	1,128	1,147
Eurozone supranationals and similar	1,094	679
<b>Total</b>	<b>35,853</b>	<b>36,747</b>

In addition to debt exposure, the Group had sovereign loan exposure of USD 3.6 billion and USD 4.2 billion to Germany as of December 31, 2014 and 2013, respectively.

The second-largest concentration in the Group's debt securities portfolio is in financial institutions (including banks), at 21.0 percent, of which 40.8 percent is secured. In response to the European government-debt crisis, the Group identified and selectively reduced unsecured and subordinated credit exposure issued by banks with weak credit profiles, including banks supported by weaker governments.

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). Although credit risks of the underlying securities are diverse in nature, the Group also considers macro impacts that may affect structured finance sub-categories (e.g., auto or credit card ABS) in its credit assessments. Structured finance exposures are assessed on a look-through basis prior to acquisition and not merely on the strength of prevailing credit ratings or credit profiles.

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### 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-". 56 percent and 59 percent of the business ceded to reinsurers that fall below "A-" or are not rated is collateralized, as of December 31, 2014 and 2013 respectively. Of the business ceded to reinsurers that fall below "A-" or are not rated, 50 percent and 55 percent were ceded to captive insurance companies, in 2014 and 2013, respectively.

Reinsurance assets include reinsurance recoverables (the reinsurers' share of reserves for insurance contracts) of USD 16.6 billion and USD 18.1 billion as of December 31, 2014 and 2013, respectively and receivables arising from ceded reinsurance, gross of allowances for impairment, of USD 0.9 billion and USD 1.1 billion as of December 31, 2014 and 2013, respectively. Reserves for potentially uncollectible reinsurance assets amounted to USD 135 million as of December 31, 2014 and USD 174 million as of December 31, 2013. 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 11 are shown before taking into account collateral such as cash or bank letters of credit and deposits received under ceded reinsurance contracts. Except for an immaterial amount, letters of credit are from banks rated "A-". Compared with December 31, 2013, collateral decreased by USD 1.9 billion to USD 5.7 billion.

Table 11 shows reinsurance premiums ceded and reinsurance assets split by rating.

Table 11

Reinsurance premiums ceded and reinsurance assets by rating of reinsurer and captive	as of December 31		2014				2013			
			Premiums ceded		Reinsurance assets		Premiums ceded		Reinsurance assets	
	USD millions	% of total	USD millions	% of total	USD millions	% of total	USD millions	% of total		
<b>Rating</b>										
AAA	63	1.0%	36	0.2%	88	1.3%	38	0.2%		
AA	1,435	23.5%	5,314	30.6%	1,484	22.6%	7,672	40.3%		
A	1,813	29.7%	7,264	41.8%	2,152	32.8%	6,681	35.1%		
BBB	1,132	18.6%	1,968	11.3%	1,071	16.3%	2,058	10.8%		
BB	375	6.1%	671	3.9%	387	5.9%	656	3.4%		
B	55	0.9%	117	0.7%	51	0.8%	33	0.2%		
Unrated	1,228	20.1%	2,017	11.6%	1,313	20.2%	1,890	9.9%		
<b>Total<sup>1</sup></b>	<b>6,101</b>	<b>100.0%</b>	<b>17,387</b>	<b>100.0%</b>	<b>6,546</b>	<b>100%</b>	<b>19,027</b>	<b>100.0%</b>		

<sup>1</sup> The value of the collateral received amounts to USD 5.7 billion and USD 7.6 billion as of December 31, 2014 and 2013, respectively.

### Credit risk related to mortgage loans

The mortgage business is affected by local property market conditions and local legislation. Investment portfolio allocations made to mortgages take these factors into consideration, and are in line with the framework of the strategic asset allocation defined by the Group, and adapted and approved by local investment committees. Conservative lending criteria (i.e., maximum mortgage-loan to property-value ratios) and diversification of loans across many single borrowers, particularly in Germany and in Switzerland, help reduce potential loss. Furthermore, business units are required to clearly state criteria for determining borrower and collateral quality in their local mortgage policies. The Group sets requirements for local policies, and monitoring and reporting standards. The Group closely monitors performance of portfolios with respect to impairments and losses.

The Group's largest mortgage loan portfolios are in Germany (USD 3.1 billion) and in Switzerland (USD 3.5 billion); these are predominantly secured against residential property. In Switzerland, the underlying properties backing individual loans are revalued every 10 years. In Germany, the property valuation is not generally reassessed after the mortgage loan is granted. A less-frequent, or no revaluation of the underlying property means that reported loan-to-value (LTV) ratios will be higher (lower) than they would be if property prices had risen (fallen) since their valuation. For more details, see table 13.a and 13.b.

## Risk review *continued*

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### Credit risk related to other loans

The credit risk arising from other loans is assessed and monitored together with the fixed income securities portfolio. 53.7 percent of the reported loans are to governments, supranationals and similar, of which 94.4 percent are to the German Central Government or the German Federal States. Table 12 shows the composition of the loan portfolio by rating class. As of December 31, 2014, a total of USD 6.0 billion or 55.5 percent of loans are secured. As of December 31, 2013, a total of USD 7.9 billion or 66.7 percent of loans were secured.

Table 12

Other loans by rating of issuer

as of December 31

Rating	2014		2013	
	USD millions	% of total	USD millions	% of total
AAA	4,998	46.1%	6,185	52.5%
AA	843	7.8%	1,293	11.0%
A	2,261	20.9%	2,257	19.1%
BBB and below	1,577	14.6%	1,167	9.9%
Unrated	1,155	10.7%	887	7.5%
<b>Total</b>	<b>10,834</b>	<b>100.0%</b>	<b>11,789</b>	<b>100.0%</b>

### Credit risk related to receivables

The Group's largest credit-risk exposure to receivables is related to third-party agents, brokers and other intermediaries, and 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. See note 16 of the consolidated financial statements for additional information on receivables.

### Credit risk related to derivatives

The positive replacement value of outstanding derivatives represents a credit risk to the Group. These instruments include interest-rate, currency, total-return and equity swaps, forward contracts and purchased options. A potential exposure also arises 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 Risk Policy. The Group's standard practice is to only transact derivatives with those counterparties for which the Group has in place an ISDA Master Agreement, with a Credit Support Annex. This mitigates credit exposures from over-the-counter transactions due to close-out netting and requires the counterparty to post collateral when the derivative position is beyond an agreed threshold. The Group further mitigates credit exposures from derivative transactions by using exchange-traded instruments whenever possible.

### Analysis of financial assets

Tables 13.a to 13.b provide an analysis, for non unit-linked businesses, of the age of financial assets that are past due but not impaired and of financial assets that are individually determined to be impaired.



Analysis of  
financial assets –  
current period

Table 13.a

in USD millions, as of December 31, 2014

	Debt securities	Mortgage loans <sup>1</sup>	Other loans	Receivables and other financial assets	Total
<b>Neither past due nor impaired financial assets</b>	<b>153,354</b>	<b>7,150</b>	<b>10,832</b>	<b>13,482</b>	<b>184,818</b>
<b>Past due but not impaired financial assets.</b>					
<b>Past due by:</b>					
1 to 90 days	–	104	–	1,263	1,367
91 to 180 days	–	27	–	289	316
181 to 365 days	–	17	–	236	253
> 365 days	–	59	–	251	310
<b>Past due but not impaired financial assets</b>	<b>–</b>	<b>208</b>	<b>–</b>	<b>2,038</b>	<b>2,247</b>
<b>Financial assets impaired</b>	<b>294</b>	<b>1,105</b>	<b>20</b>	<b>154</b>	<b>1,573</b>
<b>Gross carrying value</b>	<b>153,648</b>	<b>8,462</b>	<b>10,853</b>	<b>15,675</b>	<b>188,639</b>
<b>Less: impairment allowance</b>					
Impairment allowances on individually assessed financial assets	–	598	19	80	698
Impairment allowances on collectively assessed financial assets	–	38	–	186	224
<b>Net carrying value</b>	<b>153,648</b>	<b>7,826</b>	<b>10,834</b>	<b>15,409</b>	<b>187,717</b>

<sup>1</sup> USD 100 million past due but not impaired and USD 1.1 billion impaired mortgage loans relate to the run-off property loans at Dunbar Assets Ireland.

Analysis of  
financial assets –  
prior period

Table 13.b

in USD millions, as of December 31, 2013

	Debt securities	Mortgage loans <sup>1</sup>	Other loans	Receivables and other financial assets	Total
<b>Neither past due nor impaired financial assets</b>	<b>156,181</b>	<b>8,825</b>	<b>11,787</b>	<b>15,016</b>	<b>191,809</b>
<b>Past due but not impaired financial assets.</b>					
<b>Past due by:</b>					
1 to 90 days	–	131	–	1,477	1,608
91 to 180 days	–	38	–	304	343
181 to 365 days	–	22	–	182	203
> 365 days	–	114	–	285	399
<b>Past due but not impaired financial assets</b>	<b>–</b>	<b>304</b>	<b>1</b>	<b>2,248</b>	<b>2,553</b>
<b>Financial assets impaired</b>	<b>275</b>	<b>1,456</b>	<b>20</b>	<b>162</b>	<b>1,914</b>
<b>Gross carrying value</b>	<b>156,456</b>	<b>10,585</b>	<b>11,808</b>	<b>17,426</b>	<b>196,276</b>
<b>Less: impairment allowance</b>					
Impairment allowances on individually assessed financial assets	–	726	19	89	835
Impairment allowances on collectively assessed financial assets	–	61	–	208	269
<b>Net carrying value</b>	<b>156,456</b>	<b>9,798</b>	<b>11,789</b>	<b>17,130</b>	<b>195,172</b>

<sup>1</sup> USD 158 million past due but not impaired and USD 1.4 billion impaired mortgage loans relate to the run-off property loans at Dunbar Assets Ireland.

Risk review *continued*

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Tables 14.a and 14.b show how the allowances for impairments of financial assets in tables 13.a and 13.b developed during the periods ended December 31, 2014 and 2013, respectively.

Table 14.a

Development of allowance for impairments – current period	in USD millions	Mortgage	Other loans	Receivables
		loans		
As of January 1, 2014		787	20	297
Increase/(Decrease) in allowance for impairments		22	–	23
Amounts written-off		(109)	–	(26)
Divestments <sup>1</sup>		–	–	(3)
Foreign currency translation effects		(64)	–	(25)
<b>As of December 31, 2014</b>		<b>637</b>	<b>19</b>	<b>266</b>

<sup>1</sup> Due to the sale of the Group's General Insurance retail business in Russia (see note 5 of the consolidated financial statements).

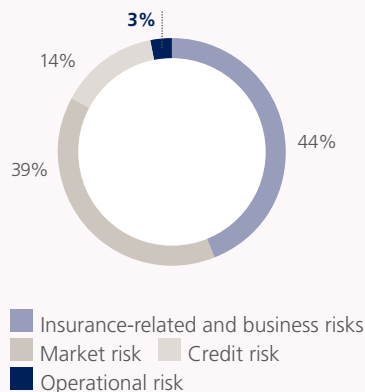
Table 14.b

Development of allowance for impairments – prior period	in USD millions	Mortgage	Other loans	Receivables
		loans		
As of January 1, 2013		733	–	327
Increase/(Decrease) in allowance for impairments		92	20	12
Amounts written-off		(62)	(1)	(38)
Foreign currency translation effects		24	–	(5)
<b>As of December 31, 2013</b>		<b>787</b>	<b>20</b>	<b>297</b>

## Operational risk

### Section highlights

Total Z-ECM capital required: USD 35 billion  
(as per July 1, 2014)



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

	Q2 2012	Q2 2013	Q2 2014
Operational risk	1.4	1.1	1.1

- The Group uses a scenario-based approach to quantify the capital required for operational risk.
- In 2014, the Group focused on significant financial reporting controls, and operational key controls for underwriting and claims.

AUDITED

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

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. See chart 'Z-ECM capital required for operational risk split by risk scenarios (unaudited)' for more information.
- Documents and evaluates loss events exceeding a threshold determined by the Zurich Risk Policy. Remedial action is taken to avoid a recurrence of such operational loss events.
- Conducts operational risk assessments: operational risks are identified for key business areas and are qualitatively assessed. Risks identified and assessed above a certain threshold must be mitigated, and escalated in specific reports at the Group level. Plans to make improvements 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.

## Risk review *continued*

AUDITED

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 makes sure that cyber risks and threats to data security are mitigated and responded to. Data held by Zurich's business partners is protected through 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.

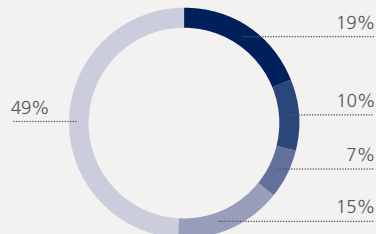
Preventing, detecting and responding to fraud is embedded in Zurich's business. Both claims and non-claims fraud are included in the common framework for assessing and managing operational risks. For Z-ECM calculations, claims fraud is part of insurance risk and non-claims fraud is part of operational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

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

### Z-ECM capital required for operational risk, split by risk scenario clusters

(as of July 1, 2014)

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



**Regulatory and Tax Compliance:** This risk cluster relates to possible non-compliance with applicable laws and regulations, leading to a range of consequences. It includes fines and penalties, litigation, compensation to policyholders, increased regulatory scrutiny, financial losses and increased cost of compliance, as well as consequences from a possible failure to comply with tax requirements.

**M&A – Due Diligence and Integration:** This risk cluster relates to poor execution of both the due diligence and the post-M&A integration processes. It includes the understatement of liabilities and required investments, operational or legal risks in the acquired business, inadequate transaction decisions, loss of key staff, inability to realize synergies or deliver benefits.

**Outsourcing:** This risk cluster relates to poor quality or disruption in services provided by third parties as a result of failure to manage global or local outsourcing agreements effectively or financial failure (e.g. insolvency) of a major supplier.

**Market Abuse, Mis-selling and Conduct of Business:** This risk cluster relates to the possibility that staff, processes or systems may operate in ways that lead to inappropriate conduct of business in relation to the customer. It includes the possibility of investigations, sanctions and fines imposed on Zurich as a company or any member of staff as a result of market abuse, mis-selling practices leading to regulatory breach or increased compensation.

**Other scenarios, e.g. project management, employment malpractice, record retention, licensing.**

### Risk management and internal controls

The Group considers controls to be key instruments for monitoring and managing operational risk. The Board has overall responsibility for the Group's risk management and internal controls, 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 manage rather than eliminate the material risk that business objectives will not be achieved. It can provide only reasonable, not absolute, assurance against material financial misstatement or loss.

The Group encourages risk awareness and understanding of controls with communication and training. Primary risk management and internal control systems are established at Group level and implemented Group-wide.

Management is responsible for identifying, evaluating and addressing significant risks, and designing and maintaining internal controls. Key processes and controls in the organization are subject to reviews by management, Group Audit, Group Compliance and Group Risk Management. Significant risks and the mitigation actions are reported regularly to the Risk and Audit Committees of the Board.

In 2014, the Group enhanced the internal control environment focusing on significant financial reporting controls as well as operational key controls in the areas of underwriting and claims. An internal control certification process is conducted regularly by local business units throughout the Group.

Significant financial reporting controls are independently assessed for their design and operating effectiveness. Significant control issues or issues affecting more than one business unit may be categorized as having Group-level significance. The Board's Risk and Audit Committees monitor resolution of such issues.

In a disclosure meeting led by the Group Controller, the content, accuracy and integrity of the disclosures are considered and the effectiveness of the internal controls over financial reporting is assessed. The conclusions are reported to the Group Executive Committee and the Board Audit Committee, which may provide further challenge. 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 Board Risk Committee has reviewed the effectiveness of the Group's risk management system, including the Group's risk tolerance and the enterprise-wide risk governance framework, and the Board Audit Committee has reviewed the effectiveness of the system of control over financial reporting for the calendar year 2014 and have reported to the Board accordingly. Issues identified have been communicated to the Board and either 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.

## Liquidity risk

AUDITED

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 governing 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 actions that could occur as a result 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.

## Risk review *continued*

AUDITED

The Group limits the percentage of the investment portfolio that is not readily realizable and regularly monitors exposures to take action if necessary to maintain an appropriate level of asset liquidity. During 2014, the Group was within its limits for asset liquidity. The fair value hierarchy tables in note 24 of the consolidated financial statements segregate financial assets into three levels, reflecting the basis for how fair value was determined. These tables indicate the high degree of liquidity of the Group's investments.

See note 19 of the consolidated financial statements for more information on debt obligation maturities and credit facilities and note 23 of the consolidated financial statements for information on commitments and guarantees. The Group's on-going liquidity monitoring includes regular reporting to the executive management and quarterly reporting to the Risk 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.

Tables 15.a and 15.b provide an analysis of the expected maturity profile of reserves for insurance contracts, net of reinsurance, based on expected cash flows without considering the surrender values as of December 31, 2014 and 2013. Reserves for unit-linked insurance contracts amounting to USD 71.4 billion and USD 74.9 billion as of December 31, 2014 and 2013, respectively, are not included, as policyholders can generally surrender their contracts at any time, at which point the underlying unit-linked assets would be liquidated. Risks from the liquidation of unit-linked assets are largely borne by the policyholders of unit-linked contracts.

Table 15.a

Expected maturity profile for reserves for insurance contracts, net of reinsurance – current period	in USD millions, as of December 31, 2014				Total
	Reserves for losses and loss adjustment expenses	Future life policyholders' benefits	Policyholders' contract deposits and other funds		
< 1 year	15,976	8,670	1,661		26,308
1 to 5 years	22,430	19,919	2,045		44,395
5 to 10 years	8,179	14,499	1,963		24,640
10 to 20 years	5,653	14,376	2,679		22,708
> 20 years	2,465	17,747	13,073		33,285
<b>Total</b>	<b>54,703</b>	<b>75,211</b>	<b>21,421</b>		<b>151,335</b>

Table 15.b

Expected maturity profile for reserves for insurance contracts, net of reinsurance – prior period	in USD millions, as of December 31, 2013				Total
	Reserves for losses and loss adjustment expenses	Future life policyholders' benefits	Policyholders' contract deposits and other funds		
< 1 year	17,338	9,017	1,386		27,742
1 to 5 years	23,511	21,918	2,432		47,861
5 to 10 years	8,279	14,966	1,931		25,176
10 to 20 years	5,509	17,083	2,542		25,134
> 20 years	2,681	18,990	9,834		31,506
<b>Total</b>	<b>57,319</b>	<b>81,975</b>	<b>18,126</b>		<b>157,420</b>

For additional information on reserves for insurance contracts, see note 8 of the consolidated financial statements.

Tables 16.a and 16.b provide an analysis of investment contract liabilities according to maturity, based on expected cash flows as of December 31, 2014 and 2013. The undiscounted contractual cash flows for investment contract liabilities are USD 71.1 billion and USD 67.4 billion as of December 31, 2014 and December 31, 2013, respectively.

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Liabilities for unit-linked investment contracts amounted to USD 63.0 billion and USD 59.5 billion as of December 31, 2014 and 2013, respectively. Because policyholders of unit-linked investment contracts can generally surrender their contracts at any time, leading the underlying assets to be liquidated, risks arising from liquidation of unit-linked assets are borne by the policyholders. Certain non-unit-linked contracts also allow for surrender of the contract by the policyholder at any time. Liabilities for such contracts amounted to USD 851 million and USD 922 million as of December 31, 2014 and 2013, respectively. The Group actively manages the Global Life in-force business to improve persistency and retention.

Table 16.a

Expected maturity profile for liabilities for investment contracts – current period	in USD millions, as of December 31, 2014				Total
	Liabilities related to unit-linked investment contracts	Liabilities related to investment contracts (amortized cost)	Liabilities related to investment contracts with discretionary participation features		
< 1 year	6,842	168	454		7,465
1 to 5 years	6,045	449	1,299		7,792
5 to 10 years	6,561	114	1,309		7,984
10 to 20 years	8,650	101	1,044		9,795
> 20 years	34,867	10	2,899		37,776
<b>Total</b>	<b>62,964</b>	<b>843</b>	<b>7,006</b>		<b>70,813</b>

Table 16.b

Expected maturity profile for liabilities for investment contracts – prior period	in USD millions, as of December 31, 2013				Total
	Liabilities related to unit-linked investment contracts	Liabilities related to investment contracts (amortized cost)	Liabilities related to investment contracts with discretionary participation features		
< 1 year	5,663	182	344		6,189
1 to 5 years	6,853	559	1,330		8,742
5 to 10 years	7,548	151	1,301		8,999
10 to 20 years	10,499	96	1,094		11,690
> 20 years	28,905	43	2,545		31,493
<b>Total</b>	<b>59,469</b>	<b>1,030</b>	<b>6,614</b>		<b>67,113</b>

See note 19 of the consolidated financial statements for information on the maturities of total debt issued. For more information on the Group's other financial liabilities, see note 17 of the consolidated financial statements. See note 6 of the consolidated financial statements for information on the maturity of debt securities for total investments.

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. See note 23 of the consolidated financial statements.

## Risk review *continued*

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### Strategic risk and risks to the Group's reputation

#### Strategic risk

Strategic risk corresponds to the unintended risk that can result as a by-product of planning or executing the strategy.

A strategy is a long term plan of action designed to allow the Group to achieve its goals and aspirations. Strategic risks can arise from:

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

Risk considerations are a key element in the strategic decision-making process. The Group assesses the implications of strategic decisions on risk-based return measures and risk-based capital to achieve an optimal risk-return profile and take advantage of economically profitable growth opportunities as they arise.

The Group works to reduce unintended risks of strategic business decisions through its risk assessment processes and tools, including the Total Risk Profiling™ process. The Group Executive Committee regularly assesses key strategic risk scenarios for the Group as a whole, including scenarios for emerging risks and their strategic implications.

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.

#### 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 Zurich Basics, 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.



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