




Risk review

186 Risk review

Inspiring action

Looking to the future.

At Zurich, being a responsible and sustainable company is at the foundation of our business. We're swiftly reducing our own carbon footprint, helping our customers adopt more sustainable behaviors, supporting employee wellbeing, and helping communities become more resilient to natural hazards and extreme weather. "We need a sustainable future for us and for next generations," says Caitlin St. Vincent Welch, Group Legal.

 **Caitlin St. Vincent Welch**
Group Legal, Zurich Insurance Group

 **To watch the video, visit:**
www.zurich.com/reports/2021/annual-report

Message from our Group Chief Risk Officer

Managing risk to help things go right.

“

In 2021, risk management was at the center of the return toward normality, helping us to navigate through an increasingly dynamic environment. By effectively managing our risks, we maintained our resilience and made sure we were there to help when our customers needed us most.

Peter Giger
Group Chief Risk Officer and Group
Chief Investment Officer ad interim

Risk management, at the center of what we do

In 2021, we returned toward normality following the severe disruption of the previous year. Zurich successfully navigated through a dynamic environment as the risk landscape evolved rapidly. Despite uncertainty from the continuing pandemic, we remained operationally resilient and maintained our focus on enabling our people to adapt and support our customers.

Maintaining principled and focused risk management was at the center of this journey. The Group's continued focus on high-priority matters allowed us to identify, assess and manage uncertain situations. Risk management equipped our business leaders with the right level of information and discipline to actively take risks within the Group's risk appetite and tolerance.



Message from our Group Chief Risk Officer (continued)

This process was supported by our experts in risk management who helped drive a culture where risk-reward trade-offs are transparent, understood and appropriately managed.

Our integrated Enterprise Risk Management Framework helped advance the Group's strategy by supporting effective risk identification and assessment to help protect our capital, liquidity, earnings, and reputation. Similarly, our well-established Total Risk Profiling™ methodology continued to support in delivering risk insights and focus on the risks that mattered.

By effectively managing our risks, we maintained our resilience and made sure we were there to help when our customers needed us most.

A dynamic risk landscape

The speed of change was a key element in the risk landscape of the Group in 2021. This was best illustrated by the evolution of cyber risk as attacks changed rapidly in scale, sophistication and targets. Cyber insurability is an area of increasing focus as risk appetites are adjusted.

Elsewhere, the sudden re-appearance of inflation concerns has brought to the fore the continued large-scale fiscal costs of the pandemic and the disconnect between markets and the real economy due to expansionary monetary policy. With limited appetite for changes to current policies, economic risks will continue to build.

We continue to apply our expertise and tools, such as dynamic scenario and sensitivity analyses, to assess and proactively manage potential impacts. Using output from the scenario assessments, we continue to develop, implement and monitor actions to give optimal outcomes for our customers, shareholders and other stakeholders.

Sustainability

Various events in 2021 illustrated the increasing risks posed by climate change. The Group's commitment to sustainability, including managing the risks posed by climate change, continues to be an integral part of Zurich's risk management approach.

Zurich is but one part of a financial system that, on its own, cannot meet the challenges posed by climate change. Rather, action from the whole of society is required, given the scale of the challenges we face. As a result, the Group aims to inspire action together with its customers and investees by continuing to promote best practices in managing the interconnectivity of environmental, social and governance (ESG) risks.

Strong financial position

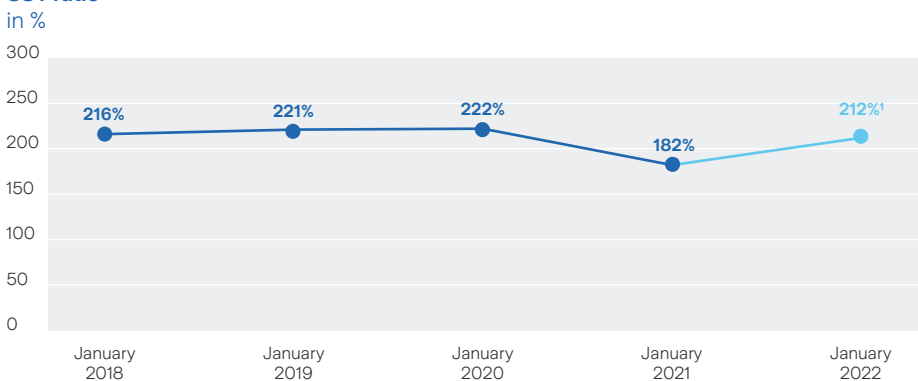
Our financial strength returned to pre-pandemic levels during 2021. This strength reconfirms our resilience and ability to continue to support our customers. Swiss Solvency Test results can be found on [page 192](#).

Peter Giger
Group Chief Risk Officer and
Group Chief Investment Officer ad interim

Development of Swiss Solvency Test ratio

The Group Swiss Solvency Test (SST) ratio increased to 212 percent¹ as of January 1, 2022 from 182 percent as of January 1, 2021. The development of the SST ratio in 2021 reflects strong underlying capital generation and an improved economic environment, in particular higher interest rates and higher equity valuation.

SST ratio



¹ The SST results as of January 1, 2022 are estimated and may differ from the final SST results, which will be presented in the Financial Condition Report at the end of April 2022.

Analysis of Group total risk capital in %, as of January 1, 2022



● Insurance risk	36%
● Market risk, including investment credit risk	63%
● Other credit risk	1%

Highlights by risk type

Insurance risk

The Group's insurance risk is diversified by geography, line of business, product and customer, supported by our centralized purchase of reinsurance which led to continued sound insurance outcomes in 2021 in the face of COVID-19 and natural catastrophes.

Read more:
Pages 195–201

Market risk

The economic recovery of 2021, lower market volatilities and improved asset-liability-matching reduced the required capital held by the Group for investment risk taking. The portfolio remains well diversified across risk drivers and geographies.

Read more:
Pages 202–208

Other credit risk

In the face of the pandemic, the Group's credit risk exposures continuously remained at high credit quality.

Read more:
Pages 208–209

Operational risk

Zurich's operational risk management approach enables the Group to focus on high-priority matters under demanding circumstances.

Read more:
Pages 210–211

Risk review

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The risk review information marked 'audited' is an integral part of the consolidated financial statements.

Risk review (continued)

Audited

The risk review information marked 'audited' is an integral part of the consolidated financial statements.

Audited

Risk management

Objectives of risk management

Taking and managing risk is an integral part of the insurance business. Zurich takes and manages risks in an informed and disciplined manner and within a pre-determined risk appetite and tolerance.

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

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

Enterprise Risk Management Framework

The Enterprise Risk Management Framework is based on a governance framework that sets forth clear responsibilities for identifying, assessing, managing, monitoring and reporting risks.

The Group's risk appetite and tolerance statement reflects Zurich's willingness and capacity to take risks in pursuit of value creation and sets boundaries within which the businesses act. Zurich protects its capital, liquidity, earnings and reputation by monitoring that risks are taken within agreed risk appetite levels and tolerance limits. The Group regularly assesses and, as far as possible, quantifies material risks to which it is exposed.

The Zurich Risk Policy sets the principles and approach for effective risk management throughout the Group. The policy describes the Group's Enterprise Risk Management Framework and provides a standardized set of risk types. Risk-specific policy manuals provide requirements and procedures to implement the principles in the Zurich Risk Policy.

The Group identifies, assesses, manages, monitors and reports risks that have an impact on the achievement of its strategic objectives by applying its proprietary Total Risk Profiling™ methodology. The methodology allows Zurich to assess risks in terms of severity and likelihood, and supports the definition and implementation of mitigating actions. At Group level, this is an annual process, followed by regular reviews and updates by management.

To foster transparency about risk, the Group regularly reports on its risk profile at business and Group levels. The Group has procedures to refer risk topics to senior management and the Board of Directors in a timely manner.

Risk review (continued)

Audited

The Group's solvency position is disclosed on the basis of the Swiss Solvency Test (SST) ratio. The Group's SST internal model has been fully approved by the Swiss Financial Supervisory Authority (FINMA). Zurich's goal is to maintain capital consistent with a 'AA' financial strength rating for the Group, which translates into an SST ratio target of 160 percent or above.

The Group applies the Zurich Economic Capital Model (Z-ECM) as an internal metric. Z-ECM provides a key input into the Group's planning process as an assessment of the Group's economic risk profile.

Risk-based remuneration

Based on the Group's remuneration rules, the Board of Directors designs and structures remuneration arrangements that support the achievement of strategic and financial objectives and do not encourage inappropriate risk-taking.

Group Risk Management's role in respect of remuneration and its interaction with Board committees is described in the remuneration report.

Risk review (continued)

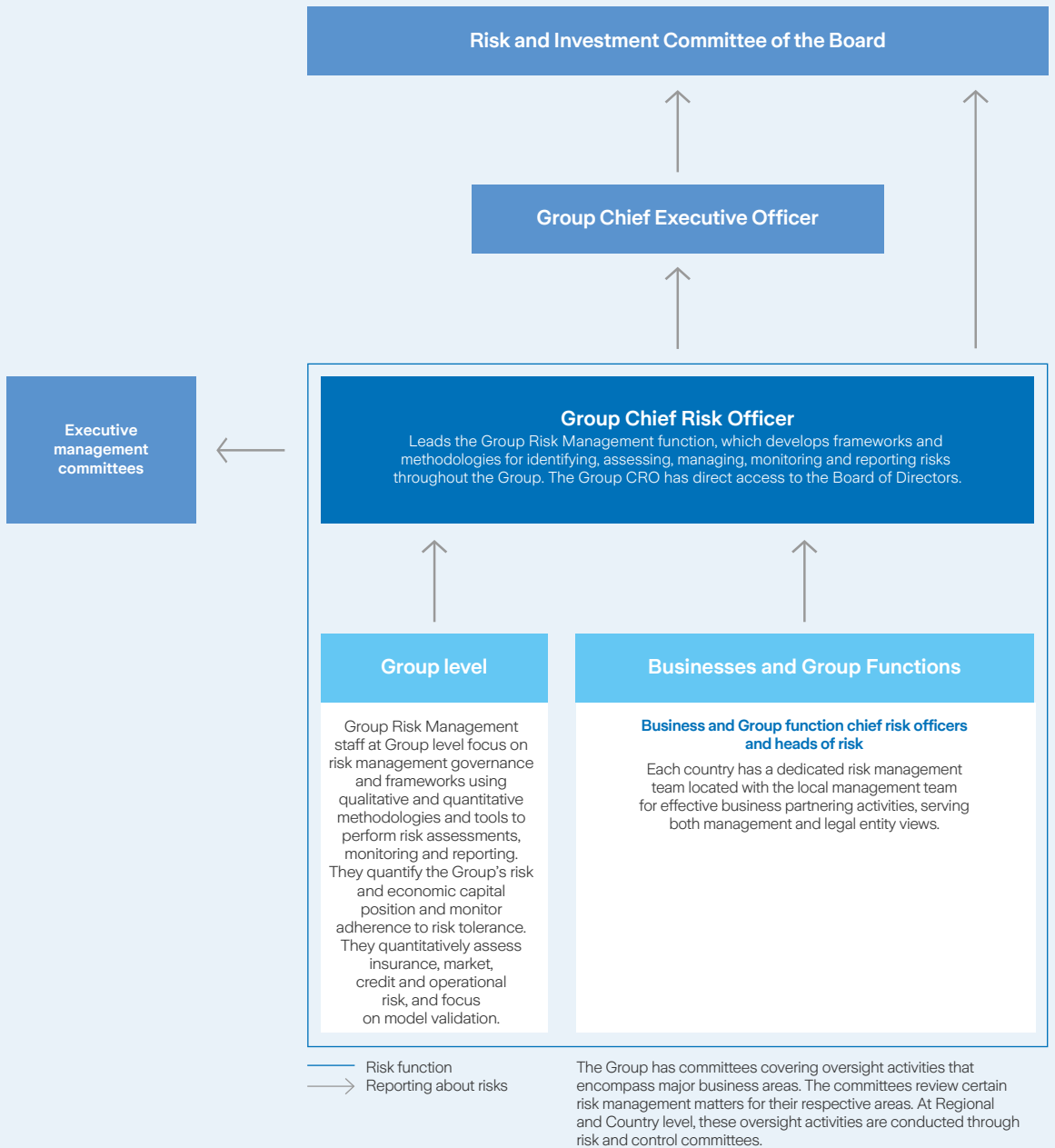
Audited

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).

Risk management organization

The Group Risk Management function is a global function, led by the Group Chief Risk Officer (CRO).



The risk function is independent of the business by being a vertically integrated function. Unless otherwise required by local laws or regulations, risk officers and heads of risk report into the Group CRO, except for the Farmers Chief Risk Officer, who has a matrix reporting line to the Group CRO. Risk officers are embedded in the business, positioning them to independently challenge, support and advise on, business decisions from a risk perspective. As business advisers on risk matters, risk officers, equipped with technical risk skills as well as business skills, help foster a risk-aware culture in the business.

Risk review (continued)

Audited

Capital management

Objectives of capital management

The Group manages capital to maximize long-term value while maintaining financial strength within its 'AA' target range, and meeting regulatory, solvency and rating agency requirements.

As of December 31, 2021, International Financial Reporting Standards (IFRS) shareholders' equity of USD 37.9 billion and subordinated debt of USD 9.8 billion were part of the capital available in the Group's SST available financial resources (AFR). Further adjustments usually include items such as intangible assets, deferred tax assets and liabilities, allowing for discounting of liabilities and the value of in-force business, and market-consistent valuation of external debt according to the methodology under SST.

Zurich strives to simplify the Group's legal entity structure to reduce complexity and increase fungibility of capital.

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 to the Executive Committee (ExCo) and Board of Directors.

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

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

Capital management program

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

The Group seeks to maintain a balance between returns for shareholders and the security that a sound capital position provides, also for our customers. Dividends, share buybacks, and issuances and redemption of debt have a significant influence on capital levels. In 2021, the Group paid a dividend out of retained earnings, bought own shares to reduce future dilution from share-based employee compensation plans and issued senior and hybrid debt to finance redemptions and investments in the Group's development.

The Swiss Code of Obligations stipulates that dividends may only be paid out of freely distributable reserves or retained earnings. Apart from what is specified by the Swiss Code of Obligations, Zurich Insurance Group Ltd faces no legal restrictions on dividends it may pay to its shareholders. As of December 31, 2021, the amount of the statutory general legal reserve was more than 50 times the paid-in share capital. The ability of the Group's subsidiaries to pay dividends may be restricted or indirectly influenced by minimum capital and solvency requirements imposed by insurance and other regulators in the countries in which the subsidiaries operate. Other limitations or considerations include foreign exchange control restrictions in some countries, and rating agencies' methodologies.

For details on issuances and redemptions of debt, see notes 18 and 29 of the consolidated financial statements.

Risk review (continued)

Audited

Risk and solvency assessment

Regulatory capital adequacy

The Group endeavors to manage its capital so that its regulated entities meet local regulatory capital requirements. 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. In addition to the minimum capital required to comply with the solvency requirements, the Group aims to hold an adequate buffer under local solvency requirements to ensure regulated subsidiaries can absorb a level of volatility and meet local capital requirements.

Regulatory solvency regimes

Regulatory requirements in Switzerland

The Swiss Solvency Test (SST) adopts a risk-based and total balance sheet approach. Insurance companies are required to provide a market-consistent assessment of the value of their assets and liabilities. Possible changes to these balance sheet positions are modelled over a one-year period to arrive at the total required capital.

Under the SST, insurance companies and insurance groups can apply to use company-specific internal models to calculate risk-bearing and target capital, as well as the SST ratio. The SST ratio must be calculated as per January 1 and submitted to the Swiss Financial Market Supervisory Authority (FINMA). Zurich filed with FINMA an SST ratio of 182 percent (unaudited) as of January 1, 2021. Zurich met the regulatory solvency requirements in Switzerland throughout 2021.

The estimated SST ratio as of January 1, 2022 stands at 212 percent (unaudited). The final SST ratio as of January 1, 2022 will be filed with FINMA by the end of April 2022 and is subject to review by FINMA.

Regulatory requirements in the European Economic Area (EEA)

The main regulatory framework governing the Group's subsidiaries in the EEA is Solvency II. This is a risk-based capital framework which covers capital requirements (pillar 1), governance and risk management (pillar 2) and reporting (pillar 3). All EEA-based legal entities of the Group use the Solvency II standard formula for their pillar 1 requirements with the exception of Zurich Insurance plc (Ireland) that applies an approved internal model.

Regulatory requirements in the UK

The United Kingdom left the EU and the EEA on January 31, 2020 and the transition period ended on December 31, 2020, meaning UK regulations can diverge from Solvency II regulatory requirements. As of December 31, 2021 the UK regulations have not materially diverged.

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 statutory 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 other jurisdictions

Every country has a capital standard for insurance companies. Several jurisdictions (e.g., Brazil and Mexico) have implemented approaches similar to Solvency II.

Risk review (continued)

Swiss Solvency Test (SST) ratio

The SST ratio is calculated as Group's SST available financial resources (AFR) minus market value margin (MVM) divided by the net of SST target capital (TC) and MVM. Market value margin, also known as risk margin, is the cost of future regulatory risk capital stemming from the present portfolio of assets and liabilities.

In 2021, the solvency of the Group returned to a pre-pandemic level with an estimated SST ratio of 212 percent as of January 1, 2022, well above the Group's SST ratio target of 160 percent. The main drivers of the Group's SST ratio increase in 2021 were strong underlying capital generation and improved market conditions.

In the SST ratio calculations as of January 1, 2022, no allowances have been made for the sale of the Italian life and pension back book which is subject to regulatory approval or the redemption of USD 1bn of subordinated debt in January 2022.

SST available financial resources

The Group's AFR are derived from the SST net asset value (NAV). The NAV represents the difference between the market-consistent value of assets and liabilities according to the market-consistent valuation methodology under SST.

During 2021, the Group's AFR increased by USD 0.5 billion to USD 52.4 billion as of January 1, 2022, compared to USD 51.9 billion as of January 1, 2021. The main drivers of the AFR increase in 2021 were economic profits, positive equity market development, new net issuance of subordinated debt eligible as capital, partly off-set by the dividend accrual, U.S. dollar appreciation and assumption and model changes.

SST target capital

The Group uses an internal risk model to determine the required target capital (TC).

The Group's TC as of January 1, 2022 amounted to USD 27.7 billion, a decrease of USD 3.4 billion compared to USD 31.1 billion as of January 1, 2021, primarily due to a reduction in market risk following improved market conditions.

Table 1

Group Swiss Solvency Test (SST) ratio and underlying components	in USD billions	January 1,	January 1,
		2022 ¹	2021
Total risk capital		24.3	26.8
Other effects on target capital (TC) ²		(2.3)	(1.5)
Market value margin (MVM)		5.7	5.8
TC		27.7	31.1
TC minus MVM		22.0	25.3
Available financial resources (AFR)		52.4	51.9
AFR minus MVM		46.7	46.0
Group SST ratio		212%	182%

¹ The SST results as of January 1, 2022 are estimated and may differ from the final SST results, which will be presented in the Financial Condition Report at the end of April 2022.

² Other effects are expected business development over the forecasting horizon, additional business costs and FINMA requirements.

Risk review (continued)

Total risk capital by risk type

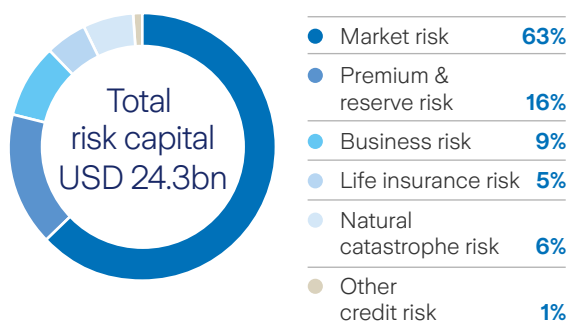
The chart below shows the total risk capital, split by risk type, as of January 1, 2022 and as of January 1, 2021. As of January 1, 2022, the largest components of total risk are market risk and premium and reserve risk, comprising 63 percent and 16 percent of the total risk capital, respectively.

The decrease in total risk capital as of January 1, 2022 compared to January 1, 2021, reflects a reduction in market risk, mainly as a result of U.S. dollar appreciation against major currencies and a higher interest rate environment. Other risk types saw smaller movements as of January 1, 2022 compared to January 1, 2021, predominantly impacted by business growth and economic environment changes.

Total risk capital, split by risk type

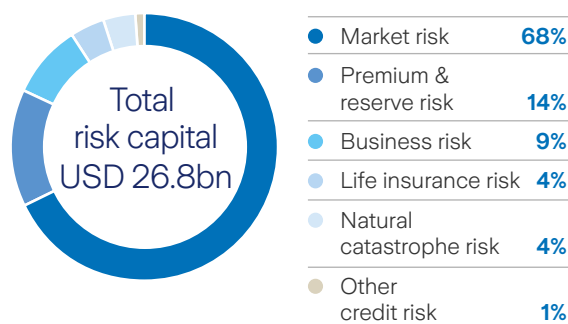
January 1, 2022

in %



January 1, 2021

in %



Sensitivity and scenario analysis

The Group evaluates sensitivities to, and stress scenarios on, the SST ratio, and assesses results relative to Zurich's risk appetite and tolerance. The sensitivities and stress scenarios in the chart below capture two key risks to the Group: market risk and insurance risk.

Market risk sensitivities show the estimated impact on the Group's SST ratio of a half percentage-point (50 basis points, or bps) increase or decrease in yield curves, a 10 percent appreciation or depreciation in the U.S. dollar, a 20 percent rise or decline in all stock markets, and a 100 bps increase in credit spreads, with and without euro-denominated sovereign bonds. The sensitivities are considered as separate but instantaneous shocks. They are a best estimate and non-linear, for example, a change to the size of the market movement could result in disproportionately higher (or lower) impact on the SST ratio depending on the prevailing market conditions at the time.

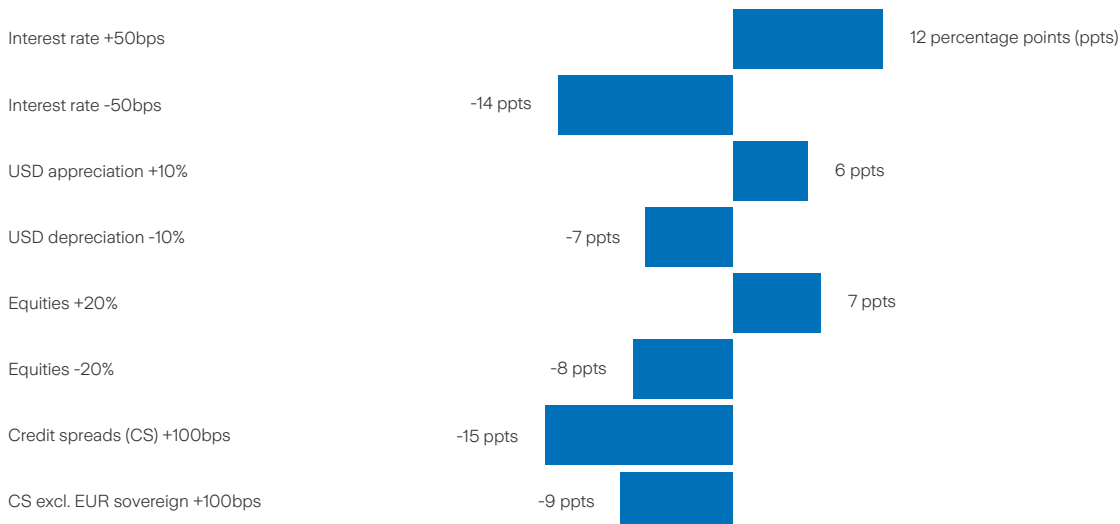
For insurance risk, the chart shows the three largest natural catastrophe events to which the Group is exposed. Insurance risk scenarios are defined as events that have a small probability of occurring but could, if realized, negatively affect the Group's AFR. The impact of insurance-specific scenarios on the target capital is not taken into account.

Risk review (continued)

SST sensitivities and scenarios

as of October 1, 2021

Impact on the SST ratio from sensitivities to financial market conditions:¹



Impact on the SST ratio due to property and casualty risk-specific scenarios:²



¹ Sensitivities are best estimate and reflect the impact on the pension plans in the UK. For the interest rate sensitivities, shocks are applied to the liquid part of the yield curve. Credit spreads (CS) include mortgages, including and excluding euro sovereign spreads. CS sensitivities of available capital include changes to the volatility adjustment applied to the interest rate curves but exclude profit sharing.

² The 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 percent probability of non-exceedance).

Audited

Insurance financial strength rating

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

The insurance financial strength rating was upgraded by S&P to AA on March 15, 2021 because "ZIC's financial performance has sustainably improved" while also "improving its balance sheet resilience and capital-allocation discipline".

On October 1, 2021, AM Best revised the issuer credit rating (ICR) outlook of Zurich Insurance Group Ltd and its main subsidiaries to positive from stable. This "reflects Zurich's consolidated balance sheet strength, which AM Best assesses as very strong, as well as its strong operating performance, very favorable business profile and appropriate enterprise risk management".

As of December 31, 2021, the IFSR of Zurich Insurance Company Ltd, the main operating entity of the Group, was rated 'AA/Stable' by S&P Global Ratings, 'Aa3/Stable' by Moody's, and 'A+ (Superior)/Stable' by AM Best. AM Best ICR was 'aa-/positive'.

Risk review (continued)

Audited

Analysis by risk type

Insurance risk

Insurance risk is the risk of deviations in the timing, frequency or severity of insured events from that expected, leading to loss, including adverse change in the value of insurance liabilities (Life and Property & Casualty (P&C)). This may result from inherent uncertainty of insured events or losses, inadequate or ineffective underwriting or accumulation management, inappropriate product development, pricing, claims management, reserving or reinsurance. The profitability of insurance business is also susceptible to business risk in the form of unexpected changes in expenses, policyholders' behavior, and fluctuations in new business volumes. Zurich manages insurance risk through:

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

Property & Casualty (P&C) insurance risk

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

Management of Property & Casualty (P&C) insurance risk

The Group's underwriting strategy takes advantage of the diversification of P&C risks across lines of business, customers and geographic regions. Zurich defines Group-wide governance for insurance risk including for new products. 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 and sets appropriate underwriting and pricing guidelines. Technical reviews assure that underwriters perform within authorities and adhere to underwriting policies.

P&C insurance reserves are regularly estimated, reviewed and monitored 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, trends and patterns of loss payments. Inflation is monitored with insights feeding into actuarial reserving models and Zurich's underwriting processes and pricing.

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

Zurich's Emerging and Sustainability Risk Committee – with cross-functional expertise from core insurance functions such as underwriting, claims and risk management – identifies, assesses and recommends actions for emerging risks.

Governance is in place to ensure appropriate focus on top-line targets and profitability. Reinsurance is deployed to help manage insurance risk. Group Risk Management also provides independent assurance through risk reviews.

The Group is exposed to losses that could arise from natural and man-made catastrophes. The main concentrations of risks arising from such potential catastrophes are regularly reported to executive management. The most important peril regions for natural catastrophes are U.S. and Caribbean hurricane, California earthquake and European windstorm.

Risk review (continued)

Audited

Natural catastrophes

The Group uses third-party models, adjusted to Zurich's view, to manage its underwriting, ensure accumulations stay within intended exposure limits and assess the capital requirement due to natural catastrophes. Consistent with this view on natural catastrophes, Zurich performs profitability assessments and strategic capacity allocations, and chooses the type and quantity of reinsurance it buys.

To ensure global consistency, exposures to natural catastrophes are modeled by a dedicated Group function. Potential losses from property, motor and marine policies with material exposure in hazard-prone geographical areas are probabilistically modeled, as well as worker injury policies with material exposure in U.S. seismic zones. Losses for other lines of business are estimated based on adjustments to these modeled results. Risk modeling mainly addresses weather-induced perils such as wind, flood, tornado, and hail, and geological-induced perils such as earthquake.

Zurich regularly reviews and expands the scope and sophistication of its modeling and strives to improve data quality. Zurich has invested in a diversified, multi-vendor-based catastrophe modeling ecosystem and in expanding its catastrophe research and development capabilities to complement existing expertise in natural catastrophe risk management (e.g., risks relating to climate change, cyber, communicable diseases, and casualty catastrophes).

Zurich supplements internal know-how with external knowledge (e.g., the Advisory Council for Catastrophes) and is a shareholder of PERILS AG, Switzerland, a catastrophe exposure and loss data aggregation and estimation firm. Zurich is also a member of the open-source initiative, Oasis Loss Modelling Framework.

COVID-19 pandemic

Zurich has developed scenario modeling capabilities for the COVID-19 pandemic which continue to be refined based on claims data. The scope in terms of lines of business includes primarily property, travel, accident and health, and credit and surety. The scenario modeling continues to inform the Group about the financial impact of COVID-19 and understand the main sensitivities. The data and risk insights gained from COVID-19 were used to build a model to better assess the risk in the P&C portfolio from pandemics.

Man-made catastrophes

Man-made catastrophes include events such as industrial accidents, terrorism and cyber attacks.

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

The Group uses third-party models to manage its underwriting and accumulations for cyber and casualty catastrophe risks. The Group actively monitors and manages its cyber exposure and continues to refine products to ensure their appropriateness. Improving modeling capabilities and data quality for cyber and casualty catastrophe risks are key focus areas.

Concentration of Property & Casualty (P&C) insurance risk

The Group defines concentration risk in the P&C business as the risk of exposure to increased losses associated with inadequately diversified portfolios. Concentration risk for a P&C insurer may arise due to a concentration of business written within a geographical area or of underlying risks covered.

Tables 2.a and 2.b show the Group's concentration of risk within the P&C business by region and line of business based on direct written premiums before reinsurance. P&C premiums ceded to reinsurers (including retrocessions) amounted to USD 9.2 billion and USD 8.6 billion for the years ended December 31, 2021 and 2020, respectively. Reinsurance programs are managed on a global basis, and therefore, the net premium after reinsurance is monitored on an aggregated basis.

Risk review (continued)

Audited							
Table 2.a							
Property & Casualty business – Direct written premiums and policy fees by line of business – current period	in USD millions, for the year ended December 31, 2021	Motor	Property	Liability	Special lines	Worker injury	Total
	Europe, Middle East & Africa	4,423	5,336	2,828	2,532	406	15,526
	North America	1,728	7,226	3,388	2,540	2,417	17,299
	Other regions	1,823	1,634	466	1,401	165	5,489
	Total	7,974	14,196	6,682	6,473	2,988	38,314
	Table 2.b						
Property & Casualty business – Direct written premiums and policy fees by line of business – prior period	in USD millions, for the year ended December 31, 2020	Motor	Property	Liability	Special lines	Worker injury	Total
	Europe, Middle East & Africa	4,162	4,842	2,278	2,154	344	13,781
	North America	1,565	5,933	2,914	2,276	2,496	15,185
	Other regions	1,683	1,462	420	1,256	141	4,961
	Total	7,409	12,237	5,612	5,686	2,981	33,926
	Analysis of sensitivities for Property & Casualty (P&C) risks						
<p>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. 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 the non-linear effects of reinsurance contracts.</p>							
Table 3.a							
Insurance risk sensitivity for the Property & Casualty business – current period	in USD millions, for the year ended December 31, 2021	Europe, Middle East & Africa	North America	Asia Pacific	Latin America	Reinsurance	Total
	+1% in net loss ratio						
	Net income before tax	(137)	(112)	(25)	(19)	(1)	(295)
	Net assets	(106)	(87)	(19)	(14)	(1)	(227)
Table 3.b							
Insurance risk sensitivity for the Property & Casualty business – prior period	in USD millions, for the year ended December 31, 2020	Europe, Middle East & Africa	North America	Asia Pacific	Latin America	Reinsurance	Total
	+1% in net loss ratio						
	Net income before tax	(123)	(98)	(24)	(18)	–	(264)
	Net assets	(94)	(75)	(19)	(13)	–	(201)

Risk review (continued)

Audited

Life insurance risk

The risks associated with life insurance include:

Life liability risk

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

Life business risk

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

Market risk

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

Credit risk

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

Management of Life insurance risk

The Group's Life underwriting results are based on the assumptions relating to life insurance risks. The actual experience may differ to that expected at the time of writing the business. For example, mortality could be either higher or lower than expected due to an unexpectedly harsh or benign flu season.

To understand the potential impact of experience differing from expectations, Zurich uses models to perform sensitivity analyses. The impact of changing the assumptions is considered under different scenarios across the risk types and products. Changes relating to absolute level and trend development in assumptions are considered by product category. For example, Zurich looks at the impact of an increase in morbidity rates for protection products or changes in the level and trend of longevity for annuity products. These analyses assist in understanding how sensitive the business is to changes in various assumptions and where there are benefits of having a diversified portfolio of risks and products. Changes in the same assumption can have a positive impact on one product and a negative impact on another. For example, people living longer than expected may have a positive impact on products that offer life cover, as claims are then paid later than expected, but could have a negative impact on annuity products as payments are made for longer than expected. At Zurich, the Life liability risks are managed through established processes with requirements described in the Zurich Risk Policy.

The Group has local product development and approval committees and a Group-level committee to review potential new life products that could significantly increase or change the nature of the risks or introduce new risks. The Group also regularly reviews the continued suitability and the potential risks of existing life products open to new business to ensure sustainability of the business.

Product pricing involves setting assumptions relating to life insurance risks. Local teams have responsibility for the pricing of the products in line with the experience and emerging trends observed in each market. The emerging experience is regularly monitored and compared against expectations. Where permitted, premiums are adjusted for factors such as age, gender, and smoker status to reflect the corresponding risks. Policy terms and conditions and disclosure requirements are designed to mitigate the risk arising from non-standard and unpredictable risks that could result in a severe financial loss.

The underwriting process forms an important part of risk management and risk selection for life insurance risks. This process is supported through setting standards in the Zurich Risk Policy and providing support through additional underwriting guidelines.

Risk review (continued)

Audited

Where required and appropriate, life insurance risks are also managed using reinsurance.

Unit-linked products are designed to reduce much of the market and credit risk associated with the Group's traditional business offerings. Risks that are inherent in these products are largely passed on to the policyholder, although a portion of the Group's management fees is linked to the value of funds under management, and hence is at risk if fund values decrease. Contracts may have minimum guaranteed death benefits where the sum at risk depends on the fair value of the underlying investments. Other life insurance liabilities include traditional life insurance products, such as protection and life annuity products.

Protection products (including disability products) provide benefits linked to policyholders' life and health and mainly carry mortality and morbidity risks. Changes in medical treatments and lifestyle changes are among the most significant factors that could result in earlier or more claims than expected or customers claiming for longer than expected. Disability, when defined in terms of the ability to perform an occupation, could also be affected by adverse economic conditions. This impact could come through, for example, an increase in claims relating to mental health conditions triggered by an economic downturn.

Life annuity products provide benefits that are paid to the customer either for a selected number of years, or until they die. Therefore, these products carry longevity risk as people living longer than expected can have a material impact on these products. Medical advances and improved social conditions that lead to increased longevity are significant risk drivers for these products. Annuitant (beneficiary) mortality assumptions include allowance for future mortality improvements. The trends in mortality improvements are monitored to ensure that changes in experience are considered. The exposure to longevity risk at a Group level is measured regularly and compared against the limit set by the Group.

The Group is exposed to risks posed by policyholder behavior and fluctuating expenses. These are mitigated by designing products that, as closely as possible, match revenue and expenses associated with the contract.

The Group is also exposed to investment and surrender risks related to bank-owned life insurance contracts sold in the U.S. These risks have reduced significantly in recent years as several significant policies have switched into less risky investment divisions. See heading 'other contracts' in note 7 of the consolidated financial statements for additional information.

In the past, low interest rates have led to an increase in both Life business risks and Life liability risks (especially longevity risk). While interest rates have recently started to rise, the level of interest rates remains an important factor in the evaluation of insurance risks.

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

The Group has a dynamic hedging strategy to reduce the investment risk associated with the closed book of variable annuitants written by its U.S. subsidiary Zurich American Life Insurance Company. This exposure has fallen substantially as a result of several policy buyback programs since 2015.

Diversification across regions and businesses, as shown in table 4 below, contributes to reducing the impacts of the risks associated with the Life business described above.

Concentration of Life insurance risk

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

Risk review (continued)

Audited

Table 4 shows the Group's concentration of risk within Life by geographic region and line of business based on reserves for life insurance on a net of reinsurance basis. The life insurance reserves also include policyholder surplus reserves with a loss absorbing capacity¹, predominantly in Germany in the amount of USD 9.5 billion in 2021 (2020: USD 12.0 billion) and in the UK in the amount of USD 0.5 billion in 2021 (2020: USD 0.6 billion). The net movement in Italy reserves in 2021 is mainly related to an agreement entered into by Zurich Investments Life S.p.A. to sell part of its life and pension back book (see note 5 of the consolidated financial statements). 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.

¹ Policyholder surplus reserves with loss-absorbing capacity refer to funds allocated to the policyholders that can be used by the shareholders, and which, under certain conditions, may require regulatory approval.

Table 4

in USD millions, as of December 31

	Unit-linked insurance contracts		Other life insurance liabilities		Total reserves	
	2021	2020	2021	2020	2021	2020
	Life					
Europe, Middle East & Africa	51,005	50,476	78,194	90,470	129,199	140,945
of which:						
United Kingdom	15,700	15,934	4,116	4,018	19,816	19,952
Germany	22,757	22,016	38,155	43,235	60,912	65,251
Switzerland	1,148	936	17,069	18,491	18,216	19,426
Italy	4,071	4,163	3,227	6,859	7,297	11,023
Ireland	976	1,315	2,052	2,451	3,028	3,766
Spain	602	676	11,428	12,802	12,031	13,478
Zurich International	5,298	4,982	235	352	5,532	5,334
Rest of Europe, Middle East & Africa	454	453	1,913	2,262	2,367	2,715
North America	11,749	10,983	1,297	1,235	13,046	12,218
Asia Pacific	703	697	4,467	4,740	5,170	5,437
Latin America	13,516	13,740	5,068	5,984	18,585	19,725
Group Reinsurance	–	–	9	11	9	11
Eliminations	–	–	(6)	(15)	(6)	(15)
Subtotal	76,973	75,896	89,030	102,425	166,003	178,321
Other businesses	5,551	5,261	10,411	10,371	15,961	15,632
Total	82,524	81,157	99,440	112,796	181,965	193,953

Reinsurance for Property & Casualty (P&C) and Life businesses

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

The Group structures and aligns its external reinsurance protection to its capital position to achieve an optimal risk-return ratio. This includes participation in the underlying risks through self-retentions in line with the risk appetite of each line of business. The cession rate for P&C was 23.0 percent (14.2 percent excluding captives, unaudited) as of December 31, 2021 and 24.2 percent (14.4 percent excluding captives, unaudited) as of December 31, 2020. The cession rate for Life was 10.8 percent as of December 31, 2021 and 8.8 percent as of December 31, 2020.

The Group uses traditional and collateralized reinsurance markets to protect itself against extreme single events, multiple event occurrences across regions, and increased frequency of events. Specifically, to protect the Group against man-made and natural catastrophe scenarios per event, Zurich arranges an annual aggregate global cover as illustrated in the graph on the next page.

Risk review (continued)

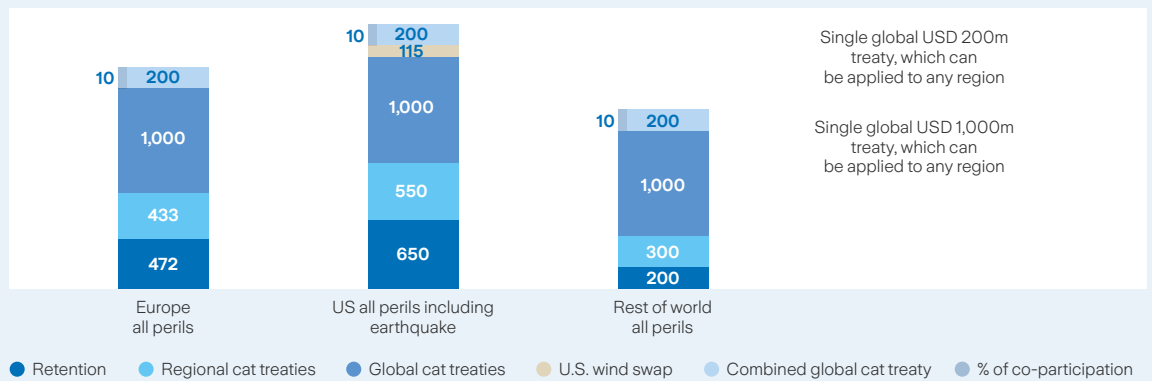
Audited

The Group participates in the underlying risks through its retention and through its co-participation in excess layers. The natural catastrophe reinsurance covers are on a loss-occurrence basis, except for the global aggregate catastrophe cover, which operates on an annual aggregate basis. The in-force natural catastrophe covers renew annually, with the exception of the global property catastrophe cover, which is up for renewal on April 1, 2022, following a three-year term.

In addition to these covers, the Group purchases several regional catastrophe covers, has a bilateral risk swap, and various line of business-specific risk treaties. These covers are reviewed continuously and are subject to change in the future.

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

Catastrophe reinsurance treaties in USD millions



Global aggregate cat treaty



● All cat losses exceeding USD 45m ● Global aggregate cat treaty ● Combined global cat treaty ● % of co-participation

– Global aggregate cat treaty renewed on January 1, 2021; US treaties renewed per April 1, 2021; Global all perils cat treaty renewed on April 1, 2021 (automatically renewed into year of the three years period); International and Europe all perils cat treaty renewed July 1, 2021. Please note: the attachment point and limit on Europe all perils tower are defined in EUR denomination (EUR390m x s EUR425m); currency exchange rates as of January 31, 2021.

– The USD 200m cover is the combined global occurrence and aggregate all perils cat treaty presiding over the global all perils cat treaty (plus over the US wind swap on the US windstorm tower). This cover can be used only once, either for aggregated losses or for an individual occurrence/event.

Risk review (continued)

Audited

Market risk, including investment credit risk

Market risk relates to the possibility of loss of value due to changes in financial market conditions.

Risk factors include:

- Equity market price changes.
- Real estate market price changes.
- Interest rate changes.
- Credit and swap spread changes.
- Defaults of issuers.
- Changes in 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 also 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. 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 defines limits on concentration of investments in single issuers and certain asset classes, as well as the degree to which asset interest rate sensitivities may deviate from liability interest rate sensitivities. The Group regularly reviews its capacity to hold illiquid investments.

The Asset/Liability Management Investment Committee reviews and monitors the 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 follows processes to manage market risks and to analyze market risk hotspots. Actions to mitigate risks are taken, if necessary, to manage fluctuations affecting asset/liability mismatch and risk-based capital.

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

In compliance with Swiss insurance regulation, the Group's policy prohibits speculative trading in derivatives, meaning a pattern of so-called 'in-and-out trading' activity without any reference to an underlying position. 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 review (continued)

Audited

Risk from equity securities and real estate

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

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

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

Risk from interest rates and credit spreads

Interest rate risk is the risk of an adverse economic impact resulting from changes in interest rates, including changes in the shape of yield curves. Yield curve changes affect the value of interest rate-sensitive investments and derivatives as well as the fair value of insurance liabilities. Other balance sheet items, such as liability investment contracts, debt issued by the Group, commercial and residential mortgages, employee benefit plans, loans and receivables, are also affected.

The Group manages credit spread risk, which is the variation in economic value due to changes in the level or the volatility of credit spreads over the risk-free interest rate. Movements of credit spreads are driven by several factors including changes in expected default probability, default losses, risk premium, liquidity and other effects.

Returns on unit-linked contracts, whether classified as insurance or investment contracts, are at the risk of the policyholder; however, the Group is exposed to fluctuations in interest rates and credit spreads insofar as they affect the amount of fee income earned if the fee income level is dependent on the valuation of the asset base.

Risk review (continued)

Audited

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

Group investment sensitivities

The gross economic market risk sensitivities of the fair value of IFRS Group investments before tax as of 2021 was negative USD 6.1 billion (negative USD 7.1 billion as of 2020) for a 50 basis points (bps) increase in interest rates. For a 50 bps decrease in interest rates, the sensitivity was USD 6.7 billion in 2021 (USD 7.9 billion as of 2020). For a 10 percent decline in equity markets, Group investments drop in value by USD 1.3 billion in 2021 compared with USD 1.3 billion as of 2020. A 100 bps increase in credit spreads resulted in a decrease of USD 6.2 billion in 2021 compared with USD 6.8 billion as of 2020.

The following describes limitations of the Group investment sensitivities. Group 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 account of the possibility that interest rate changes might differ by rating class; these are disclosed separately as credit spread risk sensitivities.

The sensitivity analysis is based on economic assets, and not on shareholders' equity or net income as set out in the consolidated financial statements. The sensitivities only cover Group investments and do not cover insurance or other liabilities. The equity market scenarios assume a concurrent movement of all stock markets. The sensitivity analysis does not take account of actions that might be taken to mitigate losses. Actions may involve changing the asset allocation, for example through selling and buying assets. Sensitivity calculations do not assign a probability to the scenario considered. 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 gross sensitivities, management uses sensitivities and stress scenarios to assess the impact of market movements on the Group's net assets. For more information on sensitivities see 'Group economic net asset sensitivities' (unaudited), below.

Group economic net asset sensitivities

The following section presents the sensitivities of Group economic net assets under Swiss Solvency Test (SST) assumptions with respect to certain standard financial market scenarios.

The net asset impact – the difference between the impact on Group investments and liabilities – represents the economic risk related to changes in market risk factors to which the Group is exposed. Tables 5, 6 and 7 show the estimated economic market risk sensitivities of the net asset impact. Positive values represent an increase in the net assets, and values in parentheses represent a decrease. Mismatches in changes in value of assets relative to liabilities represent an economic risk to the Group.

In determining the sensitivities, investments and liabilities are fully re-valued under the given scenarios. Each instrument is re-valued separately, taking relevant product features into account. Non-linear valuation effects, where they exist, are reflected in the calculations. The sensitivities are shown before tax.

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

The basis of presentation for the Life business to financial market movements uses replicating portfolios calibrated according to the methodology and cashflow models approved by FINMA. The replicating portfolios are portfolios of assets that replicate the cash flows or present values of the life insurance liabilities under stochastic scenarios from the local life valuation models. They are calibrated to match dependencies of life insurance liabilities on financial market developments in respect of interest rates, equity and property. The options and guarantees of the underlying life insurance liabilities are captured through the inclusion of options in the replicating portfolios.

Sensitivities are shown split by segment and for economic net assets net of minority interest. The heading 'Rest of the business' includes Farmers, Group Finance and Operations and Non-Core Businesses.

Risk review (continued)

Analysis of economic sensitivities for interest rate risk

Table 5 shows the estimated net impact before tax of a 50 basis point (bps) increase or decrease in yield curves after consideration of hedges in place, as of December 31, 2021 and 2020.

Table 5

	2021	2020
in USD millions, as of December 31		
Economic interest rate sensitivities*		
50 bps increase in the interest rate yield curves		
Property & Casualty	(98)	(14)
Life	(340)	(82)
Rest of the business	(31)	(153)
Economic net assets net of minority interest	(441)	(220)
50 bps decrease in the interest rate yield curves		
Property & Casualty	45	(33)
Life	239	(97)
Rest of the business	96	276
Economic net assets net of minority interest	354	124

Analysis of economic sensitivities for equity risk

Table 6 shows the estimated net impact before tax from a 10 percent decline in stock markets, after consideration of hedges in place, as of December 31, 2021 and 2020.

Table 6

	2021	2020
in USD millions, as of December 31		
Economic equity price sensitivities*		
10% decline in stock markets		
Property & Casualty	(664)	(617)
Life	(542)	(668)
Rest of the business	(100)	(119)
Economic net assets net of minority interest	(1,299)	(1,398)

Analysis of economic sensitivities for credit spread risk

Table 7 shows the estimated net impact before tax from a 100 basis point increase in corporate credit spreads, as of December 31, 2021 and 2020. The sensitivities apply to all fixed-income instruments, excluding government, supranational and similar debt securities. For the Life business, the loss-absorbing capacity of liabilities for losses on credit spreads are not included, as they are not modeled in the replicating portfolios.

Table 7

	2021	2020
in USD millions, as of December 31		
Economic credit spread sensitivities*		
100 bps increase in credit spreads		
Property & Casualty	(1,725)	(1,727)
Life	(3,989)	(4,502)
Rest of the business	(534)	(565)
Economic net assets net of minority interest	(6,095)	(6,619)

* Limitations of the economic sensitivities: same limitations apply for Group investment sensitivities, except for the above sensitivities, which are based on economic net assets including liability representation; neither the impact of the UK pension plan nor the volatility adjustment on the insurance liabilities have been considered.

Risk review (continued)

Audited

Risks from defaults of counterparties

Debt securities

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

Table 8

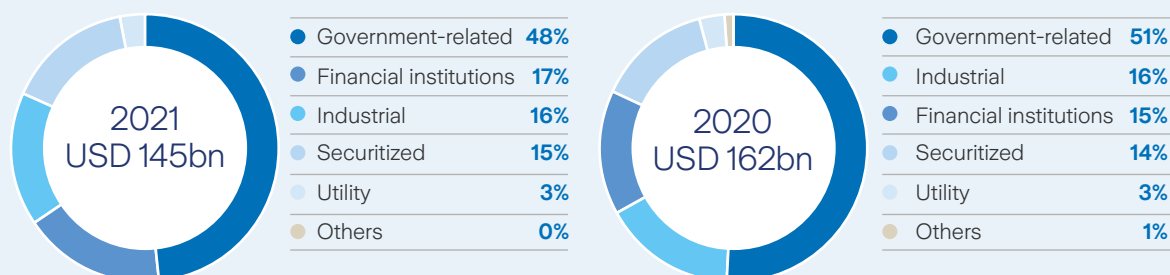
Debt securities by rating of issuer

as of December 31	2021		2020	
	USD millions	% of total	USD millions	% of total
Rating				
AAA	28,339	19.5%	36,411	22.5%
AA	44,358	30.6%	42,240	26.1%
A	25,346	17.5%	25,084	15.5%
BBB	41,255	28.4%	51,636	31.9%
BB and below	5,411	3.7%	5,802	3.6%
Unrated	375	0.3%	536	0.3%
Total	145,084	100.0%	161,710	100.0%

Table 8 shows the credit risk exposure of debt securities, by credit rating. As of December 31, 2021, 96.0 percent of the Group's debt securities was investment grade and 19.5 percent was rated 'AAA.' As of December 31, 2020, 96.1 percent of debt securities was investment grade and 22.5 percent was rated 'AAA.'

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

The risk-weighted average credit rating of the Group's debt securities portfolio is 'A-' in 2021, unchanged from 2020.

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

As of December 31, 2021, the largest concentration in the Group's debt securities portfolio was government related at 48 percent of all debt securities. In all other categories, a total of USD 28.6 billion (38 percent) was secured. As of December 31, 2020, 51 percent of the Group's debt portfolio was invested in government-related securities. In all other categories, a total of USD 29.5 billion (38 percent) was secured.

The second-largest concentration in the Group's debt securities portfolio is financial institutions, comprising investments mainly in banking, finance companies and insurance.

In addition to debt exposure, the Group had loan exposures of USD 3.5 billion to the German central government or German federal states as of December 31, 2021. The equivalent figure for December 31, 2020 was USD 4.2 billion. For more information, see the 'mortgage loans and other loans' section on [page 207](#).

Risk review (continued)

Audited

Cash and cash equivalents

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

Cash and cash equivalents amounted to USD 8.7 billion as of December 31, 2021 and USD 11.1 billion as of December 31, 2020. The risk-weighted average rating of the overall cash portfolio was 'A-' as of December 31, 2021 and 'A' as of December 31, 2020. The ten largest bank exposures represent 68 percent of the total, the risk-weighted average rating of which was 'AA-' as of December 31, 2021 and 'AA-' as of December 31, 2020.

Mortgage loans and other loans

Mortgage loans amounted to USD 6.1 billion as of December 31, 2021 and USD 5.8 billion as of December 31, 2020. The Group's largest mortgage loan portfolios are held in Switzerland (USD 3.0 billion) and in Germany (USD 1.5 billion); these are predominantly secured against residential property but also include mortgages secured by commercial property. The Group invests in mortgages in the U.S. (USD 0.5 billion); these are mainly participations in large mortgage loans secured against commercial property.

The credit risk arising from other loans is assessed and monitored together with the debt securities portfolio. Out of the USD 7.1 billion reported loans as of December 31, 2021, 56 percent are government related, of which 89 percent are to the German central government or German federal states. As of December 31, 2021, USD 3.7 billion were rated as 'AAA' (52 percent) compared with 4.1 billion as of December 31, 2020; USD 1.0 billion as 'AA' (14 percent) compared with 1.8 billion as of December 31, 2020; USD 1.2 billion as 'A' (18 percent) compared with 1.4 billion as of December 31, 2020; USD 1.2 billion as 'BBB' and below (16 percent) compared with 1.0 billion as of December 31, 2020; and USD 0.0 billion as unrated (0 percent) compared with 0.3 billion as of December 31, 2020.

Derivatives

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

To limit credit risk, derivative financial instruments are executed with counterparties rated 'BBB' or higher as per Zurich Risk Policy requirements. 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 exceeds an agreed threshold. The Group further mitigates credit exposures from derivative transactions by using exchange-traded or centrally cleared instruments whenever possible. The Group remained under the applicable thresholds for phase 5 of the initial margin rules for over-the-counter derivatives and therefore was not subject to a duty to exchange initial margin in 2021.

Risk from currency exchange rates

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 of 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 euro, Swiss franc, British pound and U.S. dollar. On entity balance sheets a currency mismatch may cause a balance sheet's net asset value to fluctuate, either through income or directly through equity. The Group manages this risk by matching foreign currency positions on entity balance sheets within prescribed limits. Residual entity mismatches are reported centrally to make use of the netting effect across the Group. Zurich hedges these residual entity mismatches within an established limit through a central balance sheet. For information on net gains/losses on foreign currency transactions included in the consolidated income statements, see note 1 of the consolidated financial statements. The monetary currency risk exposure on entity 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.

Table 9 shows the sensitivity of total IFRS equity 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. See notes 1, 3 and 7 of the consolidated financial statements for additional information on foreign currency translation and transactions.

Risk review (continued)

Audited

Table 9

	in USD millions, as of December 31	
	2021	2020
Sensitivity of the Group's total IFRS equity to exchange rate fluctuations		
10% increase in		
EUR/USD rate	309	363
GBP/USD rate	330	278
CHF/USD rate	520	599
BRL/USD rate	96	138
AUD/USD rate	373	355
JPY/USD rate	107	103
Other currencies/USD rates	493	528

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

Other credit risk

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

- Reinsurance assets.
- Receivables.

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

The Group actively uses collateral to mitigate credit risks. 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, deductible programs, trade credit and surety.

The Group has counterparty limits which are regularly monitored. Exposure to counterparties' parent companies and subsidiaries is aggregated to include reinsurance assets, investments, derivatives, and certain insurance products. Group aggregate concentration limits and relevant exception approvals are monitored in line with risk policy requirements.

On-balance sheet exposures are the main source of credit risk. Off-balance sheet credit exposures are related primarily to certain insurance products, reinsurance and collateral used to protect underlying credit exposures on the balance sheet. The Group has no material amount of off-balance sheet exposures related to undrawn loan commitments as of December 31, 2021. See note 22 of the consolidated financial statements for undrawn loan commitments.

Risk review (continued)

Audited

Credit risk related to reinsurance assets

The Group's Corporate Reinsurance Security Committee oversees the credit quality of cessions and reinsurance assets. The Group typically only cedes new business to authorized reinsurers with a minimum rating of 'A-'. Of the exposure ceded to reinsurers that are rated below 'A-' or are not rated, 54 percent was collateralized as of December 31, 2021 and 2020, respectively. Of the exposure ceded to reinsurers that are rated below 'A-' or are not rated, 66 percent was ceded to captive insurance companies in 2021, and 62 percent in 2020.

Reinsurance assets included reinsurance recoverables (the reinsurers' share of reserves for insurance contracts) of USD 25.7 billion and USD 25.6 billion, and receivables arising from ceded reinsurance of USD 1.6 billion and USD 1.5 billion as of December 31, 2021 and 2020, respectively, gross of allowance for impairment. Reserves for potentially uncollectible reinsurance assets amounted to USD 119 million as of December 31, 2021 and USD 149 million as of December 31, 2020. The Group's policy on impairment charges takes into account both specific charges for known situations (e.g., financial distress or litigation) and a general, prudent provision for unanticipated impairments.

Reinsurance assets in table 10 are shown before taking into account collateral such as cash or bank letters of credit and deposits received under ceded reinsurance contracts. Unsecured reinsurance assets shown are after deducting collateral. Bank issuing letters of credit for the benefit of Zurich are, on average, 'A' rated. The value of the collateral received amounts to USD 10.6 billion and USD 10.8 billion as of December 31, 2021 and 2020, respectively.

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

Table 10

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

	as of December 31							
	2021				2020			
	Reinsurance assets		Unsecured reinsurance assets		Reinsurance assets		Unsecured reinsurance assets	
	USD	% of	USD	% of	USD	% of	USD	% of
	millions	total	millions	total	millions	total	millions	total
Rating								
AAA	26	0.1%	26	0.2%	37	0.1%	37	0.2%
AA	8,267	30.3%	7,525	45.2%	8,382	31.1%	7,445	45.9%
A	11,461	42.1%	5,630	33.8%	11,851	43.9%	5,644	34.8%
BBB	3,604	13.2%	1,642	9.9%	3,094	11.5%	1,385	8.5%
BB	652	2.4%	324	1.9%	411	1.5%	192	1.2%
B and below	206	0.8%	77	0.5%	204	0.8%	45	0.3%
Unrated	3,020	11.1%	1,416	8.5%	3,004	11.1%	1,485	9.1%
Total	27,236	100.0%	16,640	100.0%	26,983	100.0%	16,233	100.0%

Credit risk related to receivables

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

Receivables that are past due, but not impaired, are regarded as unsecured; however, 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 managed accordingly. See notes 15 and 24 of the consolidated financial statements for additional information on receivables.

Risk review (continued)

Audited

Operational risk

Operational risk is the risk of financial loss, adverse reputational, legal or regulatory impact, resulting from inadequate or failed processes, people, systems or from external events, including external fraud, catastrophes, or failure in outsourcing arrangements. Zurich has a framework to identify, assess, manage, 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 capital required under Zurich Economic Capital Model (Z-ECM).
- Documents and reviews operational events exceeding a threshold determined by the Zurich Risk Policy. Remedial action is taken to avoid the recurrence of such operational events.
- Conducts risk assessments where operational risks are identified for key business areas. Risks identified and assessed to be above a certain threshold must have a risk response. Risk mitigation plans are documented and tracked on an ongoing basis. In the assessments, the Group uses sources of information such as the Total Risk Profiling™ process, internal control assessments, and audit findings, as well as scenario modeling and operational event data.

The Group has specific processes and systems in place to focus on high-priority operational matters such as managing information security and business resilience (see sub-section 'risk focus specific to digital transformation'), as well as combating fraud.

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

Risk focus specific to digital transformation

Digital and technological advances have not only created a wide spectrum of benefits for society but also amplified the associated risks. Organizations are realigning their operations, forging new third-party relationships and putting data at the heart of their decision-making and analysis. All of this is happening at a rapid pace and against a backdrop of an increasingly hostile cyber threat landscape. In order to succeed, organizations need to be able to assess and understand the risks inherent in this changing environment and ensure that they are managed appropriately.

On a regular basis, the Group assesses and monitors exposure to defined information security and cyber risk scenarios through key risk indicators (KRIs) to effectively focus on actions and adequate resource allocation.

Data risk

The strategic relevance of data as a business asset is rising at a rapid pace and the risks associated with data management are becoming more and more prominent. Preventing risks such as data losses and privacy breaches and assessing and monitoring the potential misuse of data and losses triggered by failures in data management remain in focus. Specifically, appropriate governance of data for business purposes and decision-making processes, including automation, machine-learning techniques and other advanced technologies, remains a priority. As Zurich strives to inspire confidence in a digital society with its data commitment, assurance on the ethical use of advanced technologies is provided from a risk management perspective for the protection and privacy of data of our customers and other stakeholders.

The relevance of technological risks, such as cyber risk, is rapidly increasing across all data-driven industries. Exposure to these risks has grown in lockstep with the significant rise in digital services provided directly to customers and the increasing prevalence of digital ecosystems and cloud solutions in today's interconnected world.

Third-party risk

Outsourcing and engagement with third parties introduces risks relevant to the delivery of our strategy, such as data loss or disclosure, disruption to critical customer services and regulatory compliance. Digitalization has accelerated the complexity and changes to the Group's third-party ecosystem. The Group addresses risks associated with third-party engagements along its supply and value chain. Applying a consistent Group-wide approach to outsourcing governance is among Zurich's key priorities.

Risk review (continued)

Business resilience risk

Zurich, along with the rest of the insurance industry, is going through a period of transformation in order to meet changing customer expectations. In addition, increasing automation of processes, development of advanced analytics capabilities, and fragmented supply chains have contributed to an increasingly complex operating environment. In response to these challenges, and to better protect the interests of stakeholders, the Group continues to evolve its business resilience capability through a number of ongoing initiatives in relation to the protection and recovery of critical services and enhancing transparency around any associated risks. Zurich's response to COVID-19 to date has proven to be effective with critical business services maintained throughout the Group.

Risk management and internal controls

The Group considers internal controls to be essential for managing operational risk. The Board has overall responsibility for the Group's risk management and internal control frameworks. The objectives of the Group's internal control system are to provide reasonable assurance that Zurich's financial statements and disclosures are materially correct, support reliable operations, and ensure legal and regulatory compliance. The internal control system is designed to mitigate rather than eliminate risks that could impact the achievement of business objectives.

The Group promotes risk awareness and understanding of controls through communication and training. Risk management and internal control systems are designed at Group level and implemented across the Group. Management, as the first line of defense, is responsible for identifying, evaluating and managing risk, and designing, implementing and maintaining internal controls. Testing effectiveness of relevant internal controls by the first line of defense also forms part of the control life cycle.

Key processes and controls in the organization are subject to review and challenge by all three lines of defense. The second and third lines of defense regularly report on observations, conclusions and recommendations that arise from their independent reviews of internal controls. Control issues of Group-level significance and associated mitigation actions are reported regularly to the Audit Committee of the Board. The Risk and Investment Committee of the Board reviews the effectiveness of the Group's risk management system, including the Group's risk tolerance and enterprise-wide risk governance framework, in accordance with the charter for each committee.

The Group's Disclosure Committee, chaired by the Head of Group Financial Accounting and Reporting, reviews the accuracy, completeness and timeliness and compliance with legal and regulatory requirements of external disclosures and the effectiveness of the respective internal controls. The conclusions result in a recommendation to the Group Chief Financial Officer to release the disclosures to the Audit Committee of the Board, who may then challenge the disclosures further. The Board reviews and approves the announcement of the results and the annual report before they are made public.

Risk review (continued)

Audited

Liquidity risk

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

Group-wide liquidity management policies and specific guidelines govern how entities plan, manage and report their entity liquidity and include regular stress tests for all major legal entities and branches 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 should the Group have to recapitalize entity balance sheets. Similar guidelines apply at the Group level, and detailed liquidity forecasts are regularly conducted, based on entities' 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 potential liquidity needs within the Group, including those that might arise in times of stress. The Group takes into account the amount, availability and speed at which these sources can be accessed. The Group has access to diverse funding sources to cover contingencies, including asset sales, external debt issuance and making use of committed borrowing facilities or letters of credit. The Group maintains a range of maturities for external debt securities. A potential source of liquidity risk is the effect of a downgrade of the credit rating of the Group. This could affect the Group's commitments and guarantees, potentially increasing liquidity needs. This risk – and mitigating actions that might be employed – are assessed on an ongoing basis within the Group's liquidity framework.

The Group regularly analyzes the liquidity of the investment assets and ensures that the liquidity of assets stays in line with liquidity requirements. In 2021, the Group's holdings in illiquid assets were within its capacity.

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

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

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

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 during the term of the investment (generally three to five years) and must be funded by the Group on a timely basis. See note 22 of the consolidated financial statements for more information.

Risk review (continued)

Audited

Strategic risk and risks to the Group's reputation

Strategic risk

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

Strategic risks can arise from:

- Inadequate risk-reward assessment of strategic plans.
- Improper execution of strategic plans.
- Unexpected changes to underlying assumptions, including those about the external environment.

The Group works to manage risks associated with strategic business decisions through its risk assessment processes and tools, including the Total Risk Profiling™ process. As part of the annual assessment of strategic risks, the Executive Committee assesses potential risks from both external and internal factors, looking at the current year and beyond. The Executive Committee members define actions to respond as appropriate and review changes to the key risks and their status of actions at least quarterly.

The Group evaluates the risks of merger and acquisition (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 risk type supports preventing adverse reputational outcomes.

The Group aims to preserve its reputation by:

- Adhering to applicable laws and regulations.
- Following the core values and principles of the Group's code of conduct that promote integrity and good business practice.
- Living up to its sustainability commitments.

The Group centrally manages certain aspects of risk to reputation, for example, communications, through functions with the appropriate expertise. Potential risks to Zurich's reputation are included in its risk assessment processes and tools, including the Total Risk Profiling™ process.

Sustainability risk

Zurich's ambition is to be one of the most responsible and impactful businesses in the world. Trends like globalization, the mobility of talent and funds, shifting geopolitics, reskilling for a digital workplace, demographics, and climate change all pose immensely complex social issues.

Sustainability means doing business today in a way that safeguards the future of our company and our society. Sustainability risks and opportunities emanate both from effects that environmental, social and governance (ESG) challenges have on the company, as well as from how the company handles its positive or negative impact on ESG issues. To protect against financial and reputational impacts, both perspectives are included in the identification and assessment of sustainability issues.

Climate change, as one of the most complex risks facing society today, is intergenerational, international and interdependent. As a global insurer, Zurich faces risks from climate change and discloses its climate risk in line with the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).

Sustainability topics associated with ESG challenges are also becoming more complex and interconnected as a result of these trends. Insurers are increasingly becoming agents of change and playing a more impactful role in addressing sustainability risk.

Risk review (continued)

Zurich works with its customers and investee companies to ensure responsible and sustainable business practices while promoting best practices in managing ESG risks. The Group has policies in place that define the sustainability positions for which Zurich has no underwriting or investment appetite. Zurich continuously works to develop relevant products and services that help solve the most pressing societal and environmental issues of today.

Sustainability risk approach

To support the Group's businesses in applying its purpose and values, as well as mitigating reputational risk impacts, Zurich has established a systematic and integrated approach to identifying, assessing and recommending action on potential risk and opportunity areas from a sustainability perspective across all the Group's activities, in particular in investment management and underwriting.

This is a three-step process:

- Issue identification: Identify relevant issues to be considered within the risk assessment process by monitoring channels such as media, social media, information from non-governmental organizations and Zurich's businesses.
- Risk assessment: Assess issues related to public commitments, the role of insurance underwriting, market exposure and materiality. The Group Chief Executive Officer approves position statements, recommended business actions, and reputational management considerations.
- Implementation: Implement mitigation actions, including managing reputational impacts locally in the businesses. Mobilize expert support available across the Group and escalate as necessary, according to governance procedures.

Zurich applies these steps across portfolios based on stated thresholds and verified data. Wherever possible, Zurich engages and works together with customers on the margins of Zurich's thresholds to ensure responsible and sustainable business practices. This engagement may be short, or in some cases, last up to two years, depending on which part of the renewal cycle customers are in and the time required for them to demonstrate credible progress on ESG issues.

Clear roles and responsibilities, starting with the Board of Directors of Zurich Insurance Group Ltd and Zurich management, aim to ensure effective oversight and action with respect to climate change and other sustainability risks.