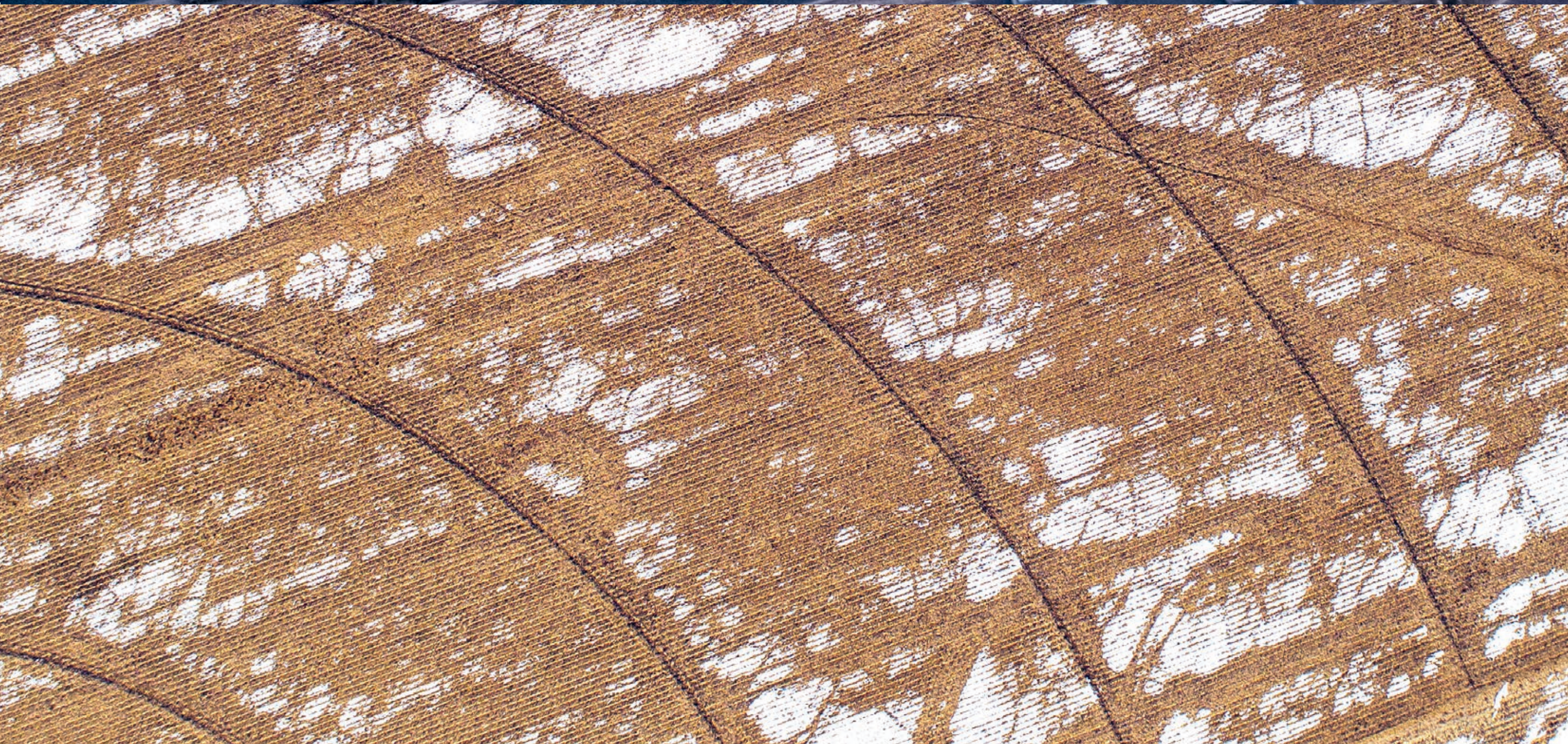
Swiss Re

Annual Report 2019
Financial Report

From risk to resilience



Financial highlights

Financial highlights

For the years ended 31 December

USD millions, unless otherwise stated	2018	2019	Change in %
Group			
Net income attributable to common shareholders	421	727	73
Gross premiums written	36 406	42 228	16
Premiums earned and fee income	34 461	38 594	12
Earnings per share in CHF	1.34	2.46	84
Shareholders' equity	27 930	29 251	5
Return on equity in %[1]	1.4	2.5	
Return on investments in %	2.8	4.7	
Net operating margin in %[2]	2.9	3.4	
Number of employees[3]	14 943	15 401	3
Property & Casualty Reinsurance			
Net income attributable to common shareholders	370	396	7
Gross premiums written	16 545	21 562	30
Premiums earned	16 095	19 275	20
Combined ratio in %	104.0	107.8	
Net operating margin in %[2]	4.3	3.8	
Return on equity in %[1]	3.7	4.4	
Life & Health Reinsurance			
Net income attributable to common shareholders	761	899	18
Gross premiums written	14 527	14 452	–1
Premiums earned and fee income	12 835	13 004	1
Net operating margin in %[2]	9.4	10.0	
Return on equity in %[1]	11.1	12.4	
Corporate Solutions			
Net loss attributable to common shareholders	–405	–647	60
Gross premiums written	4 694	4 974	6
Premiums earned	3 925	4 166	6
Combined ratio in %	117.5	127.9	
Net operating margin in %[2]	–11.1	–16.7	
Return on equity in %[1]	–19.4	–34.1	
Life Capital			
Net income/loss attributable to common shareholders	23	–177	–
Gross premiums written	2 739	2 831	3
Premiums earned and fee income	1 606	2 149	34
Gross cash generation[4]	818	1 138	39
Net operating margin in %[2]	3.9	2.4	
Return on equity in %[1]	0.4	–3.4	

[1] Return on equity is calculated by dividing net income/loss attributable to common shareholders by average common shareholders' equity.
[2] Net operating margin is calculated as "Income before interest and income tax expense" divided by "Total revenues" excluding "Net investment result – unit-linked and with-profit business".
[3] Regular staff.
[4] Gross cash generation is the estimated net cash arising from business activity within the Life Capital Business Unit during the reporting period taking into account both surplus development and certain capital actions. It is calculated gross across both Swiss Re's and MS&AD's interest in ReAssure.

What changed this year:

You can now find the following content in our 2019 Business Report:

- Message from the Chairman
- Message from the Group CEO
- Market trends
- Our role in society
- Our strategy
- Sustainability

Our annual report

Our annual report consists of the Business Report and the Financial Report:

Financial Report
This publication provides a more detailed account of our financial performance during the year and the market trends we observe. It also provides details on risk and capital management, as well as information on our governance and compensation.

For more information

See our online annual report at https://reports.swissre.com

Contents

Swiss Re delivered a Group net income of USD 727 million, driven by a strong Life & Health Reinsurance result and excellent investment performance.

Contents

The global economy and financial markets

Strong financial market performance despite slowing growth

Growth has decelerated in the US and other major economies. A reversal in monetary policy by major central banks has led to a decline in long-term bond yields, and a rally in global equity markets in 2019.

Global economy

Global growth slowed in 2019 due to a contraction in global industrial output and trade. The rise in uncertainty stemming from the US-China trade dispute resulted in a downturn in business investment and manufacturing output across the world. In the US, real GDP growth decelerated to 2.3% in 2019 as the boost from fiscal stimulus faded. Growth in the Euro area also weakened significantly, falling to 1.2% from a solid 1.9% in 2018, with Germany hit the hardest. In the UK, the pace of economic growth remained close to a 10-year low at 1.4%, as uncertainty around Brexit continued to weigh on investment and manufacturing output. In contrast, Japan's GDP growth accelerated slightly to 0.8% in 2019 from 0.3% in the previous year.

Headline inflation moderated in most markets, tempered by lower oil prices. While underlying inflation (excluding energy prices) was mostly subdued in developed economies, it was more buoyant in the US, in line with strong income growth and tight labour markets. For instance, US real disposable personal income was up 2.9% in 2019, above the 2.7% average since 1990.

Economic growth in emerging Asian markets continued to outperform growth in other regions, despite slowing for the second consecutive year. Real GDP growth in India and China decelerated but remained above the 6% mark in China, at 6.1%, in 2019. Accommodative monetary policy and fiscal measures in China cushioned the drag from the weakening global economic backdrop. Growth in Central and Eastern Europe slowed slightly along with Western European markets, but remained firmly above trend in EU member states. Russia's economy, however, slowed down abruptly, with GDP growth almost halving compared with 2018 to 1.2%. In Latin America, significant deceleration in Mexico and softening in Brazil drove slower growth in the region. Finally, political and economic crises kept some emerging countries in recession, including Turkey, Argentina and Venezuela.

Interest rates

Major central banks made a sharp monetary policy U-turn in 2019. While 2018 had been a year of gradual policy normalisation, the US Federal Reserve cut interest rates three times in steps of 25 basis points in the second half of 2019. The European Central Bank cut the deposit rate to a new record low of –0.5% and restarted open-ended quantitative easing with asset purchases of EUR 20 billion a month in November 2019. The Bank of Japan also continued its expansionary monetary policy, targeting long-term yields close to zero. The main outlier was the Bank of England, which remained on the sidelines amid Brexit uncertainty.

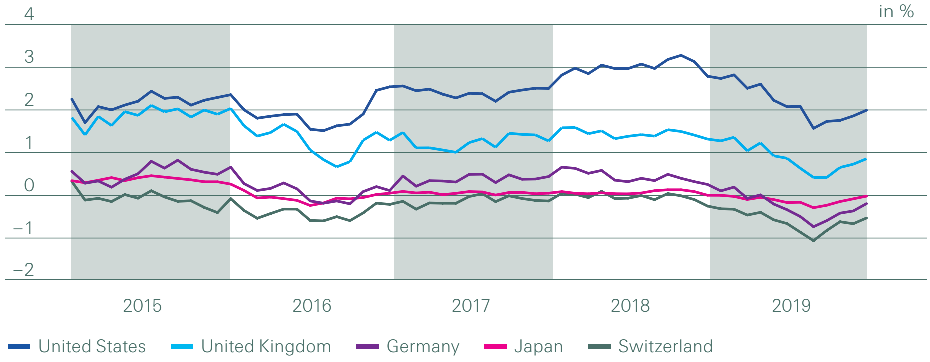
1.9%
US 10-year Treasury bond yield
Year-end 2019

–0.2%
German 10-year Bund yield
Year-end 2019

In emerging markets, central banks also joined the easing trend with the central banks of Russia, Turkey, South Africa, Indonesia, Brazil and Mexico cutting interest rates amid weak growth and falling inflation. Despite a rise in inflation towards the 3%-target at year-end, China's central bank eased monetary policy to cushion the adverse impact from slowing external demand.

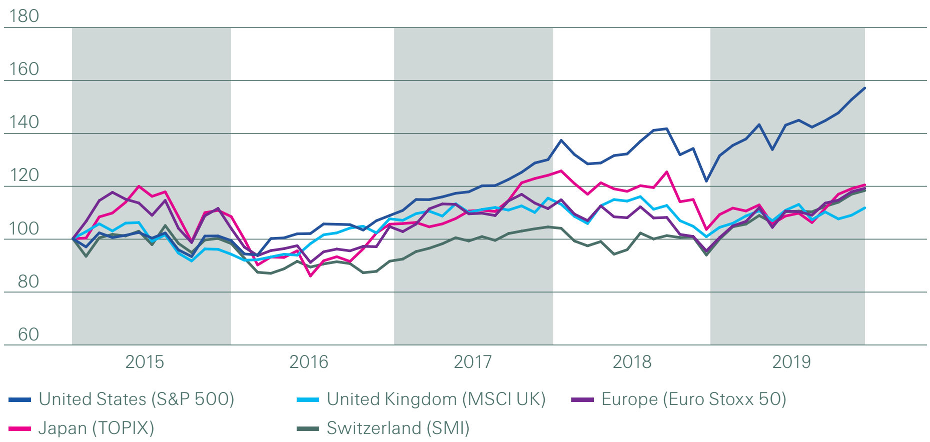
The U-turn in monetary policy led to a sharp downtrend in long-term bond yields across the globe. The US 10-year yield closed the year at 1.9%, down by almost 80 basis points compared with the previous year. Yields in the Euro area also declined significantly, dipping into negative territory. The German 10-year government bond yield ended the year at –0.2% and the UK yield closed at 0.8%. The Japanese yield ended the year at 0%.

Interest rates for 10-year government bonds 2015–2019



Source: Datastream

Stock markets 2015–2019



Source: Datastream

Stock market performance

Despite a softening economic activity and a challenging geopolitical landscape, stock markets performed well in 2019. Equities benefited from the policy U-turn by central banks, which kept monetary policy accomodative, creating a favourable environment for risk assets. This more than offset the negative impact from a slump in earnings growth as margins contracted in the second half of 2019.

However, political and policy uncertainties led to repeated setbacks. Trade tensions between the US and China ebbed and flowed throughout the year, with a number of surprise tariff announcements keeping market participants on their toes. In Italy, the governing coalition broke down and was replaced by a new government. Meanwhile, uncertainty around Brexit peaked after Theresa May stepped down as Prime Minister, resulting in an escalation of no-deal risk before a notable de-escalation towards the end of the year.

US stocks ended the year up 29%. Other major indices also fared well. The Swiss Market Index rose 26% over the year, the Eurostoxx50 was up 25%, the Japanese TOPIX rose 16% and the MSCI UK increased 11% (see stock markets chart).

Currency movements

There was little movement in the US dollar against major currencies in 2019. Policy uncertainty, relatively high US long-term yields and softening growth elsewhere kept demand strong. Over the year, the US dollar strengthened 1.8% against the euro and appreciated by 1.2% against the Chinese renminbi. It was down 4% against the British pound as no-deal Brexit risk receded. It was also down 1.7% versus the Swiss franc, and 1% versus the Japanese yen.

Economic indicators 2018–2019

	US		Eurozone		UK		Japan		China	
	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018	**2019**
Real GDP growth[1]	2.9	**2.3**	1.9	**1.2**	1.3	**1.4**	0.3	**0.8**	6.7	**6.1**
Inflation[1]	2.4	**1.8**	1.8	**1.2**	2.5	**1.8**	1.0	**0.5**	2.1	**2.9**
10-Year government bond yields[2]	2.7	**1.9**	0.3	**–0.2**[4]	1.3	**0.9**	0.0	**0.0**	3.3	**3.2**
USD exchange rate[2,3]	–	**–**	114	**112**	127	**132**	0.91	**0.92**	14.5	**14.4**

[1] Yearly average
[2] Year-end
[3] USD per 100 units of foreign currency
[4] German 10-year Bund yield

Source: Swiss Re Institute, Datastream, CEIC

Economic risks affecting re/insurers

Downside risks, which were elevated throughout 2019 amid weak economic resilience, have increased in 2020. Global political developments, coupled with the economic impact of the spread of COVID-19 in particular, triggered high levels of uncertainty.

We expect the outbreak of the novel coronavirus to lead to significant disruptions in economic activity, causing a global recession with global growth well below 1% in 2020. The main negative economic impact is likely to result from the measures to contain the further spread of the virus and a strong tightening in funding conditions. Several sectors such as hospitality, travel and manufacturing are likely to face particularly negative economic consequences. Even economies that are not directly affected by the outbreak will be hit by disruptions in the global supply chain and weaker global demand. While there is considerable uncertainty around the impact of the pandemic, our baseline scenario is for economic activity to normalise gradually going into 2021. However, a wider-than-expected global spread of COVID-19 could result in an even more protracted global economic recession.

Several political risks could also affect the outlook. While Brexit-related uncertainty has abated, there remains a risk of a no-trade-deal exit at the end of the transition period, with serious repercussions for the UK and the EU. In the EU, there are several significant policy challenges, including migration policy and national budgets. Other unresolved issues, such as fragmented financial markets, fragile banking sectors and elevated debt burdens, could also resurface in a recession.

Finally, US-China tensions continue to be unresolved. The signing of the 'Phase One' deal and the focus on the coronavirus have created a hiatus in the dispute between the two countries. We do not expect a meaningful resolution of the trade tensions in the near future, while further escalation remains a risk.

With the monitory policy arsenal largely exhausted and side effects of the ultra-accomodative stance becoming increasingly visible, economies have become less resilient. There will be calls for new approaches such as increased coordination between fiscal and monetary policies to mitigate the economic downturn. This could result in heightened inflation uncertainty and further unsettle financial markets as monetary policy leeway would become more restricted. A scenario of unexpectedly high inflation would also have a sizeable impact on re/insurance claims, especially in casualty lines.

While downside risks dominate, we also see upside potential to our baseline forecast from continued macroeconomic policy support and a de-escalation in the trade conflict. A more positive scenario of stronger growth and contained inflation would be beneficial for the re/insurance industry. Investment yields would improve, albeit only slowly, and premium volumes would rise, along with economic activity.

Primary non-life

2 400
Market size in USD billions
Estimated global premium income in 2019

3%
Market performance
Estimated global premium growth in 2019

Market overview
The global primary non-life industry generated around USD 2 400 billion of premium income in 2019, of which 22% came from emerging markets. Non-life insurance ranges from standardised motor and household to sophisticated tailor-made liability and property covers, including specialty, commercial and industrial risk insurance.

Market performance
Premiums rose modestly in most countries and regions in 2019 on the back of moderating economic growth. Global non-life premiums were up an estimated 3% in real terms, after a similar 3% gain in 2018.

Emerging markets were the main driver of global premium growth, expanding by an estimated 7% in 2019. Non-life business in China and India was particularly strong, with premiums up 9% and 11%, respectively, in real terms. Agriculture and health/private medical insurance were the main drivers of growth. Motor also boosted growth in India, but the segment slowed in China due to weaker car sales and intensified competition after market liberalisation. Premium growth in Latin America and Africa was significantly below the long-term trend, reflecting a difficult economic environment in both regions.

Advanced market premiums grew by around 2% in 2019. Rate hardening in commercial insurance supported premium growth in North America and Asia Pacific in particular. In Western Europe, insurance premiums increased by around 1% alongside more moderate economic growth.

Pricing in commercial non-life insurance strengthened again. The third quarter of 2019 marked the 8th consecutive quarter of rate improvements after almost five years of softening. The upswing broadened across lines of business and regions. Overall profitability in non-life insurance, as measured by return on equity (ROE), improved slightly in Europe and Asia Pacific in the first half of the year compared with 2018. In North America, ROE was boosted by significant equity market gains during the first months of 2019.

Generally, underwriting results in the largest non-life markets improved slightly, based on lower catastrophe losses and moderately improving underwriting conditions.

Exceptions were Japan, due to high natural catastrophe losses, and Australia, where double-digit claims growth in all major lines of business led to a significant deterioration in underwriting results. Overall, the reversal of the soft market trend of the recent years was not enough to significantly narrow the profitability gap that still besets the non-life insurance sector.

Market outlook
Against the backdrop of an expected slowing global economy in 2020 and 2021, demand for non-life insurance is expected to increase only moderately, but premium growth will be further supported by positive rate developments.

The profitability outlook remains challenging. We believe interest rates will continue to be very low, with 10-year US Treasury yields likely to remain below 1% over the next two years. As such, any improvement in sector profitability will depend on underwriting performance, highlighting the need for more rate increases and improved underwriting discipline.

Reinsurance non-life

190
Market size in USD billions
Estimated global premium income in 2019

2%
Market performance
Estimated global premium growth in 2019

Market overview

Global non-life reinsurance premiums in 2019 totaled about USD 190 billion, with 28% coming from ceding companies in emerging markets. In general, reinsurance demand is a function of the size and capital resources of primary insurance companies, as well as of the risk profile of the insurance products provided.

Market performance

We estimate that global premiums in non-life reinsurance grew by around 2% in real terms in 2019, with moderate expansion and stable reinsurance demand in both emerging and advanced markets.

The reinsurance industry currently faces mixed trends. The sector's capital base remains very strong, allowing reinsurers to fulfill their role as the backbone of the primary insurance industry and to support the resilience of societies, businesses and households. The capital position of global reinsurers, the traditional source of capital, went up around 5% to approximately USD 360 billion during 2019. However, the alternative capital sector exhibited its first decline in capacity in 2019, after several years of soaring capital inflows. The capital base went down by 7% to below USD 90 billion at the end of 2019 from USD 95 billion at the end of 2018 due to loss payments and investors withdrawing funds.[1]

At the same time, the reinsurance industry experienced a third year of elevated insurance losses. While 2017 and 2018 were mainly impacted by natural catastrophes, the 2019 claims experience was driven by a broader range of significant losses, including heavy natural catastrophes, loss creep from previous year's catastrophes, man-made disasters such as the Ethiopian Airlines crash and subsequent Boeing 737 MAX fleet grounding, the collapse of the tour operator Thomas Cook, and increasing claims in US liability insurance.

Reinsurance prices, which improved slightly in the 2018 renewals following the 2017 hurricane losses, were broadly stable in the 2019 renewals. There were rate increases in loss-affected lines and regions, but little spill-over into non-loss-affected lines. Preliminary data indicate a combined ratio of around 98% for 2019, an improvement from 101% in 2018.

Overall profits of the reinsurance industry were boosted by the positive development of equity markets and realised gains from further declines in interest rates, which led to an ROE of around 12%. Excluding these windfall gains, however, investment income remained below 3%, and overall profitability was comparably low, with an ROE of 6–8%.

Market outlook

In 2020 and 2021, we expect the reinsurance industry to expand by at least the same growth rate as the primary non-life market. Cessions from emerging markets will likely develop stronger than those from advanced markets, given the higher dynamics of the economy and the primary insurance markets.

We expect broadly stable to improving non-life reinsurance prices as a result of rising claims and the end of abundant retrocession capacity.

[1] Source: Guy Carpenter, 2020 renewal briefing, January 2020

Primary life

2 800
Market size in USD billions
Estimated global premium income in 2019

2%
Market performance
Estimated global premium growth in 2019

Market overview

The global primary life insurance industry generated about USD 2 800 billion in premium income in 2019, of which 20% came from emerging markets. Around 85% of premium income in life insurance is derived from savings and retirement products. The protection business covers a broad spectrum of mortality and morbidity risks.

Market performance

We estimate that global primary life insurance premiums grew by 2% in real terms in 2019, slightly below the average annual growth rate of the last five years. Premium growth in advanced markets remained sluggish: it stagnated in real terms in Europe and advanced Asia Pacific, but expanded in North America, driven by strong annuity sales in the US.

Emerging market premiums expanded by around 9% on average, albeit with large differences across countries. The Chinese life insurance industry is estimated to have resumed its double-digit growth path with premiums up 13% in 2019, driven by protection products. In 2018, the market had contracted following tighter regulation of wealth management products, which had been among the main growth drivers in the past. In emerging Asia, excluding China, life premiums increased by 7% in 2019. Growth in the Middle East and Africa remained weak, while Latin America grew 4% after a decline the year before.

Overall profitability of the global life insurance sector – as measured by GAAP ROE of listed life insurance companies – was healthy at around 10%. Preliminary data for 2019 suggest a slight improvement from 2018. In response to the persistent low interest rate environment, life insurers are moving their product offering away from traditional savings-type policies towards protection products (eg critical illness, disability, long-term care) and unit-linked policies, where the investment risk is borne by the policyholders.

Market outlook

The business outlook for life insurance is clouded by the increasing likelihood of a deeper global recession. In particular, sales for savings-related insurance policies are likely to decrease in 2020, while protection-related business is expected to remain more stable.

Reinsurance life

85
Market size in USD billions
Estimated global premium income in 2019

3%
Market performance
Estimated global premium growth in 2019

Market overview

The size of the global life reinsurance business was around USD 85 billion in 2019. Around 70% of this is attributable to the US, Canada, the UK and China. Ceding companies from emerging markets accounted for 17% of global demand. Life reinsurers are increasingly diversifying away from traditional mortality business.

Market performance

We estimate that global life and health reinsurance premiums grew by 3% in 2019. This growth was unevenly distributed between segments and regions. Medical expense reinsurance from emerging markets was up 13%, mainly driven by China and India. In advanced markets, cessions from the US medical expense market drove most of the increase. Globally, this sector grew 7%, contrasting strongly with a more sluggish 1% increase in mortality and health-related reinsurance demand from life insurers.

Against this backdrop, life reinsurers have sought to increase revenues through large, individual risk transfer transactions that help primary insurers stabilise income and/or bolster their balance sheets. The introduction of risk-based capital regimes has prompted much of this activity. Another area of growth has been longevity risk transfer. The availability of longevity reinsurance has become key to the pricing of annuity transactions. Insurers offering those transactions to pension funds typically look to simultaneously access reinsurance capacity to hedge at least part of the associated longevity risk inherent in these lines.

The operating margin of the life reinsurance industry improved to above 8% of revenues in 2019, up from the 7–7.5% achieved between 2015 to 2018. The contribution from investments declined further due to the ongoing low interest rate environment, while underwriting performance improved.

Market outlook

Premium income of life reinsurers are expected to be negatively impacted by declining premiums in primary life in 2020. However, ongoing turmoil in the financial markets could increase the demand for specific risk transfer transactions to bolster balance sheets of primary life insurers.

Summary of financial statements

Income statement

USD millions	2018	2019	Change in %
Revenues			
Gross premiums written	36 406	42 228	16
Net premiums written	34 042	39 649	16
Change in unearned premiums	–167	–1 675	–
Premiums earned	33 875	37 974	12
Fee income from policyholders	586	620	6
Net investment income – non-participating business	4 075	4 171	2
Net realised investment gains/losses – non-participating business	65	1 580	–
Net investment result – unit-linked and with-profit business	–1 593	4 939	–
Other revenues	39	30	–23
Total revenues	37 047	**49 314**	33
Expenses			
Claims and claim adjustment expenses	–14 855	–18 683	26
Life and health benefits	–11 769	–13 087	11
Return credited to policyholders	1 033	–4 633	–
Acquisition costs	–6 919	–7 834	13
Operating expenses	–3 432	–3 579	4
Total expenses before interest expenses	–35 942	**–47 816**	33
Income before interest and income tax expense	1 105	**1 498**	36
Interest expenses	–555	–589	6
Income before income tax expense	550	909	65
Income tax expense	–69	–140	103
Net income before attribution of non-controlling interests	481	**769**	60
Income attributable to non-controlling interests	–19	–42	121
Net income after attribution of non-controlling interests	462	**727**	57
Interest on contingent capital instruments, net of tax	–41		–100
Net income attributable to common shareholders	421	**727**	73

Changes in equity

USD millions	2018	2019	Change in %
Total shareholders' equity as of 1 January	34 124	27 930	–18
Net income attributable to common shareholders	421	727	73
Dividends	–1 592	–1 659	4
Change in unrealised gains/losses on securities, net	–2 841	3 247	–
Change in other-than-temporary impairment, net of tax	–1	2	–
Change in foreign currency translation	–356	110	–
Purchase/sale of treasury shares and share based payments	–1 402	–1 166	–17
Other changes in equity	–423	60	–
Total shareholders' equity as of 31 December	27 930	**29 251**	5
Non-controlling interests	797	1 786	124
Total equity as of 31 December	28 727	**31 037**	8

Summary balance sheet

USD millions	2018	2019	Change in %
Assets			
Fixed income securities	95 952	81 573	–15
Equity securities	3 036	2 993	–1
Other investments	13 351	12 892	–3
Short-term investments	5 417	5 768	6
Investments for unit-linked and with-profit business	29 546	520	–98
Cash and cash equivalents	5 985	7 562	26
Deferred acquisition costs	8 217	7 838	–5
Acquired present value of future profits	1 818	1 042	–43
Reinsurance recoverable	7 058	5 898	–16
Other reinsurance assets	22 798	24 743	9
Goodwill	4 071	3 945	–3
Other	10 321	9 354	–9
Assets held for sale[1]		74 439	–
Total assets	207 570	**238 567**	15
Liabilities and equity			
Unpaid claims and claim adjustment expenses	67 446	72 373	7
Liabilities for life and health policy benefits	39 593	19 836	–50
Policyholder account balances	31 938	5 405	–83
Other reinsurance liabilities	15 865	17 775	12
Short-term debt	1 633	185	–89
Long-term debt	8 502	10 138	19
Other	13 866	13 232	–5
Liabilities held for sale[1]		68 586	–
Total liabilities	178 843	**207 530**	16
Shareholders' equity	27 930	**29 251**	5
Non-controlling interests	797	1 786	124
Total equity	28 727	**31 037**	8
Total liabilities and equity	207 570	**238 567**	15

[1] Please refer to Note 11 "Assets held for sale" for more details.

Group results

Swiss Re reported a full-year 2019 net income of USD 727 million, driven by a strong Life & Health Reinsurance result and excellent investment performance.

Christian Mumenthaler
Group Chief Executive Officer

> Our 2019 results were impacted by heavy natural catastrophe losses, our decisive management actions to reposition Corporate Solutions and increased claims in US casualty. On the other hand, we delivered an excellent investment result and strong performance in L&H Re, demonstrating the power of our diversified business model.

Strategy and priorities
Swiss Re's purpose is to make the world more resilient and act as the ultimate shock absorber for societies and communities. We collect premiums and risk from all over the world, diversify the risks on our balance sheet and pay out claims to those who have been hit by catastrophes. Our business strategy is centred around diversifying our access to risk pools by leveraging our risk knowledge, unique client access and capital strength to achieve our financial targets and create sustainable value for all stakeholders.

The Reinsurance Business Unit remains the core engine of profitability, delivering a market-leading combination of shareholder returns and capital repatriation for the Group. Long-term performance of Property & Casualty Reinsurance (P&C Re) remains strong, despite significant natural catastrophe claims in recent years. Life & Health Reinsurance (L&H Re) is delivering peer-leading returns underpinned by global diversification and strong growth in Asia. In line with our strategy, we are profitably expanding our Reinsurance business through our capabilities in underwriting large transactions and providing innovative solutions. At the same time, we are also accessing corporate and retail market risk directly, through our Corporate Solutions and Life Capital Business Units, respectively. Asset Management is consistently generating attractive returns while taking an industry-leading approach focused on Environmental, Social and Governance (ESG) criteria, leveraging our financial markets expertise and benefiting from our flexible investment platform built on the latest technology and advanced analytics.

An integral part of the Group strategy relies on monetising our research and development (R&D) capabilities, thereby cementing Swiss Re's position as the leading risk knowledge company. We are running 80 R&D programmes with 450 dedicated FTEs and investing about USD 300 million a year in key technology projects. The aim is to strengthen Swiss Re's proprietary risk knowledge and to advance our capabilities to enter new risk pools, compete and advise. In particular, platforms such as iptiQ, the digital B2B2C business, and Magnum, the leading automated underwriting solution for L&H Re, are becoming a significant business driver.

In Corporate Solutions, we took decisive management actions in 2019 to return this business to profitability. These measures included cost cutting, reserve strengthening, as well as a reduction in risk exposures in specific lines of business. Portfolio repositioning will allow Corporate Solutions to focus on selected profitable segments, where we are seeing an improving price environment. The next steps in business transformation will focus on de-commoditisation of its core portfolio, selective growth with differentiating capabilities such as innovative risk solutions and expansion through tech-driven initiatives.

Life Capital is successfully transitioning to a dynamically growing, digital B2B2C business. In line with our objective to deconsolidate our UK subsidiary ReAssure, Swiss Re entered into an agreement to sell this closed-book business to Phoenix Group Holdings plc in December 2019. The transaction has a compelling strategic rationale and valued ReAssure at GBP 3.25 billion. The sale is expected to close in mid-2020, subject to regulatory and antitrust approvals. We also continue to expand our open book businesses. In particular, iptiQ is developing dynamically and averaged more than 4 000 policy sales a week, with significant expansion opportunities geographically.

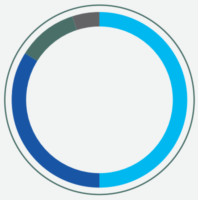
Performance

Swiss Re reported net income of USD 727 million for the year, compared with USD 421 million for 2018, driven by strong L&H Re results and excellent investment performance. The Group's property and casualty businesses were impacted by natural catastrophes and man-made losses, as well as ongoing trends in US casualty business. The Group's net operating margin[1] increased to 3.4% compared with 2.9% in the prior year.

Reinsurance generated a net income of USD 1.3 billion, compared with USD 1.1 billion in 2018. P&C Re reported a net income of USD 396 million in 2019, up from USD 370 million in 2018. The current year's result benefited from profitable business growth and a very strong investment result, while both years were adversely impacted by large natural catastrophe losses.

Net premiums and fees earned by business segment, 2019

Total: USD 38.6 billion



[1] Net operating margin is calculated as "Income before interest and income tax expense" divided by "Total revenues" excluding "Net investment result – unit-linked and with-profit business".

4.2
Net investment income in USD billions, 2019
(2018: USD 4.1 billion)

4.7%
Group return on investments, 2019
(2018: 2.8%)

Claims in 2019 primarily stemmed from Typhoon Hagibis and Typhoon Faxai in Japan, Hurricane Dorian in the Atlantic, and wildfires, floods and hailstorms in Australia, as well as losses from the Ethiopian Airlines crash and the subsequent grounding of the Boeing 737 MAX fleet. The result was further impacted by late claims development from Typhoon Jebi. The net operating margin decreased slightly to 3.8% in 2019 from 4.3% in 2018.

L&H Re contributed a net income of USD 899 million in 2019, up from USD 761 million in 2018. The underwriting result included a negative adjustment to the carrying value of an existing treaty, which had to be fair valued following the acquisition of Old Mutual Wealth Life Assurance Limited by ReAssure from Quilter plc. This was partially offset by active portfolio management and improved mortality development in the Americas. The net operating margin increased to 10.0% in 2019 from 9.4% in the previous year.

Corporate Solutions incurred a net loss of USD 647 million in 2019, compared with a net loss of USD 405 million in 2018. The current year's result reflected management actions to reposition the business and large and medium-sized man-made losses, mainly from prior accident years related to the recent deterioration in US casualty. The net operating margin was –16.7% and –11.1% for 2019 and 2018, respectively.

Life Capital reported a net loss of USD 177 million in 2019, compared with a net income of USD 23 million in 2018, mainly due to a charge related to the agreement to sell ReAssure. Excluding this one-time accounting impact, net income rose to USD 53 million, Life Capital's net operating margin declined to 2.4% in 2019 from 3.9% in 2018.

Shareholders' equity, excluding non-controlling interests, increased to USD 29.3 billion at the end of 2019, up from USD 27.9 billion at the end of 2018. The rise was mainly driven by net income of USD 0.7 billion and unrealised gains on fixed income securities of USD 3.2 billion, partially offset by a payment to shareholders of USD 2.6 billion for the 2018 regular dividend and the share buyback programmes.

Swiss Re achieved a return on equity (ROE) of 2.5% for 2019, compared with an ROE of 1.4% in 2018.

Earnings per share for 2019 were USD 2.46 or CHF 2.46, compared with USD 1.37 or CHF 1.34 for 2018.

Book value per share stood at USD 100.64 or CHF 97.46 at the end of 2019, compared with USD 93.09 or CHF 91.72 at the end of 2018. Book value per share is based on shareholders' equity and excludes non-controlling interests.

Business performance

Net premiums earned and fee income for the Group amounted to USD 38.6 billion for 2019, an increase of 12.0% year-on-year. At constant exchange rates, net premiums earned and fee income increased by 15.0%.

Gross premiums written increased by 16.0% to USD 42.2 billion in 2019, driven primarily by growth in P&C Re.

P&C Re contributed USD 19.3 billion of net premiums earned in 2019, up 19.8% from USD 16.1 billion in 2018, reflecting large transactions and growth in the natural catastrophe business. At constant exchange rates, net premiums earned increased by 23.0% year-on-year.

The P&C Re combined ratio increased to 107.8% in 2019 from 104.0% in the prior year, mainly due to unfavourable prior-year development and a higher large loss burden.

L&H Re net premiums earned and fee income increased 1.3% to USD 13.0 billion, affected by unfavourable foreign exchange movements and the termination of an intragroup retrocession agreement with Life Capital. At constant exchange rates, premiums earned and fee income increased by 4.5%.

Corporate Solutions net premiums earned were USD 4.2 billion for 2019, up 6.1% from the previous year, as double-digit rate increases and growth in targeted lines of business more than offset the impact from active pruning of selected underwriting portfolios. At constant exchange rates, net premiums earned increased 7.3% year-on-year. The Corporate Solutions combined ratio was 127.9% in 2019, compared with 117.5% in the previous year, mainly due to exceptionally severe and frequent large- and medium-sized man-made losses from prior accident years and reserve increases.

Net premiums earned and fee income for Life Capital increased to USD 2.1 billion in 2019 from USD 1.6 billion in the prior year, driven by growth in the open book life and health insurance business and the termination of an intra-group retrocession agreement with L&H Re. Life Capital continued to generate significant gross cash[2] amounting to USD 1.1 billion in 2019, compared with USD 818 million in 2018.

Investment result and expenses

The Group's investment portfolio, excluding unit-linked and with-profit investments, increased to USD 134.5 billion at the end of 2019, from USD 122.6 billion at the end of 2018. The increase was largely driven by the impact of declining interest rates and credit spread tightening, as well as favourable foreign exchange movements.

The return on investment (ROI) was 4.7% for 2019, compared with 2.8% in 2018, reflecting strong equity market performance, as well as additional gains within the fixed income portfolio.

The Group's non-participating net investment income increased to USD 4.2 billion in 2019 from USD 4.1 billion in the prior year, demonstrating the stability of the recurring investment income.

The Group reported non-participating net realised investment gains of USD 1.6 billion in 2019, compared with USD 0.1 billion in 2018. The increase was primarily due to the contribution from equity securities and additional gains on sales of fixed income securities.

Acquisition costs for the Group amounted to USD 7.8 billion in 2019, up from USD 6.9 billion in 2018, driven primarily by growth in P&C Re.

Operating expenses were USD 3.6 billion in 2019, compared with USD 3.4 billion in 2018. The year-on-year increase of 4.3% was primarily driven by expenses related to the suspended initial public offering of and subsequently, the agreement to sell ReAssure.

Interest expenses increased by 6.1% to USD 589 million in 2019 from USD 555 million in the prior year.

The Group reported a tax charge of USD 140 million on a pre-tax income of USD 909 million for 2019, compared with a tax charge of USD 69 million on a pre-tax income of USD 550 million for 2018. This translated into an effective tax rate in the current and prior-year reporting periods of 15.4% and 12.5%, respectively. The tax rate in 2019 was largely driven by tax benefits from effective settlement of tax audits and tax-exempt income, partially offset by tax charges from other income-based taxes and non-deductible expenses.

[2] Gross cash generation is the estimated net cash arising from business activity within the Life Capital Business Unit during the reporting period taking into account both surplus development and certain capital actions. It is calculated gross across both Swiss Re's and MS&AD Insurance Group Holdings Inc's interest in ReAssure.

Reinsurance

As windstorms, floods, earthquakes and wildfires continued to hit communities around the world, reinsurance again served as a key resilience tool.

Moses Ojeisekhoba
CEO Reinsurance

> We are working with our clients and partners to increase resilience around the world by providing insurance coverage and developing new solutions for our society's growing challenges.

Climate change impacts
As the world watches the number of major devastating weather events tick upward, we see the knock-on effects of events like wildfires, drought and floods contribute to an ever-growing protection gap. These so-called "secondary perils" can either spin off from a "primary peril" like a hurricane or earthquake, making such natural disasters even more dangerous, or result from more weather extremes linked to prolonged hot spells or heavy rain. They show no mercy and wreak havoc every year on the millions of households and businesses in their path.

These dangers are of particular concern in the world's growing cities and densely populated areas which are exposed to rising temperatures and heavier precipitation. In recent years, such events accounted for more than half of all insured natural catastrophe losses.

The positive impact of reinsurance
In 2019, Reinsurance helped people, businesses and communities by paying out more than USD 12 billion in property and casualty claims. The benefits of reinsurance were not only felt by those impacted by natural catastrophes or other property or casualty losses. During 2019, through the use of mortality payments, Reinsurance supported 142 000 family members who lost a loved one. It is our financial strength and stability that allows us to make insurance payouts promptly, making a difference to people in their time of need.

Resilience is at the heart of our strategy

The strategy of Swiss Re's Reinsurance Business Unit is focused on differentiation, which is driven by three key assets:

1. Direct access to our clients, in particular our C-Suite access, which allows us to understand their specific needs and deliver tailored solutions.

2. Our risk knowledge, built up over more than 150 years, which helps us build actionable solutions to close existing and growing protection gaps.

3. Our capital strength, which allows us to promptly pay claims.

Differentiation helps us navigate an evolving industry, where change is driven by factors including digitalisation and technology, geopolitical tensions and persistently low interest rates. To continue to be effective and help our clients succeed in this complex environment, we have developed a strategy that moves from solving traditional business problems to responding to future needs. Through the three pillars of Core, Transactions and Solutions, we respond to today's risks, while fulfilling a key role in maintaining society's resilience.

Core is our traditional business, focused on transferring an insurance risk from a client's balance sheet to our own, while also deploying technology to make processes more efficient. Transactions are large and complex deals that we can complete thanks to our execution ability and the strength of our balance sheet. Our Solutions are all about working alongside our clients to help them grow their underlying business. Joint risk sharing ensures an alignment of interest and makes us an even stronger partner.

Keeping our edge, now and in the future

These are challenging times for our industry, and we need to be a step ahead of risk, predicting loss trends and providing a compelling risk-return balance for our capital providers. We continue to focus on capital allocation to risk pools and on extending the reach of our products, to make them more accessible and inclusive and help to close the protection gap.

Property & Casualty Reinsurance

Property & Casualty Reinsurance

Property & Casualty Reinsurance (P&C Re) reported a net income for 2019 of USD 396 million compared with USD 370 million in 2018. The result reflected large natural catastrophe and man-made losses of USD 2.3 billion as well as proactive measures to address ongoing trends in US casualty. This was balanced by profitable business growth, driven by large transactions and growth in natural catastrophe business, as well as by a very strong investment result. The large natural catastrophe losses were mainly driven by typhoons Hagibis and Faxai in Japan, Hurricane Dorian in the Atlantic and wildfires, floods and hailstorms in Australia. The result was further impacted by late claims development for Typhoon Jebi. In addition, large man-made losses included the Ethiopian Airlines crash and the subsequent grounding of the Boeing 737 MAX fleet. The net operating margin decreased from 4.3% to 3.8%.

The investment result increased by 68.8% to USD 2.3 billion, driven by gains on sales of fixed income securities and market value gains on equity securities. The return on investments was 4.3%.

Property & Casualty Reinsurance results

USD millions	2018	2019	Change in %
Revenues			
Gross premiums written	16 545	21 562	30
Net premiums written	16 098	20 882	30
Change in unearned premiums	–3	–1 607	–
Premiums earned	16 095	**19 275**	20
Net investment income	1 380	1 419	3
Net realised investment gains/losses	–16	883	–
Other revenues	36	18	–50
Total revenues	17 495	**21 595**	23
Expenses			
Claims and claim adjustment expenses	–11 614	–14 783	27
Acquisition costs	–4 012	–4 810	20
Operating expenses	–1 114	–1 189	7
Total expenses before interest expenses	–16 740	**–20 782**	24
Income before interest and income tax expense	755	**813**	8
Interest expenses	–313	–352	12
Income before income tax expense	442	**461**	4
Income tax expense	–72	–65	–10
Net income attributable to common shareholders	370	**396**	7
Claims ratio in %	72.2	76.7	
Expense ratio in %	31.8	31.1	
Combined ratio in %	104.0	107.8	

Premiums

Gross premiums written increased by 30.3% to USD 21.6 billion in 2019. Net premiums earned were USD 19.3 billion for 2019, up from USD 16.1 billion in the prior period. The increase was driven by large transactions in the Americas and EMEA, as well as growth in the natural catastrophe business.

Combined ratio

The P&C Re combined ratio was 107.8% in 2019, compared with a reported combined ratio of 104.0% in 2018. The impact from natural catastrophes of USD 1.9 billion in 2019 was 3.5 percentage points above the expected level for the year. The unfavourable prior-year development negatively impacted the combined ratio by 3.5 percentage points in 2019.

Administrative expense ratio[1]

The administrative expense ratio decreased to 6.2% in 2019 from 6.9% in 2018, reflecting higher net premiums while expenses remained contained.

Lines of business

The property combined ratio increased to 101.3% in 2019, compared with 99.9% a year earlier. While both periods were impacted by large natural catastrophe losses, the deterioration was driven by an adverse prior-year development in 2019, mainly due to late claims from Typhoon Jebi, partly compensated by reserve releases from large losses.

The casualty combined ratio increased to 116.6% in 2019, up from 110.6% in 2018.

The specialty combined ratio deteriorated to 95.3% in 2019 compared with 93.4% in 2018. The current period included the impact of the Ethiopian Airlines crash and the subsequent Boeing 737 MAX fleet grounding, partly offset by favourable prior-year developments, mainly in marine and credit & surety businesses.

[1] Operating expenses divided by premiums earned

Investment result
The return on investments was 4.3% for 2019, up from 2.4% in 2018, reflecting an increase in the investment result of USD 1 080 million, mainly driven by additional net realised gains.

Net investment income increased by USD 36 million to USD 1 310 million for 2019, driven by a higher invested asset base.

Net realised gains, were USD 985 million for 2019 compared with net realised losses of USD 63 million for the prior period. The increase was driven by both additional gains on sales of fixed income securities and market value gains on equity securities, given strong equity market performance.

Insurance-related investment results and foreign exchange gains/losses are not included in the figures above.

Shareholders' equity
Shareholders' equity decreased to USD 8.3 billion as of 31 December 2019 from USD 9.5 billion on 31 December 2018, primarily driven by dividends paid to the Group of USD 1.4 billion and the capitalisation of inter-segmental payables and receivables following a change in presentation of historic inter-company expense balances. This was partially offset by the net changes in unrealised gains/losses and net income. The return on equity for 2019 was 4.4% compared with 3.7% in 2018.

Outlook
Renewals of loss-affected natural catastrophe business in January 2020 experienced favourable rate increases. Property insurance rates are generally hardening for business exposed to tropical cyclones and in loss-affected areas. In other areas the rates are broadly stable.

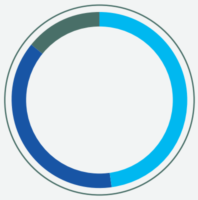
The Business Unit observed rate increases for loss-affected lines and markets within specialty lines and otherwise stable terms and conditions.

For casualty, Swiss Re saw strong rate increases in the US for Excess of Loss treaty business and improvements on proportional treaty business, supported by the material rate increases on the primary side as a response to the growing loss trends. In EMEA and Asia, the outlook for casualty rates is stable.

The Business Unit continues to see some good opportunities for transactions and will participate in those that meet its return requirements.

Swiss Re is closely monitoring the developments of the current SARS-CoV-2 coronavirus pandemic. Depending on further developments, the Business Unit may see an impact on contingency coverages it provided, e.g. event cancellation covers.

Premiums earned by line of business, 2019
Total: USD 19.3 billion



- **48%** Casualty
- **38%** Property
- **14%** Specialty

Life & Health Reinsurance

Life & Health Reinsurance

Life & Health Reinsurance (L&H Re) reported a strong net income for 2019 of USD 899 million, compared with USD 761 million in 2018. The underwriting result included a negative adjustment to the carrying value of an existing treaty, which had to be fair valued following the acquisition of Old Mutual Wealth Life Assurance Limited by ReAssure from Quilter plc, reflecting the decrease in interest rates since treaty inception. As a result, L&H Re rebalanced its asset portfolio, realising gains of a similiar magnitude. Excluding this adjustment, the underwriting result was higher than in 2018, driven by active portfolio management and improved mortality developments in the Americas.

The investment result was very strong, reflecting higher net realised gains from sales of fixed income securities and market value gains on equity securities. The return on equity was 12.4%, compared with 11.1% in 2018, above the business segment's target range of 10–12%.

Premiums

Net premiums earned and fee income in 2019 increased by 1.3% to USD 13.0 billion from USD 12.8 billion for the prior year. Gross premiums written decreased by 0.5% to USD 14.5 billion, reflecting unfavourable foreign exchange movements and the termination of an intra-group retrocession agreement with Life Capital. Adjusting for these two items, gross premiums written increased by 5.6%.

Net operating margin

The net operating margin for 2019 was 10.0%, an increase from 9.4% in 2018 due to strong investment performance.

Management expense ratio

The management expense ratio was 5.2%, a decrease from 5.4% in 2018, reflecting lower operating expenses and higher premium volumes.

Life & Health Reinsurance results

USD millions	2018	**2019**	Change in %
Revenues			
Gross premiums written	14 527	14 452	–1
Net premiums written	12 647	12 734	1
Change in unearned premiums	36	101	–
Premiums earned	12 683	**12 835**	1
Fee income from policyholders	152	169	11
Net investment income – non-participating business	1 305	1 207	–8
Net realised investment gains/losses – non-participating business	347	628	81
Net investment result – unit-linked and with-profit business	–33	118	–
Other revenues	1	4	–
Total revenues	14 455	**14 961**	4
Expenses			
Life and health benefits	–10 280	–10 587	3
Return credited to policyholders	–5	–162	–
Acquisition costs	–2 045	–1 975	–3
Operating expenses	–758	–746	–2
Total expenses before interest expenses	–13 088	**–13 470**	3
Income before interest and income tax expense	1 367	**1 491**	9
Interest expenses	–410	–445	9
Income before income tax expense	957	**1 046**	9
Income tax expense	–155	–147	–5
Net income before interest on contingent capital instruments	802	**899**	12
Interest on contingent capital instruments, net of tax	–41		–100
Net income attributable to common shareholders	761	**899**	18
Management expense ratio in %	5.4	5.2	
Net operating margin in %	9.4	10.0	

Lines of business

Income before interest and income tax (EBIT) for the life segment decreased to USD 581 million for 2019, from USD 720 million in the prior year. The result in 2019 was adversely impacted by the carrying value adjustment following the acquisition of Old Mutual Wealth Life Assurance Limited by ReAssure. Excluding this item, the result benefited from active portfolio management and improved mortality developments in the Americas.

EBIT for the health segment was USD 258 million in 2019, compared with USD 355 million in the prior-year period. The 2019 result reflected the impact from an update of the assumptions for the Group business in Asia, experience and model improvements in EMEA and increased operating expenses in line with premium growth.

Investment result
The return on investments for 2019 was 5.0%, up from 3.7% in 2018, reflecting an increase in the investment result of USD 480 million.

Net investment income decreased slightly by USD 15 million to USD 1 113 million in 2019. The running yield for 2019 was 3.3%.

Net realised gains were USD 687 million for 2019, compared with USD 192 million for the prior period, with the current period positively impacted by gains from sales of fixed income securities and market value gains on equity securities.

Insurance-related investment results as well as foreign exchange gains/losses are not included in the figures above.

Shareholders' equity
Shareholders' equity increased to USD 8.3 billion as of 31 December 2019 from USD 6.3 billion as of 31 December 2018. The increase of USD 2.0 billion reflects a change in net unrealised gains and net income for the period, partly offset by the dividend paid to the Group.

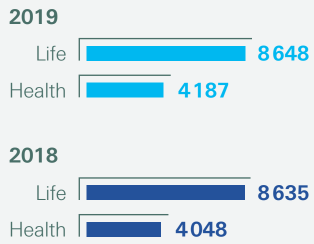
Return on equity was 12.4% in 2019, up from 11.1% in 2018.

Outlook
The Business Unit expects increases in life and health treaty reinsurance new business to be driven by high-growth markets, with more modest growth in mature markets. In mature markets, the prolonged low interest rate environment continues to have an unfavourable impact on long-term life business. Cession rates are expected to be broadly stable in major markets. The Business Unit sees a continued strong focus of clients on capital, risk and balance sheet optimisation in mature markets, leading to ongoing opportunities for large transactions.

Swiss Re will continue to pursue growth opportunities in high-growth markets and in large transactions, including longevity deals. L&H Re is responding to the expanding need for health protection driven by ageing societies, and is applying its risk knowledge to help reduce the protection gap in all regions.

Since the emergence of the SARS-CoV-2 coronavirus, we observe changes in the volumes of new business sales in some markets due to the reduced personal interaction between consumers and sales agents. The situation is changing rapidly and Swiss Re is closely monitoring developments.

Premiums earned by line of business, 2019
Total: USD 12.8 billion



Corporate Solutions

Corporate Solutions' results were impacted by decisive management actions to reposition the business and strengthen reserves. The result was also affected by large and medium-sized man-made losses, mainly from the prior accident years related to the recent deterioration in US casualty.

Andreas Berger
CEO Corporate Solutions

> 2019 was a difficult year for Corporate Solutions. However, we are actively managing risk exposure and correcting the price deficiencies to ensure a more focused and profitable portfolio going forward.

Strategy and priorities

As communicated with half-year 2019 results, Corporate Solutions has carried out a strategic review of its portfolio to address recent underperformance. In addition to increasing reserves and reinsurance protection, decisive management actions include portfolio pruning measures to ensure a more focused and profitable portfolio going forward. Portfolio repositioning, together with efficiency improvements and accelerated momentum in insurance rates, will help Corporate Solutions return to underwriting profitability with an estimated normalised combined ratio of 105% in 2020. The target normalised combined ratio for 2021 remains 98%.

Performance

Net loss was USD 647 million in 2019 with a net operating margin of –16.7%, compared with a net loss of USD 405 million in 2018 with a net operating margin of –11.1% for the previous period. The 2019 result reflected management actions to address underperformance and increased claims in US casualty business. It was also impacted by a high frequency and severity of large and medium-sized man-made losses, mainly from the prior accident years, with a claims burden of USD 1.1 billion. The investment result was higher year-on-year, mainly due to realised gains from sales of fixed income securities and market value gains on equity securities. The 2019 result was supported by higher realised gains from insurance in derivative form. From 1 July 2019, Corporate Solutions entered into an Adverse Development Cover (ADC) with Property & Casualty Reinsurance to protect accident years 2012–2018 across its portfolio.

Premiums

Net premiums earned were USD 4.2 billion in 2019, an increase of 6.1% year-on-year, driven by significant rate increases and growth in many lines of business, which more than offset the active pruning of several portfolios, including US general liability. Gross premiums written increased by 6.0% to USD 5.0 billion in 2019.

Combined ratio

The Business Unit's combined ratio increased to 127.9% in 2019 from 117.5% in 2018, mainly due to large and medium-sized man-made losses from prior accident years and reserve increases as part of the management actions taken in 2019.

Lines of business

The property combined ratio for 2019 improved by 1.3 percentage points to 116.6%, driven by lower natural catastrophe losses, partially offset by higher man-made losses.

The casualty combined ratio increased to 137.6% in 2019, mainly as a result of adverse prior-year development. The casualty combined ratio includes the full recovery from the ADC, as the majority of the reserves covered under the ADC agreement are casualty reserves.

The specialty combined ratio for 2019 deteriorated by 22.7 percentage points to 129.2%, impacted by higher large losses, including the compulsory liquidation of Thomas Cook in the third quarter.

Investment result

The return on investments was 3.4% for 2019, compared with 2.1% in 2018, reflecting an increase in the investment result of USD 124 million.

Net investment income increased by USD 16 million to USD 240 million in 2019, mainly due to a higher running yield.

Net realised gains were USD 84 million, up from net realised losses of USD 24 million in 2018. The current year result benefited from realised gains from sales of fixed income securities and market value gains on equity securities.

Corporate Solutions results

USD millions	2018	2019	Change in %
Revenues			
Gross premiums written	4 694	4 974	6
Net premiums written	4 122	4 253	3
Change in unearned premiums	–197	–87	–56
Premiums earned	3 925	**4 166**	6
Net investment income	207	234	13
Net realised investment gains/losses	16	162	–
Other revenues	3	5	67
Total revenues	4 151	**4 567**	10
Expenses			
Claims and claim adjustment expenses	–3 241	–3 900	20
Acquisition costs	–607	–640	5
Operating expenses	–763	–788	3
Total expenses before interest expenses	–4 611	**–5 328**	16
Loss before interest and income tax expense	–460	**–761**	65
Interest expenses	–24	–40	67
Loss before income tax expense	–484	**–801**	65
Income tax expense/benefit	75	143	91
Net loss before attribution of non-controlling interests	–409	**–658**	61
Income attributable to non-controlling interests	4	11	175
Net loss attributable to common shareholders	–405	**–647**	60
Claims ratio in %	82.6	93.6	
Expense ratio in %	34.9	34.3	
Combined ratio in %	117.5	127.9	

Insurance-related derivative results and foreign exchange gains/losses are not included in the investment figures.

Corporate Solutions offers insurance protection against weather perils and other risks, which is accounted for as derivatives. Insurance in derivative form reported net realised gains of USD 89 million in 2019, compared with USD 30 million in 2018.

Shareholders' equity

Shareholders' equity increased to USD 2.0 billion since the end of 2018, due to the Group's injection of USD 600 million capital in the second quarter of 2019 and unrealised investment gains, partly offset by the net loss for the period.

The return on equity was –34.1% in 2019, compared with –19.4% in 2018.

Outlook

Market momentum substantially accelerated throughout 2019. Terms and conditions tightened in parallel. Swiss Re expects the positive momentum in commercial insurance rates to continue after achieving a broad-based 12% price quality increase in 2019 (17% in the fourth quarter), which we expect will have a positive effect on the Business Unit's profitability. Further rate hardening is required until the price level is sufficient across all lines of business. Corporate Solutions expects to realise the benefits from the 2019 management actions in its financial results in 2020 and 2021.

Swiss Re is closely monitoring the developments of the current SARS-CoV-2 coronavirus pandemic. Depending on future developments, Corporate Solutions may see an impact in certain lines of business, including credit & surety, property and other specialty lines.

Life Capital

Life Capital accelerated its transition to a dynamically growing, digital B2B2C business, creating improved access to risk pools.

Thierry Léger
CEO Life Capital

> 2019 was a pivotal year for Life Capital. With the agreement to sell ReAssure, we took a definitive step in our transition to a B2B2C business focused on making insurance more accessible and affordable for people globally – both through our digital platform iptiQ and our Group Life & Health business, elipsLife.

Strategy and priorities

During 2019, Life Capital further accelerated its transition to a dynamically growing, digital B2B2C business.

A significant step in this transformation was the agreement to sell Life Capital's UK closed book business, ReAssure, to Phoenix Group Holdings plc. As previously communicated, Swiss Re's goal has been to deconsolidate ReAssure by reducing its ownership below 50%. The transaction, which is expected to close in mid-2020, subject to regulatory and antitrust approvals, valued ReAssure at GBP 3.25 billion. Earlier in the year, ReAssure agreed to acquire the UK closed book business of Quilter plc, adding over 0.2 million customer policies and GBP 12 billion of assets to ReAssure's platform. This transaction closed on 31 December 2019.

In the open book business, Life Capital continues to use technology to enable both elipsLife and iptiQ to achieve efficiencies and profitable growth and focuses on expanding both platforms globally. In 2019, the strong growth in these businesses continued, with gross written premiums increasing 22% year-on-year when measured at constant exchange rates.

Steady growth in elipsLife's mature markets allowed the business to expand into new markets, including the US. Meanwhile, iptiQ expanded into property & casualty personal lines in Europe. By the end of 2019, iptiQ had onboarded 29 partners, providing protection to more than 377 000 customers globally, and leading to an estimated valuation of USD 1–1.5 billion.

Life Capital made the first steps towards expanding into Asia in 2019, where significant potential for future growth is expected.

Performance

In 2019, Life Capital reported a net loss of USD 177 million, including a USD 0.2 billion charge in connection with the agreement to sell ReAssure. Excluding this charge, net income was USD 53 million, an increase from USD 23 million in 2018. The current year result benefited from strong investment results, partially offset by expenses related to the separation of ReAssure into a standalone group and operating costs arising from the continued growth in the open book businesses.

The net operating margin in 2019 was 2.4%, compared with 3.9% in the prior year, in line with movements in income.

Life Capital generated significant gross cash of USD 1.1 billion in 2019, compared with USD 818 million in the prior year. The gross cash generated in 2019 was mainly driven by the proceeds from the sale of subordinated bonds issued by ReAssure and a 10% stake sale in ReAssure to MS&AD Insurance Group Holdings Inc, partially offset by the impact of ReAssure recapitalisation ahead of separation. Consistent with the transition of Life Capital, the Group will no longer disclose the gross cash generation for 2020 and beyond.

Life Capital paid a dividend of USD 0.5 billion to the Group in October 2019.

Life Capital results

USD millions	2018	2019	Change in %
Revenues			
Gross premiums written	2 739	2 831	3
Net premiums written	1 175	1 780	51
Change in unearned premiums	–3	–82	–
Premiums earned	1 172	**1 698**	45
Fee income from policyholders	434	451	4
Net investment income – non-participating business	1 256	1 193	–5
Net realised investment gains/losses – non-participating business	66	18	–73
Net investment result – unit-linked and with-profit business	–1 560	4 821	–
Other revenues	–	1	–
Total revenues	1 368	**8 182**	498
Expenses			
Life and health benefits	–1 489	–2 500	68
Return credited to policyholders	1 038	–4 471	–
Acquisition costs	–255	–409	60
Operating expenses	–549	–721	31
Total expenses before interest expenses	–1 255	**–8 101**	–
Income before interest and income tax expense	113	**81**	–28
Interest expenses	–41	–72	76
Income before income tax expense	72	**9**	–88
Income tax expense	–26	–133	–
Net income/loss before attribution of non-controlling interests	46	**–124**	–
Income attributable to non-controlling interests	–23	–53	130
Net income/loss attributable to common shareholders	23	**–177**	–

Premiums

Gross premiums written in the open book businesses increased by 22% during 2019 when measured at constant exchange rates. Net premiums earned and fee income increased to USD 2.1 billion during 2019 from USD 1.6 billion in the prior year, driven by growth in the open book life and health insurance businesses, combined with the net impact of intra-group retrocessions and foreign exchange movements.

Investment result

The return on investments was 3.7% for 2019, compared with 3.3% in 2018, reflecting an increase in the investment result of USD 57 million.

Net investment income decreased by USD 57 million to USD 787 million in 2019, mainly due to run-off within the closed book portfolios.

Net realised gains increased by USD 114 million to USD 191 million in 2019, reflecting additional gains from sales of fixed income securities, partially offset by equity and interest rate derivative losses.

Insurance-related investment results as well as foreign exchange gains/losses are not included in the figures above.

Operating expenses

Operating expenses were USD 721 million in 2019, compared with USD 549 million in 2018. The increase was due to expenses related to the separation of ReAssure and investment into the growth of the open book businesses.

Shareholders' equity

Shareholders' equity increased by USD 0.2 billion to USD 5.3 billion, mainly driven by increased unrealised gains, partially offset by the net loss and the USD 0.5 billion dividend paid in 2019. The return on equity was –3.4% for 2019, compared with 0.4% for 2018. The year-on-year decrease was due to lower net income in 2019 including the charge in connection with the agreement to sell ReAssure.

Outlook

Life Capital's ambition is to increase access to the primary insurance risk pool through its fast growing B2B2C digital platform iptiQ and its Group L&H business elipsLife. The Business Unit applies leading-edge technology and smart use of data to offer affordable insurance products to more consumers. Life Capital's operations span Europe, the US, Australia, New Zealand, and going forward also China.

At present the scale and impact of the SARS-CoV-2 coronavirus outbreak does not appear to be great enough to cause significant mortality or morbidity impacts, but the situation is still changing rapidly. However, the Business Unit anticipates impacts on new policies written in some markets as sales activity is affected. Life Capital is closely monitoring this as the situation continues to unfold.

Swiss Re Institute

Edouard Schmid
Chairman Swiss Re Institute &
Group Chief Underwriting Officer

> The insight from our R&D is the foundation to how we model and understand risk.

Competitive advantage in underwriting
Distinctive knowledge and insights into insurance risk pools and individual risks have been the bedrock of Swiss Re's underwriting outperformance for more than 150 years, and cutting-edge research and development (R&D) continues to underpin the evolution of our capabilities and client offerings. Technological progress has opened up new opportunities to advance our expertise. Access to more and better data, advanced analytics and a strong talent base allow Swiss Re to create new insights at an ever-accelerating pace.

For example, the ability to aggregate and augment large pools of natural catastrophe exposure data from different sources allows Swiss Re to expand its ability to model and understand risk. In this new approach, data-mining techniques and clustering algorithms are being used to enrich risk characteristics of individual property exposures (such as age or construction type, for example). The underlying exposure database with more than 12 billion individual records is fully integrated with Swiss Re's proprietary risk modelling landscape, positioning us well for superior risk selection and advanced accumulation tracking. Strategic collaboration with open-source partners, for example the Global Earthquake Model (GEM) public-private partnership, provides further access to data and ensures timely consideration of leading scientific perspectives as we advance our own views on risk.

Deep risk insight coupled with a data-driven ability to assume forward-looking perspectives on insurance risk pools allows Swiss Re to allocate risk capital to the mutual benefit of our clients and shareholders, as well as society in the broader sense. Strategic investments in targeted R&D activities form the basis for continued underwriting excellence and position Swiss Re as a market-leading knowledge company.

Underwriting performance in 2019

The Group's overall underwriting performance in 2019 was impacted by higher-than-expected large natural catastrophe and man-made losses. Normalised for large losses, the Group's underwriting results are solid and bear testimony to our risk selection capabilities and the strong diversification of our business. In property and casualty, higher large loss burden and adverse prior-year development were balanced with profitable business growth, particularly in the natural catastrophe business. The Group's total property and casualty claims payments in the amount of USD 18.7 billion helped individuals, businesses and communities rebuild in the aftermath of natural catastrophe and man-made events. Underlying underwriting performance in life and health was strong, offsetting the adverse impact from carrying value adjustments and the charge related to the agreement to sell ReAssure. Total life and health benefits amounted to USD 13.1 billion, up from USD 11.8 billion in 2018.

Accelerated exposure growth and growing concentrations in areas with heightened exposure to natural catastrophes, such as coastal zones, have been contributing noticeably to loss activity in property and casualty. While technological progress can have a positive impact on loss frequency and severity in some lines of business, there are broad secular trends driving up loss cost tied to climate change, rapid urbanisation and increasing complexity of business operations. Changing societal trends and attitudes have been impacting claims severity further in specific markets, mainly in the US, a phenomenon commonly described as social inflation. Similarly, on the life and health side, the expansion of genetic testing, rising obesity rates, opioid-related mortality and other trends drive up claims amid stalling mortality improvement rates.

Swiss Re is well positioned to support our clients in addressing these challenges by utilising cutting-edge underwriting R&D, innovative risk transfer solutions and a strong balance sheet.

Market environment and outlook

Going into 2020, we expect the outbreak of the SARS-CoV-2 coronavirus, and the related illness, COVID-19, will lead to significant disruptions of economic activity and a global recession in 2020. While there is considerable uncertainty around the virus spread, our baseline scenario is for economic activity to normalise during the second half of the year and into 2021. For our baseline, insurance premiums are nevertheless expected to grow by around 3% in real terms, with emerging Asia powering global industry growth. China, India and other Asian markets continue to expand, based on significant protection gaps in those markets. Government initiatives and industry efforts increasingly seek to close those gaps. Swiss Re aims to be at the forefront in this area to help reduce the barriers to supply and demand that currently hinder insurance uptake.

While the effects of the coronavirus are still unfolding, what we have learned from past pandemic outbreaks is that it is important to actively encourage data gathering and cooperation between healthcare and other sectors. Swiss Re continues to engage with leaders in science, insurance and regulatory bodies on the topic.

Profitability, as measured by return on equity, has strengthened in both property and casualty and life and health reinsurance businesses in 2019, in part due to improved realised gains from investment management. With low interest rates set to stay, however, the investment environment will remain extremely challenging. With the industry experiencing its third year of elevated insurance losses, the pressure for improved market discipline is rising, and this discipline has begun to spread from catastrophe-affected portfolios to other lines of business. This is leading to improvements in pricing and the exit of several re/insurers from otherwise unsustainable markets.

We expect broadly stable to improving property and casualty reinsurance prices as a result of rising claims and a significant reduction of available retrocession capacity. Underlying primary commercial line price increases have gained strength and broadened throughout 2019. Due to our long-standing underwriting experience as a leading reinsurer, we are well positioned to navigate fast-developing risk environments.

We are positive about the opportunities available to us. Demand continues to grow for solutions and services that deploy our R&D to clients, and our ability to engage in large and tailored transactions is an asset. In addition, our industry-leading product and geographic franchise enables us to rapidly and flexibly deploy capital across all insurance risk pools.

Group Investments

Guido Fürer
Group Chief
Investment Officer

> Asset management delivered excellent value to the Group, supported by a high quality investment portfolio.

Strategy

Swiss Re's investment portfolio provided an excellent contribution in 2019, despite headwinds from the declining interest rate environment. Fundamentally, the portfolio performed well with no material impairments alongside gains generated from the fixed income portfolio and strong equity performance. Overall, Swiss Re's asset allocation changed only moderately during 2019, with a modest reduction in corporate bond exposure and continued deployment in private debt as well as real estate. We continue to systematically incorporate ESG across the entire investment value chain. As in the past, the Group remains flexible should there be a change in the investment outlook or if market opportunities arise.

Financial markets overview

Financial markets started 2019 on a strong note amid the central bank shift to looser monetary policy early in the year. This turn in policy stance was mainly driven by worsening market conditions coupled with weaker economic data, in particular slowing global trade and manufacturing activity.

Looking at specific asset classes, government bond yields declined significantly across multiple regions in 2019. In August 2019, the US Treasury yield curve briefly inverted for the first time since 2007 and sovereign bond yields hit all-time lows in various countries, with further expansion of negative-yielding debt. Equities rose sharply throughout 2019 following the large declines at the end of the prior year, predominantly due to the accommodative monetary policy. The S&P 500 index hit all-time highs and ended the year up 29%, further supported by optimism regarding the US-China "phase one" trade deal. Investment-grade corporate credit spreads tightened notably during the year.

4.2
Net investment income in USD billions, 2019
(2018: USD 4.1 billion)

4.7%
Group return on investments 2019
(2018: 2.8%)

2.8%
Group running yield 2019
(2018: 2.9%)

In the global macroeconomic environment, growth weakened in 2019 as trade activity slowed and the manufacturing sector contracted. Meanwhile, inflationary pressures have remained muted. Finally, the US-China trade dispute dominated geopolitics throughout the year, while the prospect of Brexit added to the political uncertainty in Europe.

Investment result

The Group's investment portfolio, excluding unit-linked and with-profit investments, increased to USD 134.5 billion at the end of 2019, from USD 122.6 billion at the end of 2018. The increase was largely driven by the impact of declining interest rates and credit spread tightening as well as favourable foreign exchange movements.The return on investments for 2019 was 4.7%.

The result was primarily driven by net investment income as well as gains within the fixed income portfolio and performance from equity securities, reflecting the Group's strong overall investment portfolio position. In 2018, the return on investments was 2.8%. The Group's non-participating net investment income increased to USD 4.2 billion in 2019 from USD 4.1 billion the prior year, demonstrating the stability of the recurring investment income. The Group's running yield was largely unchanged at 2.8% from 2.9% in the prior year, alongside declining yields.

The Group reported non-participating net realised investment gains of USD 1.6 billion in 2019, compared with USD 0.1 billion in 2018, as the current year benefited from significant market value gains within the equity portfolio, as well as additional gains from sales within the fixed income portfolio.

Outlook

Global economic growth is expected to slow significantly in 2020 due to the SARS-CoV-2 coronavirus pandemic, with several G7 countries at risk of a recession during the year. Central banks are likely to cut policy rates further and stay very accommodative in this environment of elevated uncertainty. The US Federal Reserve has already enacted two surprise interest rate cuts for a total of 150bp in March. On the policy front, the attention is also on the fiscal policy responses that are currently being discussed.

Besides the rapidly evolving coronavirus situation, other important themes for 2020 include the continued trade policy uncertainty and the US presidential elections.

Our investment portfolio remains well diversified across investment classes, with a continued focus on quality and ESG criteria. We plan to moderately increase our allocation to private markets, including investments in private debt and real estate, which will further diversify the overall investment portfolio.

Share performance

Swiss Re shares
Swiss Re had a market capitalisation of CHF 35.6 billion on 31 December 2019, with 327.4 million shares outstanding, of which 290.7 million were entitled to dividends. Swiss Re shares are listed in accordance with the International Reporting Standard on the SIX Swiss Exchange (SIX) and are traded under the ticker symbol SREN, ISIN CH0126881561 and Swiss Security Number 12688156.

American Depositary Receipts (ADR)
In the US, Swiss Re maintains an ADR level I programme (OTC symbol SSREY).

Share price performance
Swiss Re shares opened the year at CHF 89.38. An intra-day high of CHF 110.45 was achieved on 27 December 2019. On 3 January 2019, the shares experienced an intra-day low of CHF 88.90. The year-end share price was CHF 108.70.

During 2019, the STOXX Europe 600 Insurance index (SXIP) increased by 24.4% and the broader index of Swiss blue chips (SMI) increased by 25.4%. The Swiss Re share increased by 20.6%.

Share trading
The average on-exchange daily trading volume for 2019 was 0.7 million shares. Trading volume peaked at 3.8 million shares on 3 May 2019.

Swiss Re's dividend policy
Swiss Re's dividend policy is a central element of Swiss Re's capital management priorities.

The Group aims to ensure superior capitalisation at all times and to maximise financial flexibility, growing the regular dividend with long-term earnings and, at a minimum, maintaining it. Swiss Re will then deploy capital for business growth where it meets its strategy and profitability requirements and finally repatriate further excess capital to shareholders, with the preferred form of future capital repatriation being share buyback programmes.

Dividends are typically paid out of current earnings and Swiss Re pays its dividend annually. Shares are ex-dividend two working days after the Annual General Meeting (AGM). Dividend payment is typically two working days after the ex-dividend date. The corresponding dates in 2020 are 21 and 23 April.

Dividends
The Board of Directors proposes a regular dividend of CHF 5.90 per share for 2019. The dividend paid for 2019 will be subject to 35% Swiss withholding tax.

Public share buyback programme
On 6 May 2019, the Board of Directors launched the public share buyback programme authorised by the 2019 AGM. This programme was completed on 18 February 2020.

For further information please visit www.swissre.com/investors/shares/share_buyback/

The Board of Directors proposes to the 2020 AGM to authorise the company to repurchase own shares for the purpose of cancellation by way of a public share buyback programme of up to CHF 1.0 billion purchase value to be executed before the 2021 AGM.

Swiss Re will ask the AGM in April 2021 permission to cancel the repurchased shares by way of share capital reduction.

Index representation
In addition to its relevant industry indices, Swiss Re is also represented in various Swiss, European and global indices, including the SMI and the SXIP. Swiss Re is also a member of various sustainability indices, including the Dow Jones Sustainability World and Europe, FTSE4Good, Euronext Vigeo World 120, Bloomberg Gender Equality Index and MSCI ESG Leaders index families. In July 2019, Swiss Re received a AAA rating on the MSCI ESG assessment.

Information for investors
More information is available on Swiss Re's website: www.swissre.com/investors

General information on Swiss Re shares

Identification numbers	Share	ADR
Swiss Security Number (Valorennummer)	12688156	–
ISIN (International Securities Identification Number)	CH0126881561	US8708861088

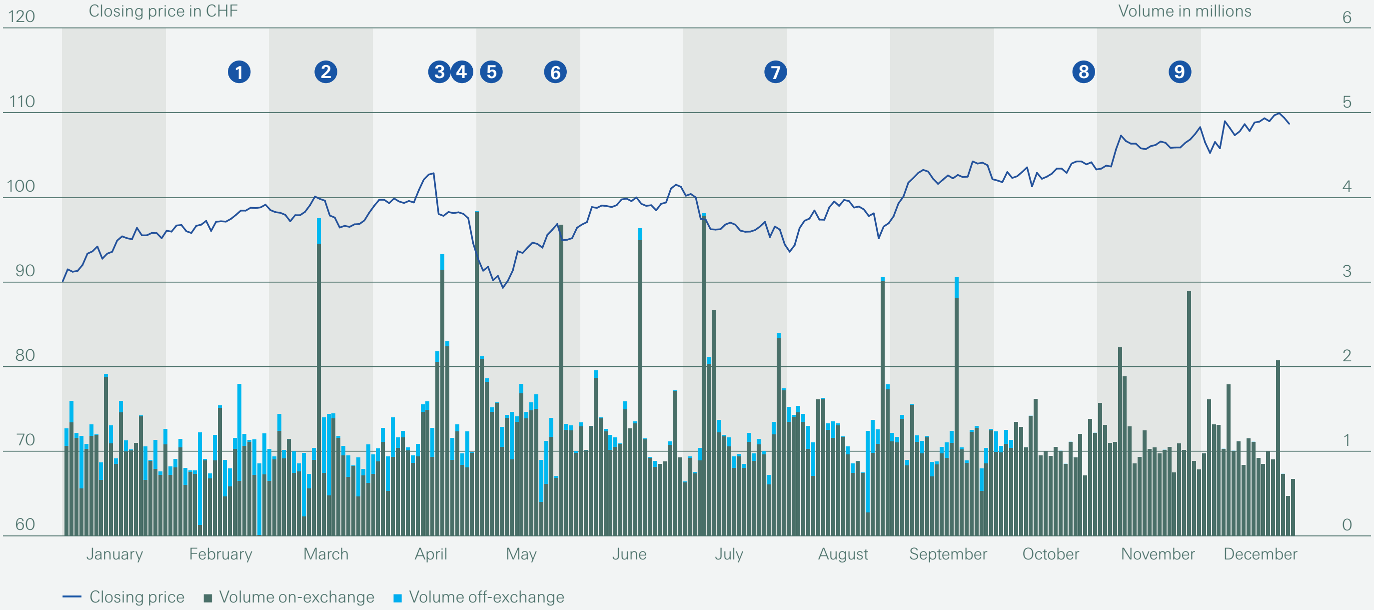
Ticker symbols	Bloomberg	Telekurs	Reuters
Share	SREN:SW	SREN	SREN.SW
ADR[1]	SSREY:US	SSREY	SSREY.PK

[1] Swiss Re's ADR are not listed but traded over the counter; four ADRs correspond to one Swiss Re share.

Weighting in indices

As of 31 December 2019	Index weight (in %)
Swiss/blue chip indices	
SMI	3.21
SPI	2.29
Insurance indices	
STOXX Europe 600 Insurance	5.43
Bloomberg Europe 500 Insurance	5.57
FTSEurofirst 300 Insurance	0.37
Dow Jones Insurance Titans 30	2.56
Sustainability indices	
Dow Jones Sustainability Europe	0.77
Dow Jones Sustainability World	0.29
FTSE4Good Global	4.10
Bloomberg Gender Equality	0.29

Swiss Re share price and trading volume in 2019



1 Annual results 2018 (21 February)
2 Annual report 2018 (14 March)
3 Ex dividend date (24 April)
4 Dividend payment (26 April)
5 Q1 results 2019 (3 May)
6 Management Dialogues (23 May)
7 H1 results 2019 (31 July)
8 9M results 2019 (31 October)
9 Investors' Day 2019 (25 November)

Key share statistics 2015 – 2019

As of 31 December	2015	2016	2017	2018	2019
Shares outstanding[1]	370 706 931	360 072 561	349 452 281	338 619 465	327 404 704
of which Treasury shares and shares reserved for corporate purposes	32 967 226[2]	34 093 834[3]	34 866 516[4]	38 575 324[5]	36 749 762[6]
Shares entitled to dividend	337 739 705	325 978 727	314 585 765	300 044 141	290 654 942

CHF unless otherwise stated					
Dividend paid per share	4.25[7]	4.60	4.85	5.00	5.60
Dividend yield[8] (in %)	4.33	4.77	5.32	5.55	5.15
Earnings per share[9]	12.93	10.55	1.02	1.34	2.46
Book value per share[10]	96.04	107.64	103.37	91.72	97.46
Price per share year-end	98.15	96.50	91.25	90.12	108.70
Price per share year high (intra-day)	99.75	97.85	98.50	98.80	110.45
Price per share year low (intra-day)	74.95	79.00	81.65	84.20	88.90
Daily trading volume (in CHF millions)	134	120	129	126	120
Market capitalisation[11] (in CHF millions)	36 385	34 747	31 888	30 516	35 589
ADR price at year-end (in USD)	24.53[12]	23.76	23.38	22.84	28.12

[1] Nominal value of CHF 0.10 per share.
[2] Includes 4.4m shares repurchased under the share buyback programme launched on 12 November 2015, which concluded on 2 March 2016.
[3] Includes 5.5m shares repurchased under the share buyback programme launched on 4 November 2016, which concluded on 9 February 2017.
[4] Includes 6.3m shares repurchased under the share buyback programme launched on 3 November 2017, which concluded on 16 February 2018.
[5] Includes 10.1m shares repurchased under the share buyback programme launched on 7 May 2018, which concluded on 15 February 2019.
[6] Includes 9.9m shares repurchased under the share buyback programme launched on 6 May 2019, which concluded on 18 February 2020.
[7] In addition to the regular dividend of CHF 4.25 per share, a special dividend of CHF 3.00 per share was paid in 2015.
[8] Dividend divided by year-end share price of the corresponding year.
[9] Calculated by dividing net income by the weighted average number of common shares outstanding.
[10] Based on shareholders' equity (excluding convertible perpetual capital instruments) divided by the number of external common shares entitled to a dividend.
[11] Based on shares outstanding.
[12] Since 15 June 2015, every Swiss Re ADR represents one quarter of a Swiss Re share. Prior to close of business on 12 June 2015, one ADR represented one Swiss Re share.

Swiss Re's 2019 economic result reflected large losses, offset by a strong contribution from investment activities and Life & Health Reinsurance.

Contents

EVM performance

Underwriting result in Property & Casualty Reinsurance and Corporate Solutions was impacted by large losses, largely offset by strong performance from investment activities and Life & Health Reinsurance.

John R. Dacey
Group Chief Financial Officer

> The power of Swiss Re's diversified business model is highlighted by our EVM results.

Economic Value Management (EVM) is Swiss Re's proprietary integrated economic valuation and steering framework, consistently measuring economic performance across all businesses.

Swiss Re reported a total contribution to economic net worth (ENW) of USD 2.9 billion in 2019, compared to USD 2.2 billion in 2018. On a risk-adjusted basis, Swiss Re reported an EVM loss of USD 19 million in 2019, compared to an EVM loss of USD 693 million in 2018.

Finding out what you need online

Read online a description of the summary of significant EVM principles and sensitivities.

–19
EVM profit in USD millions, 2019
(2018: USD −693 million)

8.2%
ENW per share growth
over-the-cycle target: 10%
(2018: 4.4%)

2.9
Total contribution to ENW in USD billions, 2019
(2018: USD 2.2 billion)

Group performance

The EVM loss of USD 19 million in 2019 reflected the impact of large natural catastrophe and man-made losses that adversely impacted Property & Casualty Reinsurance and Corporate Solutions, proactive measures to address ongoing trends in US casualty business, as well as higher capital costs. These losses were partially offset by an excellent investment result, a strong new business result in Life & Health Reinsurance and an estimated EVM profit on the agreement to sell ReAssure.

The EVM profit on new business was USD 1.2 billion, compared to USD 356 million in 2018. The 2019 result was mainly driven by a strong new business result in Life & Health Reinsurance and the estimated profit on the agreement to sell ReAssure in Life Capital, partially offset by the Property & Casualty Reinsurance new business result following large natural catastrophe losses and adverse industry trends in US casualty business.

The EVM loss from previous years' business amounted to USD 3.3 billion in 2019, compared to an EVM profit of USD 638 million in 2018. The 2019 result reflected unfavourable developments in Property & Casualty Reinsurance and Corporate Solutions, driven by large losses and adverse industry trends in US casualty business and higher capital costs for Property & Casualty Reinsurance.

Investment activities generated an EVM profit of USD 2.1 billion in 2019, compared to a loss of USD 1.7 billion in 2018. The 2019 results reflected credit spread tightening as well as strong performance across equities and alternative investments. The 2018 results were driven by a negative impact from credit spread widening as well as underperformance from equities and Principal Investments.

ENW per share growth amounted to 8.2% in 2019, below the over-the-cycle target of 10%. The underperformance was due to large losses, partially offset by the strong investment result.

Key information

USD millions, unless otherwise stated	2018	**2019**	Change in %
EVM profit	−693	−19	−97
Total contribution to ENW	2 166	2 932	35
Economic net worth (ENW)	35 993	36 138	0
Economic net worth per share in USD	119.96	124.33	4
Economic net worth per share growth, %[1]	*4.4*	*8.2*	
Profit margin – new business, %	*1.2*	*3.0*	
Profit margin – previous years' business, %	*3.5*	*−14.2*	
Profit margin – investments, %	*−18.3*	*21.8*	

[1] ENW per share growth is calculated as follows: (current-year closing ENW per share + current year dividends per share) ÷ (prior-year closing ENW per share + current year opening balance sheet adjustments per share).

Business segment performance

Property & Casualty Reinsurance reported an EVM loss of USD 1.4 billion in 2019, compared to a profit of USD 199 million in 2018. The EVM loss on new business of USD 209 million was driven by large natural catastrophe losses, mainly due to typhoons Hagibis and Faxai, Hurricane Dorian as well as proactive measures to address ongoing trends in US casualty and losses under the Adverse Development Cover with Corporate Solutions. The 2018 EVM loss of USD 430 million included large losses from typhoons Jebi and Trami in Japan, hurricanes Florence and Michael in the US as well as wildfires in California. The EVM loss on previous years' business of USD 1.8 billion was due to the update of capital costs, late claims for Typhoon Jebi, the impact of adverse trends for US casualty business as well as the Ethiopian Airlines crash and the subsequent Boeing 737 MAX grounding. Investment activities generated an EVM profit of USD 627 million in 2019, compared to a loss of USD 68 million in 2018. The 2019 EVM profit reflected strong performance across equity and alternative investments as well as the impact of credit spread tightening. The 2018 EVM loss was driven by credit spread widening as well as losses from equities, partially offset by positive performance from alternative investments.

Life & Health Reinsurance reported an EVM profit of USD 1.8 billion in 2019, compared to a profit of USD 523 million in 2018. The EVM profit on new business of USD 1.3 billion reflected strong transactional business growth in EMEA and the Americas as well as core business performance in the Americas. The 2018 EVM profit of USD 980 million included two large transactions in New Zealand. The EVM loss on previous years' business of USD 272 million included the impact of adverse mortality assumption updates in the Americas and unfavourable morbidity assumption updates and experience in Asia, partially offset by a favourable impact from the restructuring of intra-group retrocession agreements and several modelling and assumption updates. Investment activities generated an EVM profit of USD 739 million driven by the impact of credit spread tightening as well as positive equity performance. The 2018 EVM loss of USD 625 million reflected the impact from unfavourable interest rate movements on the net duration position, as well as credit spread widening.

Corporate Solutions reported an EVM loss of USD 805 million in 2019, compared to an EVM loss of USD 673 million in 2018. The EVM profit on new business of USD 164 million was mainly driven by recoveries under the Adverse Development Cover with Property & Casualty Reinsurance, rate hardening and large transactions, partially offset by management actions. Profitable business performance from insurance in derivative form also contributed to the new business profit. The EVM loss on previous years' business of USD 1.1 billion was impacted by the decisive management actions to address performance issues including reserve strengthening. The previous years' business result was also impacted by large and medium-sized man-made losses, mainly relating to adverse trends for US casualty business. Investment activities generated an EVM profit of USD 112 million in 2019, compared to a loss of USD 63 million in 2018, with results in 2019 reflecting the impact of credit spread tightening and favourable performance from equity investments, both in contrast to the 2018 result.

Life Capital generated an EVM profit of USD 591 million in 2019, compared to an EVM loss of 93 million in 2018. The EVM profit on new business was USD 133 million, mainly driven by the estimated gain on the agreement to sell ReAssure of USD 0.3 billion, partially offset by underwriting losses driven by expenses to grow the open book businesses. The EVM loss on previous years' business was USD 137 million, impacted by increased capital costs and expense reserves as well as other reserve strengthening in certain business lines. Investment activities generated an EVM profit of USD 596 million in 2019, compared to a loss of USD 533 million in 2018, driven by credit spread tightening and favourable performance from implied equity exposure arising from unit-linked business. The 2018 EVM loss was impacted by credit spread widening and underperformance from implied equity exposure arising from the unit-linked business.

Group items reported an EVM loss of USD 184 million in 2019, compared to a loss of USD 649 million in 2018. The EVM loss on new business was USD 190 million in 2019, mainly driven by capital costs on excess capital and overhead expenses, partially offset by trademark licence fees charged to the business segments. The EVM profit on previous years' business was USD 11 million, mainly driven by lower overhead expense assumptions. Investment activities generated an EVM loss of USD 6 million in 2019, compared to a loss of USD 398 million in 2018, reflecting an improved performance from Principal Investments in 2019.

Business segments – key information

USD millions, unless otherwise stated	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	**Total**
2018						
EVM profit	199	523	–673	–93	–649	–693
Total contribution to ENW	1 350	1 271	–474	265	–245	2 166
Profit margin – new business, %	*–3.1*	*8.2*	*–2.2*	*11.8*		*1.2*
Profit margin – previous years' business, %	*11.7*	*1.8*	*–36.4*	*23.1*		*3.5*
Profit margin – investments, %	*–2.4*	*–19.4*	*–11.9*		*–16.5*	*–18.3*
2019						
EVM profit	–1 396	1 775	–805	591	–184	–19
Total contribution to ENW	–351	2 656	–727	937	417	2 932
Profit margin – new business, %	*–1.1*	*7.8*	*5.3*	*7.2*		*3.0*
Profit margin – previous years' business, %	*–19.5*	*–2.5*	*–88.8*	*–6.9*		*–14.2*
Profit margin – investments, %	*23.2*	*18.8*	*20.5*		*–0.3*	*21.8*

EVM financial information

EVM income statement

For the years ended 31 December

USD millions, unless otherwise stated	2018	2019
Underwriting result		
Gross premiums and fees	44 807	58 325
Gross premiums and fees growth rate, %	*7.1*	*30.2*
Premiums and fees	43 860	57 120
Premiums and fees retention rate, %	*97.9*	*97.9*
Premiums and fees growth rate, %	*7.5*	*30.2*
Claims and benefits	−29 904	−40 913
Commissions	−8 278	−9 536
Other	286	452
Gross underwriting result – new business	**5 965**	**7 123**
Expenses	−3 624	−3 639
Net underwriting result – new business	**2 341**	**3 485**
Taxes	−415	−607
Capital costs	−1 570	−1 672
EVM profit – new business	**356**	**1 206**
EVM profit – previous years' business	**638**	**−3 293**
EVM profit – underwriting	**993**	**−2 087**
Investment result		
Mark-to-market investment result	895	9 565
Benchmark investment result	−1 702	−5 645
Gross outperformance (underperformance)	**−808**	**3 920**
Other	116	117
Expenses	−252	−249
Net outperformance (underperformance)	**−943**	**3 788**
Taxes	167	−810
Capital costs	−911	−910
EVM profit – investments	**−1 686**	**2 068**
EVM profit	**−693**	**−19**
Cost of debt	−67	−841
Release of current year capital costs	3 059	2 911
Additional taxes	−133	881
Total contribution to ENW	**2 166**	**2 932**
Profit margin – new business, %	*1.2*	*3.0*
Profit margin – previous years' business, %	*3.5*	*−14.2*
Profit margin – investments, %	*−18.3*	*21.8*

EVM balance sheet

As of 31 December

USD millions	2018	2019
Assets		
Investments	143 663	155 013
Cash and cash equivalents	5 695	9 611
In-force business assets	223 075	266 327
Retrocession assets	22 170	26 072
Other assets	3 540	3 457
Total assets	**398 142**	**460 480**
Liabilities		
In-force business liabilities	315 737	369 967
Retrocession liabilities	17 114	19 752
Provision for capital costs	7 569	9 850
Future income tax liabilities	4 264	4 203
Debt	11 180	13 718
Other liabilities	6 285	6 852
Total liabilities	**362 149**	**424 342**
Economic net worth	**35 993**	**36 138**
Total liabilities and economic net worth	**398 142**	**460 480**

Statement of economic net worth

For the years ended 31 December

USD millions	2018	2019
Economic net worth as of 1 January	**37 667**	**35 993**
Total contribution to ENW	2 166	2 932
Dividends and share buyback	–2 939	–2 590
Other, including foreign exchange on economic net worth	–901	–197
Economic net worth as of 31 December	**35 993**	**36 138**
Common shares outstanding as of 31 December	300 044 141	290 654 942
Economic net worth per share in USD as of 31 December	119.96	124.33

Business segments – EVM income statement

For the year ended 31 December

USD millions, unless otherwise stated	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	**Total**
2018							
Underwriting result							
Gross premiums and fees	19 014	19 754	4 488	1 376		175	44 807
Gross premiums and fees growth rate, %	*6.1*	*3.3*	*6.7*	*4.7*			*7.1*
Premiums and fees	18 604	20 253	3 962	1 042			43 860
Premiums and fees retention rate, %	*97.8*	*102.5*	*88.3*	*75.7*			*97.9*
Premiums and fees growth rate, %	*6.3*	*6.7*	*7.5*	*62.3*			*7.5*
Claims and benefits	−12 587	−14 141	−2 367	−809			−29 904
Commissions	−4 644	−2 923	−617	−93			−8 278
Other	62	−143	−9	286	89		286
Gross underwriting result – new business	**1 435**	**3 045**	**969**	**427**	**89**	**0**	**5 965**
Expenses	−1 301	−929	−880	−302	−211		−3 624
Net underwriting result – new business	**134**	**2 116**	**89**	**124**	**−122**	**0**	**2 341**
Taxes	−117	−388	−21	31	79		−415
Capital costs	−447	−748	−148	−89	−137		−1 570
EVM profit – new business	**−430**	**980**	**−81**	**66**	**−179**	**0**	**356**
EVM profit – previous years' business	**698**	**168**	**−530**	**374**	**−72**	**0**	**638**
EVM profit – underwriting	**268**	**1 148**	**−611**	**440**	**−251**	**0**	**993**
Investment result							
Mark-to-market investment result	1 046	−28	125	−137	−112		895
Benchmark investment result	−707	−442	−164	−310	−77		−1 702
Gross outperformance (underperformance)	**339**	**−470**	**−39**	**−447**	**−189**	**0**	**−808**
Other	59	22	10	24	1		116
Expenses	−90	−66	−17	−36	−44		−252
Net outperformance (underperformance)	**308**	**−513**	**−46**	**−460**	**−232**	**0**	**−943**
Taxes	−74	97	9	92	44		167
Capital costs	−302	−209	−26	−165	−209		−911
EVM profit – investments	**−68**	**−625**	**−63**	**−533**	**−398**	**0**	**−1 686**
EVM profit	**199**	**523**	**−673**	**−93**	**−649**	**0**	**−693**
Cost of debt	−58	−40	36	−2	−3		−67
Release of current year capital costs	908	1 060	200	398	493		3 059
Additional taxes	299	−272	−37	−38	−86		−133
Total contribution to ENW	**1 350**	**1 271**	**−474**	**265**	**−245**	**0**	**2 166**
Profit margin – new business, %	*−3.1*	*8.2*	*−2.2*	*11.8*			*1.2*
Profit margin – previous years' business, %[1]	*11.7*	*1.8*	*−36.4*	*23.1*			*3.5*
Profit margin – investments, %	*−2.4*	*−19.4*	*−11.9*		*−16.5*		*−18.3*

[1] The overall previous years' business profit margin for the Reinsurance Business Unit was 5.7%.

Business segments – EVM income statement

For the year ended 31 December

USD millions, unless otherwise stated	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	**Total**
2019							
Underwriting result							
Gross premiums and fees	24 174	27 244	4 767	2 656		–517	58 325
Gross premiums and fees growth rate, %	*27.1*	*37.9*	*6.2*	*92.9*	*n/a*		*30.2*
Premiums and fees	23 540	27 213	4 071	2 296			57 120
Premiums and fees retention rate, %	*97.4*	*99.9*	*85.4*	*86.5*	*n/a*		*97.9*
Premiums and fees growth rate, %	*26.5*	*34.4*	*2.8*	*120.4*	*n/a*		*30.2*
Claims and benefits	–15 937	–21 021	–2 197	–1 758			–40 913
Commissions	–5 873	–2 702	–626	–334			–9 536
Other	14	–6	59	380	4		452
Gross underwriting result – new business	**1 745**	**3 484**	**1 307**	**584**	**4**	**0**	**7 123**
Expenses	–1 411	–828	–875	–402	–123		–3 639
Net underwriting result – new business	**334**	**2 656**	**432**	**182**	**–119**	**0**	**3 485**
Taxes	–209	–417	–90	39	70		–607
Capital costs	–334	–931	–178	–88	–140		–1 672
EVM profit – new business	**–209**	**1 308**	**164**	**133**	**–190**	**0**	**1 206**
EVM profit – previous years' business	**–1 814**	**–272**	**–1 081**	**–137**	**11**	**0**	**–3 293**
EVM profit – underwriting	**–2 023**	**1 036**	**–917**	**–4**	**–179**	**0**	**–2 087**
Investment result							
Mark-to-market investment result	3 370	3 388	541	1 870	395		9 565
Benchmark investment result	–2 099	–2 166	–357	–933	–91		–5 645
Gross outperformance (underperformance)	**1 272**	**1 222**	**185**	**937**	**304**	**0**	**3 920**
Other	66	26	11	13	1		117
Expenses	–103	–71	–20	–28	–26		–249
Net outperformance (underperformance)	**1 234**	**1 178**	**175**	**922**	**278**	**0**	**3 788**
Taxes	–269	–242	–38	–188	–72		–810
Capital costs	–338	–197	–25	–139	–211		–910
EVM profit – investments	**627**	**739**	**112**	**596**	**–6**	**0**	**2 068**
EVM profit	**–1 396**	**1 775**	**–805**	**591**	**–184**	**0**	**–19**
Cost of debt	–273	–322	–45	–151	–50		–841
Release of current year capital costs	931	980	176	346	479		2 911
Additional taxes	386	223	–52	151	172		881
Total contribution to ENW	**–351**	**2 656**	**–727**	**937**	**417**	**0**	**2 932**
Profit margin – new business, %	*–1.1*	*7.8*	*5.3*	*7.2*			*3.0*
Profit margin – previous years' business, %[1]	*–19.5*	*–2.5*	*–88.8*	*–6.9*			*–14.2*
Profit margin – investments, %	*23.2*	*18.8*	*20.5*		*–0.3*		*21.8*

[1] The overall previous years' business profit margin for the Reinsurance Business Unit was –10.4%.

Business segments – EVM balance sheet

As of 31 December

USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	**Total**
2018							
Assets							
Investments	55 645	34 641	8 774	49 954	7 263	−12 614	143 663
Cash and cash equivalents	1 651	1 705	795	1 316	227		5 695
In-force business assets	15 912	219 518	2 677	28 760		−43 793	223 075
Retrocession assets	2 613	33 303	5 046	22 577		−41 369	22 170
Other assets	5 710	1 954	745	1 196	1 370	−7 434	3 540
Total assets	**81 531**	**291 122**	**18 038**	**103 802**	**8 860**	**−105 210**	**398 142**
Liabilities							
In-force business liabilities	54 480	215 998	13 237	72 558	745	−41 280	315 737
Retrocession liabilities	492	35 317	665	24 529		−43 889	17 114
Provision for capital costs	−88	6 250	226	1 181			7 569
Future income tax liabilities	324	4 396	−186	−48	−221		4 264
Debt	5 415	14 339	817	1 290	547	−11 227	11 180
Other liabilities	7 996	2 446	824	1 023	2 810	−8 814	6 285
Total liabilities	**68 618**	**278 745**	**15 583**	**100 532**	**3 881**	**−105 210**	**362 149**
Economic net worth	**12 913**	**12 377**	**2 454**	**3 270**	**4 979**	**0**	**35 993**
Total liabilities and economic net worth	**81 531**	**291 122**	**18 038**	**103 802**	**8 860**	**−105 210**	**398 142**

Business segments – EVM balance sheet

USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
2019							
Assets							
Investments	61 167	39 811	8 027	53 808	5 745	−13 544	155 013
Cash and cash equivalents	3 675	1 697	1 696	2 540	2		9 611
In-force business assets	20 125	250 985	2 564	39 076		−46 424	266 327
Retrocession assets	2 744	37 957	6 741	25 049		−46 419	26 072
Other assets	5 101	3 208	1 058	1 022	1 756	−8 689	3 457
Total assets	**92 812**	**333 658**	**20 087**	**121 496**	**7 503**	**−115 075**	**460 480**
Liabilities							
In-force business liabilities	63 537	249 676	14 870	87 513	776	−46 405	369 967
Retrocession liabilities	662	38 753	1 390	25 392		−46 445	19 752
Provision for capital costs	922	7 231	257	1 441			9 850
Future income tax liabilities	−93	4 635	−264	183	−259		4 203
Debt	6 968	15 216	866	1 847	626	−11 807	13 718
Other liabilities	10 681	3 260	662	1 164	1 505	−10 419	6 852
Total liabilities	**82 676**	**318 772**	**17 780**	**117 540**	**2 649**	**−115 075**	**424 342**
Economic net worth	**10 136**	**14 887**	**2 306**	**3 955**	**4 854**	**0**	**36 138**
Total liabilities and economic net worth	**92 812**	**333 658**	**20 087**	**121 496**	**7 503**	**−115 075**	**460 480**

Business segments – statement of economic net worth

For the year ended 31 December

USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	**Total**
2019						
Economic net worth as of 1 January	**12 913**	**12 377**	**2 454**	**3 270**	**4 979**	**35 993**
Total contribution to ENW	–351	2 656	–727	937	417	2 932
Dividends and share buyback	–1 420	–250		–505	–415	–2 590
Other, including foreign exchange on economic net worth	–1 006	104	579	253	–127	–197
Economic net worth as of 31 December	**10 136**	**14 887**	**2 306**	**3 955**	**4 854**	**36 138**

Comparison of EVM and US GAAP

The most significant differences between EVM and US GAAP are as follows:

- **Discounting:** For EVM, all future expected cash flows are discounted using risk-free interest rates. Under US GAAP, most property and casualty reserves are undiscounted (except for reserves acquired in business combinations), whereas life and health reserves are usually discounted based on book yields.
- **Investments and debt:** For EVM, all investments and debt positions are carried at fair value. Under US GAAP, different treatment applies for certain investments (eg real estate is held at depreciated cost) and debt is carried at amortised cost rather than at fair value.
- **Reserving basis:** For EVM, best-estimate current assumptions are used for all re/insurance reserves. Under US GAAP, life and health assumptions, including book yield discounting assumptions, are usually locked in and can include a provision for adverse deviation.
- **Recognition differences:** EVM considers the economic value related to annual management charges on unit-linked funds and adjusts for counterparty credit risk in the valuation of insurance-related net assets. In addition, EVM does not show minority interests on the balance sheet, but consolidates assets and liabilities based on the proportion of the interest held by Swiss Re.
- **Goodwill and other intangibles:** EVM excludes the recognition of potential future new business activities, including potential renewals. As a result, no goodwill or other intangible assets are carried in the EVM balance sheet.
- **Taxes:** For EVM, deferred tax assets and liabilities are recognised for temporary differences between US GAAP and EVM.
- **Capital costs:** EVM recognises opportunity costs for shareholders' capital. The present value of capital costs allocated to existing contracts are recognised in the EVM balance sheet.

Business segments – reconciliation to US GAAP

As of 31 December

USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	**Total**
2018						
US GAAP shareholders' equity	**9483**	**6274**	**1795**	**5113**	**5265**	**27930**
Discounting	4827	−849	417	−3076		1319
Investments and debt	2013	−1414	22	118	905	1644
Reserving basis						
GAAP margins		18612		2824		21436
Other	−4	103	922	−471	−745	−195
Recognition differences	−44	−168	−62	−125		−399
Goodwill and other intangibles	−1962	−1836	−370	−159	−603	−4930
Taxes	−1203	−2249	−114	513	−23	−3076
Capital costs	221	−6213	−194	−1488		−7674
Other	−418	117	38	21	180	−62
Total EVM valuation adjustments	**3430**	**6103**	**659**	**−1843**	**−286**	**8063**
Economic net worth	**12913**	**12377**	**2454**	**3270**	**4979**	**35993**
2019						
US GAAP shareholders' equity	**8318**	**8253**	**2005**	**5289**	**5386**	**29251**
Discounting	3484	−745	162	−3796		−895
Investments and debt	2302	−2305	−34	−39	491	414
Reserving basis						
GAAP margins		20796		3162		23958
Other	80	−35	850	−281	−776	−163
Recognition differences	−30	193	−25	87		225
Goodwill and other intangibles	−1943	−1847	−342	−31	−515	−4678
Taxes	−1043	−2213	−58	570	139	−2605
Capital costs	−808	−7187	−230	−1802		−10026
Other	−224	−21	−22	796	129	659
Total EVM valuation adjustments	**1818**	**6634**	**301**	**−1334**	**−532**	**6887**
Economic net worth	**10136**	**14887**	**2306**	**3955**	**4854**	**36138**

Independent Assurance Report

on the Economic Value Management financial information as of 31 December 2019 to the Board of Directors of Swiss Re Ltd, Zurich

We have been engaged to perform a reasonable assurance engagement on the Economic Value Management ('EVM') financial information of Swiss Re Ltd (the 'Company') for the year ended 31 December 2019 (the 'EVM financial information'). The EVM financial information consists of the income statement, balance sheet, statement of economic net worth and information on business segments as set out on pages 40 to 47 in the Company's 2019 Annual Report.

All other EVM information included in, or made available outside, the Company's 2019 Annual Report was not subject to assurance procedures and, accordingly, we express no conclusion on this information.

The reporting criteria used by the Company are described in the significant EVM principles (hereafter referred to as "EVM principles") as published on the Company's website (swissre.com/EVM_principles).

Board of Directors' responsibility

The Board of Directors is responsible for the preparation of the EVM financial information in accordance with the Company's EVM principles including data, valuation and accounting principles, assumptions and factors used and the related internal controls as determined necessary to enable the preparation of the EVM financial information that is free from material misstatement.

Practitioner's responsibility

Our responsibility is to perform a reasonable assurance engagement to express a conclusion on the EVM financial information as set out on pages 40 to 47 in the Company's 2019 Annual Report. We conducted our reasonable assurance engagement in accordance with International Standards on Assurance Engagements 3000 (Revised) 'Assurance engagements other than audits or reviews of historical financial information' issued by the International Auditing and Assurance Standards Board. This standard requires that we plan and perform this engagement to obtain reasonable assurance about the assurance conclusions.

A reasonable assurance engagement involves performing procedures to obtain evidence about the execution of the valuation and accounting for the purpose of the EVM financial information in accordance with the Company's EVM principles. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the EVM financial information, whether due to omissions, misrepresentation, fraud or error. In making those risk assessments, we consider internal controls relevant to the preparation of the EVM financial information in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing a conclusion on the effectiveness of the entity's internal controls regarding the EVM financial information. A reasonable assurance engagement also includes evaluating the appropriateness of the policies used and reasonableness of significant estimates made, as well as evaluating the adequacy of the overall presentation of the EVM financial information in accordance with the Company's EVM principles.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusion.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

PricewaterhouseCoopers AG, Birchstrasse 160, Postfach, CH-8050 Zürich, Switzerland
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Conclusion

In our opinion, the EVM financial information of the Company for the year ended 31 December 2019 as set out on pages 40 to 47 is prepared, in all material respects, in accordance with the Company's EVM principles applied as published on the Company's website (swissre.com/EVM_principles).

PricewaterhouseCoopers AG

Roy Clark

Frank Trauschke

Zurich, 18 March 2020

Swiss Re maintained its very strong capital position in 2019 while deploying capital to attractive risk pools and successfully growing the business.

Contents

Our resilient balance sheet protects our franchise and makes us a reliable partner for our clients.

The Group's capital position remains very strong with a Group SST ratio of 232% as of 1 January 2020, compared with the 220% target. This is supported by our diversified business model and disciplined risk-taking.

John R. Dacey
Group Chief Financial Officer

> "The strength of our business model allows us to continue to offer an attractive dividend bolstered by a public share buyback programme.

Financial strength
Swiss Re maintained a strong capital position during 2019 despite significant loss events. The Group's capital position remains very strong with a Group Swiss Solvency Test (SST) ratio of 232% as of 1 January 2020, which remains above Swiss Re's target capitalisation of 220%. Rating agencies A.M. Best, Moody's and Standard & Poor's (S&P) rated Swiss Re's financial strength 'superior', 'excellent' and 'very strong', respectively. This capital strength enables Swiss Re to support its clients while continuing to return capital to shareholders.

Swiss Re's overarching target is to maintain a very strong capital position that operates efficiently within constraints imposed by regulators and requirements from rating agencies, while giving the company maximum financial flexibility. Swiss Re's capital allocation decisions are steered to make capital and liquidity fungible to the Group wherever possible, while complying with local regulations and client needs. Cash dividends paid by our Business Units to the Group's parent holding company, Swiss Re Ltd, have amounted to USD 24.2 billion since 2013.

Based on the Group's capital strength, the Board of Directors proposes a 2019 regular dividend of CHF 5.90 per share. In addition, the Board of Directors proposes a further public share buyback programme at the discretion of the Board of Directors and subject to obtaining all necessary legal and regulatory approvals.

Liquidity
Our core insurance and reinsurance operations generate liquidity primarily through premium income. Our exposure to liquidity risk stems mainly from two sources: the need to cover potential extreme loss events and regulatory constraints that limit the flow of funds within the Group.

The amount of liquidity held is largely determined by internal liquidity stress tests, which estimate the potential funding requirements stemming from extreme loss events. Based on these internal

Patrick Raaflaub
Group Chief Risk Officer

liquidity stress tests, we estimate that Swiss Reinsurance Company Ltd, the most important legal entity of the Group from a liquidity perspective, currently holds significant surplus liquidity.

Swiss Re also provides FINMA, its principal regulator, with a yearly report on its liquidity position, in accordance with FINMA Circular 13/5, "Liquidity — Insurers".

Risk Management
Group Risk Management is key to the controlled risk-taking that underpins Swiss Re's financial strength. Risk Management is mandated to ensure that the Group and its legal entities have the necessary expertise, frameworks and infrastructure to support good risk-taking. In addition, it monitors and ensures adherence to applicable frameworks and also performs reserving and reporting activities.

Risk Management is embedded throughout Swiss Re's business. The Group has dedicated Chief Risk Officers and risk teams for all major legal entities and regions. These are closely aligned to Swiss Re's business structure, in order to ensure effective risk oversight, but remain part of the Risk Management function under the Group CRO, thus ensuring their independence as well as a consistent Group-wide approach to overseeing and controlling risks. They are supported in this by central risk teams that provide specialised risk expertise and oversight.

The Group's risk-taking is steered by Swiss Re's Risk Appetite Framework, which consists of two interlinked components: risk appetite and risk tolerance. The risk appetite statement facilitates discussions about where and how Swiss Re should deploy its capital, liquidity and other resources under a risk/return view. The risk tolerance sets clear boundaries to risk-taking.

Swiss Re's proprietary integrated risk model provides a meaningful assessment of the risks to which the Group is exposed and represents an important tool for managing our business. It determines the capital requirements for internal purposes and forms the basis for regulatory reporting under the SST and under Solvency II for our legal entities in the European Economic Area (EEA) and the United Kingdom.

Swiss Re continuously reviews and updates its internal model and parameters to reflect the Group's experiences and changes in the risk environment and current best practice.

Swiss Re's risk profile
In SST 2020, Swiss Re's overall risk increases to USD 21.3 billion (compared to USD 19.7 billion in SST 2019), driven by higher insurance risk mainly reflecting business growth and lower interest rates impact. Financial market and credit risk increase only marginally.

The increase in property and casualty risk mainly reflects growth in property business, translating into higher exposure to key natural catastrophe scenarios.

Higher life and health risk mainly reflects the impact of lower interest rates and business growth.

Financial market risk increases slightly, mainly due to repositioning of the credit portfolio, resulting in higher credit spread risk. The slight increase in credit risk is driven mainly by higher credit and surety underwriting risk.

> "
> Swiss Re's leadership in sustainability reflects our strong commitment to steer our business towards a low-carbon future.

Financial strength and capital management

Swiss Re's capital position remains very strong with significant capital deployment supporting business growth in 2019.

Solid capitalization enabling market opportunities

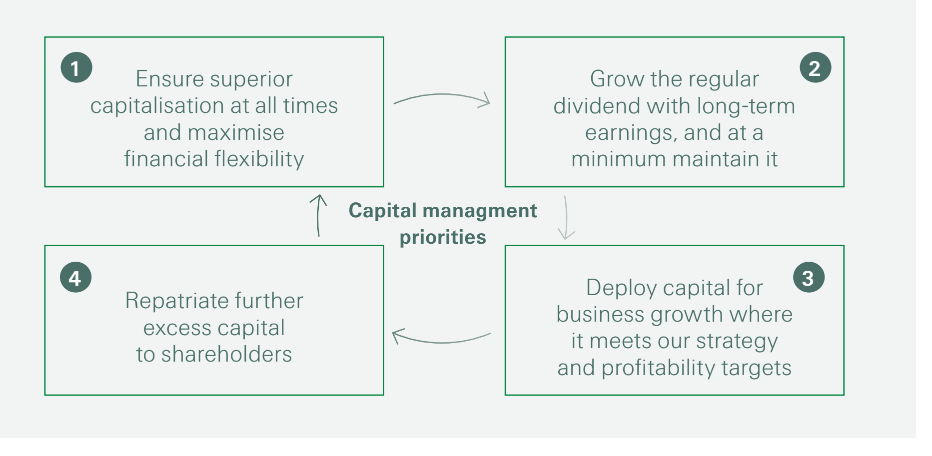
Swiss Re's policy of ensuring superior capitalisation at all times has meant that even after three consecutive years with large insurance losses, our strong capital position and high financial flexibility enabled us to respond to market opportunities and therefore creating sustainable long-term shareholder value by growing the regular dividend.

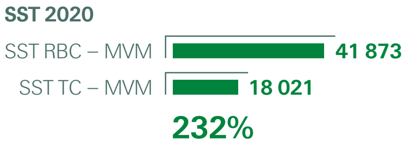
Swiss Re's capital management priorities aim to ensure the ability to continue operations following an extremely adverse year of losses from insurance and/or financial market events. Swiss Re's Board of Directors has also defined an SST capitalisation target of 220% for the Swiss Re Group.

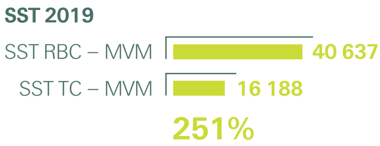
The below subsections describe Swiss Re's capitalisation according to the SST and the financial strength ratings.

Swiss Solvency Test (SST)

Swiss Re is supervised by FINMA at the Group level as well as for its regulated legal entities domiciled in Switzerland. FINMA supervision comprises minimum solvency requirements, along with a wide range of qualitative assessments and governance standards.







232%
SST ratio
(2020)

Based on current SST rules introduced in 2017, the ratio is calculated as SST risk-bearing capital (SST RBC) minus market value margin (MVM), divided by SST target capital (SST TC) minus MVM.

The Group SST 2020 report will be filed with FINMA in April 2020. Accordingly, the information presented below is based on currently available information and may differ from the final Group SST 2020 figures.

In SST 2020, the solvency of Swiss Re Group remains at a very strong level of 232% as of 1 January 2020, above the target of 220%. SST risk-bearing capital increases driven by strong investment contribution and higher supplementary capital, partially offset by capital distribution to shareholders. Underwriting contribution remained positive despite large losses from natural catastrophes, man-made events and increased claims in US casualty business. Strong growth in insurance risk as well as lower interest rates increase SST target capital and SST run-off capital costs (MVM) leading to the observed decrease in the ratio.

Swiss Re's Group SST 2020 ratio does not reflect the agreed sale of ReAssure Group plc to Phoenix Group Holdings plc expected to close in mid-2020. The transaction is estimated to increase the SST ratio by 12 percentage points.

Swiss Re Group SST Ratio

USD millions	SST 2019	**SST 2020**	Change
SST risk-bearing capital – market value margin	40637	**41873**	1236
SST target capital – market value margin	16188	**18021**	1833
SST ratio	251%	**232%**	**–19pp**

SST risk-bearing capital (SST RBC)

The SST RBC is derived from the SST net asset value (NAV), which represents the difference between the market-consistent value of assets and liabilities according to the valuation methodology prescribed under SST. For this purpose, the SST NAV is adjusted for the items in the table below.

Changes to the SST NAV mainly include economic capital generation or depletion due to underwriting and investment activities, foreign exchange movements, and capital management actions (such as dividend payments and share buyback programmes).

The increase in SST NAV to USD 49.2 billion is mainly driven by underwriting and investment contributions, partially offset by dividends paid, share buyback programmes and other contributions.

SST risk-bearing capital

USD millions	SST 2019	**SST 2020**	Change
SST net asset value	47268	**49231**	1963
Deductions	–3058	–3174	–116
SST core capital	44210	**46057**	1846
Supplementary capital	3450	5239	1789
SST risk-bearing capital	47660	**51295**	3635
Market value margin	7023	9422	2399
SST risk-bearing capital – market value margin	40637	**41873**	1236

The overall contribution from underwriting activities is positive, mainly reflecting underwriting contributions from Life & Health Reinsurance, partially offset by negative underwriting contributions from Property & Casualty Reinsurance, Corporate Solutions and Life Capital:

- The Life & Health Reinsurance contribution is mainly driven by strong transactional business growth in EMEA and the Americas as well as core business performance in the Americas, partially offset by adverse assumptions updates in the Americas and Asia.
- The Property & Casualty Reinsurance negative contribution reflects natural catastrophe losses, including typhoons Hagibis and Faxai in Japan, Hurricane Dorian in the Americas, Typhoon Jebi claims update, adverse industry trends for US casualty, Ethiopian Airlines crash and subsequent Boeing 737 MAX grounding, as well as a loss from the adverse development cover with Swiss Re Corporate Solutions Ltd.
- The Corporate Solutions negative contribution reflects previous years' business developments from reserving actions, large and medium-sized man-made losses, mainly relating to adverse industry trends for US casualty business. This is partially offset by a positive recovery from the adverse development cover with Swiss Reinsurance Company Ltd and rate hardening.
- The Life Capital underwriting contribution to SST NAV is negative, driven by expenses incurred for growing the open book businesses and underperformance of elipsLife.

The contribution from investment activities is positive, mainly driven by the impact of credit spread tightening and positive performance across equities and alternative investments.

Dividend payments and share buyback programmes lead to a decline in the SST NAV of USD 2.6 billion.

Deductions mainly reflect projected dividends and share buyback programmes (to be paid in 2020 and subject to AGM 2020 approval and subsequent BoD approval), as well as deferred taxes on real estate. These items increase by USD 116 million compared to SST 2019.

Supplementary capital is recognised as risk bearing under SST. The change in SST supplementary capital of USD 1.8 billion mainly reflects the issuance of one new senior and the replacement of two subordinated debt instruments.

A description of the change in market value margin, which represents the capital costs for the run-off period, is provided together with the SST target capital comments below.

SST target capital (SST TC)

Swiss Re uses an internal risk model to determine the economic capital required to support the risks on the Group's book, as well as to allocate risk-taking capacity to the different lines of business. The model also provides the basis for capital cost allocation in Swiss Re's EVM framework, which is used for pricing, profitability evaluation and compensation decisions. In addition to these internal purposes, the model is used to determine regulatory capital requirements under economic solvency frameworks such as SST and Solvency II.

In 2017, FINMA approved Swiss Re's internal model and its components for SST reporting purposes under their revised model review process. As a result of the material review on credit risk conducted by FINMA in 2018, Swiss Re implemented a minor update to the credit risk module, which has negligible impact on the credit risk figures. In 2019, FINMA conducted a material review of the Tropical Cyclone North Atlantic model, which was approved for use without conditions.

Since SST 2019, three major model changes have been implemented and were approved by FINMA in September 2019:

- Costing and reserving risk – The improved correlation within portfolios and adjusted calibration of costing risk increase the costing & reserving risk but have no material impact on total risk.
- Non-life claims inflation risk – The update of the inflation model resulted in a decrease in total risk.
- Foreign exchange risk – The removal of contingent foreign exchange risk has no material impact on risk figures. In addition further model currencies were introduced commensurate with business growth in the respective areas.

The risk exposure basis for SST is a projection for the period from 1 January 2020 to 31 December 2020 and is based on the economic balance sheet as of 31 December 2019 and adjustments to reflect 1 January 2020 business shifts.

In order to derive SST TC, total risk is adjusted for the line item "Other impacts" as shown in the table below.

SST TC increases to USD 27.4 billion due to an increase in the market value margin (reflected under "Other impacts") and higher total risk driven by increased insurance risk (see Risk assessment p. 67 for details).

Other impacts mainly reflect run-off capital costs (MVM) – which are deducted again from target capital to calculate the ratio – as well as the impact from business development over the forecasting period and requirements from FINMA that are not included in total risk as they are not consistent with Swiss Re's own risk view.

The increase in MVM is mainly driven by the impact of lower interest rates and growth of mortality and health business in Asia and the US.

SST Target Capital

USD millions	SST 2019	SST 2020	Change
Total risk	19 713	**21 332**	1 620
Other impacts	3 498	6 110	2 613
SST target capital	23 211	**27 443**	4 232
Market value margin	7 023	9 422	2 399
SST target capital – market value margin	16 188	**18 021**	1 833

Find more information about Swiss Re's risk model in the interactive online report.

19.8
Distribution to shareholders since 2013,
in USD billions

External dividends to shareholders

Based on the Group's solid economic earnings, the Board of Directors proposes a regular dividend of CHF 5.90 per share for the 2019 financial year, up from CHF 5.60 in 2018.

Consistent with the established capital management priorities, the Board of Directors proposes a further public share buyback programme of up to CHF 1.0 billion purchase value. In light of the recent volatility in the financial markets, the Board will evaluate the appropriateness of launching the share buyback programme in the second half of 2020.

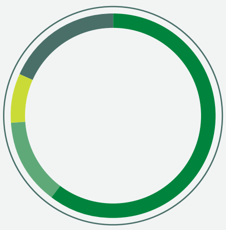
Business Unit structure and capital allocation

Our peer-leading capital repatriation is supported by strong dividend payments from our Business Units. The cash dividends paid to Swiss Re Ltd since 2013 totalled USD 24.2 billion, while the total amount of capital returned to shareholders in the same time period is USD 19.8 billion.

The Group also reinvested into the business by redeploying capital into the Business Units. The majority of this capital was allocated to grow profitable business.

Capital returned to shareholders since 2013

Cash dividends paid from each business unit to SRL
(USD bn)



- **14.0** Reinsurance P&C
- **3.2** Reinsurance L&H
- **1.8** Corporate Solutions
- **4.2** Life Capital

→ USD **24.2** bn
total cash dividends paid to Swiss Re Ltd[1]

→ USD **19.8** bn
distribution to shareholders[2]

1 Principal Investments has paid to Group dividends of USD 1.0bn between January 2013 and December 2019.
2 Reflects total external dividend and public share buyback programmes between January 2013 and December 2019.

Rating agency

Rating agencies assign credit ratings to the obligations of Swiss Re and its rated subsidiaries. The agencies evaluate Swiss Re based on a set of criteria that include an assessment of our capital adequacy, governance and risk management. Each rating agency uses a different methodology for this assessment.

A.M. Best, Moody's and S&P rate Swiss Re's financial strength based upon interactive relationships. The insurance financial strength ratings are shown in the table below.

On 18 October 2019, S&P affirmed the AA– financial strength of Swiss Re and its core subsidiaries. The outlook on the rating is "Stable". The rating reflects Swiss Re's extremely strong capital adequacy in excess of the AAA benchmark, its excellent franchise and diversified product suite across non-life and life reinsurance.

On 16 December 2019, Moody's affirmed Swiss Re's insurance financial strength rating and outlook as "Aa3" stable. The rating reflects Swiss Re's excellent market position, extensive diversification by line of business and geography, very strong capital adequacy and good reserve adequacy.

On 20 December 2019, A.M. Best confirmed the Group Swiss Re Financial Strength Rating of A+ (Superior) with stable outlook. The rating reflects A.M. Best's assessment of Swiss Re's balance sheet strength as "strongest", strong operating performance, very favourable business profile and very strong enterprise risk management.

Maintenance of target capital structure

Having achieved the Group's target capital structure in 2016, the focus is now on maintaining and optimising it.

The Group targets a senior leverage ratio of less than 25% and a subordinated (including contingent capital) leverage ratio of less than 20%. In prior years the Group's leverage ratios included undrawn off-balance sheet facilities (undrawn letter of credit capacity was included in the senior leverage ratio and undrawn, pre-funded subordinated debt facilities were included in the subordinated leverage ratio). To enable better peer comparison, from 2019 these off-balance sheet facilities are excluded from the Group's leverage ratios to the extent they remain undrawn. As further detailed on page 59, in 2019, the Group took advantage of attractive market conditions to upsize planned funding activities. ReAssure Group also issued GBP 1 billion of subordinated debt as part of the implementation of a more efficient capital structure.

Swiss Re's financial strength ratings

As of 31 December 2019	Financial strength rating	Outlook	Last update
Standard & Poor's	AA–	Stable	18 October 2019
Moody's	Aa3	Stable	16 December 2019
A.M. Best	A+	Stable	20 December 2019

Despite the increase in on-balance sheet leverage through 2019, the Group's leverage is comfortably under the senior and subordinated leverage targets at 10% and 16%, respectively. The expected deconsolidation of the ReAssure Group upon closing of the sale to Phoenix Group Holdings Plc in mid-2020 will further reduce the Group's subordinated leverage which, together with the off-balance sheet facilities, further strengthen the Group's financial flexibility.

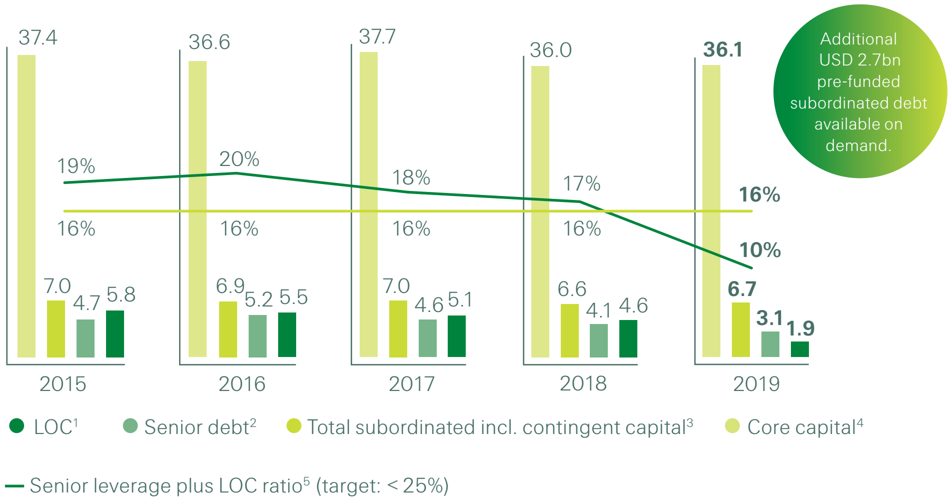
In March 2019, Swiss Re redeemed its senior notes issued by Swiss Re America Holding Corporation of USD 234 million at maturity.

Also in March 2019, Swiss Reinsurance Company Ltd issued EUR 750 million of subordinated notes with a coupon of 2.53% with a first call date in April 2030 and scheduled maturity in April 2050. In April 2019, Swiss Reinsurance Company Ltd issued USD 1 billion of subordinated notes with a coupon of 5.00% with a first call date in April 2029 and scheduled maturity in April 2049. Part of the proceeds of these two issuances were used to redeem the GBP 500 million perpetual subordinated notes that were called in May 2019 as well as the USD 750 million subordinated notes with contingent write-off that were called in September 2019.

In June 2019, ReAssure Group Plc issued three subordinated notes that were initially held by the Swiss Re Group and were subsequently placed with third party investors outside the Swiss Re Group. These subordinated notes comprised GBP 500 million of Tier 2 subordinated notes with a coupon of 5.867% and a scheduled maturity in 2029, GBP 250 million of callable Tier 2 subordinated notes with a coupon of 5.766% with a first call date in 2024 and a scheduled maturity in 2029, and GBP 250 million of Tier 3 subordinated notes with a coupon of 4.016% and a scheduled maturity in 2026.

In August 2019, Swiss Reinsurance Company Ltd issued USD 1 billion of truly perpetual subordinated notes at a coupon of 4.25%. The notes, which have a fixed credit spread for life and may be called by Swiss Re at its option every five years, provide permanent non-dillutive capital for Swiss Re.

Financial flexibility strengthened through reduced leverage
USD billions



[1] Drawn unsecured LOC and related instruments (2015 – 2018 shows drawn and undrawn).
[2] Senior debt excluding non-recourse positions.
[3] Funded subordinated debt and contingent capital instruments (2015 – 2018 also shows undrawn pre-funded facilities).
[4] Core capital of Swiss Re Group is defined as economic net worth (ENW).
[5] Senior debt plus LOCs divided by total capital.
[6] Funded subordinated debt divided by sum of funded subordinated debt and ENW (2015 – 2018 also shows undrawn pre-funded facilities).

Liquidity management

The active management of liquidity risks ensures the Group's ability to satisfy its financial obligations.

As a re/insurance group, Swiss Re's core business generates liquidity primarily through premium income. The Group's exposure to liquidity risk stems mainly from two sources: the need to cover potential extreme loss events and regulatory constraints that limit the flow of funds within the organisation.

A range of liquidity policies and measures are in place to manage these risks, in particular to ensure that
- sufficient liquidity is held to meet funding requirements under current conditions as well as adverse circumstances;
- funding is charged and credited at an appropriate market rate through Swiss Re's internal transfer pricing;
- diversified sources are used to meet the Group's residual funding needs; and
- long-term liquidity needs are taken into account in the Group's planning process and in the management of financial market risk.

Liquidity risk management

Swiss Re's core liquidity policy is to retain access to sufficient liquidity in the form of unencumbered liquid assets, cash and pre-funded facilities, to meet potential funding requirements arising from a range of possible stress events. To allow for regulatory restrictions on intra-Group funding, liquidity is managed from a legal entity perspective. The amount of liquidity held is determined by internal liquidity stress tests, which estimate the potential funding requirements stemming from extreme loss events.

The funding requirements under stress include:
- Cash and collateral outflows, as well as potential capital and funding support required by subsidiaries as a result of loss events
- Repayment or loss of all maturing unsecured debt and credit facilities
- Additional collateral requirements associated with a potential ratings downgrade
- Further contingent funding requirements related to asset downgrades
- Other large committed payments, such as expenses, commissions and tax

The stress tests also assume that funding from assets is subject to conservative haircuts, intra-Group funding is not available if subject to regulatory approval, no new unsecured funding is available and funding from new re/insurance business is reduced.

The primary liquidity stress test is based on a one-year time horizon, a loss event corresponding to 99% tail value at risk (see pages 67), and a three-notch ratings downgrade.

Swiss Re's liquidity stress tests are reviewed regularly and their main assumptions are approved by the Group Executive Committee. Swiss Re provides FINMA with a yearly report on its liquidity position, in accordance with FINMA circular 13/5, "Liquidity — Insurers."

Liquidity position of Swiss Reinsurance Company Ltd (SRZ)

From a liquidity perspective, SRZ is the most important legal entity of the Group. The estimated total liquidity sources in SRZ available within one year, after haircuts and net of short-term loans from Swiss Re Ltd and securities lending, amounted to USD 21.7 billion as of 31 December 2019, compared with USD 15.0 billion as of 31 December 2018. Based on the internal liquidity stress tests described above, we estimate that SRZ holds surplus liquidity after dividends to Swiss Re Ltd.

In 2019, the amount of surplus liquidity increased. This increase was largely due to net operating cashflows, internal dividends following legal entity optimisation and the positive impact of the reduction in interest rates.

Risk management

Risk Management provides independent oversight and applies an integrated approach to managing current and emerging risks.

Embedded throughout the business, the Group Risk Management function ensures an integrated approach to managing current and emerging threats. Risk Management plays a key role in business strategy and planning discussions, where Swiss Re's risk appetite framework facilitates risk/return discussions and sets boundaries to Group-wide risk-taking.

Taking and managing risk is central to Swiss Re's business. All risk-related activities, regardless of the legal entity in which they are undertaken, are subject to the Group's risk management framework. Consequently, the framework is applied at Group level and cascaded to all legal entity levels, whereby the three entities Swiss Reinsurance Company Ltd (SRZ), Swiss Re Corporate Solutions Ltd (SRCS) and Swiss Re Life Capital Ltd (SRLC) represent the top-level legal entities for the Business Units Reinsurance, Corporate Solutions and Life Capital.

The risk management framework sets out how Swiss Re organises and applies its risk management practices to ensure that all activities are conducted in line with the principles and limits mandated by the Group Risk Policy.

The framework comprises the following major elements:
- Risk governance documentation, including Group Risk Policy
- Key risk management principles
- Fundamental roles for delegated risk-taking
- Risk culture
- Organisation of risk management, including responsibilities at Board and executive level
- Risk control framework
- Risk appetite framework, including limits

Swiss Re applies a differentiated governance approach at the legal entity level, depending on the materiality of individual entities. SRZ, SRCS and SRLC, as well as major legal entities within the Group that are designated as so-called "Level I entities", are subject to enhanced governance, which includes the following requirements:
- Develop and maintain corporate and risk governance documentation that governs the responsibilities of the legal entity Board, committees and management
- Establish an Audit Committee as well as a Finance and Risk Committee to support the legal entity Board in performing its oversight responsibility for risk and capital steering
- Designate a Chief Risk Officer and Chief Financial Officer

Risk governance documentation

Swiss Re's risk management framework is set out in risk governance documentation at Group and legal entity level. Risk governance is the subset of corporate governance that describes the risk management framework and documents risk management practices. Group-level risk documents form the basis for all risk governance across Swiss Re. Additional risk governance for legal entities is prepared as an addendum to the Group or parent entity document.

Group risk governance documents are organised hierarchically across five levels, which are mirrored by equivalent documents at legal entity (LE) level:

- (SRL) Bylaws and the charter for the Group Finance and Risk Committee outline the ultimate authority for risk management, assigning responsibilities to the Board of Directors and the Group Executive Committee.
- The Group Risk Policy is defined by the Board and articulates Swiss Re's risk appetite framework (risk appetite and tolerance) as well as fundamental risk and capital structure principles.
- The Group Risk Management Standards outline how the Group organises and applies its risk management practices.
- Risk category standards describe how risk practices are implemented for a specific category.
- The lowest level comprises risk management methodology and process documentation.

Key risk management principles

Swiss Re's risk management is based on four fundamental principles. These apply consistently across all risk categories at Group and legal entity level:

- *Controlled risk-taking* – Financial strength and sustainable value creation are central to Swiss Re's value proposition. The Group thus operates within a clearly defined risk policy and risk control framework.
- *Clear accountability* – Swiss Re's operations are based on the principle of delegated and clearly defined authority. Individuals are accountable for the risks they take on, and their incentives are aligned with Swiss Re's overall business objectives.
- *Independent risk controlling* – Dedicated units within Risk Management control all risk-taking activities. These are supported by Compliance and Group Internal Audit functions.
- *Transparency* – Risk transparency, knowledge-sharing and responsiveness to change are integral to the risk control process. The central goal of risk transparency is to create a culture of mutual trust, and reduce the likelihood of surprises in the source and potential magnitude of losses.

Fundamental roles for delegated risk-taking

In order to ensure clear control, accountability and independent monitoring for all risks, Swiss Re's risk governance distinguishes between three fundamental roles in the risk-taking process:

- *Risk owner* – establishes a strategy, delegates execution and control, and retains ultimate responsibility for the outcomes.
- *Risk taker* – executes an objective within the authority delegated by the risk owner; risk takers are required to provide the respective risk controller with all information required to monitor and control their risks.
- *Risk controller* – is tasked by the risk owner with independent oversight of risk-taking activities to mitigate potential conflicts of interest between the risk owner and risk taker; risk controllers are responsible for escalating relevant concerns.

Risk-taking activities are typically subject to three lines of control. The first line comprises the day-to-day risk control activities performed by risk takers in the business as well as in Group functions, including identification of risks and design of effective controls. Independent oversight performed by functions such as Risk Management and Compliance represents the second line of control. The third line consists of independent audits of processes and procedures carried out by Group Internal Audit or by external auditors. This approach is designed to achieve a strong, coherent and Group-wide risk culture built on the principles of ownership and accountability.

Risk Governance documentation hierarchy

Level 0 – Risk management tasks of Boards and Executive Management	**SRL Bylaws**	**LE bylaws**
Level 1 – Risk Appetite Framework incl. risk and capital principles	**Group Risk Policy**	**LE risk appetite**
Level 2 – Risk-taking oversight throughout the Group	**Group Risk Management Standards**	**LE risk management standards**
Level 3 – Risk-taking oversight for specific risk categories	**Group risk category standards**	**LE risk management standards**
Level 4 – Method and process documentation	**Documentation on specific topics**	**LE specific topics**

Risk culture

Swiss Re fosters and maintains a strong risk culture to promote risk awareness and discipline across all its activities. This risk culture stands for the risk- and control-related values, knowledge and behaviour shared by all employees. Its principal components are summarised in a framework that builds on the Group Code of Conduct as well as on key risk management principles in the Group Risk Policy.

The risk culture framework serves to influence appropriate risk-taking behaviour in four key aspects, which are assessed annually for all employees in the performance and compensation process:

- Leadership in providing clear vision and direction
- Consideration of risk-relevant information in decision-making
- Risk governance and accountability of risk takers as well as transparent flow of risk information
- Embedding of risk management skills and competencies

Swiss Re's risk culture provides the foundation for the efficient and effective application of its Group-wide risk management framework. Group Risk Management reinforces the risk culture by ensuring risk transparency and fostering open discussion and challenge in the Group's risk-taking and risk management processes.

Key risk takers across Swiss Re are a particular focus in promoting good risk- and control-related behaviours. The relevant positions are identified in a regular process, and those who hold them are subject to additional behavioural objectives and assessments.

Risk culture is directly linked to Swiss Re's performance management, which is based not only on business results but also on behaviours. Swiss Re's compensation framework aims to foster compliance and support sensible risk-taking. Swiss Re also has a range of incentive programmes that reflect the long-term nature of its business by rewarding sustained performance rather than short-term results. This helps to align shareholder and employee interests.

Swiss Re's compensation principles and framework are captured within the Swiss Re Group Compensation Policy. The Group's Finance and Risk Committee conducts a regular risk assessment for all changes to this policy.

Key Risk Management bodies and responsibilities

Board of Directors of Swiss Re Ltd
- Responsible for the Group's governance principles and policies
- Acts through the Finance and Risk Committee, Investment Committee and Audit Committee

Group Executive Committee
- Develops and implements risk management framework
- Sets and monitors risk limits
- Some responsibilities delegated to Group CRO and major legal entities

Group CRO
- Principal independent risk controller
- Heads the Risk Management function
- Member of Group Executive Committee
- Reports to Board as well as to Group CEO

Central Risk Management units
- Oversight of financial market, credit and liquidity risk
- Shared risk expertise: risk modelling and governance, as well as political, sustainability and emerging risks
- Strategic control services: operational and regulatory risk management

Group Internal Audit
- Independent risk controller
- Assesses adequacy and effectiveness of internal control systems

Legal entity management
- Manages underwriting decisions and operational risks in its area

Legal entity CROs
- Responsible for risk oversight and establishing risk governance in their respective legal entities
- Supported by functional, regional and subsidiary CROs as well as dedicated risk teams

Compliance
- Compliance with applicable laws, Code of Conduct
- Manages compliance risks

Organisation of risk management

The Board of Directors of Swiss Re Ltd (the Board) is ultimately responsible for Swiss Re's overall risk governance principles and policies. It defines basic risk management principles and the risk appetite framework, including the Group's risk appetite and risk tolerance; in addition, it approves the Group's risk strategy. The Board mainly performs risk oversight and governance through three committees:

- Finance and Risk Committee – defines the Group Risk Policy, reviews risk capacity limits, monitors adherence to risk tolerance, and reviews top risk issues and exposures.
- Investment Committee – reviews the financial risk analysis methodology and valuation related to each asset class, and ensures that the relevant management processes and controlling mechanisms are in place.
- Audit Committee – oversees internal controls and compliance procedures.

The Group Executive Committee is responsible for developing and implementing Swiss Re's Group-wide risk management framework. It also sets and monitors major risk limits, oversees the Economic Value Management framework, determines product policy and underwriting standards, and manages regulatory interactions and legal obligations. The Group Executive Committee has delegated various risk management responsibilities to the Group Chief Risk Officer (Group CRO) as well as to certain legal entity CROs, in particular the CROs of the legal entities SRZ, SRCS and SRLC.

The Group CRO is appointed as the principal independent risk controller of Swiss Re. He is a member of the Group Executive Committee and reports directly to the Group CEO as well as to the Board's Finance and Risk Committee. The Group CRO also advises the Group Executive Committee, the Chairman or the respective Board Committees, in particular the Finance and Risk Committee, on significant matters arising in his area of responsibility.

The Group CRO leads the independent Risk Management function, which is responsible for risk oversight and control across Swiss Re. It thus forms an integral part of Swiss Re's business model and risk management framework. The Risk Management function comprises dedicated risk teams for legal entities and regions, as well as central teams that provide specialised risk expertise and oversight.

While the Risk Management organisation is closely aligned to Swiss Re's business structure, in order to ensure effective risk oversight, all embedded teams and CROs remain part of the Group Risk Management function under the Group CRO, thus ensuring their independence as well as a consistent Group-wide approach to overseeing and controlling risks.

Legal entity risk teams are led by dedicated CROs who report directly or indirectly to their top-level entity CRO, with a secondary reporting line to their respective legal entity CEO. These legal entity CROs are responsible for risk oversight in their respective entities, as well as for establishing the proper risk governance to ensure efficient risk identification, assessment and control. They are supported by functional, regional and subsidiary CROs who are responsible for overseeing risk management issues that arise at the regional or subsidiary level.

The central risk teams oversee Group liquidity and capital adequacy and maintain the Group frameworks for controlling these risks throughout Swiss Re. They also support CROs at the Group and legal entity level in discharging their oversight responsibilities. They do so by providing services, such as:

- Financial risk management
- Specialised risk category expertise and accumulation control
- Risk modelling and analytics
- Regulatory relations management
- Maintaining the central risk governance framework

Risk Management is also in charge of actuarial reserving and monitoring of reserve holdings for SRCS and SRLC as well as their subsidiaries, while for SRZ and its subsidiaries, the setting of the reserves is performed by valuation actuaries within the P&C and L&H Business Management units.

Risk management activities are complemented by Swiss Re's Group Internal Audit and Compliance units:

- Group Internal Audit performs independent, objective assessments of the adequacy and effectiveness of internal control systems. It evaluates the execution of processes within Swiss Re, including those within Risk Management.
- The Compliance function oversees Swiss Re's compliance with applicable laws, regulations, rules and the Code of Conduct. It also assists the Board, Group Executive Committee and other management bodies in identifying, mitigating and managing compliance risks.

Risk control framework

Swiss Re operates within a clearly defined risk control framework. This is set out in the Group Risk Management Standards and comprises a body of standards that establish an internal control system for taking and managing risk. These standards set responsibilities for risk takers and risk controllers. The risk control framework defines key tasks, which are the core components of Swiss Re's risk management cycle:

- *Risk tolerance and appetite assessment of plan* – ensures that the risk implications of plans are understood, and determines whether business and investment plans adhere to the risk appetite framework (risk appetite and tolerance).
- *Risk identification* – ensures that all risks to which Swiss Re is exposed are transparent in order to make them controllable and manageable.
- *Risk measurement* – enables Swiss Re to understand the magnitude of its risks and to set quantitative controls that limit its risk-taking.
- *Risk limit framework* – allows Swiss Re to control its risk-taking decisions and total risk accumulations, including the passive risk we are exposed to through our operations.
- *Risk reporting* – creates internal risk transparency and enables Swiss Re to meet external disclosure requirements.

In addition, Risk Management performs the following risk control activities:

- *Model and tool assurance* – ensures that models or tools used for costing, valuation and risk capital determination are based on sound scientific concepts, have been implemented and calibrated correctly, and produce accurate results.
- *Valuation assurance* – assesses the quality of valuations for financial instrument prices and reserves.
- *Insurance risk reviews* – assess the quality of decision-making in the taking of insurance risks by performing independent evaluations of underwriting, costing, pricing and claims handling.

Swiss Re has implemented a principle-based integrated internal control system to mitigate identified operational risks, including financial reporting and compliance risks, as well as risks that could impair the effectiveness and efficiency of operations. This control system represents a subset of Swiss Re's risk control framework and is based on international standards established by COSO (the Committee of Sponsoring Organisations of the Treadway Commission). It is applied on multiple organisational levels, including Group, functions, regions and legal entities.

Risk transfer

To efficiently manage capital across the Group and ensure that risk-taking in individual legal entities is well diversified, the Group employs internal retrocession and funding agreements. These serve to improve the fungibility of capital and consequently Group-wide diversification. In addition, the Group aims to maximise the amount of funds available centrally by optimising the excess capital held within its subsidiaries and branches.

Swiss Re also manages and mitigates insurance risk through external retrocession, insurance risk swaps or by transferring risk to capital markets through insurance-linked securities, industry loss warranties or other derivatives. This provides protection against extreme catastrophic events, further diversifies risk, stabilises economic results and releases underwriting capacity.

In addition, Swiss Re uses financial market derivative instruments as well as financial market securities to hedge financial market and credit risks arising from investments and insurance liabilities. Interest rate risk from insurance liabilities is managed through investments in fixed-income instruments whose pricing is sensitive to changes in government yields, such as government bonds.

Find more information about Swiss Re's risk control framework in the interactive online report.

Risk Appetite framework

The risk appetite framework establishes the overall approach through which Swiss Re practices controlled risk-taking throughout the Group. The framework is set out in the Group Risk Policy and consists of two interlinked components: risk appetite and risk tolerance.

	Risk appetite	**Risk tolerance**
Group Risk Policy	Risk appetite statement	Risk tolerance objectives and limits
Group strategic plan	Target liability portfolio and strategic asset allocation	Risk capacity limits
Annual planning process	Business plans	Operational limits

Optimise risk/return portfolio

Control risk exposures

Risk Appetite Framework

In the context of business strategy and planning, the risk appetite statement facilitates discussions about where and how Swiss Re should deploy its capital, liquidity and other resources under a risk/return view, while risk tolerance sets clear boundaries to risk-taking.

During strategic planning and target-setting, Risk Management provides an opinion on the proposed strategy and targets to the Group Executive Committee and ultimately the Board. The opinion focuses on the risk impact of the proposed strategy and the risks related to its implementation. The strategic plan, risk appetite and capital allocation ambition are expressed in a target portfolio for the Group's assets and liabilities, which should ultimately deliver the Group's targeted performance.

Swiss Re's risk appetite outlines the Group's principles on acceptable risks and provides key directions for risk-taking and risk controlling as part of implementing Swiss Re's strategy: achieving targeted performance, providing liquidity and financial flexibility, managing capital adequacy, and protecting and growing franchise value.

The Board further details Swiss Re's risk appetite through its approval or review of the following key steering frameworks as part of the Group's planning process: target liability portfolio, strategic asset allocation and the Group's target capital structure.

Swiss Re's risk tolerance describes the extent to which the Board has authorised Executive Management to assume risk. It represents the amount of risk that Swiss Re is willing to accept within the constraints imposed by its capital and liquidity resources, its strategy, and the regulatory and rating agency environment within which it operates.

The Group's risk tolerance is based on three objectives:
- To protect the shareholders' franchise by ensuring that the Group is able to continue operating the business following an extreme loss event
- To maintain capital and liquidity at respectable levels that are sufficiently attractive from a client perspective, and that meet regulatory requirements and expectations
- To avoid material operational risks that could subject the Group to large operational losses with corresponding consequences from an economic, reputational or regulatory perspective

To meet the first objective, the Group Risk Policy defines an extreme loss absorption limit with conditions that must be fulfilled following the realisation of a loss corresponding to a 99% Group shortfall event. To meet the second objective, the Group's risk tolerance criteria includes respectability limits, which need to be met under normal operating conditions. These limits ensure that Swiss Re has adequate capital and liquidity above minimum requirements to be considered a respectable counterparty by external stakeholders. To meet the third objective, the Group has established a Group-wide risk matrix methodology in which key operational risks are assessed against an acceptable level of expected losses.

The risk tolerance respectability criteria for the Swiss Re Group are set out in the Group Risk Policy. The Board is responsible for approving the risk tolerance criteria, as well as for monitoring and reviewing risk tolerance through its Finance and Risk Committee. Breaches or anticipated breaches of limits established to control the risk tolerance criteria must be communicated to the Group Finance and Risk Committee.

Swiss Re's risk-taking is governed by a limit framework in order to ensure that accumulation risk and large losses remain at an acceptable level, as well as to steer the allocation of available risk capacity. The limit framework is rooted in the risk appetite and risk tolerance objectives set in the Group Risk Policy and helps to translate these objectives into concrete, measurable criteria. In addition, lower level limits are implemented to allocate scarce capacity. The limit framework also allows for risk monitoring and thus supports risk controlling during the execution of the plan.

Find more information about Swiss Re's risk appetite framework in the interactive online report.

Risk assessment

In SST 2020, total risk increases to USD 21.3 billion, driven by higher insurance risk mainly reflecting business growth and lower interest rates.

Swiss Re's internal model provides a meaningful assessment of the risks to which the company is exposed and is an important tool for managing the business. It is used to measure the Group's risk position and related capital requirements as well as for defining the risk tolerance, risk limits and liquidity stress tests.

Find more information about Swiss Re's internal risk model in the interactive online report.

Swiss Re is exposed to insurance and financial risks that are calculated in its internal risk model, as well as other risks that are not explicitly part of the economic capital requirement but are actively monitored and controlled due to their significance for Swiss Re. These include operational, liquidity, model, valuation, regulatory, political, strategic and sustainability risks (see Swiss Re's risk landscape, p. 68).

Property and casualty insurance risk is mainly driven by underlying risks inherent in the business Swiss Re underwrites, in particular costing and reserving and non-life claims inflation, as well as Atlantic hurricane risk. The main drivers of life and health insurance risk are lethal pandemic, mortality trend, lapse and critical illness risk.

The Group's financial risk derives from financial market risks as well as from credit risk. Key drivers of financial market risk are credit spread and equity risk. Credit risk is mainly driven by the default risk of capital market products and credit and surety business.

Total risk is based on 99% tail VaR and represents the average unexpected loss that occurs with an estimated frequency of less than once in 100 years over a one-year time horizon.

Total risk increases to USD 21.3 billion, driven by higher insurance risk mainly reflecting business growth and lower interest rates impact. Financial market and credit risk increase only marginally. The higher weight of insurance risk leads to increased diversification.

Group capital requirement based on one-year 99% tail VaR

USD millions	SST 2019	**SST 2020**	Change	cross reference information
Property and casualty	10 537	11 708	1 170	see page 70
Life and health	8 633	9 857	1 224	see page 71
Financial market	10 981	11 218	236	see page 72
Credit[1]	3 371	3 496	125	see page 73
Diversification	*–13 809*	*–14 945*	*–1 136*	
Total risk	**19 713**	**21 332**	**1 620**	

[1] Credit comprises credit default and credit migration risk from both asset management and underwriting. Credit spread risk falls under financial market risk.

Swiss Re's internal risk model takes account of the accumulation and diversification between individual risks. The effect of diversification at the category level is demonstrated in the table above, which represents the difference between the Group 99% tail VaR and the sum of standalone tail VaR amounts in the individual risk categories. The extent of diversification is largely determined by the selected level of aggregation – the higher the aggregation level, the lower the diversification effect.

Alternative Risk Measurements for Swiss Re Group

USD billions	SST 2019	**SST 2020**	Change in %
99% VaR[1]	14.8	**16.1**	9
99.5% VaR[1]	17.5	**19.0**	9

[1] For the alternative risk measurements, the same risk exposure and data basis is applied as for the SST calculation.

Alternative risk measurements — 99% and 99.5% VaR — increase to USD 16.1 billion and USD 19.0 billion, respectively.

Swiss Re's risk landscape

The risk categories shown in the table below are discussed on the following pages. Across these categories we identify and evaluate emerging threats and opportunities through a systematic framework that includes the assessment of potential surprise factors that could affect known loss potentials. Liquidity risk management is discussed on page 60.

Core risks in Swiss Re's internal model

Insurance risk

Property & Casualty
- Natural catastrophe
- Man-made
- Costing and reserving
- Claims inflation

Life & Health
- Lethal pandemic
- Mortality trend
- Longevity
- Critical illness
- Income protection
- Lapse

Financial risk

Financial market
- Credit spread
- Equity
- Foreign exchange
- FM inflation
- Interest rate
- Real estate

Credit
- Default risk
- Migration risk

Other significant risks

Operational	**Liquidity**	**Model**	**Valuation**
Regulatory	**Political**	**Strategic**	**Sustainability**

Emerging risks

Swiss Re is exposed to a broad landscape of risks. These include risks that are actively taken as part of insurance or asset management operations and are calculated in the internal risk model as part of the Group's economic capital requirement as well as to allocate risk-taking capacity:

- *Property and casualty insurance risk* arises from coverage provided for property, liability, motor and accident risks, as well as for specialty risks such as engineering, agriculture, aviation and marine. It includes underlying risks inherent in the business Swiss Re underwrites, such as inflation or uncertainty in pricing and reserving.
- *Life and health insurance risk* arises from coverage provided for mortality (death), longevity (annuity) and morbidity (illness and disability) as well as from acquiring closed books of business. In addition to potential shock events (such as a severe pandemic), it includes underlying risks inherent in life and health contracts that arise when mortality, morbidity or lapse experience deviates from expectations.
- *Financial market risk* represents the potential impact on assets or liabilities that may arise from movements in financial market prices or rates, such as equity prices, interest rates, credit spreads, hedge fund prices, real estate prices, commodity prices or foreign exchange rates. Financial market risk originates from two main sources: investment activities and the sensitivity of the economic value of liabilities to financial market fluctuations.
- *Credit risk* reflects the potential financial loss that may arise due to the diminished creditworthiness or default of counterparties of Swiss Re or of third parties; credit risk arises from investment and treasury activities, structured transactions and retrocession, as well as from liabilities underwritten by credit and surety insurance units.

The risk landscape also includes other risks that are not explicitly part of the Group's economic capital requirement but are actively monitored and controlled due to their significance for Swiss Re:
- *Liquidity risk* represents the possibility that Swiss Re will not be able to meet expected and unexpected cash flow and collateral needs without affecting either daily operations or Swiss Re's financial condition.
- *Operational risk* represents the potential economic, reputational or compliance impact of inadequate or failed internal processes, people and systems or from external events, including legal risk and the risk of a material misstatement in financial reporting. Swiss Re has implemented a capital model for operational risk, which is used for Solvency II purposes.
- *Strategic risk* represents the possibility that poor strategic decision-making, execution or response to industry changes or competitor actions could harm Swiss Re's competitive position and thus its franchise value.

- *Regulatory risk* arises from changes to insurance regulations and supervisory regimes as well as from interactions with regulatory authorities and supervisory regimes of the jurisdictions in which Swiss Re operates.
- *Political risk* comprises the consequences of political events or actions that could have an adverse impact on Swiss Re's business or operations.
- *Model risk* reflects the potential impact of model errors or the inappropriate use of model outputs. It may arise from data errors or limitations, operational or simulation errors, or limitations in model specification, calibration or implementation; model risk may also be caused by insufficient knowledge of the model and its limitations, in particular by management and other decision-makers.
- *Valuation risk* represents uncertainty around the appropriate value of assets or liabilities. It may arise from product complexity, parameter uncertainty, quality and consistency of data, valuation methodology, or changes in market conditions and liquidity. Swiss Re is exposed to financial valuation risk from investment assets it holds as well as reserve valuation risk from insurance liabilities that result from the coverage it underwrites.
- *Sustainability risk* comprises the environmental, social and ethical risks that may arise from individual business transactions or the way Swiss Re conducts its operations.
- Across all risk categories, Swiss Re actively identifies *emerging risks* and threats as part of its risk identification process; this includes new risks as well as changes to previously known risks that could create new risk exposures, or increase the potential exposure or interdependency between existing risks.

Some of these risks are reflected indirectly in the risk model, as their realisations may be contained in the historical data and scenarios used to calibrate some of the risk factors. In addition, output from the model is used in measuring liquidity risk under stressed conditions. As separate risk categories, these risks are an integral part of Swiss Re's risk landscape. They are monitored and managed within the Risk Management organisation, and included in risk reports to Executive Management and the Board at Group and legal entity level.

Reputational risk is not considered a separate risk category but rather represents a possible consequence of any risk type in addition to the potential financial and compliance impact.

Insurance risk

Insurance risk management involves identifying, assessing and controlling risks that Swiss Re takes through its underwriting activities, including related risks such as inflation or uncertainty in pricing and reserving.

Risk Management also provides independent assurance throughout the business cycle, starting with the annual business planning process. It reviews underwriting standards, costing models and large transactions, and monitors exposures, reserves and limits.

Swiss Re's Group limit framework includes risk limits for major insurance exposures that guard against risk accumulations and ensure that risk-taking remains within Swiss Re's risk tolerance. At the entity level, underwriting and capacity limits are assigned that are used to ensure adherence to the Group's risk limits and SST capitalisation targets.

Regular internal reports ensure transparency across the Group, providing management with quantitative and qualitative risk assessments. Swiss Re's insurance risk landscape and related governance processes are regularly discussed and reviewed by the Senior Risk Council and other insurance risk oversight bodies in order to assist and advise the Group CRO on risk oversight.

Swiss Re also manages and mitigates insurance risk through external retrocession, insurance risk swaps or by transferring risk to capital markets. This provides protection against extreme catastrophic events, further diversifies risk, stabilises economic results and releases underwriting capacity.

Property and casualty risk

+11 %

Change since SST 2019

Risk developments
The increase in property and casualty risk mainly reflects growth in property business translating into higher exposure to key natural catastrophe scenarios. Higher costing and reserving risk further contributes to the increase driven by higher reserves related to the 2019 large losses, business growth and, to a lesser extent, reserve strengthening for US liability.

Management
The legal entity CROs are responsible for overseeing all property and casualty exposures written in their areas. In addition, Group Risk Management monitors and controls accumulated exposures across Swiss Re to ensure that they remain within the defined risk tolerance level.

The first line of control for property and casualty risks lies within Swiss Re's underwriting units. In general, all transactions must be reviewed by at least two authorised individuals, and are subject to authority limits. Each underwriter is assigned an individual authority based on technical skills and experience. In addition, capacity limits are allocated to local teams; any business that exceeds this authority or is otherwise complex or unusual triggers an escalation process that extends up to the Group Executive Committee. Certain single risks and specified renewable treaty classes with non-material changes can be authorised by only one individual underwriter with the necessary authority – but these risks and treaties are subject to checks after acceptance.

All transactions that could materially impact the risk at Group level or for key legal entities require independent review and sign-off by Risk Management before they are authorised. This is part of a three-signature principle, under which key transactions must be approved by Client Markets, Underwriting and Risk Management. For transactions of defined types and within defined limits, this may be applied through the approval of underwriting or pricing guidelines. For other transactions, the signatures must be secured through an individual review.

Swiss Re's limit framework for property and casualty exposures includes risk limits for major natural catastrophe scenarios and other key risks, such as terrorism, claims inflation, reserving and liability.

Insurance risk stress tests with a 200-year return period

Annualised unexpected loss, 99.5% VaR in USD millions[1]	SST 2020
Atlantic hurricane	6 371
Californian earthquake	4 406
European windstorm	2 369
Japanese earthquake	3 668
Lethal pandemic	3 086

[1] Excluding the impact of earned premiums for the business written and reinstatement premiums that could be triggered as a result of the event.

In SST 2020, the largest natural catastrophe exposure for Swiss Re Group derives from the Atlantic hurricane scenario with a USD 6.4 billion loss. The lethal pandemic loss is estimated to be at USD 3.1 billion.

Life and health risk

+14%

Change since SST 2019

Risk developments

Higher life and health risk mainly reflects the impact of lower interest rates and the appreciation of the Canadian dollar and British pound against the US dollar. The overall increase is further driven by business growth in Asia and the US, resulting in higher exposure to critical illness, lethal pandemic, mortality trend and lapse risk.

Management

The legal entity CROs are responsible for overseeing all life and health exposures written in their respective areas. Accumulated exposures across Swiss Re are monitored and controlled by Group Risk Management to ensure that they remain at an acceptable level for the Group.

Underwriters represent the first line of control for life and health risks. All transactions that could materially change risk at Group level or for key legal entities require independent review and sign-off by Risk Management before they can be authorised. This is part of a three-signature principle, under which key transactions must be approved by Client Markets, Underwriting and Risk Management. For transactions of defined types and within defined limits, this may be applied through the approval of underwriting or pricing guidelines. For other transactions, the signatures must be secured through a review of the individual transaction.

Swiss Re's limit framework for life and health exposures includes risk limits for key risks, such as mortality, longevity, lethal pandemic, critical illness and income protection risk. Market exposure limits are in place for catastrophe and stop loss business. Swiss Re pays particular attention to densely populated areas and applies limits for individual buildings to guard against risk exposure accumulations.

Financial risk

Financial risk management involves identifying, assessing and controlling risks inherent in the financial markets as well as counterparty credit risks, while monitoring compliance with Swiss Re's risk appetite and risk management standards.

Swiss Re's central Financial Risk Management team oversees all activities that generate financial market or credit risk. Its mandate covers internally and externally managed assets, strategic participations, treasury activities, and credit and market risks that derive from Swiss Re's underwriting and retrocession activities, including structured transactions, credit insurance and surety business. The Head Financial Risk Management reports to the Group CRO, with a secondary reporting line to the Group Chief Investment Officer.

Financial Risk Management controls exposure accumulation for financial market and credit risks. In addition, the team is responsible for assurance activities related to asset valuation and financial risk models, as well as for reporting Swiss Re's financial risks. These responsibilities are exercised through defined governance processes, including regular reviews by Swiss Re's Senior Risk Council and other financial risk oversight bodies.

All activities with financial market and credit risk are subject to limits at various levels of the organisation (eg Group, lines of business and legal entities). At the highest level, the Board of Directors sets a financial risk concentration limit, which defines how much of the Group's risk exposure can derive from financial risk. The Group Executive Committee establishes the principal risk limits for aggregate financial market and credit risk at Group level. Where required, additional risk limits are established by Risk Management for legal entities, key business lines, individual counterparties and countries. Furthermore, as part of the planning process, the risk-taking functions employ capacity limits to control the amount of risk mandated from the risk owner to the risk takers. Limits may be expressed in terms of notional value of policies, losses in a stress scenario, value at risk based on historic market moves, linear sensitivities to a particular risk factor or different methodologies of exposure aggregation.

Financial market risk

+2%

Change since SST 2019

Risk developments
Financial market risk increases slightly, mainly due to repositioning of the credit portfolio, resulting in higher credit spread risk. This is partially offset by lower equity risk in view of an exposure reduction and hedging of the equity portfolio.

Management
Financial market risk is monitored and controlled by dedicated experts within the Group's Financial Risk Management team. Financial Risk Management regularly reports on key financial market risks and risk aggregations, as well as on specific limits for internally and externally managed investment mandates. These reports track exposures, document limit usage and provide information on key risks that could affect the portfolio. The reports are presented and discussed with those responsible for the relevant business line at the weekly Financial Market Risk Council.

The reporting process is complemented by regular risk discussions between Financial Risk Management, Asset Management and the Group's external investment managers, as well as by regular interactions with other key units that take financial market risk, such as Principal Investments and Acquisitions, Treasury and the respective business teams that write transactions.

Financial Market SST ratio sensitivities

Impact on SST ratio	SST 2020
Interest rates +50bps	10pp
Interest rates –50bps	–12pp
Spreads +50bps	–9pp
Spreads –50bps	9pp
Equity values +25%	3pp
Equity values –25%	–3pp
Real estate values +25%	6pp
Real estate values –25%	–6pp

Among financial market sensitivities, the Group is most sensitive to a 50-basis point decrease in interest rates, leading to an estimated decrease in the SST ratio of 12 percentage points.

Credit risk stress test with a 200-year return period

Annualised unexpected loss, 99.5% VaR in USD millions	SST 2020
Credit default[1]	2390

[1] Excluding the impact of earned premiums for the business written and reinstatement premiums that could be triggered as a result of the event

Credit risk

+4%

Change since SST 2019

Risk developments
The slight increase in credit risk is driven mainly by higher credit and surety underwriting risk.

Management
Credit risk is monitored and controlled by experts within the Financial Risk Management team. Financial Risk Management regularly monitors and reports on counterparty credit quality, credit exposures and limits. In addition, it is responsible for regularly monitoring corporate counterparty credit quality and exposures, and for compiling watch lists of cases that merit close attention. These reports are presented and discussed with those responsible for the relevant business line at the weekly Credit Council.

The reporting process is supported by a Group-wide credit exposure information system that contains all relevant data, including counterparty details, ratings, credit risk exposures, credit limits and watch lists. Key credit practitioners across Swiss Re have access to this system, thus providing the necessary transparency to implement specific exposure management strategies for individual counterparties, industry sectors and geographic regions.

Credit risks are aggregated by country in order to monitor and control risk accumulation to specific risk drivers, such as economic, sovereign and political risks.

Management of other significant risks

Operational risk

The Group has implemented an internal control system to mitigate operational risks through three lines of control. This system assigns primary responsibility for identifying and managing operational risks to individual risk takers (first line of control), with independent oversight and control by the Risk Management and Compliance functions (second line of control) as well as Group Internal Audit (third line of control). Members of the Group Executive Committee are required to certify the effectiveness of the internal control system for their area of responsibility on a quarterly basis.

Operational risk is inherent within Swiss Re's business processes. As the company does not receive an explicit financial return for such risks, the approach to managing operational risk differs from the approach applied to other risk categories. The purpose of Operational Risk Management is not to eliminate risks but rather to identify and cost-effectively mitigate operational risks that approach or exceed Swiss Re's tolerance.

Risk Management is responsible for monitoring and controlling operational risks based on a centrally coordinated methodology. This includes a pre-defined taxonomy that is used for identifying, classifying and reporting operational risks, as well as a matrix in which risks are assessed according to their estimated probability and impact. Risks are assessed for their residual economic, financial reporting, reputational and compliance impact, taking into account existing mitigation and controls.

The matrix is also used to assess residual exposures against Swiss Re's tolerance limits for operational risk. This limit represents the level of operational risk that the Board of Directors and Executive Management teams are willing to accept. Material risks that exceed or are approaching risk tolerance are reported to Executive Management and Boards of Directors at Group and legal entity level. In addition, mitigation strategies are required for all risks that are outside of operational risk limits in order to bring them within tolerance.

Cyber risk and information security are a key focus of Swiss Re's operational risk controls. The Group performs an annual cyber risk assessment to determine the current maturity of controls; this is based on internationally recognised standards defined by the Information Security Forum. The results of the assessment are shared with senior management and integrated into Swiss Re's Group-wide cybersecurity programme. This programme focuses on five key areas: security culture, critical information, technology defence, incident response and supplier governance.

Operational events and issues are recorded and managed in a central Operational Risk Management system in order to address the identified problems and avoid the recurrence of similar events. The results are reviewed by the company's CRO and reported to the Executive Management team and Board.

Strategic risk

Overall responsibility for managing strategic risk lies with the Board, which establishes Swiss Re's overall strategy. The Boards of legal entities are responsible for the strategic risk inherent in their specific strategy development and execution. Strategic risks are addressed by examining multi-year scenarios, considering the related risks, as well as monitoring the implementation of the chosen strategy year by year in terms of the annual business plan.

As part of their independent oversight role, Risk Management, Compliance and Group Internal Audit are responsible for controlling the risk-taking arising from the implementation of the strategy.

Regulatory risk

Regulatory developments and related risks that may affect Swiss Re and its subsidiaries are identified, assessed and monitored as part of regular oversight activities. Swiss Re is actively engaged in a dialogue with regulators to improve mutual understanding of the implications of new regulatory proposals. Periodic reports and recommendations on regulatory issues are provided to Executive Management and the Board at Group and legal entity level.

The regulatory environment of the insurance industry continues to evolve on the regional, national and international level. While some regulatory changes create new business opportunities, others come with significant costs and business restrictions. Growing regulatory complexity, increased national protectionism and a fragile global economy are persistent themes affecting regulation and the way Swiss Re operates worldwide.

Regulatory efforts are becoming increasingly forward-looking, aimed at a broad range of emerging risks, both actual and perceived. If new regulation is not based on clearly understood risks, the resulting requirements may create an excessive burden for both insurers and policyholders. It remains a key priority for Swiss Re to highlight the negative impacts of market entry restrictions or impediments to global diversification towards regulators. At the same time, we mitigate such risks by seeking solutions that reduce the negative impact on Swiss Re and its clients.

Several regulators in Europe and Asia have developed specific expectations of how climate risks should be managed and are translating these expectations into concrete regulations. New climate-related regulations are expected, even in jurisdictions that have thus far been hesitant to act. Swiss Re supports such measures but will continue to advocate for a harmonised and gradual implementation of the requirements recommended by the Financial Stability Board Task Force for Climate Disclosure in order to avoid regulatory fragmentation and ensure that requirements are appropriate.

Swiss Re consistently advocates for the removal or reduction of market access barriers, so that policyholders, governments, taxpayers and national economies can fully benefit from international diversification and therefore reliable, quality and affordable risk cover.

Political risk

Political developments can threaten Swiss Re's operating model but also open up opportunities for developing the business. The Group adopts a holistic view of political risk and analyses developments in individual markets and jurisdictions, as well as cross-border issues such as war, terrorism, energy-related issues and international trade controls.

A dedicated Political Risk team identifies, assesses and monitors political developments world-wide. Swiss Re's political risk experts exercise oversight and control functions for named political risks, such as in the political risk insurance business; this includes monitoring political risk exposures, providing recommendations on particular transaction referrals and risk reporting. In addition, the Political Risk team provides specific country ratings that cover political, economic and security-related country risks; these ratings complement sovereign credit ratings and are used to support risk control activities and inform underwriting or other decision-making processes throughout the Group.

Swiss Re seeks to identify and assess the impact of political risk on its business. The Group raises awareness of political risk within the insurance industry and the broader public, and actively engages in dialogue with clients, the media and other stakeholders. The Group also builds relationships that expand the company's access to information and intelligence, and allow Swiss Re to further enhance our methodologies and standards. For example, Swiss Re participates in specialist events hosted by institutions such as industry and risk management associations, and maintains relationships with political risk specialists in other industries, think tanks and universities, as well as with governmental and non-governmental organisations.

The UK has left the EU and the future trade relationship between the UK and EU remains unclear. Swiss Re operates in the UK through the UK branches of Swiss Re's Luxembourg entities and some UK-domiciled entities. Swiss Re is actively engaging with the relevant UK and EEA regulators to mitigate any impacts on Swiss Re's businesses or ability to service clients and customers from the negotiations on the new trade relationship between the UK and EU.

Model risk

Swiss Re uses models throughout its business processes and operations, in particular to price insurance products, value financial assets and liabilities, assess reserves and portfolio cash flows, and estimate risk and capital requirements. Model owners have primary responsibility for model-related risks and are required to adhere to a robust tool development process, including testing, peer review, documentation and sign-off. A similar process also applies to model maintenance.

Swiss Re's model governance is based on Group-wide standards for model assurance. These standards seek to ensure that each material model has a clear scope, is based on sound mathematical and scientific concepts, has been implemented correctly and produces appropriate results given the stated purpose. Furthermore, the calibration of model parameters (and the data on which calibration relies) must be trustworthy, while expert judgments are required to be sensible, documented and evidenced.

Analytical or financial models that are used for costing, valuation and risk capital calculations are governed by Swiss Re's Model and Tool Assurance Framework. This requires the appropriateness of models to be assessed in an independent end-to-end validation process that includes specification, algorithms, calibration, implementation, results and testing. Material models used for costing, valuation of reserves and assets, as well as Swiss Re's internal risk model, are validated by dedicated teams within Risk Management. These teams provide independent assurance that the framework has been adhered to, and also conduct independent validations. Swiss Re's risk model is also subject to regulatory scrutiny.

Model-related incidents are captured within Swiss Re's operational risk framework. In addition, material model developments, incidents and risks are reported in regular risk updates to Executive Management and the Board at Group and legal entity level.

Swiss Re works closely with industry peers to develop and share best practices for assessing and managing model-related risks. In this context, Swiss Re is actively participating in a CRO Forum working group that provides a platform for such exchanges and is working on frameworks for model risk.

Valuation risk

Financial valuation risk is managed by internal and external portfolio managers, who ensure that valuations remain in line with the market. In addition, Swiss Re has a second line function within Financial Risk Management that independently assess valuations and valuation techniques; this team performs independent price verification for financial risk positions to confirm that valuations are reasonable and ensure there are no material misstatements of fair value in Swiss Re's financial reports. The results of the independent price verification process are reviewed by the Asset Valuation Committee. Summary results are regularly reported to Executive Management and the Board at Group and legal entity level. In addition, Swiss Re's external auditor conducts quarterly reviews as well as a comprehensive year-end audit of controls, methodology and results.

Reserve valuation risk is managed by Swiss Re's Actuarial Control function, with dedicated teams for property and casualty, and for life and health valuations. These teams ensure that Swiss Re's reserve setting process uses an appropriate governance framework, including defined accountabilities and decision-making processes for risk takers (as the first line of control) as well as for Actuarial Control. The framework ensures that there is independent assurance on the data, assumptions, models and processes used for valuation purposes; for all property and casualty business and selected life and health portfolios, it also includes an independent valuation of coverage provided to ensure that reserves are within an adequate range. Regular deep-dive investigations are performed into selected portfolios in order to review the appropriateness of both the reserves and the applied reserving approach.

Sustainability risk

Swiss Re's continued business success depends on the successful management of sustainability risks, thus helping to maintain the trust of its stakeholders. The Group has a long-standing commitment to sustainable business practices, active corporate citizenship, as well as good, transparent governance. All employees are required to commit to and comply with Swiss Re's values and sustainability policies.

Potential sustainability risks are mitigated through clear corporate values, active dialogue and engagement with affected external stakeholders, and robust internal controls. These include a Group-wide Sustainability Risk Framework to identify and address sustainability risks across Swiss Re's business activities. The framework comprises sustainability-related policies – with pre-defined exclusions, underwriting criteria and quality standards – as well as a central due diligence process for related transactional risks.

Sustainability risks are monitored and managed by dedicated experts in Swiss Re's Group Sustainability Risk team, which is also responsible for maintaining the Sustainability Risk Framework. In addition, this unit supports Swiss Re's management and business strategy through tailored risk assessments and risk portfolio reviews. It fosters risk awareness through internal training, and facilitates development of innovative solutions to address sustainability issues. Finally, it represents and advocates Swiss Re's position on selected sustainability risk topics to external stakeholders.

Swiss Re is a founding signatory to the UN Principles for Sustainable Insurance (UN PSI) and is currently a board member of this initiative. The UN PSI provide a global framework for managing environmental, social and governance challenges. Swiss Re has been actively contributing to the initiative for several years, co-chaired it from 2013 to 2015 and publicly reports progress against the principles in its annual Sustainability Report; the 2019 edition has been published together with the 2019 Financial Report.

Swiss Re is developing a carbon footprinting methodology, in collaboration with peers, as a basis for carbon risk steering that will help to guide the Group's business towards a low-carbon world and support Swiss Re's clients in their transition. At the UN Climate Action Summit in September 2019, Swiss Re was one of 87 companies to sign the "Business Ambition for 1.5°C". The pledge is a logical further step in leading the way towards a low carbon future.

Reflecting the Group's strong overall commitment to sustainability, Swiss Re continued to be included in leading sustainability indexes and rankings such as FTSE4Good, Euronext Vigeo World 120, Ethibel Excellence Global, oekom Prime Investment and the Dow Jones Sustainability Index. For more information on Swiss Re's sustainability practices, see the 2019 Sustainability Report.

Emerging risk

Anticipating possible developments in the risk landscape is a central element of Enterprise Risk Management. Swiss Re promotes pre-emptive thinking on risk in all areas of the business in order to reduce uncertainty and diminish the volatility of the Group's results, while also identifying new business opportunities and raising awareness for emerging risks.

For this purpose, Swiss Re's risk identification processes are supported by a systematic framework that identifies, assesses and monitors emerging risks and opportunities across all areas of Swiss Re's risk landscape. This framework combines a bottom-up approach driven by employee input with central and regional experts on emerging risk. The resulting information is complemented with insights from external organisations such as think tanks, academic networks and international organisations, as well as from interaction with clients.

Findings are reported to management and internal stakeholders, including a prioritised overview of newly identified emerging risks and an estimate of their potential impact on Swiss Re's business. Swiss Re also publishes an annual emerging risk report (Swiss Re SONAR) to raise awareness within the Group and across the industry, and initiate a risk dialogue with key external stakeholders.

To further advance risk awareness across the industry and beyond, Swiss Re maintains regular exchanges on emerging risks with its clients and continues to participate actively in strategic risk initiatives such as the CRO Forum's Emerging Risk Initiative and the International Risk Governance Council.

Find more information about Swiss Re's Emerging Risk Management activities in the interactive online report.

We apply a tailored governance approach throughout the Group, taking into account the nature, size and complexity of our Group and subsidiaries.

Contents

Overview

Environmental, social and governance (ESG) issues have grown in importance and become key focus areas in Europe, the US and other key jurisdictions.

Walter B. Kielholz
Chairman of the
Board of Directors

"It is crucial to be able to make relevant decisions based on relevant information.

Environmental, social and governance (ESG) issues dominated corporate governance discussions in key jurisdictions during 2019. There is an understanding that corporate actions do not take place in a vacuum, but within a dynamic landscape of evolving ESG issues and risks. ESG issues are linked to a variety of areas, for which the boards already have oversight, meaning those issues cannot be viewed in isolation. It is not surprising that many of the main corporate governance trends in 2019, such as diversity, scrutiny of executive remuneration, and workforce and stakeholder engagement, are to some extent related to the wider discussion around ESG issues. We expect the ESG trend to intensify further over the next few years. One reason for the increased focus on ESG issues is the greater transparency with respect to corporate reporting in general and ESG disclosures in particular. Companies are increasingly asked about their approach to sustainability and corporate social responsibility. They recognise that a good reputation, including a well-developed response to ESG matters, can be a strategic asset. A failure to respond appropriately to ESG issues can be a long-term and strategic risk. Employees, in particular millennials, contribute to the focus on ESG issues as they expect their companies to reflect their values. Finally, investors are also increasingly focusing on ESG issues.

Swiss Re Sustainability event
The Sustainable Leadership Series "Responsible investing in practice" at the Swiss Re Center for Global Dialogue in Rueschlikon in September 2019 brought together market participants from the public and private sectors, including institutional investors, wealth managers, policymakers, non-profit organisations and academia. The event served as a platform to share first-hand insights on the implementation of sustainable investing strategies, discuss policy developments and look at latest trends in stewardship across a fast-evolving market.

Information on compensation
Information on compensation, shareholdings and loans of the members of the Board of Directors and the Group Executive Committee (Group EC) are included in the Compensation Report beginning on page 143 of this Financial Report.

Swiss Re's corporate governance framework

Swiss Re's corporate governance framework ensures sustainability, fosters transparency and facilitates a quality assessment of the Swiss Re Group's organisation and business. The Board of Directors has ultimate responsibility for the success of Swiss Re Ltd (SRL) and the Group within a framework of effective and prudent controls. It is responsible for the overall direction, supervision and control of SRL and the Group and of the Group Executive Committee (Group EC), as well as for supervising compliance with applicable laws, rules and regulations. Such responsibilities are non-transferable and rest with the entire Board. The Board of Directors has delegated the management of SRL and the Group to the Group EC.

Swiss Re's governance documents

Swiss Re's Code of Conduct provides key principles that guide Swiss Re in making responsible decisions and achieving results using the highest ethical standards. It is built on the five Swiss Re Corporate Values: Integrity, Team Spirit, Passion to Perform, Agility and Client Centricity. The Corporate Governance Guidelines set out Swiss Re's harmonised governance principles and standards, ensuring a consistent and tailored corporate governance approach across the Group. The Articles of Association define the legal and organisational framework of SRL as the Group's holding company. The Bylaws define Swiss Re's governance framework and include the responsibilities of the Board of Directors and the Group EC and their members. The Board Committee Charters outline the duties and responsibilities of the Board Committees and form part of the Bylaws. The Bylaws and the Board Committee Charters are not publicly available.

2019 key focus areas

Cyber risk

In light of Swiss Re's ever-increasing cyber risk exposure, cyber risk was added as a standing agenda item to the Finance & Risk Committee (FRC) meetings. In April 2019, the FRC was presented, in addition to an update on global cyber regulations, with the results of the yearly internal Cyber Risk Assessment which compares Swiss Re Group's maturity with financial industry peers. In June 2019, the FRC discussed the positive results of testing Swiss Re's cyber security stance (including red teaming, incident response simulations and table-top exercises) from both the attacker's and defender's point of view. In October 2019, the FRC discussed the three-year Cyber Defence Programme and considered next steps. Finally, the December meeting highlighted that cyber security is an ongoing journey, and as Swiss Re is a knowledge company based on data, security must be part of our DNA. While Swiss Re has launched its cyber defence successfully, a continuous focus is needed to strengthen and adapt its existing security capabilities to address the ever-changing threat landscape.

Swiss Re Summit

We held the Swiss Re Summit at our headquarter in Zurich on 3 December 2019. We brought together the boards and executive teams of the Group and Business Units and the board members of the most important subsidiaries to share experiences, discuss current issues and hear about key trends affecting Swiss Re and the industry at large. The Summit focused on the strategy for the Group as well as for the individual Business Units. The Group's CEO and CFO shared insights into our technology strategy, recent R&D achievements and efforts undertaken by the Swiss Re Institute and spoke about the financial and capital targets for the coming years. The three Business Unit CEOs outlined their respective strategies and talked about some of the challenges they currently face. The day ended with a panel discussion on sustainability, which is an integral part of our strategy and our day-to-day business. The Summit was preceded by an Audit Summit, where the members of the SRL Audit Committee met with the members of the Audit Committees of the ten most important Group companies. The participants discussed important ongoing projects as well as the impact of upcoming accounting changes and internal and external audit topics, including the transition to the newly selected External Auditor.

Corporate Governance Refresher Training

In September 2019, we held two Corporate Governance Refresher Training sessions, which our internal Swiss Re stakeholders could join via conference call. The Head Corporate Governance Group presented the Group's corporate governance framework and documents, with a focus on the Corporate Governance Guidelines as well as the Bylaws. The participants discussed practical examples relevant for the applicability of the Bylaws. The training concluded with Q&A and feedback sessions.

Swiss Re's corporate governance adheres to:

- The SIX Swiss Exchange's Directive on Information Relating to Corporate Governance (including its annex) dated 20 March 2018, effective as of 1 May 2018.
- The Swiss Code of Best Practice for Corporate Governance (Swiss Code) of 28 August 2014, issued by economiesuisse, the Swiss business federation.
- The Swiss Financial Market Supervisory Authority FINMA provisions on corporate governance, risk management and internal control system at insurers.

Swiss Re's corporate governance also complies with applicable local rules and regulations in all jurisdictions where it conducts business.

For Swiss Re's governance documents please visit:

Group Code of Conduct
files.swissre.com/codeofconduct/

Corporate Governance Guidelines
www.swissre.com/corporategovernanceguidelines

Articles of Association (SRL)
www.swissre.com/articlesofassociation

Highlights 2019/2020

Network for Innovative Corporate Governance (NICG): First Conference held: Board Dynamics – Information Management

Swiss Re and the University of St. Gallen (HSG) entered into a strategic research coorperation arrangement at the beginning of 2019. On 1 July 2019, members of the Swiss business community and academics from HSG met at the Swiss Re Centre for Global Dialogue. The occasion was the founding of the Network for Innovative Corporate Governance (NICG), an initiative for promoting interdisciplinary and cross-generational dialogue on the future of corporate governance and its integral development. The opening conference was dedicated to the topic "Board Dynamics – Information Management". The conference provided a platform for the exchange of knowledge, for discussions and for addressing possible development potential. The aim was to close certain existing research gaps, to open up innovative topics and, for a broad spectrum of subject areas, to deepen and expand the existing cooperation between academia and practice. NICG is under the leadership of Professor Dr Michèle Sutter-Rüdisser (HSG) and Dr Felix Horber, Swiss Re's Company Secretary. NICG's guiding principle is: An innovative contribution to the further development of corporate governance requires a lively exchange and constant discussion. For further information please visit: **www.nicg.net/conference**

Board of Directors
Composition in 2019

- At the Annual General Meeting on 17 April 2019, the shareholders re-elected Walter B. Kielholz for a further one-year term of office as a member and Chairman of the Board of Directors.
- All other members of the Board of Directors were individually re-elected by the Annual General Meeting 2019 for a further one-year term of office as members of the Board of Directors: Renato Fassbind (Vice Chairman and Lead Independent Director), Raymond K.F. Ch'ien, Karen Gavan, Trevor Manuel, Jay Ralph, Joerg Reinhardt, Eileen Rominger, Philip K. Ryan, Sir Paul Tucker, Jacques de Vaucleroy, Susan L. Wagner and Larry Zimpleman. The Board of Directors consists of 13 members.
- The Annual General Meeting 2019 re-elected Renato Fassbind, Raymond K.F. Ch'ien, Joerg Reinhardt and Jacques de Vaucleroy as members of the Compensation Committee for a one-year term of office.

Announced composition changes in 2020

- Trevor Manuel and Eileen Rominger will not stand for re-election at the Annual General Meeting 2020. The Board of Directors proposes to elect Sergio P. Ermotti, Joachim Oechslin and Deanna Ong as new members of the Board of Directors for a first one-year term of office until completion of the Annual General Meeting 2021.

Nomination Committee

At the constitutive meeting of the Board of Directors following the Annual General Meeting 2019, the Board of Directors established a Nomination Committee. The Nomination Committee's function is to generally assist the Board of Directors in its overall responsibility to select, nominate and appoint members of the Board of Directors, the Chairman and the members of the Compensation Committee. The following Board members are members of the Nomination Committee: Renato Fassbind (Chair), Joerg Reinhardt, Jacques de Vaucleroy and Susan L. Wagner. For further information see page 96 and www.swissre.com/about-us/corporate-governance/board-committees.html

Group EC
Composition in 2019

- Andreas Berger (former Chief Regions & Markets Officer and member of the Board of Management of Allianz Global Corporate & Specialty SE) was appointed CEO Corporate Solutions and a member of the Group EC with effect from 1 March 2019. He succeeds Agostino Galvagni, who decided to step down as CEO Corporate Solutions at the end of 2018.
- Anette Bronder (previously a member of the Management Board at T-Systems International) was appointed Group Chief Operating Officer and a member of the Group EC with effect from 1 July 2019, succeeding Thomas Wellauer, who retired on 30 June 2019.
- Nigel Fretwell, Group Chief Human Resources Officer, and Hermann Geiger, Group Chief Legal Officer, were appointed as new members of the Group EC with effect from 1 July 2019. The Group EC had therefore consisted of 14 members since 1 July 2019; prior to that it consisted of 12 members. At the same time, Group Human Resources became a new Group Function.
- Russell Higginbotham (former CEO Reinsurance Europe, Middle East and Africa (EMEA) and Regional President EMEA) was appointed CEO Reinsurance Asia and Regional President Asia with effect from 8 July 2019. He succeeds Jayne Plunkett who decided to pursue an new opportunity outside Swiss Re.
- Urs Baertschi, previously President Reinsurance Latin America, was appointed CEO Reinsurance EMEA and Regional President EMEA and a member of the Group EC with effect from 1 September 2019, succeeding Russell Higginbotham, who was appointed CEO Reinsurance Asia and Regional President Asia.

Announced composition change in 2020

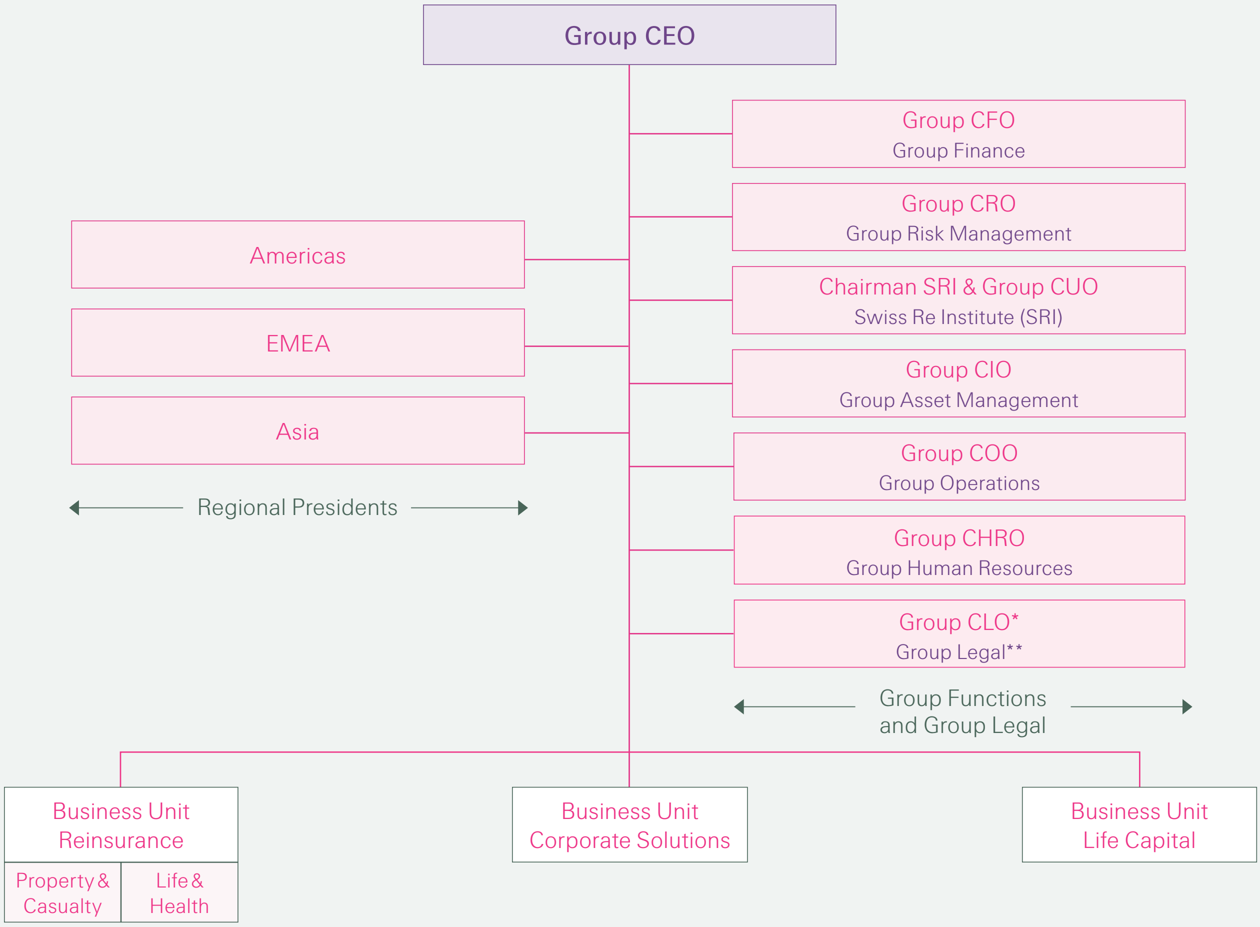
- Jonathan Isherwood (current Head of Globals Reinsurance) will succeed J. Eric Smith, CEO Reinsurance Americas and Regional President Americas, assuming responsibility as CEO Reinsurance Americas with effect from 1 April 2020 and as Regional President Americas and a member of the Group EC with effect from 14 August 2020, when J. Eric Smith retires.

Find out more

For more information please visit:
www.swissre.com/about-us/corporate-governance.html

Group structure and shareholders

Operational Group structure



* The Group CLO reports with a dual reporting line to the Group CEO and the Group COO.
** Group Legal is not a Group Function.

Legal structure — listed and non-listed Group companies
Swiss Re Ltd (SRL), the Group's holding company, is a joint stock company, listed in accordance with the International Reporting Standard on SIX Swiss Exchange (ISIN CH0126881561, Swiss Security Number 12688156), domiciled at Mythenquai 50/60 in 8022 Zurich, and organised under the laws of Switzerland.

Information on its market capitalisation is provided on pages 32–33 of this Financial Report. No other Group companies have shares listed. More information on the Group companies is provided in Note 21 to the Group financial statements on pages 271–273.

SRL has a level I American Depositary Receipts (ADR) programme in the US. The ADR are traded over the counter (OTC) (ISIN US8708861088, OTC symbol SSREY). One SRL share equals four ADR. Neither the ADR nor the underlying SRL shares are listed on a securities exchange in the US. Shares represented by ADR for which no specific voting instructions are received by the depositary from the holder will not be voted.

Significant shareholders

The following table provides a summary of the disclosure notifications of major shareholders holding more than 3% of voting rights:

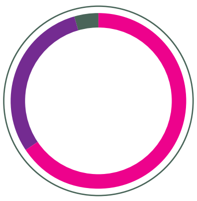
Shareholder	Number of shares	% of voting rights and share capital	Creation of the obligation to notify
BlackRock, Inc.	17 108 297	5.05	27 May 2019

For the detailed disclosure notification please visit: www.swissre.com/disclosureofshareholdings

All notifications received in 2019 are published at www.swissre.com/disclosureofshareholdings

Registered shareholdings by type

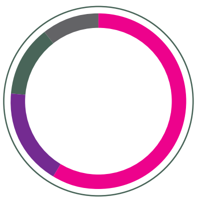
As of 31 December 2019



- **67.2%** Institutional shareholders
- **28.6%** Individual shareholders
- **4.2%** Swiss Re employees

Registered shareholdings by country

As of 31 December 2019



- **56.8%** Switzerland
- **19.3%** UK
- **13.7%** US
- **10.2%** Other registered shareholders

Shareholder structure

Registered — unregistered[1] shares

As of 31 December 2019	Shares	in %
Registered shares[2]	167 993 029	51.3
Unregistered shares[2]	122 661 913	37.5
Shares held by Swiss Re	28 510 762	8.7
Share buy-back programme	8 239 000	2.5
Total shares issued	**327 404 704**	**100.0**

[1] "Unregistered" shares refers to shares for which no application has been received by the owner to enter the shares in the share register.
[2] Without Swiss Re's holdings.

Registered shares with voting rights by shareholder type

As of 31 December 2019	Shareholders	in %	Shares	in %
Individual shareholders	73 861	87.7	48 167 383	28.6
Swiss Re employees	6 651	7.9	6 998 916	4.2
Total individual shareholders	**80 512**	**95.6**	**55 166 299**	**32.8**
Institutional shareholders	**3 714**	**4.4**	**112 826 730**	**67.2**
Total	**84 226**	**100.0**	**167 993 029**	**100.0**

Registered shares with voting rights by country

As of 31 December 2019	Shareholders	in %	Shares	in %
Switzerland	72 226	85.8	95 361 734	56.8
UK	1 377	1.6	32 427 406	19.3
US	1 334	1.6	23 033 818	13.7
Other	9 289	11.0	17 170 071	10.2
Total	**84 226**	**100.0**	**167 993 029**	**100.0**

Registered shares with voting rights by size of holding

As of 31 December 2019	Shareholders	in %	Shares	in %
Holdings of 1–2 000 shares	78 617	93.3	28 684 578	17.1
Holdings of 2 001–200 000 shares	5 534	6.6	53 261 244	31.7
Holdings of > 200 000 shares	75	0.1	86 047 207	51.2
Total	**84 226**	**100.0**	**167 993 029**	**100.0**

More information

More information on the SRL shares, such as the price performance and trading volume in 2019, Swiss Re's dividend policy and dividends, the share buy-back programme and an overview of the key share statistics since 2014, is included in the section "Share performance" on pages 32–33 of this Financial Report.

Cross-shareholdings

Swiss Re has no cross-shareholdings in excess of 5% of capital or voting rights with any other company.

Capital structure

Capital

As a result of the cancellation of shares repurchased under the share buy-back programme that was completed on 15 February 2019, the fully paid-in share capital of SRL as of 31 December 2019 amounted to CHF 32 740 470.40. It is divided into 327 404 704 registered shares, each with a par value of CHF 0.10.

The table on page 86 this Financial Report provides an overview of the issued, conditional and authorised capital of SRL as of 31 December 2019 and 31 December 2018, respectively.

More information is provided in the sections "Conditional and authorised capital in particular" below and "Changes in capital" on page 86 of this Financial Report.

Conditional and authorised capital in particular

Conditional capital for Equity-Linked Financing Instruments

The conditional capital of SRL as of 31 December 2019 was as presented in the table on page 86.

The conditional capital amounts to CHF 5 000 000, permitting the issuance of a maximum of 50 000 000 registered shares, payable in full, each with a nominal value of CHF 0.10.

Such shares are issued through the voluntary or mandatory exercise of conversion and/or option rights granted by the company or Group companies in connection with bonds or similar instruments, including loans or other financial instruments (Equity-Linked Financing Instruments).

The Articles of Association are available at:
www.swissre.com/articlesofassociation

Existing shareholders' subscription rights are excluded. The then current holders of the conversion and/or option rights granted in connection with Equity-Linked Financing Instruments shall be entitled to subscribe to the new registered shares. Subject to the Articles of Association, the Board of Directors may decide to restrict or exclude existing shareholders' advance subscription rights with regard to these Equity-Linked Financing Instruments. Such a decision may be made in order to issue Equity-Linked Financing Instruments on national and/or international capital markets or by way of private placements in connection with (i) mergers, acquisitions (including takeover) of companies, parts of companies, equity stakes (participations) or new investments planned by the company and/or Group companies, financing or re-financing of such mergers, acquisitions or new investments, or (ii) improving the regulatory and/or rating capital position of the company or Group companies.

If advance subscription rights are excluded, then (i) the Equity-Linked Financing Instruments are to be placed at market conditions, (ii) the exercise period is not to exceed ten (10) years for option rights and thirty (30) years for conversion rights, and (iii) the conversion or exercise price or the calculation methodology for such price of the new registered shares is to be set in line with the market conditions and practice prevailing at the date on which the Equity-Linked Financing Instruments are issued or converted into new registered shares.

The acquisition of registered shares through the exercise of conversion or option rights and any further transfers of registered shares is subject to the restrictions specified in the Articles of Association (please also see page 87).

The maximum number of 50 000 000 shares to be issued under the conditional capital for Equity-Linked Financing Instruments corresponds to 15.27% of the existing share capital.

The availability of the conditional capital is not limited in time.

Authorised capital

The authorised capital of SRL as of 31 December 2019 was as presented in the table on page 86.

The authorised capital amounts to CHF 8 500 000. The Board of Directors is authorised to increase the share capital of the company at any time up to 17 April 2021 through the issue of up to 85 000 000 registered shares, payable in full, each with a nominal value of CHF 0.10. Increases by underwriting as well as partial increases are permitted. The Board of Directors determines the date of issue, the issue price, the type of contribution and any possible acquisition of assets, the date of dividend entitlement as well as the expiry or allocation of non-exercised subscription rights.

The subscription rights of existing shareholders may not be excluded with respect to a maximum of CHF 5 200 000 through the issue of up to 52 000 000 registered shares, payable in full, each with a nominal value of CHF 0.10, out of the total amount of authorised capital.

The Board of Directors may exclude or restrict the subscription rights of existing shareholders with respect to a maximum of CHF 3 300 000 through the issue of up to 33 000 000 registered shares, payable in full, each with a nominal value of CHF 0.10, out of the total amount of authorised capital. Such exclusion or restriction relates to the use of shares in connection with (i) mergers, acquisitions (including take-over) of companies, parts of companies or holdings, equity stakes (participations) or new investments planned by the company and/or Group companies, financing or re-financing of such mergers, acquisitions or new investments, the conversion of loans, securities or equity securities, and/or (ii) improving the regulatory and/or rating capital position of the company or Group companies in a fast and expeditious manner if the Board of Directors deems it appropriate or prudent to do so (including by way of private placements).

The subscription and acquisition of the new registered shares, as well as each subsequent transfer of registered shares, shall be subject to the restrictions specified in the Articles of Association.

The maximum number of 85 000 000 shares to be issued under the authorised capital corresponds to 25.96% of the existing share capital.

Joint provision for conditional capital for Equity-Linked Financing Instruments and for the authorised capital

The total of registered shares issued from (i) authorised capital, where the existing shareholders' subscription rights were excluded and (ii) from conditional capital, where the existing shareholders' advance subscription rights on the Equity-Linked Financing Instruments were excluded, may not exceed 33 000 000 registered shares (corresponding to 10.08% of the existing share capital) up to 17 April 2021.

Changes in capital

Changes in 2019

The Annual General Meeting 2019 approved the reduction of the ordinary share capital by CHF 1 121 476.10 from CHF 33 861 946.50 to CHF 32 740 470.40 by cancelling 11 214 761 shares with a nominal value of CHF 0.10 each repurchased by SRL on a second trading line on the SIX Swiss Exchange, via Cantonal Bank of Zurich as agent. The 11 214 761 shares were repurchased under the share buy-back programme launched on 7 May 2018 until its completion on 15 February 2019. The purchase value of the repurchased own shares corresponded to CHF 999 999 983.08.

The reduction of the ordinary share capital could only take place after the required three notices to creditors had been published in the Swiss Gazette of Commerce *(Schweizerisches Handelsamtsblatt)* as stipulated in Article 733 of the Swiss Code of Obligations.

The reduction of the ordinary share capital approved by the Annual General Meeting on 17 April 2019 was published in the Swiss Gazette of Commerce *(Schweizerisches Handelsamtsblatt)* on 16 July 2019.

On 17 April 2019 the Annual General Meeting authorised a public share buy-back programme for cancellation purposes consisting of two tranches of up to CHF 1 billion purchase value each for the Board of Directors to repurchase SRL's shares prior to the 2020 Annual General Meeting. The first tranche of the programme was launched on 6 May 2019 and completed on 18 February 2020. The purchase value of the repurchased own shares corresponded to CHF 999 999 970.00. Together with the Q3/2019 results, which were published on 31 October 2019, the Board of Directors announced that it had decided not to launch the second tranche of the share buy-back programme due to the capital deployment, significant natural catastrophe losses in 2019 and the decision to suspend the initial public offering of ReAssure.

For further details on the share buy-back programmes, please visit: www.swissre.com/sharebuyback

Furthermore, the Annual General Meeting 2019 renewed the authorised capital (until 17 April 2021) and made further amendments to the provisions of the Articles of Association concerning authorised and conditional capital (re-setting several sub-limits, and amending the description of permitted cases of an exclusion of subscription or advance subscription rights).

Changes in 2018

The Annual General Meeting 2018 approved the reduction of the ordinary share capital by CHF 1 083 281.60 from CHF 34 945 228.10 to CHF 33 861 946.50 by cancelling 10 832 816 shares with a nominal value of CHF 0.10 each repurchased by SRL on a second trading line on the SIX Swiss Exchange, via Cantonal Bank of Zurich as agent. The 10 832 816 shares were repurchased under the share buy-back programme that ran from 3 November 2017 until 16 February 2018. The purchase value of the repurchased own shares corresponded to CHF 999 999 975.78.

The reduction of the ordinary share capital could only take place after the required three notices to creditors had been published in the Swiss Gazette of Commerce *(Schweizerisches Handelsamtsblatt)* as stipulated in Article 733 of the Swiss Code of Obligations. The reduction of the ordinary share capital approved by the Annual General Meeting on 20 April 2018 was published in the Swiss Gazette of Commerce on 24 July 2018.

On 20 April 2018, the Annual General Meeting authorised the Board of Directors to repurchase up to a maximum of CHF 1 billion purchase value of SRL's own shares prior to the Annual General Meeting 2019 by way of a buy-back programme for cancellation purposes. The programme was launched on 7 May 2018 and completed on 15 February 2019. The purchase value of the repurchased own shares corresponded to CHF 999 999 983.08.

For further details on the share buy-back programmes, please visit: www.swissre.com/sharebuyback

Changes in previous years

Information about changes in share capital of SRL as well as of our former parent company Swiss Reinsurance Company Ltd for earlier years is provided in the Annual Reports of these companies for the respective years. For details please visit: www.swissre.com/investors/financial-information.html

			31 December 2018			**31 December 2019**
	Capital in CHF	In % of the share capital	Shares	**Capital in CHF**	In % of the share capital	**Shares**
Share capital	33 861 946.50	100%	338 619 465	32 740 470.40	100%	327 404 704
Conditional capital						
for Equity-Linked Financing Instruments	5 000 000.00	14.77%	50 000 000	5 000 000.00	15.27%	50 000 000
Authorised capital	8 500 000.00	25.10%	85 000 000	8 500 000.00	25.96%	85 000 000

Shares

All shares issued by SRL are fully paid-in registered shares, each with a par value of CHF 0.10. Each share carries one vote. The shares rank equally among each other in all respects (including in respect of entitlements to dividends and liquidation proceeds). There are no categories of shares with a higher or limited voting power, privileged dividend entitlement or any other preferential rights, nor are there any other securities representing a part of the company's share capital.

The company cannot exercise the voting rights of treasury shares. As of 31 December 2019, shareholders had registered 167 993 029 shares with the share register for the purpose of exercising their voting rights, out of a total of 327 404 704 shares issued.

Profit-sharing and participation certificates

SRL has not issued any profit-sharing and participation certificates.

Limitations on transferability and nominee registrations

Free transferability

The company maintains a share register for the registered shares, in which owners and usufructuaries are entered.

The company may issue its registered shares in the form of single certificates, global certificates and intermediated securities. The company may convert its registered shares from one form into another at any time and without the approval of the shareholders. The shareholders have no right to demand a conversion into a specific form of registered shares.

Each shareholder may, however, at any time request a written confirmation from the company of the registered shares held by such shareholder, as reflected in the company's share register.

The registered shares are administered as intermediated securities. The transfer of intermediated securities and furnishing of collateral in intermediated securities must conform to the Federal Intermediated Securities Act of 3 October 2008. The transfer and furnishing of collateral by assignment is excluded.

Persons acquiring registered shares will, upon application, be entered in the share register without limitation as shareholders with voting power if evidence of the acquisition of the shares is provided and if they expressly declare that they have acquired the shares in their own name and for their own account and, where applicable, that they are compliant with the disclosure requirement stipulated by the Financial Markets Infrastructure Act (FMIA) of 19 June 2015. The Board of Directors is allowed to remove the entry of a shareholder with voting rights from the share register retroactively from the date of entry if the entry was obtained under false pretences or if the owner, whether acting alone or as part of a group, has breached notification rules.

Admissibility of nominee registrations

Persons not expressly declaring in their application for entry in the share register that they are holding shares for their own account (nominees) are entered without further inquiry in the share register of SRL as shareholders with voting rights up to a maximum of 2% of the outstanding share capital available at the time. Additional shares held by such nominees that exceed the limit of 2% of the outstanding share capital are entered in the share register with voting rights only if such nominees disclose the names, addresses and shareholdings of any persons for whose account the nominee is holding 0.5% or more of the outstanding share capital. In addition, such nominees must comply with the disclosure requirements of the FMIA.

Legal entities or partnerships or other associations or joint ownership arrangements that are linked through capital ownership or voting rights, through common management or in like manner, as well as individuals, legal entities or partnerships (especially syndicates) that act in concert with intent to evade the entry restriction are considered as one shareholder or nominee.

The provisions of the Articles of Association restricting the registration of nominees as shareholders with voting rights may be amended or abolished by a resolution of the General Meeting of shareholders, which requires an absolute majority of the votes validly cast (see page 113).

Convertible bonds and options

Convertible bonds

As of 31 December 2019, except as provided below, neither SRL nor any of its subsidiaries has any bonds outstanding that are convertible into equity securities of SRL.

On 6 June 2018, SRL placed with the market via a repackaging vehicle USD 500 000 000 of six-year exchangeable notes, which may be stock-settled at the option of SRL. Subject to the conditions of the notes, noteholders may exchange their notes for ordinary shares of SRL at an exchange price of USD 111.6987 (adjusted from the initial exchange price of USD 115.2593). The exchange price is subject to further adjustment in certain circumstances described in the conditions of the notes. To economically offset the settlement of a noteholder-initiated exchange, SRL purchased matching call options on SRL shares with a portion of the proceeds. Consequently, no new SRL shares will be issued upon a noteholder-initiated exchange. The settlement and delivery of these notes took place on 13 June 2018. For further details please see Note 7 on page 294. Assuming all of the notes were exchanged at the request of noteholders, 4 476 327 registered shares of SRL would have to be delivered (corresponding to 13.67% of the existing share capital).

Shares

Vesting of share awards to Swiss Re employees are physically settled (with treasury shares). The number of issued shares will not be affected. For details on shares granted to Swiss Re employees and for more information on the quantitative impact of vested shares please see Note 17 to the Group financial statements on page 266 of this Financial Report. Assuming maximum vesting of all share awards granted as of 31 December 2019, 3 660 142 registered shares of SRL would have to be delivered (corresponding to 1.18% of the existing share capital).

Board of Directors

The Board of Directors is ultimately responsible for the success of Swiss Re Ltd and the Group.

From left to right: Philip K. Ryan, Sir Paul Tucker, Raymond K.F. Ch´ien, Jacques de Vaucleroy, Karen Gavan, Larry Zimpleman, Walter B. Kielholz, Renato Fassbind, Trevor Manuel, Joerg Reinhardt, Susan L. Wagner, Jay Ralph, Eileen Rominger

Members of the Board of Directors

According to Article 14 of the Articles of Association, the Board of Directors of Swiss Re Ltd, the holding company of the Group, shall consist of at least seven members. As of 31 December 2019, the Board of Directors consisted of the following members[1]:

Name	Nationality	Age	Initial election
Walter B. Kielholz (Chairman)	Swiss	68	1998[2]
Renato Fassbind (Vice Chairman, Lead Independent Director)	Swiss	64	2011
Raymond K.F. Ch´ien	Chinese	67	2008[2]
Karen Gavan	Canadian	58	2018
Trevor Manuel	South African	63	2015
Jay Ralph	American, Swiss	60	2017
Joerg Reinhardt	German	63	2017
Eileen Rominger	American	65	2018
Philip K. Ryan	American	63	2015
Sir Paul Tucker	British	61	2016
Jacques de Vaucleroy	Belgian	58	2017
Susan L. Wagner	American	58	2014
Larry Zimpleman	American	68	2018

[1] For the biographies of former Board members, please refer to: www.swissre.com/formerboardmembers

[2] Initially elected to the Board of Directors of Swiss Reinsurance Company Ltd, the Group's former parent company, and subsequently elected to the Board of Directors of SRL in 2011.

Felix Horber
Group Company Secretary

Felix Horber, attorney-at-law, has been the Group Company Secretary of Swiss Re since 2007. He holds a PhD in Law and an Executive Master in European and International Business Law. He is a Certified Director for Board Effectiveness and a Lecturer in Law at the University of St. Gallen, Switzerland.

Walter B. Kielholz
Chairman, non-executive
Born: 1951
Nationality: Swiss

Walter B. Kielholz was elected to the Board of Directors of Swiss Reinsurance Company Ltd in 1998 and to the Board of Directors of SRL in connection with its formation in 2011. He was Vice Chairman from 2003 to April 2009 and has been Chairman of the Board of Directors since May 2009. He chairs the Chairman's and Governance Committee.

Professional experience
Walter B. Kielholz began his career at the General Reinsurance Corporation, Zurich, in 1976, where he held several positions in the US, the UK and Italy before assuming responsibility for the company's European marketing. In 1986, he joined Credit Suisse, where he was responsible for relationships with large insurance groups. He joined Swiss Re in 1989, where he became an Executive Board member in 1993 and was Chief Executive Officer from 1997 to 2002. He was also a member of the Board of Directors of Credit Suisse Group Ltd from 1999 to 2014 and served as Chairman from 2003 to 2009.

Educational background
Business Finance and Accounting degree, University of St.Gallen, Switzerland

External mandates
- Vice Chairman of the Institute of International Finance
- Member of the European Financial Services Round Table
- Chairman of the Zurich Art Society

Renato Fassbind
Vice Chairman and Lead Independent Director, non-executive and independent
Born: 1955
Nationality: Swiss

Renato Fassbind was elected to the Board of Directors of SRL in 2011. He was appointed Vice Chairman in 2012 and Lead Independent Director in 2014. He chairs the Nomination Committee and the Audit Committee and is a member of the Chairman's and Governance Committee and the Compensation Committee.

Professional experience
After two years with Kunz Consulting AG, Renato Fassbind joined F. Hoffmann-La Roche Ltd in 1984, becoming Head of Internal Audit in 1988. From 1986 to 1987, he worked as a public accountant with Peat Marwick in New Jersey, USA. In 1990, he joined ABB Ltd as Head of Corporate Staff Audit and, from 1997 to 2002, was Chief Financial Officer and member of the Group Executive Committee. In 2002, he joined Diethelm Keller Holding Ltd as Group Chief Executive Officer. From 2004 to 2010, he was Chief Financial Officer and member of the Executive Board of Credit Suisse Group Ltd.

Educational background
- PhD in Economics, University of Zurich, Switzerland
- Certified Public Accountant (CPA), Denver, USA

External mandates
- Board member of Kühne + Nagel International Ltd*
- Board member of Nestlé S.A.*

Raymond K.F. Ch'ien
Member, non-executive and independent
Born: 1952
Nationality: Chinese

Raymond K.F. Ch'ien was elected to the Board of Directors of Swiss Reinsurance Company Ltd in 2008 and to the Board of Directors of SRL in connection with its formation in 2011. He is a member of the Compensation Committee and the Investment Committee. He is also a member of the Board of Directors of Swiss Re Asia Pte. Ltd.

Professional experience
Raymond K.F. Ch'ien was Group Managing Director of Lam Soon Hong Kong Group from 1984 to 1997. From 1999 to 2011, he was Chairman of CDC Corporation, a software development company, and from 2003 to 2015 Chairman of MTR Corporation Limited, which operates a major public transport network in Hong Kong.

Educational background
- PhD in Economics, University of Pennsylvania, USA

External mandates
- Chairman of the Board of Directors of Hang Seng Bank Ltd*
- Board member of China Resources Power Holdings Company Ltd* and the Hongkong and Shanghai Banking Corporation Ltd
- Honorary President of the Federation of Hong Kong Industries

* Listed company

Karen Gavan
Member, non-executive and independent
Born: 1961
Nationality: Canadian

Karen Gavan was elected to the Board of Directors of SRL in 2018. She is a member of the Audit Committee. She is also a member of the Board of Directors of Swiss Re America Holding Corporation.

Professional experience
Karen Gavan started her career in finance roles at Prudential Insurance, Imperial Life and Canada Life. She joined Transamerica Life Canada in 1992 as Chief Financial Officer and added responsibilities over her tenure becoming Executive Vice President and Chief Financial Officer from 2000 to 2002 of Transamerica Life Canada/AEGON Canada, and from 2003 to 2005 the company's Chief Operating Officer. From 2005, Karen Gavan assumed a number of non-executive board mandates. She joined the Board of Economical Insurance in 2008 and, until her retirement in November 2016, also served for five years as President and Chief Executive Officer at Economical Insurance, preparing the company for its initial public offering. During her leadership, the company also launched SONNET, Canada's first fully digital insurer.

Educational background
- Honours Bachelor of Commerce, Lakehead University, Canada
- Fellow, Institute of Chartered Accountants of Ontario, Canada

External mandates
- Board member of Mackenzie Financial Corporation
- Board member of HSBC Bank Canada

Trevor Manuel
Member, non-executive and independent
Born: 1956
Nationality: South African

Trevor Manuel was elected to the Board of Directors of SRL in 2015. He is a member of the Audit Committee and the Investment Committee.

Professional experience
Trevor Manuel served in the South African government for more than 20 years, including as Minister of Finance from 1996 to 2009 and as Minister in Presidency, responsible for the National Planning Commission, from 2009 to 2014. He held positions at international bodies, including the United Nations Commission for Trade and Development, the World Bank, the International Monetary Fund, the G20, the African Development Bank and the Southern African Development Community.

Educational background
- National Diploma in Civil and Structural Engineering, Peninsula Technikon, South Africa
- Executive Management Programme, Stanford University, USA

External mandates
- Chairman of the Board of Directors of Old Mutual Ltd*
- Deputy Chairman of Rothschild & Co South Africa
- Professor Extraordinaire, University of Johannesburg
- Honorary Professor, University of Cape Town
- Trustee of the Allan Gray Oris Foundation Endowment

Jay Ralph
Member, non-executive and independent
Born: 1959
Nationality: American and Swiss

Jay Ralph was elected to the Board of Directors of SRL in 2017. He is a member of the Finance and Risk Committee.

Professional experience
Jay Ralph was a member of the Board of Management of Allianz SE from 2010 to 2016, where he also served on a number of boards of directors of Allianz SE subsidiaries. He was Chief Executive Officer of Allianz Re from 2007 to 2009 and President and Chief Executive Officer of Allianz Risk Transfer from 1997 to 2006. Before joining Allianz, he was auditor at Arthur Andersen & Company, Investment Officer at Northwestern Mutual Life Insurance Company, President at Centre Re Bermuda Ltd and a member of the Executive Board of Zurich Re.

Educational background
- MBA in Finance and Economics, University of Chicago, USA
- BBA in Finance and Accounting, University of Wisconsin, USA
- Certified Public Accountant (CPA), Chartered Financial Analyst (CFA) and Fellow, Life Management Institute (FLMI)

External mandates
- Member of the Siemens Pension Advisory Board
- Member of the Georgia O'Keeffe Museum Board of Trustees and Georgia O'Keeffe Museum Innovations Board

* Listed company

Joerg Reinhardt
Member, non-executive and independent
Born: 1956
Nationality: German

Joerg Reinhardt was elected to the Board of Directors of SRL in 2017. He is a member of the Nomination Committee and the Compensation Committee.

Professional experience

Joerg Reinhardt has been Chairman of the Board of Directors of Novartis since 2013. He was Chairman of the Board of Management and the Executive Committee of Bayer HealthCare AG from 2010 to 2013 and, prior to that, held various executive positions at Novartis. He was Chief Operating Officer from 2008 to 2010, headed the Vaccines and Diagnostics Division from 2006 to 2008 and held a number of other senior roles, primarily in research and development, in the preceding years. Joerg Reinhardt started his career at Sandoz Pharma Ltd, a predecessor company of Novartis, in 1982.

Educational background

- PhD in Pharmaceutical Sciences, Saarland University, Germany

External mandates

- Chairman of the Board of Directors of Novartis Inc.*
- Chairman of the Board of Trustees of the Novartis Foundation

Eileen Rominger
Member, non-executive and independent
Born: 1954
Nationality: American

Eileen Rominger was elected to the Board of Directors of SRL in 2018. She is a member of the Investment Committee.

Professional experience

Eileen Rominger began her career at Oppenheimer Capital, where she worked for 18 years as an equity portfolio manager, serving as a Managing Director and a member of the Executive Committee. Eileen Rominger then joined Goldman Sachs Asset Management in 1999, where she held a number of senior leadership positions, becoming the company's Global Chief Investment Officer in 2009. She subsequently served from 2011 to 2012 as the Director of the Division of Investment Management at the United States Securities and Exchange Commission, where she led a team which implemented regulatory policy for mutual funds and federally registered investment advisors. From 2013 to 2018, Eileen Rominger was a senior advisor at CamberView Partners, a provider of advice to public companies on shareholder engagement and corporate governance.

Educational background

- Bachelor's degree in English, Fairfield University, USA
- MBA in Finance, The Wharton Graduate School of Business, University of Pennsylvania, USA

External mandates

- Member of the Investment Committee of the JPB Foundation
- Member of the Board of Trustees of the Massachusetts Museum of Contemporary Art

Philip K. Ryan
Member, non-executive and independent
Born: 1956
Nationality: American

Philip K. Ryan was elected to the Board of Directors of SRL in 2015. He chairs the Finance and Risk Committee and is a member of the Chairman's and Governance Committee and the Audit Committee. He is also Chairman of Swiss Re America Holding Corporation.

Professional experience

Philip K. Ryan held various positions with Credit Suisse from 1985 to 2008, including Chairman of the Financial Institutions Group, Chief Financial Officer of Credit Suisse Group Ltd, Chief Financial Officer of Credit Suisse Asset Management, and Managing Director of CSFB Financial Institutions Group. He was Chief Financial Officer of the Power Corporation of Canada from 2008 to 2012. In that capacity, he was a director of IGM Financial Inc., Great-West Lifeco Inc. and several of their subsidiaries, including Putnam Investments.

Educational background

- MBA, Kelley School of Business, Indiana University, USA
- Bachelor's degree in Industrial and System Engineering, University of Illinois, USA

External mandates

- Operating Partner Corsair Capital
- Member of the Advisory Board of NY Green Bank
- Member of the Smithsonian National Board

* Listed company

Sir Paul Tucker
Member, non-executive and independent
Born: 1958
Nationality: British

Sir Paul Tucker was elected to the Board of Directors of SRL in 2016. He is a member of the Finance and Risk Committee and the Investment Committee.

Professional experience
Sir Paul Tucker was the Deputy Governor of the Bank of England from 2009 to 2013. He held various senior roles at the Bank of England from 1980 onwards, including as a member of the Monetary Policy Committee, Financial Policy Committee, Prudential Regulatory Authority Board and Court of Directors. He also served as a member of the Steering Committee of the G20 Financial Stability Board and as a member of the Board of the Bank for International Settlements. In 2014, he was granted a knighthood for his services to central banking. Sir Paul Tucker is the author of *Unelected Power: The Quest for Legitimacy in Central Banking and the Regulatory State* (Princeton University Press, 2018).

Educational background
- BA in Mathematics and Philosophy, Trinity College, Cambridge, United Kingdom

External mandates
- Chairman of the Systemic Risk Council
- Research Fellow at the Harvard Kennedy School of Government
- Board member of the Financial Services Volunteers Corps
- Senior Fellow at the Harvard Center for European Studies
- Governor of the Ditchley Foundation
- President of the UK's National Institute of Economic and Social Research

Jacques de Vaucleroy
Member, non-executive and independent
Born: 1961
Nationality: Belgian

Jacques de Vaucleroy was elected to the Board of Directors of SRL in 2017. He chairs the Compensation Committee and is a member of the Chairman's and Governance Committee, the Nomination Committee and the Investment Committee. He is also Chairman of Swiss Re Europe S.A. and Swiss Re International SE.

Professional experience
Jacques de Vaucleroy was a member of the Management Committee of AXA Group from 2010 to 2016, serving as Chief Executive Officer of North, Central and Eastern Europe and Chief Executive Officer of Global Life & Savings. He also held a number of positions in boards of directors and supervisory boards of AXA companies. Before that, he spent 24 years at ING Group, where he held senior roles in banking, asset management and insurance. He was a member of the Executive Board of ING Group from 2006 to 2009, in charge of insurance and asset management in Europe.

Educational background
- Master's degree in Law, Université Catholique de Louvain, Belgium
- Master's degree in Business Law, Vrije Universiteit Brussel, Belgium

External mandates
- Vice Chairman of the Board of Directors of Ahold Delhaize*
- Board member of Colt Technology Services Group plc, Fidelity International Limited, Eight Roads Holdings Limited and Zabka Polska SA
- Board member of the Simôn I. Patiño Foundation and the TATA non-profit organisation

Susan L. Wagner
Member, non-executive and independent
Born: 1961
Nationality: American

Susan L. Wagner was elected to the Board of Directors of SRL in 2014. She chairs the Investment Committee and is a member of the Chairman's and Governance Committee, the Nomination Committee and the Finance and Risk Committee.

Professional experience
Susan L. Wagner is a co-founder of BlackRock, where she served as Vice Chairman and a member of the Global Executive and Operating Committees before retiring in 2012. Over the course of her nearly 25 years at BlackRock, Susan L. Wagner served in several roles such as Chief Operating Officer, Head of Strategy, Corporate Development, Investor Relations, Marketing and Communications, Alternative Investments and International Client Businesses. Prior to founding BlackRock, Susan L. Wagner was a Vice President at Lehman Brothers, supporting the investment banking and capital markets activities of mortgage and savings institutions.

Educational background
- BA in English and Economics, Wellesley College, USA
- MBA in Finance, University of Chicago, USA

External mandates
- Board member of Apple Inc.*
- Board member of BlackRock, Inc.*
- Board member of Color Genomics, Inc.
- Member of the Board of Trustees of Wellesley College, USA

* Listed company

Larry Zimpleman
Member, non-executive and independent
Born: 1951
Nationality: American

Larry Zimpleman was elected to the Board of Directors of SRL in 2018. He is a member of the Finance and Risk Committee.

Professional experience
Larry Zimpleman started his career in 1971 as actuarial intern at The Principal Financial Group, an investment management company that offers insurance solutions, asset management and retirement services to individual and institutional clients. From 1976 to 2006, he held various senior management and leadership positions at The Principal. He became President and Chief Executive Officer in 2008 and Chairman in 2009. In August 2015, Larry Zimpleman stepped down as President and CEO. His membership in the Board of Directors ended in May 2016.

Educational background
- Bachelor of Science, Drake University, USA
- MBA, Drake University, USA
- Fellow, Society of Actuaries, USA

External mandates
- Member of the Board of Trustees of the Drake University
- Member of the Board of Trustees of the Iowa Clinic

Independence
At least three-quarters of the members of the Board of Directors must be independent members. SRL defines independence in line with best-practice corporate governance standards. To be considered independent a Board member may not be, and may not have been in the past five years, employed as a member of the Group EC, or by any subsidiary of the Group, or may not have a material relationship with any part of the Group (either directly or as a partner, director or shareholder of an organisation that has a material relationship with the Group) other than serving as an independent board member in any subsidiary. In addition, the Board agrees on other criteria that disqualify a Board member from being considered independent, taking into consideration provisions of applicable law, regulations and best practice.

In particular, each of the Board members must annually confirm that he or she: has not been employed by the company in any capacity within the last five years; has not accepted and does not have a family member who accepted any payments from the company or any subsidiary of the company in excess of USD 120 000 during the current fiscal year or any of the past three fiscal years; is not a family member of an individual who is, or during the past three years was employed by the company or by a subsidiary of the company in any capacity; is not (and is not affiliated with a company that is) an adviser or consultant to the company or a member of the company's senior management; is not affiliated with a significant customer or supplier of the company; does not have any personal services contract(s) with the company or a member of the company's senior management; is not affiliated with a not-for-profit entity that receives significant contributions from the company; has not been a partner or employee of the company's external auditor during the past three years, and does not have any other conflict of interest that the Board of Directors determines to mean he or she cannot be considered independent.

All the members of the Board of Directors meet our independence criteria, with the exception of our Chairman. As a full-time Chairman he is not considered independent.

Conflicts of interest
The members of the Board of Directors are also subject to procedures to avoid any action, position or interest that conflicts with an interest of SRL or the Group or gives the appearance of a conflict. Each member must disclose any conflict of interest relating to a matter to be discussed at a meeting, as soon as the member becomes aware of the conflict, to the Chairman. The respective member must not participate in the discussion and decision-making involving the interest at stake. The Chairman informs the Board of Directors of the existence of the conflict and it is reflected in the meeting minutes. Each member must disclose any conflict of interest generally arising to the Group Chief Legal Officer (Group CLO), or in his absence to the Group Chief Compliance Officer (Group CCO). The Group CLO (or in his absence the Group CCO) ensures that such a reported conflict of interest is dealt with accordingly.

Information about managerial positions and significant business connections of non-executive directors
Walter B. Kielholz, Chairman of the Board of Directors since 1 May 2009, was Swiss Re's CEO from 1 January 1997 to 31 December 2002. In line with SRL's independence criteria, Walter B. Kielholz, being a full-time Chairman, is not considered independent. No other director has ever held a management position within the Group. None of the members of the Board of Directors has, or represents a company or organisation that has, any significant business connections with SRL or any of the Group companies, other than as disclosed in Note 19 to the Group financial statements on page 269 of this Financial Report.

Other mandates, activities and functions
Article 26 of the Articles of Association governs the requirements regarding the external mandates held by Board members. Please see www.swissre.com/articlesofassociation

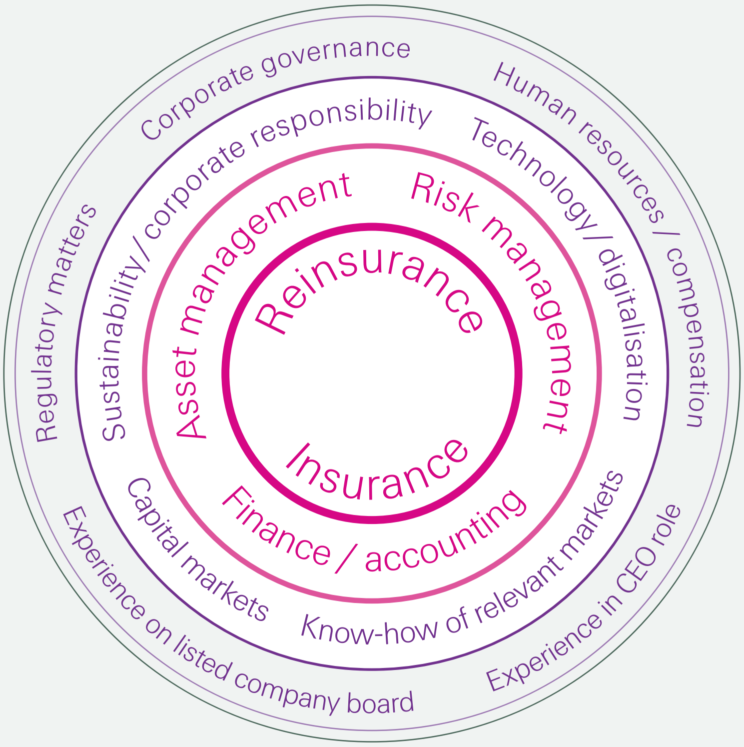
In addition, no member of the Board of Directors may serve on the board of directors of a listed company in which another member of the Board of Directors holds an executive function, or where a member of the Board of Directors is able to determine the compensation of another member of the Board of Directors.

All Board members comply with the requirements on external mandates set out in the Articles of Association. Any activities of Board members in governing and supervisory bodies of important Swiss and foreign organisations, institutions and foundations, as well as permanent management and consultancy functions for important Swiss and foreign interest groups and official functions and political posts, are stated in each of the directors' biographies, which can be found on pages 89–93.

Changes in 2019

The composition of the Board of Directors remained unchanged in 2019. All the members of the Board of Directors stood for re-election. At the Annual General Meeting on 17 April 2019, the shareholders re-elected Walter B. Kielholz for a further one-year term of office as a member and as Chairman of the Board of Directors. All other members of the Board of Directors were individually re-elected by the Annual General Meeting 2019 for a further one-year term of office as members of the Board of Directors: Renato Fassbind (Vice Chairman and Lead Independent Director), Raymond K.F. Ch'ien, Karen Gavan, Trevor Manuel, Jay Ralph, Joerg Reinhardt, Eileen Rominger, Philip K. Ryan, Sir Paul Tucker, Jacques de Vaucleroy, Susan L. Wagner and Larry Zimpleman. The Board of Directors consists of 13 members.

Board of Directors skills and competencies



Election, succession planning, qualifications, training and term of office

Election procedure

Members of the Board of Directors and the Chairman of the Board of Directors are elected individually by the Annual General Meeting for a term of office until completion of the next Annual General Meeting.

Succession planning

Succession planning is of significant importance to the Board of Directors. It regularly analyses its composition to confirm that its members' qualifications, skills and experience correspond to the Board's needs and requirements. The Board of Directors initiates the evaluation of potential new Board members in a timely manner with the continued aim to ensure its members have the desired qualifications and experience as well as to further diversify and renew its composition. The Nomination Committee evaluates candidates for Board membership and makes recommendations to the Board of Directors for election or re-election proposals. The Board of Directors nominates candidates for Board membership for election at the Annual General Meeting, ensuring that the Board retains an adequate size and well-balanced composition and that at least three-quarters of its members are independent. With regard to its succession planning, the Board of Directors aims to safeguard the stability of its composition while also renewing the Board in a sensible way.

Qualifications

The Board of Directors needs to secure the necessary qualifications, skills and diversity to perform all required responsibilities. It must assemble among its members the balance of managerial expertise and knowledge from different fields required for the fulfilment of the oversight responsibility as well as for sound, independent decision-making in line with the needs of the business.

The Board of Directors defines the selection criteria against which candidates for Board membership are assessed. The requirements that potential Board members have to meet in terms of knowledge in various key areas and the industry are constantly increasing.

Membership on the Board of Directors requires experience in key sectors such as insurance and reinsurance, finance, accounting, capital markets, risk management and regulatory matters as well as leadership and decision-making experience in a large, complex financial institution. The mandate also demands significant commitment, integrity and intercultural communication competence.

The prevalence of these qualifications and skills ensures that SRL has the relevant expertise required for active involvement and supervision of an international listed company.

A Board member may not have any management or executive function within the Group.

The Articles of Association are available at:
www.swissre.com/articlesofassociation

Board members' training

The Board of Directors has a unique role in the company oversight. The company therefore strives to build a strong and effective Board culture, supported by ongoing learning, which is an important component to foster Board effectiveness. Newly elected Board members undergo a comprehensive onboarding programme consisting of a total of 21 hours of sessions in order to gain a sound understanding of the Group's organisation, business and environment. Additionally, the Board members update and enhance their knowledge of emerging business trends and risks through regular meetings with internal and external experts throughout the year. During 2019, the Board of Directors completed training sessions on the following topics: Property & Casualty reserving; Life & Health reserving; the internal capital adequacy model as well as Economic Value Management.

Additionally, one-to-one training sessions are offered at any time through the year with our top executives and experts.

Term of office

The members of the Board of Directors are elected for a term of office until completion of the next Annual General Meeting. Members whose term has expired are immediately eligible for re-election.

First election date

The initial election year of each member is stated in the table on page 88.

Allocation of tasks within the Board of Directors

Chairman of the Board of Directors

The Chairman of the Board of Directors leads the Board of Directors, convenes the Board and committee meetings, establishes the agendas and presides over Board meetings. The Chairman coordinates the work of the Board committees together with the respective Chairpersons and ensures that the Board is kept informed about the committees' activities and findings. In cases of doubt, the Chairman makes decisions about the authority of the Board or its committees and about interpreting and applying Swiss Re's governance documents.

The Chairman chairs the Chairman's and Governance Committee and develops and continually adapts Swiss Re's governance to regulatory and corporate requirements. He keeps himself informed about the activities within the Group and may attend Group EC and Business Unit Executive Committee meetings as he deems necessary. He also has access to all corresponding documentation and minutes. He ensures adequate reporting by the Group EC and the Group CEO to the Board of Directors and facilitates their communication with the Board. He annually assesses the Group CEO's performance and discusses with the Group CEO the annual performance assessment of the Group EC members.

The Chairman presides over General Meetings of shareholders and represents the Group towards its shareholders, in industry associations and in the interaction with other stakeholders such as the media, political and regulatory authorities, governmental officials and the general public. Specifically, the Chairman keeps regular contact with the Group's regulator FINMA.

The Chairman arranges the introduction for new Board members and appropriate training for all Board members.

If the post of the Chairman is vacant, the Board of Directors may appoint a new Chairman from among its members for the remaining term of office. Such a resolution requires both the presence of all remaining members of the Board of Directors, physically or by telephone or video conference, and a majority of at least three-quarters.

Vice Chairman

The Vice Chairman performs the duties of the Chairman if the Chairman is prevented from performing his duties or in a potential conflict-of-interest situation. The Vice Chairman may prepare and execute Board resolutions at the request of the Board and liaises between the Board and the Group EC in matters not reserved to the Chairman.

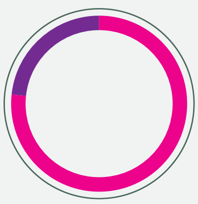
Lead Independent Director

The Vice Chairman or another member of the Board of Directors may also assume the role of Lead Independent Director. The Lead Independent Director acts as an intermediary between the Group and its shareholders and stakeholders in the absence of the Chairman or, in particular, when a senior independent member of the Board is required. He may convene and chair sessions where the Chairman is not present. He will communicate the outcome of these sessions to the Chairman.

Board of Directors diversity

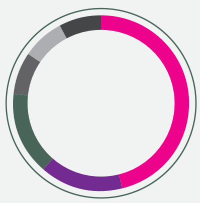
In addition to the skill sets and competencies of the members of the Board of Directors, the principles of gender and age diversity, inclusion, nationality and regional representation play an important role in the composition of the Board of Directors.

Gender diversity



- **10** Male
- **3** Female

Regional representation



- **6** US/Canada
- **2** Europe
- **2** Switzerland
- **1** UK
- **1** Asia
- **1** Africa

Nominations for re-/election by the Annual General Meeting of 17 April 2020

The shareholders annually elect the members of the Board of Directors, the Chairman of the Board of Directors and the members of the Compensation Committee, individually and separately, for one-year terms, until completion of the next Annual General Meeting. The Board of Directors proposes, based on recommendations by the Nomination Committee, that each of the following Board members be **re-elected** for a one-year term:

- Walter B. Kielholz
- Renato Fassbind
- Raymond K.F. Ch'ien
- Karen Gavan
- Jay Ralph
- Joerg Reinhardt
- Philip K. Ryan
- Sir Paul Tucker
- Jacques de Vaucleroy
- Susan L. Wagner
- Larry Zimpleman

The Board of Directors proposes, based on a recommendation by the Nomination Committee, that **Walter B. Kielholz be re-elected as Chairman of the Board of Directors** for a last one-year term. Walter B. Kielholz is a very experienced Chairman with our company. This proposal is in line with the Board of Directors' aim to ensure stability in the Board of Directors' composition and work. As announced by Swiss Re on 3 March 2020, Sergio P. Ermotti will be nominated for election by the Annual General Meeting 2021 as Chairman of the Board of Directors to succeed Walter B. Kielholz.

Trevor Manuel and Eileen Rominger will not stand for re-election at the Annual General Meeting 2020. The Board of Directors proposes, based on proposals by the Nomination Committee, the following candidates for **first-time election** as members of the Board of Directors for a one-year term of office:

- Sergio P. Ermotti
- Joachim Oechslin
- Deanna Ong

Sergio P. Ermotti has been Group Chief Executive Officer and a member of the Group Executive Board of UBS Group since 2011. Before joining UBS, he was Group Deputy Chief Executive Officer at UniCredit and responsible for the business areas of Corporate and Investment Banking, and Private Banking between 2007 and 2010. He started his professional career at Merrill Lynch in 1987, where he held various positions in the areas of equity derivatives and capital markets before he became Co-Head of Global Equity Markets and a member of the Executive Management Committee for Global Markets & Investment Banking in 2001. Sergio P. Ermotti, a Swiss citizen, is a Swiss-certified banking expert and a graduate of the Advanced Management Programme at the University of Oxford, United Kingdom.

Joachim Oechslin was Group Chief Risk Officer and a member of the Group Executive Board of Credit Suisse Group from 2014 to February 2019 and is currently a Senior Advisor at Credit Suisse. Previously, he was Chief Risk Officer and a member of the Group Committee of Munich Re Group (2007–2013), Deputy Chief Risk Officer of AXA Group (2007), Group Chief Risk Officer of Winterthur Group (2003–2006) and Chief Risk Officer of Winterthur Life & Pensions (2001–2003). Prior to joining Winterthur Group, Joachim Oechslin was a consultant at McKinsey & Company, specialising in the financial services sector. He is a Swiss citizen and holds a Master of Science in Mathematics from the Swiss Federal Institute of Technology (ETH), Zurich, Switzerland.

Deanna Ong has been Chief People Officer and a member of the Group Executive Committee at GIC, a sovereign wealth fund established by the Government of Singapore, since 2017. For the past two years, she has also been a Board member and Chairwoman of the Audit Committee of Swiss Re's main reinsurance carrier for the Asia region. Deanna Ong joined GIC in 1994 and held various finance roles covering public and private market assets until 2009. From 2009 to 2014, she was Director Finance, responsible for financial management across GIC's portfolio. In 2012 she also took on responsibility for Human Resources & Organisation and Corporate Governance. Prior to joining GIC, she was a tax accountant with Arthur Andersen & Co. Deanna Ong is a Singapore citizen and holds a Bachelor of Accountancy from the Nanyang Technological University of Singapore.

The Board of Directors furthermore proposes, based on recommendations by the Nomination Committee, that **Raymond K.F. Ch'ien**, **Renato Fassbind**, **Joerg Reinhardt** and **Jacques de Vaucleroy** be re-elected as members of the **Compensation Committee** and **Karen Gavan** be elected as a new member of the **Compensation Committee**.

Swiss Re's governance framework

Organisational structure of the Board of Directors

The Board of Directors constitutes itself at the first meeting following the Annual General Meeting. However, it is the Annual General Meeting though, which elects the Chairman and the members of the Compensation Committee. The Board of Directors elects from among its independent members a Vice Chairman and a Lead Independent Director. The same member may act in both roles. The Board of Directors also elects the Chairpersons and members of the Board Committees (other than the members of the Compensation Committee) as proposed by the Chairman's and Governance Committee. The Board of Directors may remove members from any such special function at any time. The Board of Directors also appoints its secretaries, who do not need to be members of the Board of Directors.

Committees of the Board of Directors

As determined by the applicable Swiss Corporate law and the Articles of Association, the Board of Directors has inalienable and non-transferable responsibilities and authorities. The Board of Directors has established Board committees that support the Board in fulfilling its duties. The Board has delegated certain responsibilities, including the preparation and execution of its resolutions, to the following six committees:

- Chairman's and Governance Committee
- Nomination Committee
- Audit Committee
- Compensation Committee
- Finance and Risk Committee
- Investment Committee

Each committee consists of a chairperson and at least three other members elected from among the Board of Directors. The members of the Compensation Committee are elected annually by the Annual General Meeting.

The term of office of a Board committee member is one year, beginning with the appointment at the constituting Board meeting following an Annual General Meeting and ending at the Board meeting following the subsequent Annual General Meeting. For Compensation Committee members, the term of office begins with the election at the Annual General Meeting until completion of the next Annual General Meeting.

Please refer to pages 98 and 99 for an overview of the responsibilities and members of the Board committees. Depending on the responsibility, the Board committees have decision-making powers or act in an advisory capacity.

Committees of the Board of Directors

Chairman's and Governance Committee

Responsibilities

The Chairman's and Governance Committee's primary function is to act as advisor to the Chairman and to address corporate governance issues affecting the Group and impacting its legal and organisational structure. It is also in charge of succession planning at the Board of Directors level (with the exception of the succession planning responsibilities that lie with the Nomination Committee), oversees the annual performance assessment and self-assessment at both the Board of Directors and the Group EC level.

Members
- Walter B. Kielholz, Chair
- Renato Fassbind
- Philip K. Ryan
- Jacques de Vaucleroy
- Susan L. Wagner

2019 key focus areas
- Sustainability: Oversaw the effective and efficient implementation of the Group Sustainability Strategy
- Succession planning: Steered the succession planning processes, where relevant in collaboration with the Nomination Committee
- Performance and self-assessments: Led the annual performance assessment and the annual self-assessment processes for the Board of Directors and the Group EC

Nomination Committee

Responsibilities

The Nomination Committee's function is to generally assist the Board of Directors in its overall responsibility related to succession planning. The Nomination Committee's responsibility is, in particular, to select and nominate candidates at the Board of Directors level for all the individuals who are elected by the Annual General Meeting. Those are the members at the Board of Directors, the Chairman and the members of the Compensation Committee.

Members
- Renato Fassbind, Chair
- Joerg Reinhardt
- Jacques de Vaucleroy
- Susan L. Wagner

2019 key focus areas
- Succession planning: Steered the succession planning processes for the Chairman and the Board members who are elected by the Annual General Meeting

Audit Committee

Responsibilities

The central task of the Audit Committee is to assist the Board of Directors in fulfilling its oversight responsibilities as they relate to the integrity of SRL's and the Group's financial statements, the Swiss Re Group's compliance with legal and regulatory requirements, the external auditor's qualifications and independence, and the performance of Group Internal Audit (GIA) and the Group's external auditor. The Audit Committee monitors independently and objectively SRL's and the Group's financial reporting process and system of internal control, and it facilitates ongoing communication between the external auditor, Group EC, Business Units, GIA and the Board of Directors with regard to the Group's financial reporting and, more broadly, its financial situation.

Members
- Renato Fassbind, Chair
- Karen Gavan
- Trevor Manuel
- Philip K. Ryan

2019 key focus areas
- External auditor: Led the process for the selection of a new external auditor
- Reporting basis: Oversaw the decision-making process to change Swiss Re's reporting basis from US GAAP to IFRS as of 2024
- Finance Transformation: Oversaw the finance transformation initiatives

Independence

All members of the Audit Committee are non-executive and independent.

Further qualifications

Additional qualification requirements apply to members of the Audit Committee: Each member of the Audit Committee has to be financially literate. At least one member must qualify as an Audit Committee financial expert, as determined by the Board of Directors. Members of the Audit Committee should not serve on audit committees of more than four listed companies outside the Group. Audit Committee members have to advise the Chairman of SRL before accepting any further invitation to serve on an audit committee of another listed company outside the Group and observe the limitations set in the Articles of Association in relation to external mandates.

Compensation Committee

Responsibilities

The Compensation Committee supports the Board of Directors in establishing and reviewing SRL's compensation framework and guidelines and performance criteria as well as in preparing the proposals to the Annual General Meeting regarding the compensation of the Board of Directors and of the Group EC. It proposes compensation principles in line with legal and regulatory requirements and the Articles of Association for the Group to the Board of Directors for approval and, within those approved principles, determines the establishment of new (and amendments to existing) compensation plans, and determines, or proposes as appropriate, individual compensation. The Compensation Committee also ensures that compensation plans do not encourage inappropriate risk-taking within the Group and that all aspects of compensation are fully compliant with applicable laws, rules and regulations.

Members

- Jacques de Vaucleroy, Chair
- Raymond K.F. Ch'ien
- Renato Fassbind
- Joerg Reinhardt

2019 key focus areas

- Compensation Framework and Compensation Plan design: Monitored the effectiveness of the Compensation Framework and its alignment with both shareholders' interests and long-term business strategy, specifically with regard to long-term incentives. Monitored the way that leadership has implemented and utilised the pay for performance framework, including pay equity principles at both the business and individual level
- Legal and regulatory developments: Monitored legal and regulatory developments, including continued compliance with the Ordinance against Excessive Compensation at Public Corporations

Finance and Risk Committee

Responsibilities

The Finance and Risk Committee annually reviews the Group Risk Policy and proposes it for approval to the Board of Directors, reviews risk and capacity limits approved by the Group EC as well as their usage across the Group and reviews the Risk Control Framework. It reviews the most important risk exposures in all major risk categories as well as new products or strategic expansions of the Group's areas of business. It reviews the risk aspects of control transactions that cover the acqusition of equity ownership in legal entities for strategic purposes. In terms of risk and economic performance measurement it reviews critical principles used in internal risk measurement, valuation of assets and liabilities, capital adequacy assessment, and economic performance management. It also reviews capital adequacy and the Group's treasury strategy.

Members

- Philip K. Ryan, Chair
- Jay Ralph
- Sir Paul Tucker
- Susan L. Wagner
- Larry Zimpleman

2019 key focus areas

- Cyber risk: Oversaw in particular the successful implementation of the cyber preparedness programme
- China growth: Monitored and reviewed the underwriting, operational and reputational risks associated with the growth strategy in China
- Claims processes: Reviewed regular updates on claims processes and functions in the Business Units Reinsurance and Corporate Solutions including the handling of large exposures

Investment Committee

Responsibilities

The Investment Committee endorses the strategic asset allocation and reviews tactical asset allocation decisions. It reviews the performance of the financial assets of the Group and endorses or receives information on participations and principal investments. It reviews the risk analysis methodology as well as the valuation methodology related to each asset class and ensures that the relevant management processes and controlling mechanisms in asset management are in place.

Members

- Susan L. Wagner, Chair
- Raymond K.F. Ch'ien
- Trevor Manuel
- Eileen Rominger
- Sir Paul Tucker
- Jacques de Vaucleroy

2019 key focus areas

- Investment performance: Reviewed SAA positioning, risk usage and performance in the context of financial markets and Business Unit developments
- Financial markets outlook: Evaluated evolving economic and financial market risks and their impact on portfolio strategy and relative value to ensure appropriate positioning
- Examined key topics such as liquidity and market structure, stress scenarios, ESG and investment trends

Board committee memberships

Name	Chairman's and Governance Committee	Nomination Committee	Audit Committee	Compensation Committee	Finance and Risk Committee	Investment Committee
Walter B. Kielholz	X (Chair)					
Renato Fassbind	X	X (Chair)	X (Chair)	X		
Raymond K.F. Ch'ien				X		X
Karen Gavan			X			
Trevor Manuel			X			X
Jay Ralph					X	
Joerg Reinhardt		X		X		
Eileen Rominger						X
Philip K. Ryan	X		X		X (Chair)	
Sir Paul Tucker					X	X
Jacques de Vaucleroy	X	X		X (Chair)		X
Susan L. Wagner	X	X			X	X (Chair)
Larry Zimpleman					X	

Working methods of the Board of Directors and its committees

Convening meetings and invitation

The entire Board of Directors and its committees meet at the invitation of the Chairman of the Board of Directors as often as business requires or at least quarterly. Any member of the Board of Directors or the Group EC may, for a specific reason, require the Chairman to call an extraordinary Board of Directors or committee meeting. The Chairman defines the agenda for each meeting and therefore works closely with the chairpersons of the committees and the Group CEO.

The agenda, along with any supporting documents, is delivered to the participants, as a rule, at least ten calendar days in advance of a meeting in order to allow enough preparation time. The Chairman may determine that a Board of Directors meeting be held on an ad hoc basis, if circumstances require.

Resolutions and quorum

A Board meeting has a quorum if at least the Chairman, the Vice Chairman or the Lead Independent Director and the majority of the members of the Board of Directors are present in person, by telephone or by video conference. A Board committee has a quorum if the majority of the Board committee members are present or participate by telephone or video conference.

Resolutions are adopted by majority vote. In the event of a tie at Board meetings, the Chairman's vote is decisive. In the event of a tie at Board committee meetings, the item shall be submitted to a vote by the entire Board of Directors.

Board and committee meetings deal with the items on the agenda incorporating presentations by members of the Group EC and, where needed, by subject matter experts or external advisors. For every meeting of the Board of Directors, it is considered whether an executive session should be held for discussions between the Board of Directors and the Group CEO.

Furthermore, private sessions are held for discussions involving all members of the Board of Directors only.

The Board of Directors and its committees can also adopt resolutions by written agreement if no member of the Board of Directors requests a discussion of the motion. A decision may only be taken by circular resolution if all the members sign the circular resolution or respond to the email, respectively. A circular resolution is adopted if the majority of the total number of Board members (or Board committee members) express their agreement with the resolution.

Each committee provides a report on its activities and recommendations following a committee meeting at the next Board of Directors meeting. If any significant topic arises, the committees contact the Board of Directors immediately. It is the responsibility of each committee to keep the full Board of Directors informed on a timely basis, as deemed appropriate.

Minutes are kept of the discussions and resolutions taken at each meeting of the Board of Directors and its committees.

The table on the next page provides an overview of the meetings of the Board of Directors and its committees held in 2019.

Self-assessment

An open, transparent and critical board room culture forms the basis for the Board of Directors' annual review of its own performance and effectiveness. The Board of Directors evaluates its work and the performance of the Chairman. It conducts the self-assessment on the basis of questionnaires, which deal with the Board's composition, organisation and processes, the Board's responsibilities as well as with the focus areas and goals of the year under review. The topics are discussed and take-aways defined to be incorporated in the goals for the upcoming year. In addition, each Board committee annually reviews the adequacy of its composition, organisation and processes as well as the scope of its responsibilities, assesses their accomplishments and evaluates the achievement of the goals set and its performance.

Board of Directors and Board committee meetings in 2019

Body	Number and average duration of meetings	Invitees in advisory capacity[1], in addition to members
Board of Directors	12 meetings[2] 3¾ hours	Group EC members, Group Company Secretary
Chairman's and Governance Committee	6 meetings[3] 1¾ hours	Group CEO, Group Company Secretary
Nomination Committee	6 meetings 1 hour	Chairman Board of Directors, Group Company Secretary
Audit Committee	8 meetings 3 hours	Group CEO, Group CFO, Group CRO, Group CLO, Group Chief Compliance Officer, Head Group Internal Audit, Chief Accounting Officer, lead auditors of external auditor, Group Company Secretary
Compensation Committee	6 meetings[4] 3 hours	Group CEO, Group Chief Human Resources Officer, Head Reward, advisors[5]
Finance and Risk Committee	6 meetings 3¾ hours	Group CEO, Group CFO, Group CRO, Group CUO, Group CIO, Group COO, Group Treasurer, CEO Reinsurance, CEO Corporate Solutions, CEO Life Capital, Group Company Secretary
Investment Committee	5 meetings 3 hours	Group CEO, Group CFO, Group CRO, Group CIO, Head Financial Risk Management, Group Treasurer, CFO Asset Management, Group Company Secretary

[1] All invitees are requested to attend all meetings, with the exception of the Group EC members' participation at Board of Directors meetings (please also see page 104).
[2] In addition, three decisions by circular resolution.
[3] In addition, one decision by circular resolution.
[4] In addition, seven decisions by circular resolution.
[5] The law firm Niederer Kraft Frey Ltd (NKF) and the human resources consulting firm Mercer provided support and advice for compensation issues during the reporting year. Representatives of NKF participated in five committee meetings in 2019, representatives of Mercer in four meetings. Mercer and NKF have further mandates with Swiss Re.

In addition, an independent external consultant was engaged in 2019 to assess the effectiveness of the Board through one-on-one interviews with the Board members, with a focus on priority setting, committee work, relationship of the Board with senior management and Board culture. The advisor's report served as a basis for the self-assessment discussion of the Board at the end of the year.

The self-assessments also form the basis for the Board's succession planning, comprising the evaluation of the skills needed among the members of the Board of Directors and Board committees. Please refer to page 94 for an overview of the Board of Directors' skills and competencies.

Attendance rates[1] of Board members: Board of Directors and Board committee meetings in 2019

Body	Attendance rate of Board members in %
Board of Directors	98.4
Chairman's and Governance Committee	100
Nomination Committee	95.8
Audit Committee	97.4
Compensation Committee	98.6
Finance and Risk Committee	96.6
Investment Committee	100
Overall attendance rate	**98.3**

Individual attendance rates[1] of Board members: Board of Directors and Board committee meetings in 2019

Attendance in %	Number of Board members
100	5
95–99.9	8

[1] The attendance rates are calculated taking into account the duration of all meetings the Board members were required to attend.

Board of Directors and Group EC: areas of responsibility

Non-transferable duties

The Board of Directors has the ultimate responsibility for the success of SRL and the Group within a framework of effective and prudent controls. It is responsible for the overall direction, supervision and control of SRL and the Group and the Group EC as well as for supervising compliance with applicable laws, rules and regulations. Such responsibilities are non-transferable and rest with the entire Board.

Delegation of management

The Board of Directors has delegated the management of SRL and the Group to the Group EC (see section on Executive Management, starting on page 106). Such delegated tasks are within the responsibility of the entire Group EC. The Board of Directors based the delegated responsibilities on authority levels, including monetary thresholds and limits.

The tables on this and the next pages provide a non-exhaustive summary of the key responsibilities of the Board of Directors and tasks delegated to the Group EC.

Key responsibilities of the Board of Directors

Strategy and overall direction of the company

- Defines the strategy of the Group based on proposals by the Group EC
- approves the capital allocation plan for both Underwriting and Asset Management
- approves the Group Risk Strategy and Risk Policy, which define the Group's risk Appetite and tolerance, key principles for risk-taking and control and key capital structuring principles based on the endorsement by the Finance and Risk Committee
- approves the entry into new business activities, provided they are of strategic relevance, and the exit of existing activities
- approves significant corporate transactions, participations and principal investments and approves an annual capital expenditure plan
- approves the financial objectives and the means necessary to achieve them
- approves all matters where such decisions exceed the authorities delegated to the Board committees, the Group CEO, the Group EC and individual Group EC members and overrules decisions if necessary

Governance and organisation

- Determines the operating model of the Group and the organisational structure in line with this model and the strategy
- issues and regularly reviews necessary policies and directives, including governance standards and the Group Code of Conduct
- supervises internal control
- regulates the compensation framework of the Group; approves the Group's variable compensation pool; proposes the Board of Directors and Group EC compensation to the Annual General Meeting for approval

Accounting, financial control and financial planning

- Approves the applicable accounting standards for external reporting, budgeting and financial control and planning
- approves the applicable proprietary economic reporting and performance measurement standards (EVM)
- approves an annual budget and a mid-term financial plan based on both accounting and internal economic standards
- approves the annual financial statements for both SRL and the Group based on the recommendations of the Audit Committee
- is informed of the quarterly and semi-annual financial statements for both SRL and the Group, which are approved by the Audit Committee
- approves the Annual Report of both SRL and the Group
- approves the publication of the Annual Report, semi-annual financial statements and quarterly key financial figures news releases

Appointment and removal of Group EC members and further key executives, People Strategy

- Appoints and removes Group EC members and the Company Secretary; reviews their performance and plans their succession
- approves the People Strategy of the Group and, on an annual basis, reviews progress towards this strategy
- annually reviews with the Group EC the Group's overall human capital situation, strength of management and issues like diversity and inclusion, performance process and quality of succession planning

Capital

- Takes decisions regarding equity and equity-linked issuances and corresponding share capital increases, if any, and reductions of share capital in line with applicable law
- approves annually a debt funding plan, and, if required, approves individual debt issuances

General Meetings of shareholders

- Convenes General Meetings of shareholders and decides on proposals to be brought forward to the shareholders
- implements resolutions taken by the shareholders

Key responsibilities of the Group Executive Committee

Under the leadership of the Group CEO, the Group EC has management responsibility for matters concerning SRL as a legal entity. Additionally, the Group EC has management and functional responsibility for Group matters. In particular, the Group EC focuses on (the control of) the implementation of the Group Strategy, as promulgated and approved by the Board of Directors. In particular, it includes the responsibilities addressing Group Strategy, including strategic and financial targets for the Business Units; decisions on Group-wide steering and control; allocation of capital and resources to business opportunities; asset and liability management, treasury, Group funding and capital management; finance and risk management, governance, compliance, legal and regulatory affairs; functional issues such as human resources, talent management as well as reputational issues and branding. In particular with respect to the below topics, the Group EC:

Governance
- Has overall responsibility for managing Group operations
- issues guidelines relating to the delegation of decision-making authority within the Group

Strategy and structure
- Ensures implementation of the Group strategy
- decides on legal, financial and management structures, as delegated by the Board of Directors

Planning
- Prepares and proposes the Group business plan to the Board of Directors for approval and reviews the Business Units' business plans

Financial reporting
- Oversees the preparation and presents to the Board of Directors the annual and interim financial statements of both SRL and the Group together with segment reporting on the Business Units

Capital management
- Establishes principles on financing through capital markets and the allocation of financial resources within the Group
- establishes the principles for intra-Group transactions and funding

Risk management
- Establishes the principles for external retrocession and the balancing of Group-wide catastrophe and accumulated risk
- supervises the Group's internal control evaluation and certification process

Business transactions
- Decides on certain strategic transactions and proposes important strategic transactions to the Board of Directors for discussion and decision

Legal, regulatory and compliance
- Oversees implementation of Group-wide compliance procedures and monitors remediation of any regulatory and compliance deficiencies

People Strategy
- Has responsibility for the Group's people management, subject to the authority of the Board of Directors

Compensation
- Makes proposals for the individual compensation of selected members of senior management
- proposes benefit plans to the Compensation Committee for decision

The Group EC discharges its responsibilities as a joint body, except for responsibilities delegated to the Group CEO and further individual Group EC members. For the key responsibilities of individual Group EC members, please see page 112.

Board supervision of Executive Management

The Board of Directors maintains effective and consistent oversight and monitors the execution of responsibilities it has delegated to the Group EC through the following control and information instruments.

Participation of Board members at Executive Management meetings

The Chairman is invited to all meetings of the Group EC and Business Unit Executive Committees and receives the corresponding documentation and minutes.

Special investigations

The Board committees are entitled to conduct or authorise special investigations at any time and at their full discretion into any matters within their respective scope of responsibilities, taking into consideration relevant peer group practice and general best practice. The committees are empowered to retain independent counsel, accountants or other experts if deemed necessary. No special investigations were conducted in the reporting year 2019.

Involvement of the Group EC in meetings of the Board of Directors

The Group EC members attend Board meetings as deemed appropriate by the Chairman and the other Board members. The presence of the entire Group EC was required for four Board meetings in 2019, and selected members were invited to six further Board meetings. The Group EC members do not attend the constituent meeting of the Board of Directors following the Annual General Meeting and the Board self-assessment session.

Involvement of the Group EC in Board committee meetings

As a matter of principle, selected members of the Group EC as well as further senior management members participate in Board committee meetings as advisors. The attendance rate of the Group EC members at Board and Board committee meetings was 95.8% in 2019 (the attendance rate represents the total actual attendance time of all members at all meetings in the year under review, 2019, in relation to the corresponding target attendance time). A detailed summary of Group EC and further senior management participation in Board committee meetings is provided on page 101.

Periodic reports to Board of Directors and its committees

The Group EC and further senior management members regularly provide the Board of Directors with different types of reports, in particular the following reports:

Executive Report (quarterly)
This comprehensive report gives an update on current business developments, covering the Group Functions and the Business Units, including major business transactions, claims, corporate development and key projects.

US GAAP Board Report (quarterly)
The report provides factual financial highlights from an accounting perspective, with a focus on historical development of the business as an informational basis before the publication of results.

EVM Board Report (annually)
The report provides factual financial highlights from an economic perspective, with a focus on historical value creation.

Group Performance Management Report (semi-annually)
The report tracks the actual performance of the Group and the segments against pre-defined financial targets, analyses the impact of management actions and provides information on current challenges.

Global Outlook for Insurance, Reinsurance and Financial Markets (quarterly)
The report describes trends and provides forecasts regarding the economic environment, the property & casualty/ life & health (re)insurance markets and the financial markets.

Swiss Solvency Test Report (annually)
The report provides the legally required update on the assessment of solvency according to the Swiss Solvency Test (SST) of the Group, Swiss Reinsurance Company Ltd, Swiss Re Corporate Solutions Ltd and Swiss Re Life Capital Reinsurance Ltd.

Swiss Re Liquidity Report (annually)
The report describes the liquidity position of the Group in current and in stressed market conditions.

In addition, reports are submitted to the Board committees, such as:
- Regular updates on claims
- Regular updates on reserving/reserve movements
- Group Legal Report (quarterly)
- Compliance Report (quarterly)
- Group Internal Audit Report (quarterly)
- Group Tax Report (annually)
- Group Risk Update (quarterly)
- Derivative Use Update (semi-annually)
- Report on Capital, Liquidity and Treasury Activities (quarterly)
- Global Regulatory Risk Report (annually)
- Financial Risk Management Update (quarterly)
- Own Risk and Solvency Assessment Report (ORSA) (annually)

Risk management

Embedded throughout the business, the Group Risk Management function ensures an integrated approach to managing current and emerging threats. Risk Management plays a key role in the business strategy and planning process, where Swiss Re's risk appetite framework facilitates risk/return discussions and sets boundaries to Group-wide risk-taking.

The Board of Directors keeps itself abreast of key risk themes and receives the following annual reports from Group Risk Management: the Swiss Solvency Test Report, the Swiss Re Liquidity Report, the SONAR Report on emerging risks, the Sustainability Report, as well as the Own Risk and Solvency Assessment Report. In addition, Group Risk Management provides the Finance and Risk Committee with regular Group Risk Updates from the Group CRO, semi-annual reports on derivate use, as well as annual reports on Global Regulatory Risk. The Investment Committee on its part receives quarterly reports on Financial Risk Management.

These reports cover compliance with the Group's risk tolerance criteria, major changes in risk and capital adequacy measures and a description of the Group's main risk issues, including related risk management actions. The Finance and Risk Committee regularly reports to the entire Board of Directors. For further information on Swiss Re's Risk Management, please see the Risk and Capital Management Report on pages 52–77 (for Risk Management in particular pages 61–77).

Duty to inform on extraordinary events

As soon as the Group CEO or other members of the Group EC become aware of any significant extraordinary business development or event, they are obliged to inform the Board of Directors immediately.

Right to obtain information

The Board of Directors has complete and open access to the Group CEO and the other members of the Group EC, the Chief Compliance Officer and the Head of GIA. Any member of the Board of Directors who wishes to have access to any other officer or employee of the Group will coordinate such access through the Chairman. The Vice Chairman and the chairpersons may approach the Group EC members as well as further key executives directly if they require information to support their respective (Board committee's) duties. Any member of the Board of Directors may request at Board meetings to obtain information on any aspect of the Group's business. Outside Board meetings, any member can direct a request for the provision of information and business records to the Chairman.

Group Internal Audit

GIA is an independent assurance function, assisting the Board of Directors and Group EC to protect the assets, reputation and sustainability of the organisation. GIA assesses the adequacy and effectiveness of the Group's internal control system and adds value by improving the Group's operations.

GIA applies a risk-based approach, performing its own risk assessment as well as making use of risk assessments performed by the Group's Risk Management and other assurance functions (after reviewing the quality of the assurance work performed). Based on the results of the risk assessment, GIA produces an annual audit plan for review and approval by the Audit Committee. The audit plan is updated on a quarterly basis according to the Group's evolving needs. GIA provides formal quarterly updates on its activities to the Audit Committee, which include audit results, the status of management actions required, the appropriateness of the resources and skills of GIA and any changes in the tools and methodologies it uses.

The Head of GIA meets at least once per quarter with the Audit Committee and immediately reports any issue that could have a potentially material impact on the business of the Group to the Chair of the Audit Committee.

GIA has unrestricted access to any of the Group's property and employees relevant to any function under review. All employees are required to assist GIA in fulfilling its duty. GIA has no direct operational responsibility or authority over any of the activities it reviews.

GIA staff govern themselves by following the Code of Ethics (Code) issued by the Institute of Internal Auditors (IIA). The IIA's International Standards for the Professional Practice of Internal Auditing constitute the operating guidance for the department. The Code is available at: https://na.theiia.org/special-promotion/PublicDocuments/Code%20of%20Ethics.pdf

External auditor

For information regarding the external auditors, please refer to pages 115–116.

Executive Management

Under the leadership of the Group CEO, the Group Executive Committee is responsible for the management of Swiss Re Ltd and the Group.

From left to right: Urs Baertschi, J. Eric Smith, Edouard Schmid, Moses Ojeisekhoba, Christian Mumenthaler, John R. Dacey, Anette Bronder, Andreas Berger, Thierry Léger, Nigel Fretwell, Guido Fürer, Patrick Raaflaub, Russell Higginbotham, Hermann Geiger

Members of the Group Executive Committee

The Group Executive Committee (Group EC) consisted of the following 14 members as of 31 December 2019:

Name	Nationality	Age	Function	Appointed in current role
Christian Mumenthaler	Swiss	50	Group Chief Executive Officer	July 2016[1]
Urs Baertschi	Swiss, German	44	CEO Reinsurance Europe, Middle East and Africa (EMEA)/ Regional President EMEA	September 2019
Andreas Berger	German	53	CEO Corporate Solutions	March 2019
Anette Bronder	German	52	Group Chief Operating Officer	July 2019
John R. Dacey	American	59	Group Chief Financial Officer	April 2018[2]
Nigel Fretwell	British	57	Group Chief Human Resources Officer	May 2013[3]
Guido Fürer	Swiss	56	Group Chief Investment Officer	November 2012
Hermann Geiger	German	56	Group Chief Legal Officer	January 2009[4]
Russell Higginbotham	British	52	CEO Reinsurance Asia/Regional President Asia	July 2019[5]
Thierry Léger	French, Swiss	53	CEO Life Capital	January 2016
Moses Ojeisekhoba	Nigerian, British	53	CEO Reinsurance	July 2016[6]
Patrick Raaflaub	Swiss, Italian	54	Group Chief Risk Officer	September 2014
Edouard Schmid	Swiss	55	Chairman Swiss Re Institute & Group Chief Underwriting Officer	July 2017
J. Eric Smith	American	62	CEO Reinsurance Americas/Regional President Americas	January 2012

Member of the Group EC since: [1] January 2011, [2] October 2012, [3,4] July 2019, [5] September 2018, [6] March 2012.

The following two Group EC members stepped down during 2019:

				Stepped down
Jayne Plunkett	American	49	CEO Reinsurance Asia/Regional President Asia	8 July 2019
Thomas Wellauer	Swiss	64	Group Chief Operating Officer	30 June 2019

For the biographies of former Group EC members, please refer to: www.swissre.com/formergroupecmembers

Christian Mumenthaler
Group Chief Executive Officer
Born: 1969
Nationality: Swiss

Professional experience

Christian Mumenthaler started his career in 1997 as an associate at the Boston Consulting Group. He joined Swiss Re in 1999 and was responsible for key company projects. In 2002, he established and headed the Group Retro and Syndication unit. Christian Mumenthaler served as Group Chief Risk Officer between 2005 and 2007 and was Head of Life & Health between 2007 and 2010. In January 2011, he was appointed Chief Marketing Officer Reinsurance and member of the Group Executive Committee and became Chief Executive Officer Reinsurance in October 2011. In July 2016, Christian Mumenthaler was appointed Group Chief Executive Officer.

Educational background

- PhD in Physics, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland

External mandates

- Chairman of Insurance Europe's Reinsurance Advisory Board
- Vice Chairman of the Geneva Association
- Board member of economiesuisse, the Swiss American Chamber of Commerce and the Society for the Promotion of the Institute of Insurance Economics, St. Gallen
- Member of the Pan-European Insurance Forum, the IMD Foundation Board, the Global Reinsurance Forum, the Steering Board Insurance Development Forum, the Board of Trustees of Avenir Suisse and the Board of Trustees of the St. Gallen Foundation for International Studies

Urs Baertschi
Chief Executive Officer Reinsurance EMEA/ Regional President EMEA
Born: 1975
Nationality: Swiss and German

Professional experience

Urs Baertschi began his career at Swiss Re Capital Partners and Securitas Capital in a variety of private equity and corporate development roles. In 2001, he joined Cutlass Capital, a private equity firm focused on the health care industry, where he was appointed a Principal in 2006. In 2008, Urs Baertschi rejoined Swiss Re as the Head of US Direct Private Equity and was appointed Head of Principal Investments and Acquisitions Americas in 2010. In this role, he was responsible for the financial and strategic direct investments as well as corporate development transactions in the Americas. In 2016 Urs Baertschi became the President of Reinsurance, Latin America, with overall responsibility for the business in the region. On 1 September 2019, he assumed the role of Chief Executive Officer Reinsurance EMEA and Regional President EMEA and became a member of the Group Executive Committee.

Educational background

- Bachelor's degree in Economics, University of Pennsylvania, USA
- Bachelor's degree in International Relations, University of Pennsylvania, USA

Andreas Berger
Chief Executive Officer Corporate Solutions
Born: 1966
Nationality: German

Professional experience

Andreas Berger started his insurance career in 1995 as a leadership trainee at Gerling Group. He held several management roles there, followed by various leadership positions at Boston Consulting Group, before returning to Gerling in 2004 as Head of Commercial Business and International Programs and Affinity Business. When Allianz Global Corporate & Specialty SE (AGCS) was created in 2006, Andreas Berger became its Global Head of Market Management & Communication. In this newly created position, he established an overall market management function for the corporate client segment and served as AGCS's spokesperson. In 2009, he was appointed AGCS Chief Executive Officer, Regional Unit London. His areas of responsibility included the UK, Ireland, South Africa, the Middle East and Benelux. In 2011 Andreas Berger joined the AGCS Board of Management as Chief Regions & Market Officer (Central & Eastern Europe, Mediterranean, Africa and Asia). In addition, he assumed responsibility for the Global Broker Channel Distribution for the Allianz Group. Andreas Berger joined Swiss Re in March 2019 as Chief Executive Officer Corporate Solutions and member of the Group Executive Committee.

Educational background

- Master's degree in Law, Justus Liebig University Giessen, Germany
- Master's degree in Business Administration, Université de Paris-Dauphine (IX), France/Justus Liebig University Giessen, Germany

External mandates

- Member of the Executive Committee of the International Insurance Society
- Honorary appointment as member of the selection committee of the Collège des Ingénieurs

Anette Bronder
Group Chief Operating Officer
Born: 1967
Nationality: German

Professional experience
Anette Bronder started her career at Hewlett Packard GmbH, where she held several senior management positions, including Director Software Services for Central & Eastern Europe and Director HP Consulting Germany. In 2010, she was appointed Director of Enterprise Technology at Vodafone GmbH in Germany. In 2013, she assumed worldwide responsibility for the Enterprise Delivery and Operations division of Vodafone Group and was based in London. In 2015, Anette Bronder joined T-Systems International as Managing Director Digital Division, where she oversaw the new growth areas Internet of Things, Public Cloud and Healthcare for Deutsche Telekom worldwide. In 2017, she took on additional responsibility for Deutsche Telekom's global Security Portfolio and Security Operations. Anette Bronder joined Swiss Re on 1 June 2019 and was appointed Group Chief Operating Officer and a member of the Group Executive Committee effective 1 July 2019.

Educational background
- Master's degree in Economics and Social Sciences, University of Stuttgart, Germany

External mandates
- Member of the Board of Directors Air Liquide S.A. (as of 5 May 2020, subject to election by the Annual General Meeting)

John R. Dacey
Group Chief Financial Officer
Born: 1960
Nationality: American

Professional experience
John R. Dacey started his career in 1986 at the Federal Reserve Bank of New York. From 1990 to 1998, he was a consultant and subsequently Partner at McKinsey & Company. He joined Winterthur Insurance in 1998 and was its Chief Financial Officer from 2000 to 2004 as well as a member of its Group Executive Board until 2007. From 2005 to 2007, he was Chief Strategy Officer and a member of its risk and investment committees. He joined AXA in 2007 as Group Regional Chief Executive Officer and Group Vice Chairman for Asia-Pacific as well as a member of their Group Executive Committee. John R. Dacey joined Swiss Re in October 2012 and was appointed Group Chief Strategy Officer and a member of the Group Executive Committee in November 2012. He also served as Chairman Admin Re® from November 2012 to May 2015. He was appointed Group Chief Financial Officer with effect from April 2018.

Educational background
- Bachelor's degree in Economics, Washington University, St. Louis, USA
- Master's degree in Public Policy, Harvard University, Cambridge, USA

Nigel Fretwell
Group Chief Human Resources Officer
Born: 1962
Nationality: British

Professional experience
Nigel Fretwell started his career at Barclays PLC, where he held various management roles over 25 years. His last role was as Group Employee Relations Director, leading the development and delivery of key Group-wide People Strategy, Industrial Relations and Employment Policy initiatives. In 2005 he joined HSBC as Human Resources Director for the worldwide operations of HSBC Insurance Brokers Limited. He then served from 2008 to 2011 as Regional Head of Human Resources, Asia Pacific, and from 2009 concurrently as Global Head of Human Resources, Commercial Banking, and finally from 2011 to 2013 as Global Head of Human Resources for Retail Banking and Wealth Management, which included HSBC Insurance and HSBC Asset Management. Nigel Fretwell joined Swiss Re as Group Chief Human Resources Officer in May 2013 and was appointed as a member of the Group Executive Committee effective 1 July 2019.

Educational background
- Master's degree in Strategic Human Resource Management, Kingston University, United Kingdom
- Associate of the Chartered Institute of Bankers

Guido Fürer
Group Chief Investment Officer
Born: 1963
Nationality: Swiss

Professional experience
Guido Fürer commenced his career at Swiss Bank Corporation/O'Connor & Associates in 1990, where he held leading positions in option trading at its capital market division. He joined Swiss Re in 1997 as Managing Director at Swiss Re New Markets, and from 2001 to 2004 he worked for Swiss Re's Private Equity unit. In 2004, he joined Asset Management with responsibility for tactical asset allocation prior to assuming the role of Head of Strategic Asset Allocation. Guido Fürer has led Swiss Re Group Asset Management since his appointment as Group Chief Investment Officer and a member of the Group Executive Committee in November 2012. In 2019, he additionally assumed the roles of Swiss Re Country President Switzerland and Chairman of the Swiss Re Stategic Council.

Educational background
- Master's degree in Economics, University of Zurich, Switzerland
- PhD in Financial Risk Management, University of Zurich, Switzerland
- Executive MBA from INSEAD, Fontainebleau, France

External mandates
- Member of the Board of Directors FWD Group Ltd
- Member of the Board of Directors FWD Ltd
- Member of the Advisory Board of the Department of Banking and Finance, University of Zurich, Switzerland
- Member of the Board of Trustees of G&B Schwyzer-Winiker Stiftung

Hermann Geiger
Group Chief Legal Officer
Born: 1963
Nationality: German

Professional experience
Hermann Geiger started his professional career in 1990 as a law clerk and qualified attorney at law, working with various major law firms, specialising in financial services transactions and regulation, capital markets, corporate and litigation. In 1995, he joined GE Insurance Solutions where he served as General Counsel Europe & Asia in the insurance business of General Electric. Following the acquisition of GE Insurance Solutions by Swiss Re in 2006, Hermann Geiger joined Swiss Re as Regional General Counsel Europe. In 2009, he assumed the global position as Head Legal & Compliance and Group Chief Legal Officer. As of 1 July 2019, Hermann Geiger was appointed as a member of the Group Executive Committee.

Educational background
- PhD in Law, University of Constance, Germany
- PhD in Economics and Political Sciences, University of the German Federal Armed Forces Munich, Germany
- LL.M. (Master of Laws), University of Birmingham, United Kingdom

External mandates
- Board member of the European General Counsel Association
- Advisory Board member of ARIAS Europe
- Member of the Swiss-American Chamber of Commerce's legal committee

Russell Higginbotham
Chief Executive Officer Reinsurance Asia/ Regional President Asia
Born: 1967
Nationality: British

Professional experience
Russell Higginbotham started his career in 1986 at a UK life insurer and, in 1991, he joined Munich Re as a Senior marketing Analyst. Russell Higginbotham joined Swiss Re in 1995 and served in various roles in the Life & Health Reinsurance development and strategy teams. Between 2002 and 2005, he was Life & Health Country Manager for Japan and subsequently for South Korea. In 2006, he moved to Sydney and served as Chief Executive Officer of Swiss Re's Australia and New Zealand operations. From 2010 to 2015, he assumed the role of Chief Executive Officer Reinsurance UK & Ireland, based in London, and was named Head of Life & Health Products Reinsurance in 2016. He was appointed Chief Executive Officer Reinsurance EMEA, Regional President EMEA and a member of the Group Executive Committee in September 2018. With effect from 8 July 2019, Russell Higginbotham assumed the role of Chief Executive Officer Reinsurance Asia and Regional President Asia.

Educational background
- Bachelor's degree (Hons) in Business, University of Hertfordshire, United Kingdom
- Master's degree in Business Administration, Henley Management College, United Kingdom

Thierry Léger
Chief Executive Officer Life Capital
Born: 1966
Nationality: French and Swiss

Professional experience

Thierry Léger started his career in the civil construction industry before joining Swiss Re as an engineering underwriter in 1997. In 2001, he moved to Swiss Re New Markets, providing non-traditional solutions to insurance clients. Between 2003 and 2005, he was a member of the executive team in France as leader of the sales team. From 2006, Thierry Léger assumed increasing responsibility for Swiss Re's largest clients, ultimately becoming the Head of the newly created Globals Division in 2010 and a member of the then existing Group Management Board. In 2013, Thierry Léger became Head of Life & Health Products Reinsurance. As of January 2016, he was appointed Chief Executive Officer Life Capital and a member of the Group Executive Committee.

Educational background

- Master's degree in Civil Engineering, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland
- Executive MBA, University of St. Gallen, Switzerland

Moses Ojeisekhoba
Chief Executive Officer Reinsurance
Born: 1966
Nationality: Nigerian and British

Professional experience

Moses Ojeisekhoba started his career in insurance as a registered representative and agent of The Prudential Insurance Company of America in 1990. From 1992 to 1996, he was a Risk and Underwriting Manager at Unico American Corporation. He then joined the Chubb Group of Insurance Companies as regional Underwriting Manager and, in 1999, became Corporate Product Development Manager in New Jersey and thereafter moved to London as Strategic Marketing Manager for Chubb Europe. In 2002, he was appointed International Field Operations Officer for Chubb Personal Insurance before becoming Head Asia-Pacific in 2009, a position he remained in until he joined Swiss Re. Moses Ojeisekhoba joined Swiss Re in February 2012 and was appointed Chief Executive Officer Reinsurance Asia, Regional President Asia and a member of the Group Executive Committee in March 2012. In July 2016, Moses Ojeisekhoba was appointed as Chief Executive Officer Reinsurance.

Educational background

- Master's degree in Management, London Business School, United Kingdom
- Bachelor of Science in Statistics, University of Ibadan, Nigeria

Patrick Raaflaub
Group Chief Risk Officer
Born: 1965
Nationality: Swiss and Italian

Professional experience

Patrick Raaflaub began his career as an economist at Credit Suisse. He then was a founding member of a consulting start-up and research fellow at the University of St. Gallen. He joined Swiss Re in 1994 and was appointed Chief Financial Officer of Swiss Re Italia SpA in 1997, and then was Divisional Controller Americas Division from 2000. He worked as Head of Finance Zurich from 2003, then Regional Chief Financial Officer Europe and Asia from 2005. From 2006, he was Head of Group Capital Management, where he was responsible for capital management at Group level and global regulatory affairs. In 2008, he joined the Swiss Financial Markets Supervisory Authority FINMA as Chief Executive Officer. Patrick Raaflaub returned to Swiss Re as Group Chief Risk Officer and a member of the Group Executive Committee in September 2014.

Educational background

- PhD in Political Science, University of St. Gallen, Switzerland

External mandates

- Member of the Board of Directors CSS Versicherung AG

Edouard Schmid
Chairman Swiss Re Institute &
Group Chief Underwriting Officer
Born: 1964
Nationality: Swiss

Professional experience

Edouard Schmid joined Swiss Re in 1991 as a risk analyst, developing catastrophe models and supporting property catastrophe underwriting on a global basis. From 1996, he was a team leader in the Cat Perils unit, until he became Head Cat Perils & Retrocession in 2002. From 2003 until 2008, he was based in Hong Kong as Chief Underwriter Property & Specialty Asia. He returned to Zurich in 2008 and served as Head Property & Casualty Risk and Actuarial Management, and, concurrently, as Chief Risk Officer Corporate Solutions from 2011. In May 2012, he became Head Property & Specialty Reinsurance. Edouard Schmid was appointed Group Chief Underwriting Officer and a member of the Group Executive Committee as of July 2017. Following the merger of the Swiss Re Institute (SRI) with Group Underwriting, effective 1 July 2019, he also serves as Chairman of the SRI.

Educational background

- Master's degree in Physics, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland

External mandates

- Member of the Board of Directors New China Life Insurance Company Ltd*

J. Eric Smith
Chief Executive Officer Reinsurance
Americas/Regional President Americas
Born: 1957
Nationality: American

Professional experience

J. Eric Smith worked in various roles in property and casualty insurance at Country Financial for more than 20 years. He then joined Allstate in 2003, where he rose to the rank of President, Financial Services. He moved to USAA in 2010 as President USAA Life Insurance Co. J. Eric Smith joined Swiss Re in July 2011 as Chief Executive Officer Reinsurance Americas and as a member of the then existing Group Management Board. He was appointed Regional President Americas and member of the Group Executive Committee in January 2012.

Educational background

- Bachelor's degree in Finance, University of Illinois, USA
- Master's degree in Business Administration, Kellogg School of Management, Northwestern University, USA

Changes in 2019

Andreas Berger (former Chief Regions & Markets Officer and a member of the Board of Management of Allianz Global Corporate & Specialty SE) was appointed CEO Corporate Solutions and a member of the Group EC with effect from 1 March 2019. He succeeds Agostino Galvagni, who decided to step down from Swiss Re at the end of 2018. Anette Bronder (previously a member of the Management Board at T-Systems International) was appointed Group Chief Operating Officer and a member of the Group EC with effect from 1 July 2019, succeeding Thomas Wellauer, who retired on 30 June 2019. Nigel Fretwell, Group Chief Human Resources Officer, and Hermann Geiger, Group Chief Legal Officer, were appointed as new members of the Group EC with effect from 1 July 2019. Russell Higginbotham (former CEO Reinsurance Europe, Middle East and Africa (EMEA) and Regional President EMEA) was appointed CEO Reinsurance Asia and Regional President Asia with effect from 8 July 2019. He succeeds Jayne Plunkett, who decided to pursue a new opportunity outside Swiss Re. Urs Baertschi, previously President Reinsurance Latin America, was appointed CEO Reinsurance EMEA and Regional President EMEA and a member of the Group EC with effect from 1 September 2019, succeeding Russell Higginbotham, who was appointed CEO Reinsurance Asia and Regional President Asia. The Group EC has therefore consisted of 14 members since 1 July 2019; prior to that, it consisted of 12 members.

Changes in 2020

Jonathan Isherwood (current Head of Globals Reinsurance) will succeed J. Eric Smith, CEO Reinsurance Americas and Regional President Americas assuming the responsibility as CEO Reinsurance Americas, effective 1 April 2020, and as Regional President Americas and a member of the Group EC, effective 14 August 2020, when J. Eric Smith retires.

Other mandates, activities and vested interests

Article 26 of the Articles of Association governs the requirements regarding external mandates held by Group EC members (please see: www.swissre.com/articlesofassociation). All Group EC members comply with these requirements. Information on external mandates held by the Group EC members is provided in their biographies (pages 107–111).

Management contracts

SRL has not entered into any management contracts with any third parties.

* Listed company

Key responsibilities of the Group Executive Committee members

The Board of Directors has delegated the management of SRL and the Group to the Group EC. Such delegated tasks are within the responsibility of the entire Group EC. The Group EC discharges its responsibilities as a joint body, except for responsibilities delegated to the Group CEO and further Group EC members. For an overview of the Group EC's key responsibilities, please see page 103.

Key responsibilities of individual members of the Group Executive Committee

Group Chief Executive Officer

The Group CEO is responsible for overseeing the operational management of the Group. This responsibility covers the Group Functions, Group Legal and the three Business Units Reinsurance, Corporate Solutions and Life Capital. He leads and manages the Group EC, its processes, including succession planning and its costs, and is responsible for its performance. He oversees the work of the Group Function heads, the Group CLO and the Business Unit CEOs and gives them guidance on the execution of their tasks. He develops the Group strategy together with the Group EC and submits it to the Board of Directors for approval. Once approved, he focuses on the Group strategy's implementation and its further development.

Group Chief Financial Officer

The Group CFO is responsible for the Group-wide Finance function, with a focus on steering and achieving the company's financial targets. He is responsible for the US GAAP and EVM consolidated financial reporting, as well as the relevant quarterly and ad hoc business results disclosure to the financial community. He provides guidance to the Business Unit CFOs, and gives input on the financial aspects of strategic projects and transactions. The Group CFO provides the Audit Committee and Finance and Risk Committee with regular and ad hoc financial reporting that allow the committees to fulfil their respective authorities. The Group CFO's responsibilities include the Group strategic process and initiating the respective discussions in the Group EC as preparation for submission of strategic content to the Board of Directors for approval. He augments the Business Units' activities with targeted initiatives as well as systematically monitors and steers the implementation of the Group Strategy.

Group Chief Investment Officer

The Group CIO is responsible for the Group-wide Asset Management function and its investment results. He manages the investment portfolio, advises the BUs on defining their strategic asset allocation (SAA), and implements the Group and BUs SAAs within the risk limits set by the Group EC. The Group CIO retains responsibility for decisions on investment tactics and also provides financial market advice on strategic projects and transactions. In addition, the Group CIO is responsible for the Asset Management organisation and operational and compliance risks pertinent to his responsibilities.

Group Chief Operating Officer

The Group COO is responsible for the Group Operations function, its processes, including oversight of human resources and talent management as it relates to Group Operations, as well as its costs and performance. Her responsibilities include being a strategic partner to the Group and the Business Units in all operational matters and providing a high-quality, cost-effective and differentiating operating platform for the whole Group.

Group Chief Risk Officer

The Group CRO is responsible for providing the Board of Directors and Group EC with independent assurance that all of Swiss Re's risks are being appropriately modelled, governed and managed and that adequate controls are in place. As part of executing these responsibilities, the Group CRO is charged with establishing the Group's Risk Management Framework (for further details on the Group's Risk Management Framework, please refer to pages 61–77 of this Financial Report) for all risk categories, including but not limited to financial, insurance and operational risk (the latter comprising reporting risks, legal and compliance risks and other operational risks).

Chairman Swiss Re Institute (SRI) & Group Chief Underwriting Officer

The Chairman SRI & Group CUO is responsible for steering capital to the most attractive areas in underwriting, leading themes that are of strategic importance for the Group's underwriting, providing research, development and analytics for selected portfolios and markets to improve both capital allocation and risk selection, and pursuing long-term strategic innovation and thought leadership by leveraging data, analytics, technologies and insights available in Swiss Re and the market.

Group Chief Human Resources Officer

The Group CHRO is responsible for the HR function Group-wide. This responsibility includes being a strategic partner to the Group CEO, Group EC and the Board of Directors on all people- and other HR-related matters. This includes defining and implementing a people strategy that helps enable the appropriate culture and human resources to support the business strategy of the Group. This work is conducted in close cooperation with the Group CEO and the Group EC.

Group Chief Legal Officer

The Group CLO is responsible for the Group-wide Legal and Compliance functions with a focus on managing and mitigating legal and compliance risks for the Group in conjunction with the Business Units and the Group Functions. He defines and implements a legal and compliance strategy in support of the business strategy of the Group. The Group CLO serves in a dual function as a strategic business partner in an enabling capacity as well as in the role of a controller in an oversight and governance capacity.

Regional Presidents

The Regional Presidents for the areas Americas, Asia and EMEA are responsible for representing the Group externally and internally, as well as enhancing the Swiss Re brand and safeguarding the Group's reputation in the geographies for which they are responsible. The Regional Presidents also assume responsibility for oversight of the Group's operating platform and coordinate activities across the Business Units in their regions.

The BU Chief Executive Officers

The Business Unit CEOs are responsible for the management and performance of the respective BU top-level company as well as the respective Business Unit. The Business Unit CEOs set the business and corporate agenda of the respective Business Unit, ensuring high-quality and performance-oriented and timely decision-making. They oversee the implementation of the decisions made and ensure the Business Unit Executive Committees fulfil their responsibilities.

Shareholders' participation rights

The Annual General Meeting elects the Independent Proxy for a one-year term of office.

Voting right restrictions, statutory group clauses and exception rules

SRL does not have any voting right restrictions or statutory group clauses (other than the limitations on nominee registrations set out on page 87) in place. Therefore, there are no procedures or conditions for cancelling restrictions and no rules on making exceptions to them. Accordingly, no such exceptions were granted in 2019.

Statutory rules on participating in the General Meeting of shareholders

Owners, usufructuaries or nominees entered in the share register as having voting rights on a specific qualifying day determined by the Board of Directors are entitled to one vote per share held at the General Meeting of shareholders.

SRL's Articles of Association allow any shareholder with voting rights to have his or her shares represented at any General Meeting of shareholders by another person authorised in writing or by the Independent Proxy. Such representatives need not be shareholders. Business firms, partnerships and corporate bodies may be represented by legal or authorised representatives or other proxies, married persons by their spouses, and minors and wards by their guardians, even though such representatives are not shareholders.

The Independent Proxy is elected by the Annual General Meeting for a term of office until completion of the next ordinary General Meeting of shareholders. The Independent Proxy whose term of office has expired is immediately eligible for re-election. The duties of the Independent Proxy are determined by applicable laws, rules and regulations. Any General Meeting of shareholders may remove the Independent Proxy with effect as per the end of the General Meeting of shareholders.

If the company does not have an Independent Proxy, the Board of Directors shall appoint one for the next General Meeting of shareholders.

Statutory quorums

The General Meeting of shareholders may pass resolutions without regard to the number of shareholders present at the meeting or shares represented by proxy.

Resolutions are passed by an absolute majority of votes validly cast (excluding blank and invalid ballots), except where the law requires otherwise.

The Chairman of the General Meeting of shareholders determines the voting procedure. Provided that the voting is not done electronically, voting shall take place openly based on a show of hands or by written ballot.

Convocation of the General Meeting of shareholders

In accordance with SRL's Articles of Association, the Board of Directors convenes the General Meeting of shareholders through a notice published in the Swiss Official Gazette of Commerce at least 20 days before the date of the meeting. The notice must state the day, time and place of the General Meeting of shareholders, along with the agenda and proposals, which will be submitted by the Board of Directors.

Extraordinary General Meetings of shareholders may be called by a resolution of the General Meeting of shareholders or the Board of Directors, or by one or more shareholders with voting rights whose combined holdings represent at least 10% of the share capital.

Agenda

The Board of Directors announces the agenda items and the proposals for the General Meeting of shareholders. Shareholders with voting rights whose combined holdings represent shares with a nominal value of at least CHF 100 000 may, no later than 45 days before the date of the meeting, request in writing that a particular item, together with the relevant proposals, be included on the agenda.

Registrations in the share register

Any share whose owner, usufructuary or nominee is entered in the share register as having voting rights through said share on a specific qualifying day (record date) designated by the Board of Directors entitles its holder to one vote at the General Meeting of shareholders. In 2019, SRL recognised the voting rights of shares registered no later than four working days before the Annual General Meeting of shareholders.

Changes of control and defence measures

SRL's Articles of Association contain neither an "opting up" nor an "opting out" provision.

Duty to make an offer

SRL has not put in place any specific measures to defend against potential unfriendly takeover attempts. The Board of Directors believes that the company's best protection is a fair valuation of its shares and that the efficiency of a free market is preferable to artificial obstacles, which can have a negative impact on the share price in the long term.

In accordance with the Financial Markets Infrastructure Act (FMIA), any party who acquires SRL shares which, added to those already owned, exceed the threshold of 33⅓% of SRL shares, either directly, indirectly or in concert with third parties, and regardless of whether these voting rights of such SRL shares are exercisable or not, triggers a mandatory takeover offer for the outstanding SRL shares owned by all other shareholders.

The FMIA allows companies to include an "opting up" provision in their articles of association, which raises the mandatory takeover offer threshold up to 49%, or an "opting out" provision, which waives the mandatory offer. SRL's Articles of Association contain neither of these provisions.

Change of control clauses

The mandates and employment contracts of the members of the Board of Directors, Group EC and further Executive Management members do not contain any provisions such as severance payments, notice periods of more than 12 months, additional pension fund contributions or the treatment of deferred compensation that would benefit them in a change of control situation.

Unvested deferred compensation may vest and employee participation plan rules may be amended upon a change of control (if the Board of Directors so decides; see below). In such an event, the rights of members of the Board of Directors and the Group EC, as well as of further Executive Management members, are identical to those of all other employees.

The Articles of Association provide that the Board of Directors (or to the extent delegated to it, the Compensation Committee) may decide on the continuation, acceleration, amendment or removal of any vesting, blocking or exercise conditions for the payment or grant of deferred compensation. The Board of Directors may also decide to replace the award with shares of the entity assuming control. For more information on the quantitative impact of vested shares, please refer to page 87 of this Corporate Governance Report under the paragraph entitled "Shares".

Auditors

KPMG will be proposed to shareholders for election at the AGM 2020 as the new external auditor for the financial year 2021.

Duration of the mandate and term of office of the lead auditors

PricewaterhouseCoopers Ltd (PwC) was appointed as the external auditor of SRL when the company was founded on 2 February 2011. PwC had been elected as the external auditor of the previous parent company of the Group, Swiss Reinsurance Company Ltd, at its Annual General Meeting 1991 and had been re-elected annually since then. The Annual General Meeting 2019, following the proposal of the Board of Directors, based on the recommendation by the Audit Committee, re-elected PwC for a term of one year as external auditors.

In line with the Swiss Code of Obligations and to foster external auditor independence, each of the two lead audit partners rotates out of his or her role after seven years. Alex Finn therefore handed over to Roy Clark following the election of PwC as external auditors by the Annual General Meeting 2018. Bret Griffin handed over to Frank Trauschke in May 2018.

Information tools pertaining to the external audit

Responsibilities

The external auditor is accountable to the Audit Committee, the Board of Directors and ultimately to the shareholders. The Board of Directors reviews the external auditor's professional qualifications and is assisted in its oversight by the Audit Committee.

Cooperation and flow of information between the auditor and the Audit Committee

The Audit Committee liaises closely with the external auditor. The lead auditors participate as advisors at all Audit Committee meetings. For more information, see page 101.

PwC provided reports on selected topics at each of the Audit Committee meetings during the reporting year: At the 29 January meeting, PwC provided the External Auditor Update, which covered the PwC Quality, Performance and Assurance Report as well as the audit-related, tax and non-audit services. At the 19 February Audit Committee meeting, it provided the Q4 and Full-Year Audit Report and on 13 March, the PwC Final Board Report. At the meeting on 15 April, PwC provided the US GAAP and EVM control reports as well as the PwC Quality Assessment. At the Audit Committee meeting on 2 May, it provided the Q1 PwC Report and at the 30 July meeting, the H1/Q2 PwC Report. Furthermore, PwC provided the Audit Plan PwC/fees Report at the 2 October meeting and the 9M/Q3 PwC Report on 30 October.

The Audit Committee reviews and approves in advance all planned audit services and any non-audit services provided by the external auditor. It discusses the results of annual audits with the external auditor, including reports on the financial statements, necessary changes to the audit plans and critical accounting issues.

Fees paid to the auditor

The fees (excluding value added taxes) for professional services provided by PwC in 2019 were as follows:

USD millions	2018	2019
Audit fees	**31.3**	**31.0**
Non-audit fees	**6.9**	**12.3**
Audit-related assurance services	6.1	11.0
Services relating to corporate finance transactions	0.0	0.3
Tax related services	0.6	0.3
Other non-audit services	0.2	0.7
Total fees	**38.2**	**43.3**

In 2019, audit-related assurance services included the support of the initially planned IPO and the agreement to sell ReAssure, other transaction-related advice as well as assurance services required by Swiss Re's regulators. Services relating to corporate finance transactions included support on potential capital market transactions, Tax related services comprised advice on a number of tax assignments and other non-audit services included permitted advisory services related to a variety of initiatives such as the setting up of the IFRS programme, the implementation of client management software and the enhancement of Swiss Re's training programme.

The external auditor shares with the Audit Committee its findings on the adequacy of the financial reporting process and the efficacy of the internal controls.

It informs the Audit Committee about any differences of opinion between the external auditor and management encountered during the audits or in connection with the preparation of the financial statements.

Evaluation of the external auditor

It is the Audit Committee that is responsible for recommending an audit firm to the Board of Directors for election at the Annual General Meeting. Unlike in the European Union, there is no law in Switzerland that provides for a mandatory rotation of the external auditor after a certain number of years. The Audit Committee closely monitors regulatory developments in the EU and elsewhere on this topic. In order to be able to select and recommend an audit firm for election by the shareholders and in line with good corporate governance, the Audit Committee thoroughly evaluates the credentials of the current external auditor annually based on the following main criteria: Investment in the client relationship, quality of delivery, quality of the people and services and focus on client value. The Audit Committee presents the findings of the evaluation to the entire Board of Directors. PwC has a proven record of professionalism and efficiency and fully meets the high demands made by Swiss Re as a global re/insurance Group. The Audit Committee's assessment of the external auditor is furthermore based on the external auditor's qualifications, independence and performance. The Audit Committee also evaluates annually the performance of the lead auditors.

Qualifications

At least once a year, the external auditor submits a report to the Audit Committee describing the external auditor's own quality control procedures, including any material issues raised by its most recent internal reviews or inquiries or investigations by governmental or professional authorities within the preceding five years, as well as any steps taken to deal with any such issues.

Independence

At least once a year, the external auditor provides a formal written statement delineating all relationships with the company that might affect its independence. Any disclosed relationships or services that might interfere with the external auditor's objectivity and independence are reviewed by the Audit Committee, which then recommends appropriate action to be taken by the Board.

Performance

This assessment measures the external auditor's performance against a number of criteria, including: understanding of Swiss Re's business; technical knowledge and expertise; comprehensiveness of the audit plans; quality of the working relationship with management and clarity of communication. It is compiled based on the input of key people involved in the financial reporting process and the observations of the Audit Committee members.

Auditor rotation 2021

Considering that PwC has carried out the mandate as external auditor for the Swiss Re Group since 1991, the Board of Directors will propose to the shareholders at the AGM 2020 the election of KPMG as the Group's new external auditor for the financial year starting on 1 January 2021.

In September 2018, the Audit Committee decided to launch a tender process in Q1/2019 for a new external auditor of the Group. After a thorough tender process, the Board of Directors decided, as proposed by the Audit Committee and in line with the main criteria mentioned in the chapter on the evalution of the external auditor (far left of this page), to propose KPMG to the AGM 2020 for election as the new external audit firm to replace PwC for the financial year starting on 1 January 2021. On 31 July 2019, Swiss Re publicly announced the Board of Director's decision to nominate KPMG as the new auditor as part of the news release on the H1/2019 US GAAP results. For the news release, please refer to: www.swissre.com/media/news-releases/nr-20190731-hy-2019-news-release.html

Audit fees

The Audit Committee annually reviews the audit fees as well as any fees paid to the external auditor for non-audit services based on recommendations by the Group CFO.

Special Auditor

SRL's Articles of Association foresee that the Annual General Meeting may elect a Special Auditor for a term of three years which would be responsible for the special audit reports that are required by Swiss law in connection with changes in capital. Currently there is no Special Auditor elected.

Information policy

As a global company, Swiss Re strives to inform its stakeholders openly, consistently and in a transparent manner – beyond the minimum legal information requirements.

Swiss Re maintains open lines of communication with stakeholders on matters related to its financial and business performance, strategy and business activities through analyst and media conferences and calls, road shows, news releases and corporate reports. The latter encompass the company's Annual Report, the Half-Year Report and the Sustainability Report, which are made available both in print and digitally. Additionally, Swiss Re publishes the Financial Condition Report, solvency reports for the regulated entities and key quarterly financial information online.

On the Group's website (www.swissre.com/newsreleases), visitors can find a host of news and research, publications, video and podcasts as well as discussion and analysis related to Swiss Re and the broader re/insurance industry. The financial calendar displayed below is also available online, and includes, amongst other things access details for analyst conference calls as well as on-demand video recordings of annual and half-year results' events and Q1/Q3 key financial figures.

At www.swissre.com/media/contacts, interested parties – internal or external – can subscribe to the Media Relations mailing list to receive ad hoc disclosures and relevant corporate news via email. Contact details are provided on page 318.

The Swiss Official Gazette of Commerce *(Schweizerisches Handelsamtsblatt)* is Swiss Re's official medium for prescribed announcements and official information.

The Chairman conducts an annual corporate governance roadshow to visit and engage in an ongoing dialogue with Swiss Re's largest shareholders. Throughout the year, our Investor Relations team, often joined by our Executive Management, holds regular meetings with institutional investors and analysts, including roadshows, conferences and calls.

On 23 May 2019, Swiss Re hosted Management Dialogues in London, where Jayne Plunkett, former CEO Reinsurance Asia, provided insights on the Asia strategy and growth. Jason Richards, Head Casualty Underwriting Reinsurance, explained Casualty's risks and opportunities and Thierry Léger, CEO Life Capital, and Pravina Ladva, CTOO Life Capital, explained the iptiQ strategy. At the Investor's day in London on 25 November 2019, the Group CEO, Christian Mumenthaler, provided an update on the Group strategy, John R. Dacey, the Group CFO, on Swiss Re's financial strength and capital management, and the Group CIO, Guido Fürer, on the Group's asset management. The Business Unit CEOs gave updates on the businesses of the three Business Units, Reinsurance, Corporate Solutions and Life Capital, and the Chairman Swiss Re Institute & Group CUO spoke about Reinsurance's capital portfolio steering. The presentations as well as the conference call recordings from these events are available at: www.swissre.com/investors/presentations

Swiss Re strictly observes close periods around the publication of the Group's financial results. Close periods apply through the preparation of results or key financial data, and include a cooling-off period after their release. During such close periods, Swiss Re employees and members of the Board of Directors are not allowed to trade Swiss Re shares or financial instruments related to such shares.

Important dates in 2020

20	**February**	Annual results 2019
19	**March**	Publication of Annual Report 2019 and 2019 EVM results as well as the AGM 2020 invitation
17	**April**	156th Annual General Meeting
30	**April**	Release of first quarter 2020 key financial data
19	**May**	Management Dialogues, Zurich
31	**July**	Half-year 2020 results
30	**October**	Release of nine months 2020 key financial data
20	**November**	Investors' day, Zurich

Swiss Re is committed to a compensation framework that is balanced and performance-oriented and that aligns the interests of employees and shareholders.

Contents

Report from the Compensation Committee

Jacques de Vaucleroy
Chair Compensation Committee

> During the past year, the Compensation Committee continued to monitor the alignment of Swiss Re's compensation framework with shareholders' interests and with our long-term business and risk strategy.

Dear shareholders,
As the Chair of Swiss Re's Compensation Committee, I am pleased to share with you Swiss Re's Compensation Report for the financial year ended 31 December 2019.

Swiss Re's vision "we make the world more resilient" is supported by our mission – to create smarter solutions for our clients through new perspectives, knowledge and capital. The combination of these strengths makes Swiss Re a partner of choice for our clients. At the same time, Swiss Re wants to be an employer of choice for our employees. Its compensation framework is therefore designed to attract, motivate and retain the qualified talent the Group needs to succeed globally while providing superior returns to our shareholders. During the past year, the Compensation Committee monitored:

- The alignment of Swiss Re's compensation framework with shareholders' interests and with our long-term business and risk strategy.
- The effectiveness of the current performance measurement approach (ie performance achievements at the business and individual level against the goals set for the year, including behaviour and risk aspects), which determines compensation outcomes.
- The competitiveness of compensation for the Board of Directors, Group Executive Committee (Group EC) and other key executives.
- Legal and regulatory developments, including the compliance of the Board of Directors and Group EC compensation with the Ordinance against Excessive Compensation at Public Corporations (Ordinance).

Furthermore, the Compensation Committee conducted a self-assessment on its own effectiveness.

On behalf of the Compensation Committee, I would like to acknowledge the strong shareholder support at the Annual General Meeting (AGM) 2019. Swiss Re's shareholders approved all compensation-related motions and, like in prior years, the 2018 Compensation Report received a positive outcome in the consultative vote.

Through discussions with regulators, key investors and proxy advisors, Swiss Re identified potential enhancements to its compensation disclosure. As a result, the 2019 Compensation Report contains additional information, particularly in the area of realised compensation for the Group Chief Executive Officer (Group CEO).

Group business performance 2019
Key considerations for annual compensation decisions continue to cover a combination of US GAAP and Economic Value Management (EVM) based business results, qualitative factors and Swiss Re's pay-for-performance approach. Compensation decisions were made considering Swiss Re's overall performance for the reporting year in which the Group's US GAAP and economic performance was negatively impacted by higher-than-expected natural catastrophe and man-made losses as well as by increased claims in US casualty, partially offset by a strong investment result.

- Property & Casualty Reinsurance's reported US GAAP and economic result reflects the large natural catastrophe events, man-made losses and measures to address ongoing trends in US casualty.
- Life & Health Reinsurance met its return on equity target and delivered a strong EVM new business profit.
- Corporate Solutions' US GAAP and economic results were heavily impacted by natural catastrophe and man-made losses, mainly from prior accident years related to the recent deterioration in the US casualty business, resulting in an overall loss for the year.
- Life Capital's US GAAP result reflected a charge related to the agreement to sell ReAssure. Gross cash generation was strong, mainly driven by proceeds from the sale of subordinated bonds issued by ReAssure and the sale of a 10% stake in ReAssure to MS&AD Insurance Group Holdings Inc.

Group Annual Performance Incentive 2019
In years with relatively benign natural catastrophe experience, variable compensation payouts were positive but not excessive. Conversely, in adverse environments, the negative impact shall be substantive but also proportionate, given the need to carefully manage key talent retention risk and the Group's willingness to underwrite risk. Swiss Re's US GAAP performance was below target, but higher than last year. This backdrop, in conjunction with the qualitative performance assessment, led the Compensation Committee and the Board of Directors to grant variable compensation payouts that are below target levels.

Compensation framework
Swiss Re's compensation framework is designed to promote long-term sustainable performance for the Group and its shareholders through a mix of fixed and variable compensation components. It comprises fixed components such as base salary, pension and other benefits, as well as a combination of variable short- and long-term incentives, as outlined later in this Compensation Report.

The Compensation Committee continues to review and monitor the compensation framework of Swiss Re, considering business strategy, targets, sustainability and Environmental, Social and Governance (ESG) considerations, risk awareness and corporate values. External factors with respect to regulatory requirements and legal developments, the international context in which we operate and relevant market data are also taken into account.

There were no material changes to our compensation framework in relation to the year 2019.

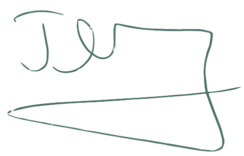
AGM 2020
The Compensation Committee remains committed to recommending compensation policies and programmes to the Board of Directors that support our business strategy and align the interests of our employees with those of our shareholders. We are therefore keen to maintain regular interactions with shareholders and other key stakeholders.

Consistent with last year and in line with our Articles of Association, shareholders will again be asked to approve the following amounts:

- Maximum aggregate amount of compensation for the members of the Board of Directors for the term of office from the AGM 2020 to the AGM 2021.
- Maximum aggregate amount of fixed compensation and variable long-term compensation for the members of the Group EC for the financial year 2021.
- Aggregate amount of variable short-term compensation for the members of the Group EC for the financial year 2019.

Separately from this and as in the past, shareholders will also be asked to support this Compensation Report in a consultative vote. The Compensation Committee is satisfied that this Compensation Report complies with applicable laws, rules and regulations and provides a comprehensive view of the compensation framework at Swiss Re and the 2019 compensation decisions.

Zurich, 19 March 2020

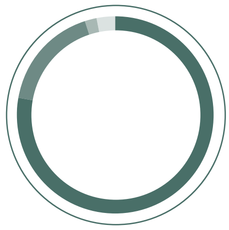


Jacques de Vaucleroy
Chair Compensation Committee

Compensation highlights in 2019

Pay for performance
The Compensation Committee ensures that Group EC compensation is linked to the business performance of Swiss Re by delivering a substantial portion of compensation in the form of performance-related incentives.

All employees



- **78%** Base salary
- **17%** Cash API[1]
- **2%** VAI[1]
- **3%** LPP[1]

Group EC

- **31%** Base salary
- **19%** Cash API[1]
- **16%** VAI[1]
- **34%** LPP[1]

Group CEO

- **26%** Base salary
- **19%** Cash API[1]
- **19%** VAI[1]
- **36%** LPP[1]

[1] Variable/performance related, whereby VAI and LPP are deferred

The Compensation Committee monitors how compensation is aligned with specific business metrics, including US GAAP net income and EVM profit.

USD millions (unless otherwise stated)	2017	2018	change	**2019**	change
US GAAP net income	331	421	27%	727	73%
EVM profit	–9	–693	–	–19	–
Regular dividend payments (CHF)[1]	5.00	5.60	12%	5.90	5%
Financial Strength Rating (Standard & Poor's)	AA-	AA-		AA-	
Total equity	34 294	28 727	–16%	31 037	8%
Regular staff worldwide	14 485	14 943		15 401	
Aggregate compensation for all employees (CHF millions)[2]	2 165	2 208	2%	2 310	5%
Group EC members[3]	14	14		16	
Aggregate Group EC compensation (CHF thousands)[2, 3]	43 159	44 253	3%	47 002	6%

[1] Dividend payments are made in April of the following year. For 2019, an ordinary dividend of CHF 5.90 is proposed to the AGM 2020.
[2] Disclosure includes all awards for a reporting year, ie the 2019 aggregated compensation values include the fair value of the Leadership Performance Plan (LPP) granted in April 2019. The total Annual Performance Incentive (API) for 2019 for members of the Group EC is subject to approval by the shareholders at the AGM 2020. For individuals who left the Group EC during or before the reporting period, disclosure also includes legally or contractually required payments for the period when the individual was no longer in a Group EC position (eg base salary when on garden leave).
[3] Including the Group CEO as well as individuals holding a Group EC position at one point during a reporting year. The existing functions of Group Chief Human Resources Officer and Group Chief Legal Officer were added to the Group EC in 2019. As a result, the number of individuals who held a Group EC position at one point during the reporting year has increased to 16 in 2019. Of the 16 individuals, nine were active for the full year 2019 on the Group EC.

Attribution of group income to key stakeholders

USD millions (unless otherwise stated)	2017	%	2018	%	**2019**	%
Income before tax and variable compensation	814	100%	863	100%	1 218	100%
Variable compensation	351	43%	373	43%	351	29%
Income tax expense	132	16%	69	8%	140	11%
US GAAP net income attributable to shareholders	331		421		727	
of which paid out as dividend[1]	1 592	196%	1 659	192%	1 766	145%
of which share buyback	1 032	127%	1 020	118%	1 010[2]	83%
of which added to retained earnings within shareholders' equity	–2 293	–	–2 258	–	–2 049	–

[1] FY 2019 is estimated based on the average monthly CHF/USD FX rate as of February 2020. The dividend is subject to AGM approval and the amount depends on the final number of dividend eligible shares and FX rates upon dividend payout.
[2] Includes shares bought back between 6 May 2019 and 18 February 2020 as part of the buyback programme authorised at the AGM 2019. The total amount represents an estimate translated at the respective period average rate.

Compensation framework

Guiding principles

Swiss Re's compensation framework is designed to add to the success of the business by:

- Supporting a culture of sustainable high performance with a focus on risk-adjusted financial results.
- Ensuring alignment of compensation to business results and individual contribution and recognising both what was achieved and how it was achieved.
- Supporting Swiss Re's commitment to attract, motivate and retain the qualified talent the Group needs to succeed globally.
- Aligning the interests of employees with those of Swiss Re's shareholders and society at large.
- Fostering compliance and supporting appropriate and controlled risk-taking.

Swiss Re seeks to ensure that total compensation is competitive in local labour markets and well balanced in terms of fixed versus variable compensation and in terms of short-term versus long-term incentives. This encourages sustainable long-term performance and supports shareholder alignment as well as appropriate risk-taking in line with the business and risk strategy. The compensation package is complemented by competitive pension plans and benefits.

Swiss Re is committed to ensuring equal pay for equal work and has a non-discriminatory approach to determining compensation and benefits at all levels.

Compensation Policy

Building on the overarching compensation principles included in Swiss Re's Articles of Association, the compensation framework is captured within the Swiss Re Group Compensation Policy (Compensation Policy). The Compensation Policy governs the compensation structure and processes across all functions and locations at Swiss Re and is reviewed regularly.

The Board of Directors has approved an authority matrix that defines the limits to which each level of management can authorise compensation payments. The Group CEO, the Compensation Committee or the Board of Directors, as applicable, approves all compensation that exceeds the preset limits. In line with best practice for Corporate Governance purposes, the Group CEO is not involved in decision-making concerning his own compensation.

The Human Resources function conducts a regular self-assessment of Swiss Re's Compensation Policy. The Compensation Committee reviews this self-assessment and identifies potential areas for improvement. It also receives reports on compensation decisions as appropriate, including a comprehensive review of the effectiveness of the annual compensation review cycle.

Swiss Re assesses its Compensation Policy against FINMA requirements. As part of this process, the Risk Management function annually reviews risks related to the Compensation Policy and reports its findings to the Compensation Committee.

To reflect best practices, the Compensation Policy prohibits the use of any personal hedging strategies or remuneration and liability-related insurance that could undermine the risk alignment effects and economic exposure embedded in compensation arrangements.

The Compensation Policy is implemented globally to the extent possible. Variations may apply at the regional and business unit level to accommodate specific requirements, eg talent management and compliance with local regulations.

Overview of key compensation and benefits components for Group EC members and other employees

	Fixed compensation		Variable compensation*			Participation plans
			(short-term)	(long-term)		(long-term)
	Base salary	**Benefits**	**Cash API**	**VAI (deferred API)**	**LPP**	**GSPP**
Eligibility	All employees	All employees	All employees	Employees with an API at or above USD 100 000	Group EC members and other key employees	All employees
Purpose	Attract and retain	Risk protection, market competitiveness, connection to Swiss Re values	Pay for performance	Pay for sustained performance	Alignment with future performance and shareholders	Alignment to shareholders
Plan duration				3 years	5 years for Group EC members and other key executives** (including a 2-year holding period); 3 years for remaining participants	3 years
Drivers	Role and experience	Market practice	Business and individual performance	Business performance	Business performance	
Settlement	Cash (immediate)	Pension, insurances, cash	Cash	Cash (deferred)	Shares	Shares
Performance KPIs			Business and individual performance	Measurement of the economic impact of profit/loss from previous years' business	ROE Relative TSR	
Performance period			1 year	3 years	3 years	
Payout range			0 to 2 × TAPI (on total API)***	50% to 150% of deferred API	RSUs: 0% to 100% PSUs: 0% to 200%	
Share price impact	No	No	No	No	Yes	Yes
Forfeiture rules	No	In certain plans	Yes	Yes	Yes	Yes (on match)
Clawback rules	No		Yes	Yes	Yes	Yes (on match)

* Different variable compensation programmes apply to certain employees in ReAssure. None of the ReAssure employees concerned are Group EC members.
** Certain members of Business Unit Executive Committees (BU ECs) and all Group Managing Directors (GMDs).
*** For Group EC members, the API payout range is additionally capped at 3 × annual base salary.

Swiss Re aims for total compensation that is competitive in the market. Swiss Re also seeks to ensure that total compensation is well balanced in terms of fixed versus variable compensation and in terms of short-term versus long-term incentives.

Base salary

Base salary is the fixed compensation paid to employees for carrying out their role and is established based on the following factors:

- Scope and responsibilities of the role, and qualifications required to perform the role.
- Market value of the role in the location in which Swiss Re competes for talent.
- Skills and expertise of the individual in the role.

Benefits

Swiss Re aims to provide a competitive package of employee benefits. Benefits are designed and implemented under a global framework, while appropriately reflecting differing local employment market conditions.

The key objectives of Swiss Re's benefits packages are to:

- Provide a degree of security for employees as it relates to pension, health matters, disability and death.
- Be competitive in the markets where Swiss Re competes for talent.
- Connect with Swiss Re values and enhance engagement.

Additionally, forfeiture provisions apply in certain benefit plans.

Annual Performance Incentive

Purpose

The Annual Performance Incentive (API) is a performance-based, variable component of compensation. Combined with the base salary, it provides competitive total cash compensation when both business and individual performance targets are achieved and desired behaviours are demonstrated.

Structure

Swiss Re operates a Target API (TAPI) system along with a performance management framework that provides equal weighting to results-oriented and behaviour-related performance criteria for all employees. API is awarded for both objectives achieved and the demonstration of desired behaviours.

A TAPI is set based on multiple factors, but primarily on the role being performed, internal calibration and market benchmarks. The employee's total compensation and pay mix are taken into account when setting the TAPI. The possible payout for the API ranges from 0 to 2 × TAPI.

For Group EC members an additional cap applies, which is 3 × annual base salary.

In 2019, for the members of the Group EC including the Group CEO, the total of the aggregate TAPIs amounted to CHF 15.02 million. This is an increase compared to the prior year, which is due to the number of Group EC positions being increased from 12 to 14 in 2019 (the existing positions of Group Chief Human Resources Officer and Group Chief Legal Officer have been added to the Group EC). The 14 positions were held by a total of 16 individuals during 2019. For the Group CEO, the TAPI was CHF 2.5 million for the same year.

Funding

Swiss Re uses a three-step process to assess business performance to help determine the overall Group API pool.

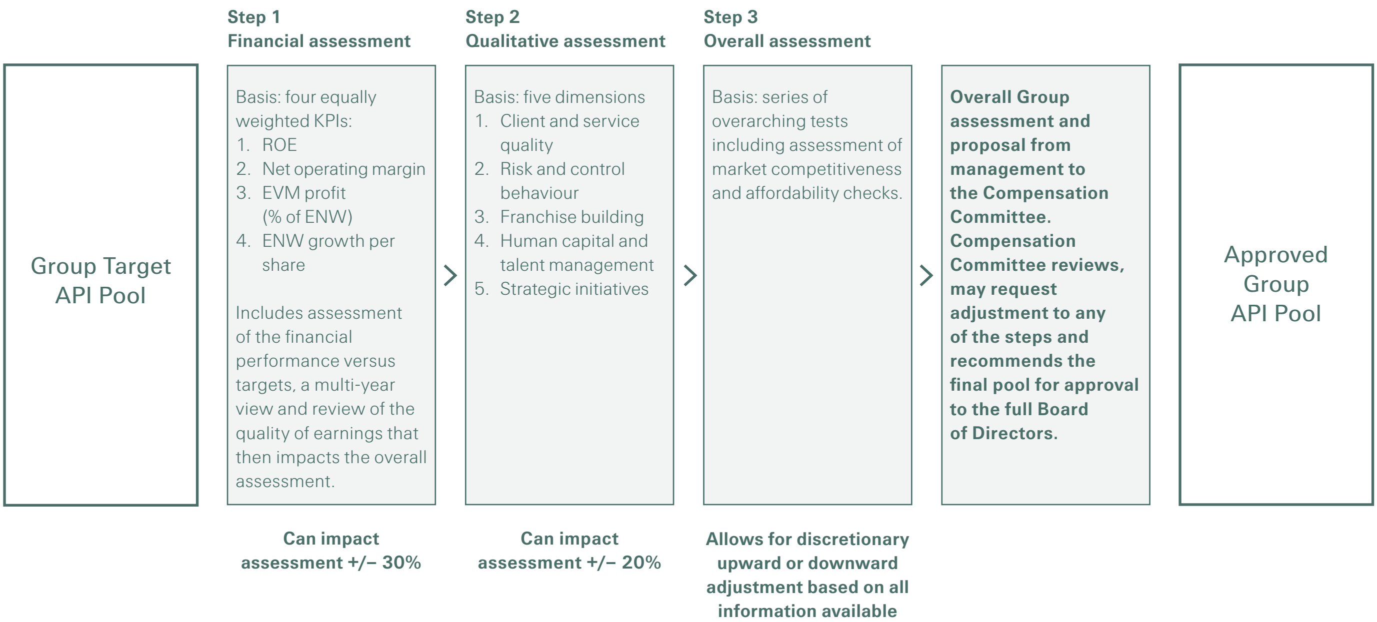
The process (as shown in the chart below) comprises a financial, a qualitative and an overall assessment. The financial assessment covers four equally weighted performance factors versus targets: ROE, net operating margin, EVM profit (% of economic net worth/ENW) and ENW growth per share measured for both the Group and each Business Unit individually. Also, multi-year comparisons and an assessment of the quality of earnings are considered. The qualitative assessment is based on the achievement of key objectives that aim to reinforce the success of Swiss Re's strategy. For each Business Unit/Group Function, an assessment is made considering five defined dimensions: client and service quality, risk and control behaviour, franchise building, human capital and talent management and strategic initiatives. Within those dimensions, the assessment includes, among others, environmental, social and governance (ESG) as well as sustainability considerations in accordance with our corporate values. The preliminary Group API pool is then reviewed considering a number of different perspectives, including pay for performance linkage, reasonableness in the market context and proportionality of value-sharing among employees and shareholders. As part of the process, the Compensation Committee can apply discretion to make upward or downward adjustments to the pool recommended for approval to the Board of Directors. For information on the discretion applied in 2019, please refer to page 138 of this Financial Report.

Allocation

The approved Group API pool is further allocated to the Group EC and other senior executive pools, and to pools of different Business Units/Group Functions. This allocation is agreed by the Group CEO based on the assessment of financial and qualitative performance of the respective business area.

The individual API is determined considering the TAPI, business and individual performance. Individual performance is assessed against the individual's established goals and Swiss Re's behaviour expectations and corporate values.

Group API pool funding process



Settlement

API is generally settled in cash. When the total API level for an employee exceeds a pre-defined amount, the award is split into two components: an immediate cash portion (cash API) and a deferred cash portion (Value Alignment Incentive/VAI).

Forfeiture of unsettled awards and clawback provisions for settled awards apply in a range of events, enabling Swiss Re to seek repayment where appropriate. Examples of such events are acts which can be considered as malfeasance, fraud or misconduct.

Value Alignment Incentive

Purpose

The VAI is the mandatory deferred portion of the API which introduces a time component to the performance-based, variable compensation. This supports the Group's business model by aligning a portion of variable compensation with sustainable long-term results. The aim is to ensure that the ultimate value of the deferred variable compensation is affected by the longer-term performance of the relevant Business Unit and the Group.

Plan duration

The VAI supports a longer-term perspective by linking awards to performance over a three-year period.

Performance measurement

The performance measurement calculation uses the three-year average of the published EVM previous years' business profit margin.

EVM is Swiss Re's proprietary integrated economic valuation and steering framework, consistently measuring performance across all businesses (please refer to the EVM section on pages 34–47 of this Financial Report).

A higher EVM previous years' business profit margin (for all prior underwriting years) results in a higher performance factor. Conversely, a lower EVM previous years' business profit margin results in a lower performance factor. The performance factor is a linear function, whereby payout generally ranges from 50% to 150%.

Structure

The higher the API granted, the greater the amount of compensation that remains at risk through deferral into the VAI, as shown in the table below.

Funding

The VAI is not funded as a separate pool. The Group API pool includes amounts paid in cash and amounts to be deferred into the VAI.

Settlement

At the end of the deferral period, the VAI is settled in cash. For the full three-year performance measurement period, forfeiture conditions apply.

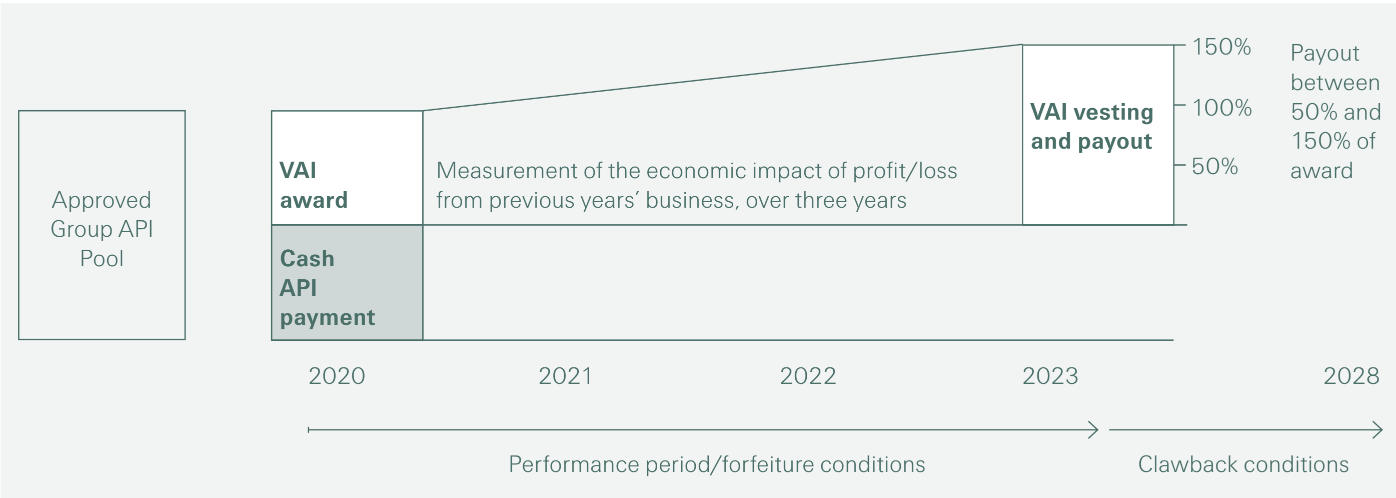
Additionally, clawback provisions apply in a range of events as defined in the VAI plan rules (please refer to page 129 of this Financial Report for details on termination and clawback provisions).

For VAI performance outcomes over past years, please refer to page 139 of this Financial Report.

Portion of API that is deferred

	Deferral into VAI
Group CEO	50% of API
Other Group EC members	45% of API
Other key executives	40% of API
All other employees	50% of the API amount exceeding USD 100 000 with a minimum deferral amount of USD 5 000 at USD 100 000 and up to a maximum of 40% of API

Value Alignment Incentive



Leadership Performance Plan

Purpose

The purpose of the Leadership Performance Plan (LPP) is to provide an incentive for Swiss Re's senior management (including the members of the Group EC) to create sustainable company performance over the long term. The LPP is a forward-looking instrument awarded to incentivise decision-making that is also in the shareholders' interest.

The design of the LPP aims to:
- Focus participants' energies on earnings, capital efficiency and Swiss Re's position against peers, all of which are critical to sustain shareholder value creation.
- Focus participants on long-term goals.
- Attract and retain individuals with exceptional skill.
- Provide competitive compensation that rewards long-term performance.

Grant

The amounts disclosed under LPP in the section "Compensation disclosure and shareholdings 2019" reflect the grants made in April 2019. The LPP 2019 will be measured over the period 2019 to 2021 and vests in 2022. Grant levels are determined based on multiple factors including the role being performed and market benchmarks.

The individual grant level for each member of the Group EC is based on a stable CHF amount which in any year cannot exceed 1.5 × annual base salary for each member of the Group EC, excluding the Group CEO, and 2 × annual base salary for the Group CEO. In 2019, the total of the LPP grants awarded to members of the Group EC, including the Group CEO, amounted to CHF 13.5 million (this figure excludes any awards granted and then forfeited at a later point in the reporting year). The LPP grant awarded to the Group CEO amounted to CHF 2.0 million.

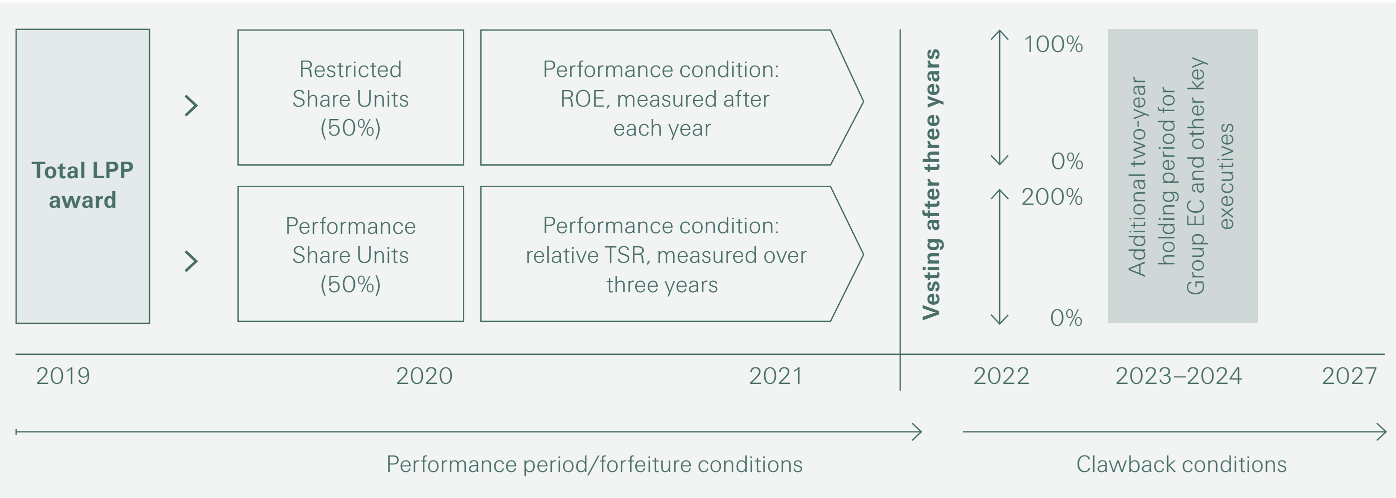
Plan duration

The vesting period, during which performance is measured, is three years. For LPP awards granted to Group EC members and other key executives, the duration of the LPP is five years, comprising a three-year vesting and performance measurement period and an additional two-year holding period.

Structure

At the grant date, the award amount is split equally into two underlying components: Restricted Share Units (RSUs) and Performance Share Units (PSUs). The valuation by a third party is used to determine the number of RSUs and PSUs granted.

Leadership Performance Plan



Restricted Share Units

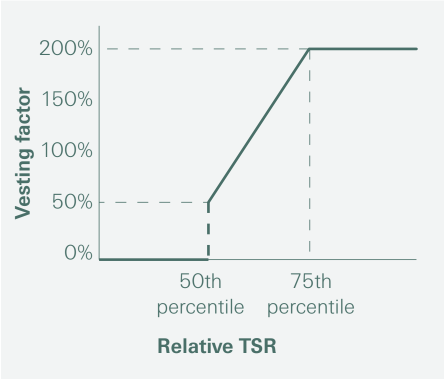
The performance condition for RSUs is ROE with a linear vesting line. Vesting is at 0% for an ROE at the risk-free rate* and at 100% for an ROE at a pre-defined premium above the risk-free rate. The premium is set at the beginning of the plan period, and for LPP 2019, this premium has been set at 900 basis points above the risk-free rate. At the end of each year, the performance against the ROE condition is assessed and one third of the RSUs are locked in within a range of 0% to 100%. At the end of the three-year period, the total number of units locked in at each measurement period will vest (capped at 100%**).

RSU vesting curve

Performance Share Units

The performance condition for PSUs is relative total shareholder return (TSR) measured over three years. The PSUs vest within a range of 0% to 200%. Vesting starts at the 50th percentile of TSR relative to peers with 50% vesting and is capped at the 75th percentile relative to peers with 200%** vesting. In case of a negative TSR over three years, the Compensation Committee retains the discretion to trigger vesting at a lower level of TSR.

PSU vesting curve



Swiss Re's three-year TSR performance is assessed relative to the TSR of the pre-defined peer group for the same period. This peer group consists of companies that are similar in scale and have a global footprint or a similar business mix to Swiss Re. The peer group, which is set at the beginning of the plan period, includes Allianz SE, American International Group Inc, Aviva PLC, AXA SA, Chubb Limited, Everest Re Group Ltd, Hannover Rueck SE, MetLife Inc, Muenchener Rueckversicherungs-Gesellschaft AG, Prudential PLC, QBE Insurance Group Ltd, Reinsurance Group of America Inc, RenaissanceRe Holdings Ltd, SCOR SE and Zurich Insurance Group Ltd.

Funding

The LPP pool granted each year is reviewed in the context of sustainable business performance and affordability, and funded as part of the total variable compensation pool.

Settlement

At the end of the three-year measurement period, both RSUs and PSUs will typically be settled in shares.

Forfeiture and clawback provisions apply in a range of events as defined in the LPP plan rules, enabling Swiss Re to seek repayment where appropriate (please see page 129 of this Financial Report for termination and clawback provisions in long-term plans).

Swiss Re also makes it possible for all LPP participants to have shares sold or automatically settled on a net basis as applicable, to cover statutory tax and social security liabilities that may arise at vesting.

For LPP performance outcomes over past years, please refer to page 140.

Outlook for 2020

In 2019, the Board of Directors has approved changes to the LPP plan design in order to strengthen the focus on growth in terms of operating value creation as an incentive driver. At the same time, it is important that any growth is shareholder value accretive, ie returns exceed cost of capital. In view of this, absolute ENW growth is introduced as a new performance metric.

Any new LPP grants as of 2020 consider relative TSR, ROE and absolute ENW growth. At grant, the award is split in three components with equal value whereby each component is linked to one performance metric. These components have vesting multiples set between 0% to 100% for ROE and absolute ENW growth, and between 0% and 200% for relative TSR.

More details on the plan, structure and performance measurement will be included in the 2020 Compensation Report. Current outstanding LPP awards (grants prior to 2020) are unaffected by the change.

* The annual risk-free rate is determined as the average of 12 monthly rates for ten-year US Treasury bonds of the corresponding performance year.
** Maximum vesting percentage excludes share price fluctuation until vesting.

Global Share Participation Plan

Swiss Re offers its employees an opportunity to directly participate in the long-term success of the Group by purchasing shares (for up to a maximum of CHF 7 000 per year of a plan cycle and capped at 10% of base salary), through the Global Share Participation Plan (GSPP). Swiss Re provides a 30% match on the number of shares held by employees at the end of the three-year plan cycle. The match is subject to forfeiture in case of termination of employment before the end of the plan cycle.

The GSPP has the same core design in all locations.

Supplementary information on ReAssure employees

In preparation of a potential Initial Public Offering (IPO) or trade sale of ReAssure, senior management employees in ReAssure were moved onto variable short- and long-term compensation schemes which differ from the API, VAI and LPP in 2019 (none of the ReAssure senior management employees are Group EC members). For reasons of talent retention, these schemes are maintained despite the decision to suspend the IPO and the subsequent agreement to sell ReAssure to Phoenix Group Holdings plc (subject to regulatory and anti-trust approvals).

Long-term compensation termination and clawback provisions

Termination reason	VAI	LPP	GSPP
Voluntary resignation	Unvested awards are forfeited pro rata and the performance factor is capped at 100% as of the date of termination of the employment relationship.	Unvested awards are forfeited as of the date of termination of the employment relationship.	Matching Share Awards are forfeited as of the date of termination of the employment relationship.
Redundancy	Unvested awards shall vest on the regular vesting date, subject to performance.	Unvested awards shall vest on the regular vesting date, subject to performance.	Matching Share Awards are subject of immediate vest as of the date of termination of the employment relationship.
Retirement	Unvested awards shall vest on the regular vesting date, subject to performance.	Unvested awards shall vest on the regular vesting date, subject to performance.	Matching Share Awards are subject of immediate vest as of the date of termination of the employment relationship.
Termination for cause	Unvested awards are forfeited as of the date of termination of the employment relationship.	Unvested awards are forfeited as of the date of termination of the employment relationship.	Matching Share Awards are forfeited as of the date of termination of the employment relationship.
Health/disability	Unvested awards shall vest on the regular vesting date, subject to performance.	Unvested awards shall vest on the regular vesting date, subject to performance.	Matching Share Awards are subject of immediate vest as of the date of termination of the employment relationship.
Death	Unvested awards shall vest immediately using the performance factor as presented during the latest Compensation Committee meeting.	Unvested awards shall vest immediately using the performance factors as presented during the latest Compensation Committee meeting.	Matching Share Awards shall vest immediately.
Mutual agreement	Unvested awards may vest at Swiss Re's sole discretion. The final decision is subject to the review and approval of the Business Head, Head of Reward, Group Chief Human Resources Officer, Group CEO and, if applicable, the Compensation Committee.	Unvested awards may vest at Swiss Re's sole discretion. The final decision is subject to the review and approval of the Business Head, Head of Reward, Group Chief Human Resources Officer, Group CEO and, if applicable, the Compensation Committee.	Matching Share Awards may vest if stated in the agreement between Swiss Re and the employee.

In events of malfeasance, fraud, misconduct, or as deemed appropriate by the Compensation Committee, awards are subject to clawback rules where Swiss Re is entitled to seek repayment of all or part of any awards paid, vested, settled or released, for a period of five years after settlement.

Supplementary information on Group EC members

Performance assessment

The Compensation Committee assesses the performance of the Group EC, including the Group CEO, against a set of quantitative and qualitative objectives. These objectives are agreed at the beginning of the year and are aligned with the Group's strategy.

Compensation approval

The determination of compensation for the Group EC, including the Group CEO, is ultimately subject to AGM approval, as outlined in the Articles of Association.

Benchmarking

The external compensation advisor to the Compensation Committee conducts an annual review of the compensation of the Group EC relative to a group of reference companies to ensure that market competitiveness is maintained. The reference companies are regularly reviewed by the Compensation Committee to ensure their relevance. The core peer group consists of the following globally active primary insurance and reinsurance firms: AIA Group Ltd, Allianz SE, American International Group Inc, Aviva PLC, AXA SA, Chubb Limited, Hannover Rueck SE, Insurance Australia Group Ltd, MetLife Inc, Muenchener Rueckversicherungs-Gesellschaft AG, Prudential PLC, QBE Insurance Group Ltd, Reinsurance Group of America Inc, SCOR SE and Zurich Insurance Group Ltd.

Employment conditions and change of control provisions

The Group EC members, including the Group CEO, have open-ended employment agreements with notice periods of 12 months for termination either by the company or the individual. Their employment agreements do not contain severance clauses ("golden parachutes"), special provisions on the cancellation of contractual arrangements, agreements concerning special notice periods, waivers of lock-up periods for options, shorter vesting periods, additional contributions to pension funds or any other provisions protecting the individuals concerned against changes of control.

With regard to deferred compensation, in the event of a change of control, the rights of members of the Group EC and other members of senior management are identical to those of all other employees. Both the VAI and LPP Plan Rules include provisions governing change of control events.

Specifically, the Board of Directors (or to the extent delegated to it, the Compensation Committee) may decide at its discretion on the continuation, acceleration, amendment or removal of any vesting, blocking or exercise conditions for the payment or grant of deferred compensation. It may also decide to replace any LPP award with shares of the entity assuming control. In addition, it may apply any other measure which it considers equitable and reasonable, provided this does not constitute impermissible compensation pursuant to the Ordinance. Should the Board of Directors decide to accelerate vesting, performance factors will generally be based on the latest performance estimates available.

Information on "change of control" clauses is also covered in the Corporate Governance section on page 114 of this Financial Report. For more information on the quantitative impact of vested shares, please refer to page 87 of this Financial Report and Note 17 to the Group financial statements on pages 266–267 of this Financial Report.

Group EC members are covered by the Group's standard defined contribution pension plans.

Stock Ownership Guidelines

Swiss Re has stock ownership guidelines which articulate the levels of stock ownership expected of the Group EC members, including the Group CEO. The guidelines are designed to increase the alignment of the interests of senior management and shareholders.

The guidelines define target ownership by role and the ownership levels required are:
- Group CEO – 3 × annual base salary.
- Other Group EC members – 2 × annual base salary.

For the avoidance of doubt, stock ownership guidelines do also apply to the senior executives below the Group EC members (1 × annual base salary).

Members have a five-year timeframe to achieve these targets. In case of non-compliance and because Swiss Re believes that a meaningful stock ownership position is essential for alignment with the interests of shareholders, restrictions on the cash portion of the API and/or the vested VAI amounts will apply. These amounts may be settled in shares, then bought against market conditions.

All vested shares that are owned directly or indirectly by the relevant Group EC member and related parties will be included in the assessment of whether the guidelines have been met or not.

Compensation framework for the Board of Directors

The objective in compensating members of the Board of Directors is to attract and retain experienced individuals who are highly motivated to perform a critical role in the strategic oversight of Swiss Re and to contribute their individual business experience and expertise. The structure of fees for members of the Board of Directors takes account of the way their contribution to the success of Swiss Re differs from that of the members of the Group EC.

The fee components are structured to achieve a strong alignment with the interests of Swiss Re Ltd´s shareholders:
- Fees are delivered 60% in cash and 40% in shares. The shares have a four-year blocking period.
- The Board members do not receive variable or performance-based compensation.
- The fee level for each Board member, subject to their re-election, is reviewed annually.
- The maximum aggregate amount of compensation for the members of the Board of Directors is approved by the Annual General Meeting (AGM) in advance of the term of office for which the Board members are (re-)elected.

Roles and time commitment

Swiss Re Ltd's Board of Directors has a special skill set including experience in key areas such as insurance and reinsurance, finance, accounting, capital markets, risk management and regulatory matters, as well as leadership and decision-making experience in large, complex financial institutions. The mandate also demands significant commitment, high integrity and intercultural communication competence. The fees for the members of the Board of Directors reflect different responsibilities and committee memberships. The individual level of pay therefore varies.

Certain committees, such as the Audit Committee, meet more frequently or hold longer meetings, and hence have higher workloads reflected in their fees. The table on page 101 of the Financial Report provides an overview of the meetings of the Board of Directors and its committees held in 2019.

The Chairman of the Board of Directors devotes himself full-time to his role. In defining the position of Chairman as a full-time role, Swiss Re applies best practice for regulated, complex financial institutions.

The Vice Chairman, who is also the Lead Independent Director, acts as a deputy of the Chairman if the Chairman is prevented from performing his duties or in potential conflict of interest situations. The Vice Chairman may prepare and execute Board resolutions on request of the Board and liaises between the Board and the Group EC in matters not reserved to the Chairman. The Lead Independent Director acts as an intermediary between the Group and its shareholders and stakeholders in the absence of the Chairman or, in particular, when a senior independent member of the Board is required. He may convene and chair sessions where the Chairman is not present. He will communicate the outcome of these sessions to the Chairman.

For further details on the duties and required expertise of the members of the Board of Directors (including the Chairman and Vice Chairman), please refer to pages 94 and 95 in the Corporate Governance Chapter of the Financial Report.

Fee approval

In line with Swiss law, and as outlined in the Articles of Association, the aggregate compensation for the members of the Board of Directors for the next term of office is subject to shareholder approval at the AGM.

Subsidiary boards of directors

The majority of the board members at subsidiary level are Swiss Re executives. They do not receive any additional compensation for their services in these roles. The non-executive members of the subsidiary boards receive their fees 100% in cash. When a member of the Board of Directors of Swiss Re Ltd also serves on the board of a subsidiary, the aggregate compensation of the Board of Directors proposed to the AGM for approval also includes any subsidiary board fees.

Compensation governance

Authority for decisions related to compensation at the Board and Group EC level is governed by the Articles of Association and the Bylaws of Swiss Re Ltd, including the Charter of the Compensation Committee. The main responsibilities of the Compensation Committee are summarised in the table on the right.

The Articles of Association of Swiss Re Ltd include rules on

- The annual and binding approval by the AGM of the maximum aggregate amounts of compensation of members of the Board of Directors and of the Group EC (Article 22).
- The supplementary amount for changes in the Group EC (Article 23) if the maximum aggregate amount of compensation approved by the AGM is not sufficient to also cover compensation of a new Group EC member.
- The compensation principles for both the members of the Board of Directors and of the Group EC covering short-term and long-term elements, performance-related pay, payment in shares, financial instruments or units, compensation in kind or other types of benefits (Article 24).
- The agreements with members of the Board of Directors and the Group EC, external mandates and credits and loans (Articles 25 to 27).

The Articles of Association are available on the Swiss Re website at: www.swissre.com/articlesofassociation

Download the PDF to your mobile by scanning the QR code with your smartphone camera.

Roles and responsibilities in respect of compensation

Function	Description of roles and responsibilities
Board of Directors	• Establishes and periodically reviews Swiss Re's compensation framework, including guidelines and performance criteria. • Prepares the proposals to the AGM regarding Board of Directors and Group EC compensation. • Further details can be found in the Corporate Governance section on pages 78–117 of this Financial Report.
Compensation Committee	• Consists of at least four independent members of the Board of Directors. Each member of the Compensation Committee is elected individually at the AGM for a term of office until completion of the next AGM. • Is governed by a Charter approved by the Board of Directors, which defines the purpose, composition and procedural rules of the Compensation Committee, including its responsibilities and authorities for making proposals and decisions related to compensation of the members of the Board of Directors and the Group EC. • Assesses the individual performance of the members of the Group EC, including the Group CEO, and periodically reviews the effectiveness of the performance management process. • Is responsible for making recommendations to the Board of Directors and overseeing the design and implementation of compensation principles, policies, framework, plans and disclosure. • Reviews compensation principles, policies and share-based plans annually to ensure that these remain in line with Swiss Re's objectives and strategy, shareholders' interests and legal and regulatory requirements. • Further details can be found in the Corporate Governance section on page 99 of this Financial Report.
Management	• The Group CEO and the Group Chief Human Resources Officer participate in the Compensation Committee meetings. Up until 30 June 2019, the Group COO also participated in the Compensation Committee meetings. • Other members of senior management may attend as deemed appropriate by the Compensation Committee and upon invitation by the Chair of the Compensation Committee. • No individual may attend any part of a meeting where their own compensation is discussed.
Secretary	• The Head of Reward serves as the Secretary to the Compensation Committee and attends its meetings (apart from the executive sessions).
External Advisors	• Mercer provides information about remuneration trends, market benchmarking and advice on executive compensation issues. • Niederer Kraft Frey Ltd provides legal advice, mainly about specific aspects of compliance, plan rules and disclosure matters regarding compensation. • These advisors are retained by the Compensation Committee and provide the Compensation Committee with an external perspective. They may also have other mandates with Swiss Re.

Compensation approvals

The table below shows the approval processes for key compensation decisions:

Compensation item	Proposed	Endorsed	Approved
Maximum aggregate amount of compensation for the members of the Board of Directors for the next term of office	Compensation Committee	Chairman of the Board of Directors, Board of Directors	AGM
Maximum aggregate amount of fixed compensation and long-term variable compensation for the members of the Group EC	Group CEO	Chairman of the Board of Directors, Board of Directors, Compensation Committee	AGM
Aggregate amount of variable short-term compensation for the members of the Group EC	Group CEO	Chairman of the Board of Directors, Board of Directors, Compensation Committee	AGM
Compensation for the Chairman of the Board of Directors	Compensation Committee		Board of Directors[1]
Individual compensation for the members of the Board of Directors (excl. Chairman of the Board of Directors)	Compensation Committee	Chairman of the Board of Directors	Board of Directors[1]
Variable short-term compensation pools and long-term incentive pools for the Group and Group EC	Group CEO	Chairman of the Board of Directors, Compensation Committee	Board of Directors[1]
Compensation for Group CEO	Chairman of the Board of Directors	Compensation Committee	Board of Directors[2]
Variable short-term compensation pools for the Control Functions	Group CEO	Compensation Committee, Chairs of the Audit Committee and the Finance and Risk Committee	Board of Directors
Individual compensation for the Heads of the Control Functions	Group CEO	Compensation Committee, Chairs of the Audit Committee and the Finance and Risk Committee	Board of Directors
Individual compensation for the members of the Group EC (excl. Group CEO)	Group CEO	Chairman of the Board of Directors, Compensation Committee	Board of Directors[2]

[1] Within the maximum aggregate amount of compensation approved by the AGM.

[2] Within the maximum aggregate amount of compensation approved by the AGM and the additional amount available for changes in the Group EC after the AGM as per the Articles of Association, respectively.

Compensation Committee's time allocation to key topics in 2019

- **22%** Pay for performance for the Group
- **14%** Pay for performance for Group EC members
- **17%** Compliance and regulatory
- **17%** Executive sessions
- **20%** Review of compensation framework
- **10%** Other topics

Compensation Committee activities

The Compensation Committee operates as the Group's global compensation committee and oversees the compensation framework applied at all entities of the Swiss Re Group.

The Compensation Committee has an annual agenda to ensure that important reviews take place at the appropriate times throughout the year. The Compensation Committee also commits time to executive sessions and conducts a periodic self-assessment to ensure its high level of effectiveness. It held six meetings during 2019 and provided regular updates to the Board of Directors on topics discussed, decisions made and items for approval after each of these meetings. In addition, on seven occasions, it passed decisions by circular resolution. A high-level overview of topics dealt with by the Compensation Committee during the year is shown on page 134 of this Financial Report.

High-level overview of topics discussed by the Compensation Committee

At Swiss Re, the compensation cycle begins in December and runs through to April of the following year. The Compensation Committee oversees each stage of the process, starting with deciding on the variable compensation pool for the prior performance year, reviewing this decision, and setting targets for the upcoming year.

Outlined below is an overview of the main topics discussed during the six Compensation Committee meetings held in 2019:

<table>
<tr><th></th><th>January</th><th>February</th><th>April</th><th>June</th><th>September</th><th>December</th></tr>
<tr><td rowspan="2">Past performance cycle</td><td colspan="2">Performance assessment process and variable compensation pool</td><td colspan="2">Review of decisions of prior compensation cycle</td><td></td><td></td></tr>
<tr><td></td><td colspan="2">Performance factors for deferred compensation awards</td><td></td><td></td><td></td></tr>
<tr><td rowspan="2">Upcoming performance cycle</td><td colspan="2">LPP pool for upcoming year</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Performance targets for upcoming year</td><td></td><td></td><td></td><td>Upcoming performance cycle discussion</td></tr>
<tr><td rowspan="2">Group EC compensation and performance</td><td colspan="2">Group EC performance assessment</td><td colspan="2">Group EC compensation benchmarking</td><td></td><td></td></tr>
<tr><td></td><td>Group EC individual compensation proposals</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Board of Directors compensation</td><td></td><td></td><td>Board fees for upcoming compensation period</td><td>Review of subsidiary board compensation</td><td>Board compensation benchmarking and policy</td><td></td></tr>
<tr><td rowspan="3">Compensation plans and principles</td><td></td><td></td><td></td><td>Annual benefits review; Stock Ownership Guidelines</td><td>Compensation policy; review of LPP plan design</td><td>API, VAI, LPP and GSPP Plan Rules; compensation approval authority matrix</td></tr>
<tr><td></td><td></td><td></td><td></td><td colspan="2">Integration of sustainability performance targets in the compensation framework</td></tr>
<tr><td colspan="6">Compensation framework for ReAssure</td></tr>
<tr><td rowspan="2">Compliance and regulatory</td><td colspan="2">Compensation Report</td><td></td><td>Compensation Report and AGM feedback</td><td>Role and mandate of external advisors</td><td>Compensation Report</td></tr>
<tr><td colspan="6">Compliance and regulatory developments</td></tr>
</table>

The role of the Control Functions in compensation

The role of Swiss Re's Control Functions (defined as Group Risk Management, Compliance and Group Internal Audit) in compensation matters is well established.

Risk and control-related behaviour assessment

Swiss Re bears risks in the course of its business activities, including market, credit and liquidity, underwriting, operational (including legal and compliance) and reputational risk. The Control Functions annually perform an independent assessment of risk and control-related behaviours of the Group and each of the business functions, and of Swiss Re's Key Risk Takers individually.

These reports are delivered to key executives including the Group Chief Risk Officer and the Group Chief Human Resources Officer on an annual basis.

Key Risk Takers

Swiss Re's Key Risk Takers are executives in core risk-taking positions who decide on business and people strategies, approve budgets and can materially influence financial results or expose Swiss Re to significant operational or reputational risks.

In 2019, Swiss Re identified 175 positions, held by 180 employees throughout the year, who qualify as Key Risk Takers. This group consists of the members of the Group EC, Business Unit EC members, other key executives and roles with core risk-taking authority. The list of Key Risk Takers is reviewed on a regular basis by Group Risk Management and Human Resources.

Influence of the behavioural assessment on compensation

The risk and control-related behaviour assessment of Group and business functions provides additional input to help determine the Group API pool and its allocation to each business function.The assessment of each Key Risk Taker serves as an additional factor when considering individual performance and compensation outcomes.

Independence of the Control Functions

In order to ensure the continued independence of Control Functions, their compensation approval processes differ in that key annual compensation decisions for these functions are approved at the Board level. This includes the approval of the aggregate API pools of the Control Functions and the approval of the individual compensation for the head of each Control Function.

Performance outcomes 2019

Key considerations for Swiss Re's annual compensation decisions continue to cover US GAAP and EVM based business results, qualitative factors and Swiss Re's pay for performance approach.

The outcomes of the financial, qualitative and overall assessment, all part of Swiss Re's three-step funding process (as described on pages 125–126 of this Financial Report), determined the Group API pool for 2019.

Financial assessment (step 1)

Swiss Re Group and Business Units
In 2019, the Group's US GAAP performance and Economic Value Management (EVM) results were significantly impacted by large natural catastrophe events, man-made losses and increased claims in US casualty, which are reflected in both the Property & Casualty Reinsurance and Corporate Solutions result. The investment result reflected strong equity market performance, including a significant contribution from the sale of the Group's investment in the Brazilian insurance group SulAmérica S.A. and gains within the fixed income portfolio. Life & Health Reinsurance delivered strong US GAAP and economic results. Life Capital generated significant gross cash for the Group.

US GAAP financial performance
Property & Casualty Reinsurance's net income was adversely affected by the large natural catastrophe and man-made losses. Life & Health Reinsurance's performance benefited from realised gains on fixed income securities and solid underwriting results due to active portfolio management and improved mortality developments in the Americas, partially offset by a negative adjustment to the carrying value of an existing treaty, which had to be fair valued following the acquisition of Old Mutual Wealth Life Assurance Limited by ReAssure from Quilter plc, reflecting the decrease in interest rates since treaty inception.

Corporate Solutions reported a net loss, reflecting the impact of large and medium-sized claims, mainly from prior accident years, related to recent deterioration in the US casualty business.

Life Capital's result reflected a charge related to the agreement to sell ReAssure. Excluding this one-time accounting impact, the net result would have been favourable. The strong gross cash generation was mainly driven by the 10%-stake sale in ReAssure to MS&AD and the sale of subordinated bonds issued by ReAssure.

For further details on the US GAAP financial performance, refer to pages 170–285 of this Financial Report.

EVM financial performance
The underwriting result of Property & Casualty Reinsurance was primarily driven by higher-than-expected claims, mostly in Casualty, as well as large natural catastrophes and man-made losses. The investment profit mainly reflected a strong performance from equities and alternative investments as well as favourable market development on credit investments and bonds. The Life & Health Reinsurance underwriting new business profit showed transactional business growth in the Americas and EMEA and strong business performance in the Americas, partially offset by a previous years' business loss driven by reserve strengthening and higher-than-expected losses in all regions. The investment profit was mainly driven by favourable market development on USD credit investments and strong performance from equity investments.

Corporate Solutions generated an underwriting loss primarily driven by a combination of reserve strengthening and high frequency and an increasing severity of large and medium-sized man-made losses. Investment activities were outperforming across credit and equity investments.

The unfavourable underwriting result of Life Capital was primarily driven by expenses, partially offset by the gain on the agreement to sell ReAssure. This was more than offset by investment activities, driven by favourable market development on UK credit investments and positive performance from equity exposure arising from the unit-linked portfolio.

For further details on the EVM financial performance, refer to the EVM chapter on pages 34–47 of this Financial Report.

Qualitative assessment (step 2)

In 2019, Swiss Re's 15 401 employees performed well on the qualitative dimension: an increase in transactions in conjunction with cost discipline, strengthened client satisfaction, continued focus on sustainability, relevant research activities and thought leadership at industry events set a strong foundation for the coming years.

Joint efforts across Business Units and Group Functions have enabled Swiss Re to deliver on key strategic initiatives in 2019. Examples include the strategic repositioning of Corporate Solutions (to restore profitability and transform into a business that sets new standards and leads the industry forward). In ReAssure, the preparation for deconsolidation within a timeframe significantly below market norms stood out and the subsequent agreement to sell ReAssure to Phoenix Group Holdings plc (subject to regulatory and anti-trust approvals) maximises the long-term value for Swiss Re shareholders.

The Group developed innovative solutions and played a leading technical role. It cooperated with clients, and public and private partners. For example, together Swiss Re:

- Landed China's first ever county-level natural catastrophe programme, providing comprehensive coverage against losses caused by geological disasters.
- Co-developed a first-of-its-kind telematics solution, giving insurers a better and more personalised risk assessment, while supporting safer driving behaviour.
- Launched a new holistic cyber reinsurance solution, providing a single, flexible, end-to-end solution to insurers' cyber exposure challenges.

When it comes to franchise building, Swiss Re is a recognised voice on topics such as societal resilience and climate risks at major industry events such as the World Economic Forum. Our data-driven research publications, including the industry leading sigma, enabled risk-focused decision-making and identified strategic opportunities in the re/insurance industry. Reinsurance's NatCat campaign further strengthened Swiss Re's thought leadership position.

Sustainability and Environment, Social and Governance (ESG) considerations continued to be key topics in 2019. Swiss Re refined its Group Sustainability Strategy, further embedding sustainability in its core activities. Swiss Re was co-founder of the United Nations' Net-Zero Asset Owner Alliance and committed to decarbonise its business model, for example through a carbon-neutral investment portfolio by 2050.

Swiss Re's client and service quality is assessed on an annual basis through leading external benchmarks. Both clients and non-clients perceived Swiss Re as a leading brand in property and casualty and life and health reinsurance in 2019. Corporate Solutions received positive client feedback on the implemented management actions and the transparent communication related to pruning activities as well as the de-commoditising of its core business. Life Capital successfully improved the client experience by focusing on operational excellence and enhanced processes. Swiss Re demonstrated its societal engagement beyond traditional risk transfers, for example by contributing to disaster relief in the aftermath of Cyclone Idai in Mozambique.

On Human Capital and Talent Management, Swiss Re increased female representation in management positions as we believe this is critical to our success. Bloomberg recognised our strong commitment to and transparency on gender-related topics in the workplace by again including Swiss Re in its Gender-Equality Index. Staff commended the open and inclusive culture that embraces individual differences. Initiatives to foster this diverse and inclusive culture comprised policy and benefit changes to Swiss Re's LGBTI+ community, among other measures.

Reinsurance and risk are intrinsically linked. The continuous assessment by Swiss Re's Assurance functions kept the Group focused: there was a robust risk governance framework with a clear risk appetite and accountability for managing risk. A clear tone from the top encouraged an effective and open risk culture.

Overall assessment (step 3)

The labour market review concluded that Swiss Re is acting in line with the majority of reinsurance organisations, which have projected an increase in their annual incentive pools compared to the prior year, although pools are still below target levels.

The capital market review highlighted that Swiss Re's proposed value-sharing with employees in terms of revenue is below peers' historical three-year median levels, giving a higher percentage distribution to shareholders.

Analysis showed that market competitiveness of Swiss Re's compensation is decreasing. Attrition rates are increasing in certain business areas and locations, and retention risks are emerging for critical talent.

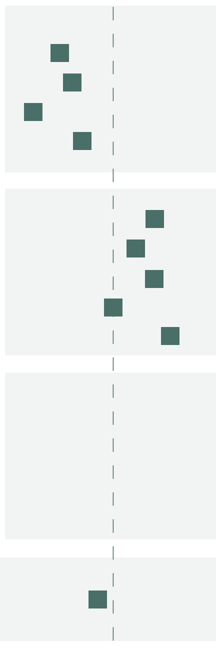
Annual Performance Incentive

Both the Compensation Committee and the full Board of Directors assessed in depth the 2019 performance of Swiss Re Group. The financial performance was below target, but higher than last year, as shown in US GAAP and EVM results. Combined with the Group's strong qualitative performance, this has resulted in steps 1 and 2 in variable compensation payouts that are below target levels. Considering in step 3 aspects such as pay positioning, key talent retention risk and future growth potential, the Compensation Committee has applied upward discretion to the proposed API pool recommended for approval to the Board of Directors. This payout decision is supported by our long-standing practice where we have positive but not excessive variable compensation payouts in years with relatively benign natural catastrophe environments, and conversely, lower but proportionate variable compensation payouts in adverse environments.

Performance targets used for the financial assessment are considered to be commercially sensitive and disclosure of such may provide an unfair advantage to Swiss Re's competitors. However, to further increase transparency on the bonus-setting process, indicative achievements against the targets are disclosed.

Group API pool outcome 2019

	Key performance indicator	Weighting	Achievement versus target
Financial assessment (step 1)	ROE Net operating margin EVM profit (% of ENW) ENW growth per share	25% 25% 25% 25%	
Qualitative assessment (step 2)	Client and service quality Risk and control behaviour Franchise building Human capital and talent management Strategic initiatives		
Overall assessment (step 3)	Overall assessment of Group API Pool from a number of different perspectives, eg labour market, capital market, compensation competitiveness and retention		
Group API Pool approved by the Board of Directors			



Value Alignment Incentive
VAI performance is measured for the Group and each underlying business area. The performance factor for each participant is determined based on the business area that the participant worked for on 31 December of the year preceding the award (see page 126 for a detailed description of the VAI). The VAI 2016 (awarded 2017) performance factor of 97.4% for the Swiss Re Group is based on the three-year average previous years' business performance for years 2017, 2018 and 2019. The main drivers were previous years' business reserve increases, especially for US casualty in Corporate Solutions and Property & Casualty Reinsurance. Business area performance factors for the VAI 2016 (awarded 2017) ranged from 68.0% to 103.8%.

VAI plan year	Performance period remaining as of 31 December 2019	Swiss Re Group performance factor
2011 (awarded 2012)	Closed	103.0%
2012 (awarded 2013)	Closed	101.5%
2013 (awarded 2014)	Closed	100.3%
2014 (awarded 2015)	Closed	99.9%
2015 (awarded 2016)	Closed	100.0%
2016 (awarded 2017)	–	97.40%
2017 (awarded 2018)	1 year	to be determined
2018 (awarded 2019)	2 years	to be determined

Illustrative example of realised performance for the VAI 2016 (awarded 2017)
Granted and realised VAI are shown below for a grant of CHF 100 000 on the VAI 2016 (awarded 2017). For illustrative purposes, this example considers only the Group performance factor. For disclosure of actual realised compensation 2019 for the Group CEO, please refer to page 144 of this Financial Report.

Performance achievement

VAI awarded in April 2017 **CHF 100 000** → Three-year average of the EVM previous years' business profit margin: –3.8% → **Performance factor: 97.4%** → **VAI realised in March 2020** **CHF 97 400**

Leadership Performance Plan

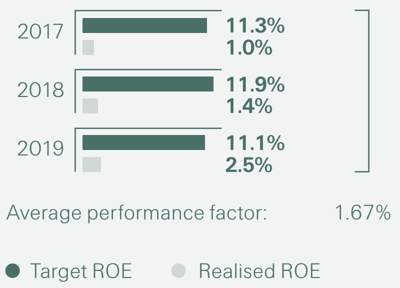
The LPP award is consistently linked to the Group's future achievement of multi-year performance conditions (ROE and relative TSR), keeping the focus on the long-term success of the Group. Swiss Re made LPP grants in 2019 consistent with this rationale. The LPP is generally part of total compensation (see pages 127–128 for a detailed description of the LPP).

The RSU component is measured against an ROE performance condition. At the end of each year, the performance is assessed and one third of the RSUs is locked in within a range of 0% to 100%. At the end of the three-year period, the total number of units locked in vests. For the LPP 2016 and LPP 2017, the average performance factor for the RSUs was 32.3% and 1.67%, respectively, for the three-year period.

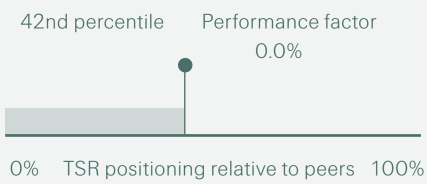
The PSU component is based on relative TSR, measured against a pre-defined basket of peers, and vests within a range of 0% to 200%. For both the LPP 2016 and LPP 2017, the performance factor for the PSUs was 0% for the three-year period. The table below gives an overview of the RSU and PSU performance achievement for the previous LPP plan years:

LPP plan year	Performance period remaining as of 31 December 2019	RSU average performance factor for the three-year period	PSU performance factor for the three-year period
2012	Closed	99.7%	200.0%
2013	Closed	99.7%	60.0%
2014	Closed	99.7%	81.0%
2015	Closed	66.7%	0.0%
2016	Closed	32.3%	0.0%
2017	–	1.67%	0.0%
2018	1 year	to be determined	to be determined
2019	2 years	to be determined	to be determined

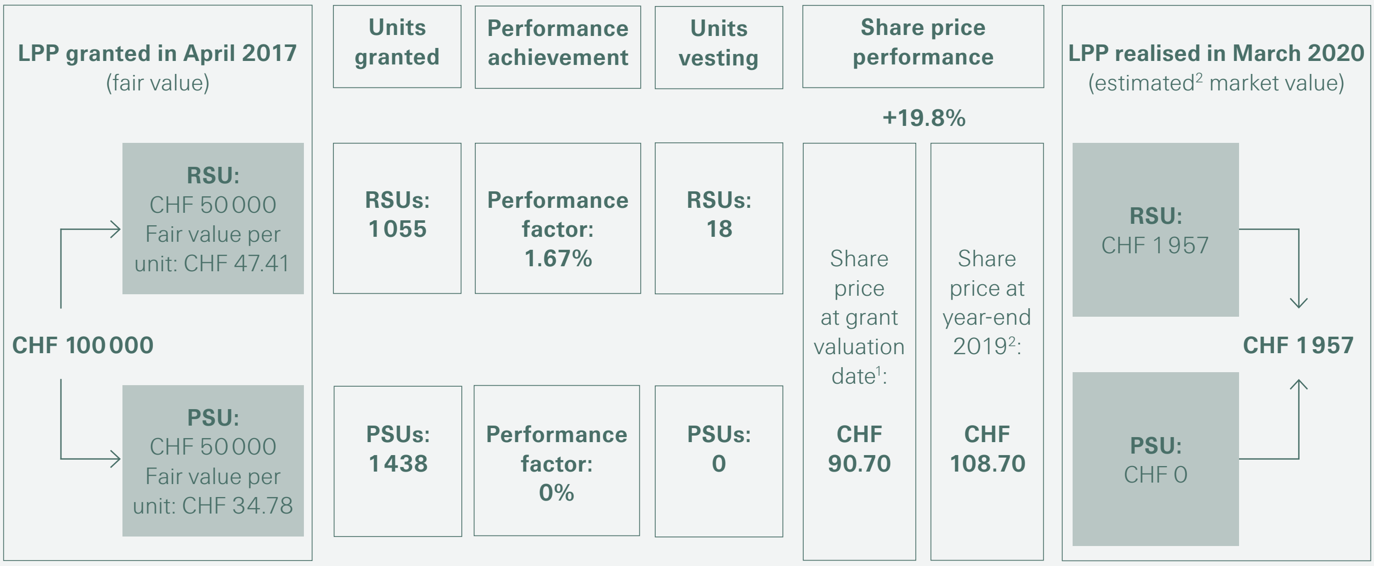
2017 RSU performance outcomes



2017 PSU performance outcomes
Swiss Re TSR 2017–2019: 31.9%



Illustrative example of realised performance for the LPP 2017–2020
Granted and realised LPP 2017–20 are shown below for a a sample grant of CHF 100 000 on the LPP 2017. This is a simplified representation for illustrative purposes only. The number of RSUs and PSUs has been rounded to the nearest full number for ease of readability. For the disclosure of actual realised compensation for the Group CEO, please refer to page 144 of this Financial Report.



[1] The LPP 2017 grant was based on a grant valuation share price of CHF 90.70 (as of 24 February 2017, ie the date after publication of the 2016 annual results).
[2] Since vesting of LPP 2017 will occur after the publication of this report, the closing share price at year-end 2019 was used to estimate the realised value.

Compensation disclosure and shareholdings 2019

Aggregate compensation of the Swiss Re Group

The aggregate compensation for the performance years 2018 and 2019 for all employees was as follows:

		Performance year 2018		**Performance year 2019**	
Category	Type of plan	Number of employees[1]	Values (in CHF millions)[2]	Number of employees[1]	Values (in CHF millions)[2]
Fixed compensation	Base salaries	14943	1351	15401	1378
	Pensions, social security and benefits	14943	443	15401	509
Annual Performance Incentive	Cash Annual Performance Incentive[3]	13877	300	14395	306
	Value Alignment Incentive[3]	529	32	524	36
Long-term variable compensation	Leadership Performance Plan[3]	404	50	453	52
Other payments	Severance payments[4]	439	28	387	24
	Sign-on payments	94	4	127	5
Total			2208		**2310**

[1] Regular staff.
[2] Foreign currency conversions calculated using December 2019 year-to-date FX rates for 2019 figures and December 2018 year-to-date FX rates for 2018 figures (where relevant).
[3] Includes separate variable short-term and long-term compensation schemes for ReAssure.
[4] Severance payments in the table above include (i) payments under standard severance packages, (ii) other payments that are over and above what is contractually or legally required, and (iii) voluntary supplementary departure payments, but exclude similar legally permitted payments or garden leave which are aligned with local market practice for comparable positions in respect of amount, nature or duration. No severance payments were made to members of the Group EC.

As of 31 December 2019, the Group had 15401 employees worldwide, compared to 14943 employees at the end of 2018.

The total compensation of the Group for 2019 amounted to CHF 2310 million (compared to CHF 2208 million in 2018), whereof CHF 2256 million has been or will be paid in cash (compared to CHF 2156 million in 2018) and CHF 54 million has been granted in share-based awards (compared to CHF 52 million in 2018).

The value of all outstanding deferred compensation (determined for VAI at grant and for LPP using the fair value at grant) for all employees at 31 December 2019 amounted to CHF 239 million (compared to CHF 270 million in 2018), whereof CHF 103 million will be payable in cash (compared to CHF 132 million in 2018) and CHF 136 million in shares (compared to CHF 138 million in 2018).

In 2019 and 2018, an increase of expenses amounting to CHF 1 million and a reduction of expenses amounting to CHF 3 million, respectively, was recognised for compensation in previous financial years.

Aggregate compensation for Key Risk Takers

The aggregate compensation of the individuals that held a key risk-taking position during the performance years 2018 and 2019 was as follows:

		Performance year 2018		**Performance year 2019**	
Category	Type of plan	Number of employees	Values (in CHF millions)[1]	Number of employees	Values (in CHF millions)[1]
Fixed compensation	Base salaries	181	67	180	63
	Pensions, social security and benefits	181	24	180	27
Annual Performance Incentive	Cash Annual Performance Incentive[2]	171	39	170	38
	Value Alignment Incentive[2]	160	21	156	22
Long-term variable compensation	Leadership Performance Plan[2]	164	38	163	39
Other payments	Severance payments[3]	3	0	0	0
	Sign-on payments	9	1	12	3
Total			190		**192**

[1] Foreign currency conversions calculated using December 2019 year-to-date FX rates for 2019 figures and December 2018 year-to-date FX rates for 2018 figures (where relevant).
[2] Includes separate variable short-term and long-term compensation schemes for ReAssure.
[3] Severance payments in the table above include (i) payments under standard severance packages, (ii) other payments that are over and above what is contractually or legally required, and (iii) voluntary supplementary departure payments, but exclude similar legally permitted payments or garden leave which are aligned with local market practice for comparable positions in respect of amount, nature or duration. No severance payments were made to members of the Group EC.

Compensation decisions for members of governing bodies

The section below is in line with Swiss law and specifically with Articles 14 to 16 of the Ordinance against Excessive Compensation at Public Corporations (the Ordinance), which require disclosure of compensation granted to members of the Board of Directors and the Group EC. Compensation to members of the Board of Directors and the highest-paid member of the Group EC is shown separately. At the AGM 2018 and the AGM 2019, the shareholders approved the maximum aggregate compensation amounts for the Board of Directors and Group EC for the prospective periods. For the reconciliation of these aggregate amounts to what was awarded, please refer to page 148 of this Financial Report.

Compensation decisions for the Group EC

The 2019 figures in the following table cover payments to 16 individuals who held a Group EC position at one point in 2019 (of whom nine were active on the Group EC for the full year) and legally or contractually required payments made in 2019 to an individual who stepped down from the Group EC in 2018. The 2018 figures cover payments to 14 individuals who held a Group EC position at one point in 2018 (of whom 11 were active on the Group EC for the full year). The number of Group EC positions was increased from 12 to 14 in 2019: the existing positions of Group Chief Human Resources Officer and Group Chief Legal Officer were added to the Group EC.

	14 members	16 members
CHF thousands[1]	2018	**2019**
Base salaries	12 265	12 279
Allowances[2]	1 159	812
Funding of pension benefits[3]	1 928	3 098
Total fixed compensation[4]	15 352	**16 189**
Cash Annual Performance Incentive[4, 5]	7 781	7 671
Value Alignment Incentive[4, 5]	6 559	6 474
Leadership Performance Plan[6]	13 150	13 525
Granted in RSU (50%)	*6 575*	*6 763*
Granted in PSU (50%)	*6 575*	*6 763*
Total variable compensation	27 490	**27 670**
Total fixed and variable compensation	42 842	**43 859**
Compensation due to members leaving[7]	1 411	3 143
Total compensation[8]	44 253	**47 002**

[1] Foreign currency conversions calculated using December 2019 year-to-date FX rates for 2019 figures and December 2018 year-to-date FX rates for 2018 figures (where relevant).
[2] Benefits or allowances, eg housing, schooling, lump sum expenses, relocation expenses and taxes, child and similar allowances.
[3] Swiss Re's Pension Fund has amended its regulations with effect from 1 January 2019, including some adjustments to the benefits provided to insureds in Switzerland. In consideration of those amendments (which apply both to Group EC members insured in Switzerland and all other employees insured in Switzerland), the figure disclosed for 2019 includes higher employer pension contributions and contributions to mitigate the effects of lower conversion rates.
[4] Covers payments reflecting the time in the role as Group EC members.
[5] For 2019, subject to shareholder approval at the AGM 2020. For 2018, based on shareholders' approval at the AGM 2019 of the aggregate amount of short-term variable compensation. The 2019 disclosure includes pro-rata payments in relation to the active period on the Group EC for individuals who joined or left the Group EC in 2019. The 2018 disclosure includes full-year payments for all individuals (ie no pro-rata approach has been applied). If a pro-rata approach had been applied on the 2018 disclosure, this would have resulted in Cash Annual Performance Incentive payments of CHF 7 420 thousand and Value Alignment Incentive payments of CHF 6 264 thousand.
[6] Disclosure reflects all awards for a reporting year, ie the 2018 value reflects the fair value of LPP awards granted in April 2018 and the 2019 value reflects the fair value of LPP awards granted in April 2019. Any awards granted in 2019 and then forfeited at a later point in the same year are not included.
[7] For individuals leaving the Group EC during or before the reporting period, this only covers legally or contractually required payments for the period when the individual was no longer in the Group EC position (eg base salary when on garden leave).
[8] Amounts are gross before deduction of employee social security contributions. Additional and not included are company contributions to social security systems paid by Swiss Re in line with applicable laws, which amounted to CHF 2 109 031 in 2018 and CHF 1 971 899 in 2019 (for the individuals who joined the Group EC in 2019, the 2019 figure excludes employer social security contributions made during the period prior to joining the Group EC).

Overall, total variable compensation for individual members of the Group EC (including the Group CEO) who were active on the Group EC for the full year 2019 ranged from 137% to 238% of total fixed compensation.

The proposed total API (including VAI) amount for 2019 for the Group EC (including the Group CEO) is CHF 14.1 million. This includes pro-rata payments in relation to the active period on the Group EC for individuals who joined or left the Group EC in 2019. For comparison purposes, the total API (including VAI) amount for 2018 includes full-year payments for all individuals who held a Group EC position at one point during the year 2018 (ie no pro-rata approach has been applied). If a pro-rata approach had been applied on the 2018 disclosure, this would have resulted in API (including VAI) payments of CHF 13.7 million.

The Compensation Committee and the Board of Directors carefully considered the performance of the Group EC in 2019 and concluded that, given the overall business environment for the Swiss Re Group and the qualitative achievements, a modest API increase compared to last year is warranted. Nevertheless, this amount overall still remains below target levels.

Compensation decisions for the highest-paid member of the Group EC

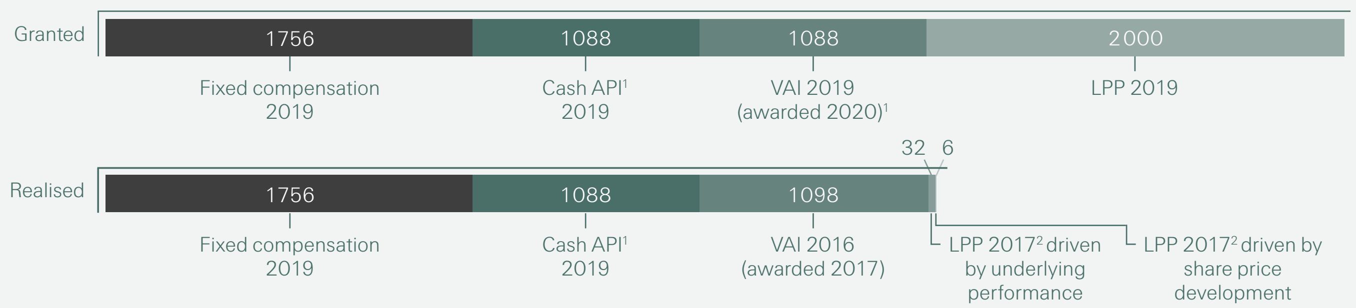
The table below shows the compensation paid to Christian Mumenthaler, Group CEO (in the role since 1 July 2016):

CHF thousands	2018	**2019**
Base salary	1 475	1 500
Allowances[1]	35	35
Funding of pension benefits[2]	178	221
Total fixed compensation	1 688	**1 756**
Cash Annual Performance Incentive[3]	1 063	1 088
Value Alignment Incentive[3]	1 063	1 088
Leadership Performance Plan[4]	2 000	2 000
Granted in RSU (50%)	*1 000*	*1 000*
Granted in PSU (50%)	*1 000*	*1 000*
Total variable compensation	4 126	**4 176**
Total compensation[5]	5 814	**5 932**

[1] Benefits or allowances paid in cash. Includes healthcare and accident insurance benefits, lump sum expenses, transportation, and child and similar allowances.
[2] Swiss Re's Pension Fund has amended its regulations with effect from 1 January 2019, including some adjustments to the benefits provided to insureds in Switzerland. In consideration of those amendments (which apply to the Group CEO and Group EC members insured in Switzerland as well as all other employees insured in Switzerland), the figure disclosed for 2019 includes higher employer pension contributions and contributions to mitigate the effects of lower conversion rates.
[3] For 2019, subject to shareholder approval at the AGM 2020. For 2018, as part of the aggregate amount of short-term variable compensation approved by the shareholders at the AGM 2019.
[4] Disclosure reflects all awards for a reporting year, ie the 2018 value reflects the fair value of the LPP award granted in April 2018 and the 2019 value reflects the fair value of the LPP award granted in April 2019.
[5] Amounts are gross before deduction of employee social security contributions. Additional and not included are company contributions to social security systems paid by Swiss Re in line with applicable laws, which amounted to CHF 230 930 in 2018 and to CHF 264 515 in 2019.

Realised compensation for the highest-paid member of the Group EC

The chart below shows the compensation granted to and realised by Christian Mumenthaler, Group CEO (in the role since 1 July 2016) during 2019.



[1] For 2019, subject to shareholder approval at the AGM 2020.
[2] The LPP 2017 grant took place on 1 April 2017 and was based on a share price of CHF 90.70 (at the grant valuation date of 24 February 2017). Since vesting of the LPP 2017 will occur after the publication of this report, the closing share price at year-end 2019 of CHF 108.70 was used to estimate the realised value.

The performance of the Group CEO is evaluated against both quantitative targets (as defined in the Group Plan approved by the Board of Directors) and qualitative goals agreed between the Board of Directors and the Group CEO, designed to support long-term business strategy and drive sustainable performance across the Swiss Re Group.

While the Group's financial performance in 2019 was below target, the Board of Directors recognised that an outstanding investment result was achieved based on decisive action on asset allocation strategy, very disciplined continuation of significant improvements on the cost side without cutting too deep into the knowledge base of the Group and a strong delivery on the agreement to sell ReAssure (subject to regulatory and anti-trust approvals).

In particular, the Board of Directors was satisfied with how decisively the turn around at Corporate Solutions was initiated under the strong and very close guidance of the Group CEO: the underwriting portfolio was pruned, new talent was brought in, costs were cut and at the same time morale and fighting spirit in the Business Unit were maintained. The Board of Directors also appreciated the Group's efforts in the areas of technology, digitalisation and particularly in developing successful new business models.

Overall, the Board of Directors was pleased with the Group CEO's effective management of the Group despite challenging conditions.

Additional information on compensation decisions

For US GAAP and statutory reporting purposes, VAI and LPP awards are accrued over the period during which they are earned. For the purpose of the disclosure required in this Compensation Report, the value of awards granted is included as compensation in the year of performance for the years 2018 and 2019, respectively.

Each member of the Group EC, including the Group CEO, participates in a defined contribution pension scheme. The funding of pension benefits shown in the previous two tables reflects the actual employer contributions.

Other payments to members of the Group EC

During 2019, no payments (or waivers of claims) other than those set out in the section "Compensation disclosure and shareholdings in 2019" were made to current members of the Group EC or persons closely related.

Shares held by members of the Group EC

The following table reflects Swiss Re share ownership by members of the Group EC as of 31 December:

Members of the Group EC	2018	2019
Christian Mumenthaler, Group Chief Executive Officer	71 733	75 305
Urs Baertschi, CEO Reinsurance EMEA/Regional President EMEA	n/a	546
Andreas Berger, CEO Corporate Solutions	n/a	34
Anette Bronder, Group Chief Operating Officer	n/a	0
John R. Dacey, Group Chief Financial Officer	27 124	29 809
Nigel Fretwell, Group Chief Human Resources Officer	n/a	12 272
Guido Fürer, Group Chief Investment Officer	66 007	53 983
Agostino Galvagni, former CEO Corporate Solutions[1]	99 521	n/a
Hermann Geiger, Group Chief Legal Officer	n/a	49 318
Russell Higginbotham, CEO Reinsurance Asia/Regional President Asia	3 918	4 662
Thierry Léger, CEO Life Capital	53 785	56 167
Moses Ojeisekhoba, CEO Reinsurance	38 998	40 704
Jayne Plunkett, former CEO Reinsurance Asia/Regional President Asia[2]	36 264	n/a
Patrick Raaflaub, Group Chief Risk Officer[3]	3 944	16 590
Edouard Schmid, Chairman Swiss Re Institute & Group Chief Underwriting Officer	30 936	31 794
J. Eric Smith, CEO Reinsurance Americas/Regional President Americas	24 004	25 262
Thomas Wellauer, former Group Chief Operating Officer[4]	110 520	n/a
Total	566 754	**396 446**

[1] The number of shares held on 31 December 2018 when Agostino Galvagni stepped down from the Group EC was 99 521.
[2] The number of shares held on 8 July 2019 when Jayne Plunkett stepped down from the Group EC was 30 406.
[3] For personal reasons, Patrick Raaflaub has extended time to meet the share ownership levels required under Swiss Re's Stock Ownership Guidelines.
[4] The number of shares held on 30 June 2019 when Thomas Wellauer stepped down from the Group EC was 83 102.

Leadership Performance Plan units held by members of the Group EC

The following table reflects total unvested LPP units (RSUs and PSUs) held by members of the Group EC as of 31 December:

Members of the Group EC	2018	2019
Christian Mumenthaler, Group Chief Executive Officer	119 029	100 734
Urs Baertschi, CEO Reinsurance EMEA/Regional President EMEA	n/a	10 076
Andreas Berger, CEO Corporate Solutions	n/a	11 293
Anette Bronder, Group Chief Operating Officer	n/a	11 293
John R. Dacey, Group Chief Financial Officer	55 178	50 369
Nigel Fretwell, Group Chief Human Resources Officer	n/a	30 222
Guido Fürer, Group Chief Investment Officer	68 971	62 960
Agostino Galvagni, former CEO Corporate Solutions	55 178	n/a
Hermann Geiger, Group Chief Legal Officer	n/a	31 476
Russell Higginbotham, CEO Reinsurance Asia/Regional President Asia	26 277	31 808
Thierry Léger, CEO Life Capital	55 178	50 369
Moses Ojeisekhoba, CEO Reinsurance	55 178	50 369
Jayne Plunkett, former CEO Reinsurance Asia/Regional President Asia	44 142	n/a
Patrick Raaflaub, Group Chief Risk Officer	55 178	50 369
Edouard Schmid, Chairman Swiss Re Institute & Group Chief Underwriting Officer	41 962	44 095
J. Eric Smith, CEO Reinsurance Americas/Regional President Americas	44 142	40 295
Thomas Wellauer, former Group Chief Operating Officer	55 178	n/a
Total	675 591	**575 728**

Loans to members of the Group EC

As per Article 27 of the Articles of Association, credits and loans to members of the Group EC may be granted at employee conditions applicable for the Swiss Re Group, with a cap on the total amount of such credits and loans outstanding per member (currently CHF 3 million per member of the Group EC). In 2019, all existing loans and mortgates have been transferred to an external party. No new loans and mortgages were offered as of 1 July 2019.

For loans and mortgages offered up until the transfer, in general, credit was secured against real estate or pledged shares. The terms and conditions of loans and mortgages were typically the same as those available to all employees of the Swiss Re Group in their particular locations to the extent possible.

Swiss-based variable-rate mortgages had no agreed maturity dates. The basic preferential interest rates equaled the corresponding interest rates applied by the Zurich Cantonal Bank ("Zürcher Kantonalbank") minus one percentage point. Where fixed or floating interest rates were preferential, the value of this benefit for the period from 1 January 2019 until the transfer has been included under "allowances" in the tables covering compensation decisions for Group EC members.

The following table reflects total mortgages and loans offered by Swiss Re for members of the Group EC as of 31 December:

CHF thousands	2018	**2019**
Total mortgages and loans to members of the Group EC	900	**0**
Highest mortgage or loan to an individual member of the Group EC:		
Edouard Schmid, Chairman Swiss Re Institute & Group Chief Underwriting Officer	900	0
Total mortgages and loans not at market conditions to former members of the Group EC	4 300	**0**

Compensation for members of the Board of Directors

The following two tables illustrate (1) the individual compensation for the members of the Board of Directors for the reported financial years 2018 and 2019 and (2) the individual compensation for the members of the Board of Directors paid or payable for the term of office from AGM 2019 to AGM 2020.

(1) Individual Board compensation for the reported financial years 2018 and 2019 (figures in CHF thousands; foreign currency conversions calculated using December 2019 year-to-date FX rates for 2019 figures and December 2018 year-to-date FX rates for 2018 figures, where relevant)

Members of the Board of Directors	Total 2018	Fees and allowances in cash	Fees in blocked shares	**Total 2019**
Walter B. Kielholz, Chairman	3875	2288	1520	3808
Renato Fassbind, Vice Chairman, Lead Independent Director, Chair Audit and Nomination Committees	826	496	330	826
Raymond K.F. Ch'ien, member[1]	439	311	130	441
Mary Francis, former member[2]	117	0	0	0
Karen Gavan, member[3]	284	313	120	433
Rajna Gibson Brandon, former member[2]	109	0	0	0
C. Robert Henrikson, former member, former Chair Compensation Committee[2]	158	0	0	0
Trevor Manuel, member	351	211	140	351
Jay Ralph, member	276	166	110	276
Joerg Reinhardt, member	276	178	118	296
Eileen Rominger, member	184	165	110	275
Philip K. Ryan, member, Chair Finance and Risk Committee[3]	894	658	240	898
Sir Paul Tucker, member	325	195	130	325
Jacques de Vaucleroy, member, Chair Compensation Committee[4]	633	520	198	718
Susan L. Wagner, member, Chair Investment Committee	575	357	238	595
Larry Zimpleman, member[5]	184	186	110	296
Total compensation for the reported financial years[6, 7]	9506	**6044**	**3494**	**9538**

[1] Includes fees for duties on the board of Singapore Group companies.
[2] Term of office expired after the completion of the AGM of 20 April 2018 and did not stand for re-election.
[3] Includes fees received for duties on the board of US Group companies.
[4] Includes fees for duties on the board of Luxembourg Group companies.
[5] Includes fees for duties on the board of ReAssure Group companies.
[6] Compensation for the members of the Board of Directors includes fixed fees (cash and shares) and minimal allowances. No sign-on or severance payments have been made.
[7] Amounts are gross before deduction of social security contributions of the Board member. Additionally and not included are company contributions to social security systems paid by Swiss Re in line with applicable laws which amounted to CHF 414 704 in 2018 and CHF 392 690 in 2019. For Board members domiciled outside of Switzerland, company social security contributions are refunded, if bilateral social security agreements between Switzerland and the country of domicile apply and provide for such refund.

(2) Individual Board compensation for the term of office between AGM 2019 and AGM 2020 (figures in CHF thousands; foreign currency conversions calculated using December 2019 year-to-date FX rates, where relevant)

The table below provides more detailed information on the compensation paid or payable to each Board member against the maximum aggregate amount of CHF 9.9 million, as approved by the AGM 2019:

Members of the Board of Directors	Base fees	Audit Committee fees	Compensation Committee fees	Finance and Risk Committee fees	Investment Committee fees	Nomination Committee fees	Additional fees[1]	**Total**[2]
Walter B. Kielholz, Chairman								3 800
Renato Fassbind, Vice Chairman, Lead Independent Director, Chair Audit and Nomination Committees	225	425	50				125	825
Raymond K.F. Ch'ien, member	225		50		50		114	439
Karen Gavan, member	225	75					139	439
Trevor Manuel, member	225	75			50			350
Jay Ralph, member	225			50				275
Joerg Reinhardt, member	225		50			30		305
Eileen Rominger, member	225				50			275
Philip K. Ryan, member, Chair Finance and Risk Committee	225	75		300			299	899
Sir Paul Tucker, member	225			50	50			325
Jacques de Vaucleroy, member, Chair Compensation Committee	225		200		50	30	223	728
Susan L. Wagner, member, Chair Investment Committee	225			50	300	30		605
Larry Zimpleman, member	225			50			50	325
Total compensation for the term of office from AGM 2019 to AGM 2020[3]								**9 605**

[1] Including Vice Chairman or subsidiary fees (converted to CHF at 2019 average exchange rates where applicable).
[2] Excluding company contributions to social security systems paid by Swiss Re in line with applicable laws.
[3] Including an amount of approximately CHF 15 000 for minimal benefits.

Shares held by members of the Board of Directors

The number of shares held by members of the Board of Directors as of 31 December were:

Members of the Board of Directors	2018	**2019**
Walter B. Kielholz, Chairman	407 523	423 878
Renato Fassbind, Vice Chairman, Lead Independent Director, Chair Audit and Nomination Committees	27 593	31 143
Raymond K.F. Ch'ien, member	22 946	21 345
Karen Gavan, member[1]	1 512	2 803
Trevor Manuel, member	5 558	7 065
Jay Ralph, member	2 115	3 299
Joerg Reinhardt, member	14 415	25 684
Eileen Rominger, member	813	1 997
Philip K. Ryan, member, Chair Finance and Risk Committee	11 611	15 693
Sir Paul Tucker, member	4 004	5 403
Jacques de Vaucleroy, member, Chair Compensation Committee	2 706	4 835
Susan L. Wagner, member, Chair Investment Committee	11 360	13 920
Larry Zimpleman, member	813	1 997
Total	512 969	**559 062**

[1] Shareholdings for 2018 and 2019 include 2 500 American Depository Receipts (ADRs), equivalent to 625 shares.

Loans to members of the Board of Directors

No loans were granted to current or former members of the Board in 2019 and no loans were outstanding as of 31 December 2019.

Related parties transactions

Disclosure on compensation decisions in 2019 covers members of the Board of Directors and the Group EC as indicated, and for both includes related parties to the extent applicable. Such related parties cover spouses, partners, children and other dependents or closely linked persons. In 2019, no compensation was paid to any related party.

Compensation for former members of governing bodies

During 2019, payments in the total amount of CHF 0.3 million were made to seven former members of the Group EC. This amount is made up of company contributions payable by Swiss Re to governmental social security systems in line with applicable laws, benefits in the context of the outstanding mortgages and loans not at market rates, risk benefits and company commitments for tax-related services.

Reconciliation of AGM resolutions

Group EC compensation
Financial year 2019
CHF millions

34.0
Maximum aggregate amount approved for fixed compensation and variable long-term compensation

32.9
Amount paid/granted

Board of Directors
Term of office: AGM 2019–AGM 2020
CHF millions

9.9
Maximum aggregate amount approved

9.6
Amount paid/granted

Shareholder compensation resolutions and awarded compensation

The following explanations give an overview of the applicable framework of Swiss Re Ltd's Articles of Association based on the Ordinance, the approvals by the shareholders at the AGM 2019 of the respective motions proposed by the Board of Directors and the reconciliation of the shareholders' resolutions with the compensation awarded in the reporting year 2019.

Framework of the Articles of Association

In accordance with Article 22 of the Articles of Association, the Shareholders' meeting shall approve annually and with binding effect the proposals of the Board of Directors in relation to:
a) The maximum aggregate amount of compensation of the Board of Directors for the next term of office.
b) The maximum aggregate amount of fixed compensation and variable long-term compensation of the Group EC for the following financial year.
c) The aggregate amount of short-term compensation of the Group EC for the preceding completed financial year.

AGM 2019 voting results

At the AGM on 17 April 2019, shareholders approved for the fifth time the maximum aggregate prospective compensation of the members of the Board of Directors (89.98% approval). Shareholders also approved for the Group EC (i) the maximum aggregate prospective fixed compensation and variable long-term compensation and (ii) the aggregate retrospective variable short-term compensation. The outcomes were 87.59% and 89.57% approval, respectively. As in previous years, the 2018 Compensation Report was subject to a consultative vote and was approved by 89.92% of the shareholder votes.

Reconciliation of AGM 2018 resolutions for Group EC compensation[1]

At the AGM 2018, shareholders approved a prospective maximum aggregate amount of CHF 34.0 million for fixed compensation and variable long-term compensation for the financial year 2019 for the 12 members of the Group EC expected at the time of the AGM 2018 to hold such position in 2019.

The amount of fixed compensation and variable long-term compensation effectively granted to the 16 individuals who held a Group EC position at one point during the financial year 2019 amounts to CHF 32.9 million and includes compensation and associated costs in relation to the period in a Group EC position for Andreas Berger, Anette Bronder, Nigel Fretwell, Hermann Geiger and Urs Baertschi who joined the Group EC during the year (those appointments were not known at the time of the AGM 2018).

Reconciliation of AGM 2019 resolution for Board of Director's compensation[1]

At the AGM 2019, the shareholders approved a maximum aggregate amount of compensation of CHF 9.9 million for the 13 members of the Board of Directors for the term of office from the AGM 2019 to the AGM 2020.

As shown on page 147 of this Financial Report, the compensation paid to the 13 members of the Board of Directors for their term of office from the AGM 2019 to the AGM 2020 is CHF 9.6 million and therefore within the approved amount.

AGM 2020 motion for variable short-term compensation for the Group EC for the financial year 2019

At the AGM 2020, the Board of Directors will propose to the shareholders to approve an aggregate amount of CHF 14 144 529 for variable short-term compensation in relation to the completed financial year 2019 for the 16 individuals who were members of the Group EC at one point during the financial year 2019. This amount has been included in the items "Cash Annual Performance Incentive" and "Value Alignment Incentive" in the table for Group EC compensation on page 143 of this Financial Report. It includes pro-rata payments in relation to the active period on the Group EC for individuals who joined or left the Group EC in 2019.

[1] Reconciliations calculated using December 2019 year-to-date FX rates where applicable.

Report of the statutory auditor
to the General Meeting of Swiss Re Ltd
Zurich

Report of the statutory auditor on the Compensation Report

We have audited the accompanying Compensation Report included in this 2019 Financial Report of Swiss Re Ltd (the 'Company') for the year ended 31 December 2019. The audit was limited to the information according to Articles 14-16 of the Ordinance against Excessive Compensation at Public Corporations (the 'Ordinance') contained in the tables on pages 143 to 148 of the Compensation Report.

Board of Directors' responsibility
The Board of Directors is responsible for the preparation and overall fair presentation of the Compensation Report in accordance with Swiss law and the Ordinance. The Board of Directors is also responsible for designing the compensation framework and defining individual compensation packages.

Auditor's responsibility
Our responsibility is to express an opinion on the accompanying Compensation Report. We conducted our audit in accordance with Swiss Auditing Standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Compensation Report complies with Swiss law and articles 14–16 of the Ordinance.

An audit involves performing procedures to obtain audit evidence on the disclosures made in the Compensation Report with regard to compensation, loans and credits in accordance with articles 14–16 of the Ordinance. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements in the Compensation Report, whether due to fraud or error. This audit also includes evaluating the reasonableness of the methods applied to value components of compensation, as well as assessing the overall presentation of the Compensation Report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion
In our opinion, the Compensation Report included in the 2019 Financial Report of the Company for the year ended 31 December 2019 complies with Swiss law and articles 14–16 of the Ordinance.

PricewaterhouseCoopers AG

Roy Clark	Frank Trauschke
Audit expert Auditor in charge	Audit expert

Zurich, 18 March 2020

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Our actions are guided by sustainable, long-term value creation and have a tangible link to our financial performance.

Contents

Climate-related financial disclosures (TCFD)

These disclosures provide a foundation to improve investors' and other stakeholders' ability to appropriately assess and price climate-related risk and opportunities.

Swiss Re has a long track record as a responsible company. In our understanding this means a commitment to sustainable, long-term value creation. Through our enhanced Group Sustainability Strategy we have further sharpened this commitment and have clearly defined sustainability as a strategic, long-term value driver.

We adopt this approach throughout our re/insurance value chain, comprising of both the liability and the asset sides of our balance sheet, our own operations and dialogue with our stakeholders.

The 2030 Sustainability Ambitions of our strategy cover three focus areas where we can have a significant positive impact in terms of supporting sustainability and strengthening resilience.

Climate-related financial disclosures

"Mitigating climate risk and advancing the energy transition" is one of these ambitions. This is why we continue to play an active part in the Task Force on Climate-related Financial Disclosures (TCFD, www.fsb-tcfd.org) since it was set up by the Financial Stability Board.

Tackling this issue effectively will be challenging. Therefore, we need a viable and adaptable action plan backed by a true multi-stakeholder effort. This plan will be key to developing orchestrated solutions, directing risk transfer products and investments to those areas with the greatest positive impact on enabling sustainable progress.

Starting from the premise that climate change creates physical, liability and transition risks, the TCFD's aim is to offer consistent and effective financial disclosures that allow investors and other stakeholders to assess the climate risks faced by companies and to take appropriate action.

We began to implement the TCFD recommendations in our 2016 Financial Report and have since continued to expand our climate-related disclosures. The table on page 153 provides an overview of the core elements of these disclosures, which are covered on the following pages.

Achieving net-zero CO_2 emissions[1]:
In 2019, Swiss Re made three important commitments to achieving net-zero CO_2 emissions:
- Across the Swiss Re Group by 2050, by signing the UN Global Compact "Business Ambition for 1.5°C"
- In our investment portfolio by 2050, as a founding partner of the UN-convened Net-Zero Asset Owner Alliance
- In our operations already by 2030

Find out more

To learn more about our Group Sustainability Strategy and for a full account of our recent actions and achievements, we invite you to read our stand-alone 2019 Sustainability Report at: reports.swissre.com/sustainability-report/2019/

[1] Net-zero emissions means that for every tonne of CO_2 that cannot be reduced, a tonne needs to be removed from the atmosphere and stored permanently through so called carbon removal technologies.

Climate governance

Swiss Re's governance around climate-related risks and opportunities

At Swiss Re's highest governance level, three Board of Directors committees are charged with overseeing the implementation and execution of Swiss Re's Climate Action Plan.

The Chairman's and Governance Committee, presided over by the Chairman, has the overall responsibility of monitoring the Group's Strategic Priorities on enabling sustainable progress, including initiatives and actions specifically addressing climate change.

The Investment Committee reviews Swiss Re's asset management-related activities and, as part of this, receives regular updates on Group Asset Management's Responsible Investing Strategy and implementation, including in the area of climate change.

The Finance and Risk Committee defines the Group Risk Policy, reviews risk capacity limits, monitors adherence to risk tolerance, and reviews all top risk issues and exposures, including those with a specific climate dimension.

The role of the Board of Directors is the oversight of the development and adoption of sustainability policies and strategies, while the Group Executive Committee approves them.

As we move to implement our enhanced Group Sustainability Strategy, we will also introduce a number of key performance indicators at the Group Executive Committee level. One such indicator will align Swiss Re's business actions with the goals of the Paris Agreement to limit a global temperature
rise to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.

Group Risk Management is responsible for maintaining a suitable risk policy framework, as well as for coordinating the Group's Sustainability Strategy, mandate and topics. The Business Units drive the strategic implementation within their respective areas, and Group Asset Management is responsible for developing and implementing the Group's Responsible Investing Strategy, which also contains a dedicated approach to climate change.

You can read more about our sustainability governance in our 2019 Sustainability Report, page 20.

Climate-related financial disclosures of the Financial Stability Board

Governance	Strategy	Risk management	Metrics and targets
A) Board oversight	A) Climate-related risks and opportunities	A) Processes for identifying and assessing climate-related risks	A) Metrics to assess climate-related risks and opportunities
B) Management's role	B) Impact of climate-related risks and opportunities	B) Process for managing climate-related risks	B) Scope 1, 2 and 3 green-house gas emissions
	C) Potential impact of different scenarios	C) Integration into overall risk management	C) Targets

Climate strategy

We regularly assess the actual and potential impacts of climate-related risks and opportunities on our business, strategy and financial planning.

There is clear empirical evidence that the global climate has been changing and a far-reaching scientific consensus that this change has been due to human activity, primarily from the burning of fossil fuels and agriculture. Swiss Re recognises that climate change, if not mitigated, will potentially have disastrous effects on society and the global economy. In view of this, we are committed to playing an active role in the transition towards a low-carbon economy and to supporting our private- and public-sector clients in this transition.

Natural catastrophes are a key risk in our Property & Casualty (P&C) businesses. The damage caused by storms, floods, droughts and other natural catastrophe perils (including wildfires) can affect millions of lives and the economies of entire countries. In 2019, we received USD 2.94 billion of property and casualty reinsurance premiums from our clients for all natural catastrophe covers (for losses larger than USD 20 million). This represents approximately 15% of total premiums in P&C Reinsurance, which shows the importance our clients place on obtaining re/insurance protection against natural catastrophe risks.

On average, insured losses due to natural catastrophes have increased steadily over the past 20 years. The key reasons have been economic development, population growth, urbanisation and a higher concentration of assets in exposed areas. At the same time, the protection gap, ie the difference between insured and total economic losses, has remained substantial in all regions (see graph on page 165).

In view of the high potential relevance of climate change for our P&C businesses, climate change continues to be an essential element in our enhanced Group Sustainability Strategy, which includes "Mitigating climate risk and advancing the energy transition" as one of our three 2030 Sustainability Ambitions. As part of this ambition, we have developed a Climate Action Plan.

Building on our commitments and initiatives of recent years, our Climate Action Plan (which serves as our climate strategy), combines three objectives:

1. Becoming the leading re/insurance company providing cover for physical climate risk
2. Becoming a leading provider of re/insurance solutions for low-carbon transition opportunities
3. Building partnerships to develop scalable solutions to mitigate and adapt to climate change

You can find out more about our Group Sustainability Strategy, our 2030 Sustainability Ambitions and Climate Action Plan in the 2019 Sustainability Report, pages 9–13. As our Climate Action Plan indicates, understanding the risks posed by climate change and identifying the potential to create suitable products and services are and will continue to be priorities for Swiss Re.

Climate-related risks

Physical risks

Physical risks posed by climate change could potentially affect four areas of our business. They can:

- Reduce/disrupt our operations
- Influence modelling and pricing of weather-related natural perils
- Impact the economic viability of re/insurance for risks exposed to extreme weather events
- Impact real assets exposed to weather-related natural perils

Our own operations

According to our in-house catastrophe loss models, severe weather risks are potentially of importance for some of our operations, mainly in Florida and on the northeastern coast of the US. However, even assuming an extreme climate change scenario, we do not expect any of these office locations to be exposed to risk levels that would question their economic viability. In 2012, Hurricane Sandy in New York showed that some of Swiss Re's offices are already exposed to severe weather risks. In response, we sharpened the Group's business continuity management to minimise property losses and business interruption. Thanks to these investments, we are able to swiftly transfer work to unaffected locations if required and to keep potential financial impacts to a minimum.

Modelling and pricing of weather-related perils

Based on our proprietary loss modelling, we calculate the annual expected losses (AEL) and loss-frequency distributions of major weather-related natural catastrophes. The four perils with the largest AEL at present are disclosed on page 164 (North Atlantic hurricane, US tornado, European windstorm, and Japanese tropical cyclone).

Our models show that with the current climate, the dominant factor is natural variability, affecting both the frequency and severity of extreme weather events in all regions. We expect this to remain the case both in the short and medium term (ie 2025 and 2030), in line with the latest scientific findings (see the IPCC Fifth Assessment Report, chapter 11, and the IPCC Special Report on the impacts of global warming of 1.5°C).

In addition, we expect weather risk to remain assessable by scientific methods, meaning we can continue to update our loss models in the future to assure adequate costing of extreme weather events. Since most of the re/insurance contracts with our clients have a duration of one year, we can adequately price natural catastrophe risks by updating our models to reflect the current climate risks.

Regarding the long-term time horizon (2040), we expect a substantial need to adjust some of our weather risk models, based on current scientific knowledge. We are confident, however, that future research will continue to give us sufficient guidance on the magnitude and direction of these adjustments. The potential impact of climate change, including natural variability, is already being assessed and integrated into our risk view today, eg through regular updates of tropical cyclone frequencies. Furthermore, we conduct internal research and collaborate with academia to study the impact on extreme weather events in the near and medium term.

Impact on the economic viability of re/insurance protection

An increase in the frequency and severity of extreme weather events can restrict the affordability of re/insurance in certain regions, especially in coastal areas, by requiring a rise in premiums. While climate projections are associated with a large range of uncertainty, especially when it comes to storms making landfall, increases in the frequency and severity of tropical storms are likely. Natural variability is expected to remain the dominant factor in the short and medium term (2025 and 2030). In the longer term (2040), a rise in sea levels will lead to non-linear increases in storm surge risk for coastal areas. Additionally, warmer temperatures will lead to more extreme rainfall events that may increase flood risk.

If rises in re/insurance premiums, necessitated by increasing extreme weather risks, remain modest, ie re/insurance protection remains economically viable for our clients, the overall premium volume will potentially grow. Larger increases, however, will eventually reverse this effect by pushing re/insurance prices for certain exposed risks beyond the limits of economic viability. This is particularly relevant for areas with inadequate construction planning and development. In addition, timing is of crucial importance: if measures to exclude a particular risk are taken too early we may offer our clients less insurance protection; if measures are taken too late, we may end up with increased claims.

Finally, the overall size of the re/insurance market will depend on future economic growth rates.

In line with independent external studies, we have shown through a series of scenario assessments (Economics of Climate Adaptation studies, ECA), that in many regions, climate adaptation measures need to be taken to limit expected increases in natural catastrophe damages and thus to ensure the economic viability of re/insurance in the future. This is a key reason why Swiss Re actively engages with the United Nations, the public sector, clients, industry peers and employees to advocate cost-effective adaptation to climate change.

Impact on real assets exposed to weather-related perils

Real assets such as real estate are exposed to natural perils, eg hurricanes, tropical cyclones and floods. In addition to considering physical risks when acquiring new properties, we analyse these exposures across the portfolio based on our proprietary modelling capabilities used for our re/insurance underwriting. This analysis has been extended and refined recently, with results suggesting a very low exposure to natural perils in general and to climate-related perils in particular.

Physical risks conclusion: Although the physical risks arising from climate change will have significant economic consequences over time, especially from a wider societal perspective, they represent a limited and manageable risk for Swiss Re.

Transition risks in our re/insurance business

Transition risks may arise as a result of the extensive policy, legal, technology and market changes that are required to make the transition to a low-carbon economy. We have assessed the two transition risks that may potentially affect our business:

- Climate-related litigation risks
- Risks from technological and market shifts

Climate-related litigation risks

We identified potential climate-related litigation risks as an emerging risk over a decade ago and assessed its potential relevance through our own research. After years of decline, climate change litigation activities against large greenhouse gas emitters have increased recently. However, associated insurance coverage disputes have remained stable.

As a result, we have not faced any new claims from climate-related litigation in recent years and the results of the litigation, which have remained in favour of the defendants, suggest that this trend will likely continue, but warrants continued monitoring.

Technological and market shifts

The re/insurance sector is likely to experience the technological transition in two ways. Firstly, new technologies by definition do not have loss histories and thus may be challenging to cost accurately. Research and development is thus required to develop possible loss scenarios and the related expenses. Once these are developed and tested, new technologies are likely to present the sector with an opportunity to offer new solutions (see "Climate-related opportunities", page 158).

Secondly, new low-carbon technologies are likely to gradually displace traditional, fossil fuel-based ones. This will alter the market and, as a result, gradually change the nature of re/insured assets.

This transition does not, however, automatically translate into a financial risk for us. For example, motor insurance is the most important business line of the re/insurance sector globally. According to Swiss Re's sigma database, it currently represents approximately 33% of global non-life gross written premiums and is expected to grow further, albeit at a lower rate.

Driven by intensifying efforts to curb climate change, the global motor vehicle inventory will shift from combustion to electric engines. In a Swiss Re study on the casualty risk trends in the automotive industry, we noted that the move from conventional (pure combustion engine) cars to more electrically based mobility is a transition process that is likely to increase in the coming years. This development will entail the implimentation of a variety of new technologies, from new lightweight materials to advanced battery systems.

Consequently, while the automotive industry as a whole is undergoing significant change, the impact on insurance portfolios is expected to be gradual. As motor insurance contracts are renewed annually, re/insurers will be able to develop the appropriate underwriting experience, loss adjustment and claims handling.

To address the residual risk, we have recently started to develop a carbon risk steering mechanism. Its key component will be a carbon risk model designed to measure our carbon intensity and the associated risks embedded in our re/insurance business.

As a first step in 2018, we introduced a thermal coal policy for our underwriting, pledging not to provide re/insurance to businesses with more than 30% exposure to thermal coal utilities or mining. The policy is fully integrated into our Sustainable Business Risk Framework. It applies to both old and new thermal coal projects and across all lines of business. While it is easier to implement this policy in some parts of our business, for others the transition will take some time and require a continued and constructive dialogue with our clients. In 2019, we continued the implementation of the thermal coal policy for treaty business and engaged with over 300 insureds across all regions on this topic.

We also intensified our efforts to decarbonise our business by committing to net-zero emissions by 2050 on the liability and the asset sides of our balance sheet. A further step towards this commitment was the development of a policy to shift away from highly carbon-intense oil and gas production.

From July 2021, we will no longer provide individual/insurance covers for those oil and gas companies that are responsible for the world's 5% most carbon-intense oil and gas production.

From July 2023, we will no longer provide individual insurance covers for those oil and gas companies that are responsible for the world's 10% most carbon-intense oil and gas production.

Transition risks in our re/insurance business conclusion: Overall, it is our view that the transition to a low-carbon economy is not expected to present a significant financial risk for Swiss Re. Mainly due to the annual renewal of contracts, we expect the associated risks can be managed effectively.

Transition risks in our investments

Climate-related risks can impact the value of our investments and are therefore considered a substantial part of our Responsible Investing Strategy. A key risk for asset owners is that a changing environment may result in a specific company or a particularly exposed industry becoming a stranded asset in investment portfolios, ie the devaluation of investments driven by unfavourable changes, such as increased taxes or new regulations. With regard to climate change, the market environment could shift to address mitigation and adaptation requirements to limit a global temperature rise to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.

Governments and regulators have started to develop proposals to steer and transition climate change-related market activities to more sustainable alternatives. The European Commission's Action Plan for Financing Sustainable Growth and the UK's Green Finance Strategy, which legislates for net-zero emissions by 2050, are just two examples.

Based on these market developments, we continue to focus on policy and legal risks, as well as technology risks, as we mainly expect changes within these two dimensions to potentially impact asset values. In this way, we aim to capture those industries and groups of companies that are most exposed to these risks and may therefore require adjustments in the near to medium term.

Industries and companies that are particularly exposed to changes in policy and legal, as well as technological developments, show elevated risk exposures either in the production process, in raw materials, in transportation/logistics or distribution and store operations due to high carbon footprints in these areas. Furthermore, industries may face increased costs due to higher or more volatile energy prices, compliance costs in the production and distribution process, and costs from product demand substitution. All these changes may cause increased price volatility of the underlying assets.

Based on our commitment to support the transition to a low-carbon economy, we have been measuring the weighted average carbon intensity[1] of our corporate credit and listed equities portfolios since the end of 2015. Measurement results are presented in the "Metrics and targets" section (pages 164–167). As part of our mitigation strategy, we have stopped investing in companies that use at least 30% thermal coal for power generation or produce 30% or more of their revenues from thermal coal mining.

As of 2018, we also excluded oil sands companies that generate 20% or more of their revenues from such operations from the investment universe. In 2019, we extended our mitigation approach to an absolute coal threshold: we do not invest in mining companies producing at least 20 million tonnes of coal per year and power utility generators with more than 10 gigawatts of installed coal fire capacity.

Transition risks in our investments conclusion: While we expect some policy and legal adjustments in the market environment, we do not consider the transition to a low-carbon economy as a significant financial risk for Swiss Re. This view is formed on the basis of having a strong mitigation strategy in place, which is regularly reviewed and adjusted, as well as the constant monitoring of our portfolio.

[1] Weighted average carbon intensity = (company CO_2 /company revenue) * (investment/portfolio)

Climate-related opportunities

Climate change does not just create risks, but also presents new opportunities. Developing corresponding products and services is a core part of our Group Sustainability Strategy, 2030 Sustainability Ambitions and Climate Action Plan. With our offerings, we pursue two different but complementary objectives: adapting to the effects of climate change and supporting the transition to a low-carbon economy.

Opportunities related to physical risks in our re/insurance business

Since most of our re/insurance contracts are renewed on an annual basis, we can offer our clients effective natural catastrophe protection that can help them cope with current climate risks. The same applies to our weather insurance solutions.

In addition, we undertake special efforts to help expand re/insurance protection by focusing on non-traditional clients (in particular from the public sector), underdeveloped markets and innovative risk transfer instruments. You can read about some innovative transactions we have recently completed in our 2019 Sustainability Report, pages 25–31.

Opportunities related to transition risks in our re/insurance business

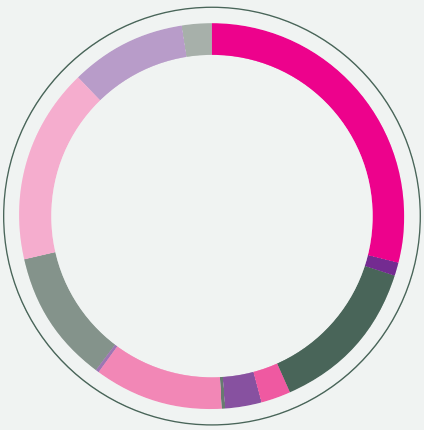
While Swiss Re is active in all types of renewable energy re/insurance, over the years we have become a recognised lead market for offshore wind risks. More than five years ago, Swiss Re Corporate Solutions established a Centre of Competence for Wind Power and through this focused investment, we have built up and refined the technical expertise required to understand and manage these risks. For example, in 2019, we played a key role in several major windfarm projects, including the Parc éolien en mer de St-Nazaire, the first large commerical windfarm project in France. Additionally, we took on the role of lead insurer for a number of large projects in Taiwan – Formosa II and Greater Changhua 1 & 2a. Over the next decade, we expect many new development opportunities to arise, which are likely to create demand for re/insurance protection in numerous lines of business (credit, engineering, property, liability, etc).

You can read about our involvement in some new offshore wind farm projects in our 2019 Sustainability Report, pages 29–30.

Opportunities for our investments

We expect to experience, particularly over the longer term, an improved risk/return relationship in our investment portfolio as part of our consistent and broad-based integration of environmental, social and governance (ESG) criteria along the investment process. We address sustainability risks such as climate change to make the portfolio more resilient against financial market shocks. This is of crucial importance as such risk factors are not yet fully reflected in current market valuations.

As part of our adaptation strategy, we consider investment opportunities that enable a low-carbon economy:



Green bonds

Green bond proceeds are used exclusively to finance environmentally sustainable projects that address key areas of concern, including climate change, but also natural resource conservation, biodiversity conservation, and pollution prevention and control. We support the transition towards a low-carbon economy by investing into green bonds following the ICMA Green Bond Principles. As of 31 December 2019, we held USD 1.8 billion of green bonds and are targeting a portfolio of USD 4.0 billion by the end of 2024. We have embraced the opportunity to participate in the impressive average market growth of 54% p.a. since 2014[1,2].

- **29.0%** Agencies
- **13.6%** Financials
- **2.9%** Municipals
- **10.8%** Regional governments
- **11.3%** Sovereigns
- **9.7%** Utilities
- **1.0%** Basic industries
- **2.4%** Information technology
- **0.4%** Non-cyclical consumer goods
- **0.2%** Resources
- **16.2%** Supranationals
- **2.5%** Non-cyclical services

1 Moody's, "Sustainable Finance – Global: Green, social and sustainable bond issuance to hit record $400 billion in 2020", 3 February 2020
2 Moody's – Green bonds: Key numbers and trends, 2018

Infrastructure renewables

For our infrastructure loan mandates, we work with best-in-class managers to gain access to, and provide financing for, renewable energy projects that reflect our risk appetite, generate attractive long-term returns and help build a more sustainable energy supply for the future. Renewables make up approximately 13% of our infrastructure portfolio, whereof 76% are in solar panels and 24% in wind farms.

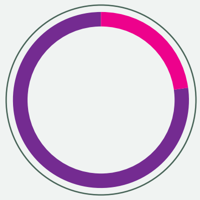
Real estate

Our real estate investment portfolio comprises commercial and residential buildings with a total market value of USD 4.7 billion as of 31 December 2019. These are predominantly located in Switzerland, the US, Germany, Australia, the UK, and Central and Eastern Europe. As ESG criteria are considered a key pillar of long-term sustainable value creation, we incorporate them into decision-making throughout the whole operating model, including external investment manager due diligence.

New property investments are evaluated from an ESG perspective, which includes both a property's current and potential future status as it relates to energy efficiency, public transport connectivity, use of sustainable materials, occupier well-being and community engagement. Ongoing business plan execution and asset management of properties already in the portfolio always incorporate different ways to improve ESG characteristics, as economically and financially sensible.

For investment real estate in Switzerland, we apply the following sustainability criteria: analysis of energy sources as a percentage of market value and MINERGIE® certifications. MINERGIE® is a Swiss sustainability label for new and refurbished buildings. By the end of 2019, the combined value of our MINERGIE®-certified buildings reached USD 0.4 billion, or 23% of our Swiss portfolio of direct real estate investments by value, which corresponds to a gross floor area of 82 497 m². The Swiss portfolio is gradually shifting away from fossil fuels as a heating source to either renewable energy (14%) or district heating (15%). Whenever this is not possible, gas (49%) is considered as an alternative, given its smaller carbon footprint compared to oil (19%).

Switzerland



Energy sources

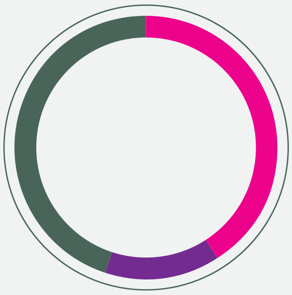
49%	19%	15%	14%	3%
Gas	Oil	District heating	Renewable energy	Others[1]

100%

[1] Includes projects under construction, land and non-heated assets.

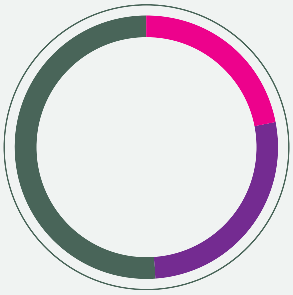
The externally managed real estate portfolio is predominantly invested in Australia, the UK and the US, and contains 47% green buildings based on regional energy labels. The Australian portfolio is the most advanced, followed by the UK portfolio.

Australia



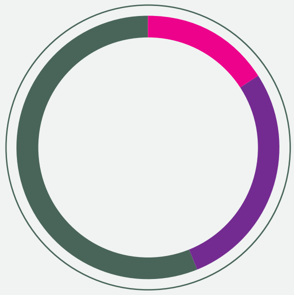
- **41%** NABERS Energy 5
- **14%** NABERS Energy 4/4.5
- **45%** NABERS Energy < 4 or not certified

UK



- **22%** BREEAM "Excellent"
- **27%** BREEAM "Very Good"
- **51%** Not certified

US



- **16%** LEED "Gold"
- **28%** LEED "Silver"
- **56%** Not certified

In the US, our approach to sustainability includes some of the most recognised certificates and guidelines such as "GreenGuide: Sustainable Property Operations", a best-practice guideline for sustainable and efficient real estate operations, as well as the LEED certification of the US Green Building Council (USGBC).

2019 was the third year in a row that the US portfolio achieved four out of five stars in GRESB. The 2019 GRESB score increased by 4 points (+5%) to 82.

82/100
(vs. average GRESB Score of 72)

Implementation & Measurement: 81/100
(vs. average GRESB Score of 69)

Management & Policy: 86/100
(vs. average GRESB Score of 80)

Swiss Re's climate resilience under different scenarios
The TCFD requests companies to describe the resilience of their strategy, taking into account different climate related-scenarios including one of, or less than 2°C increase. In principle, it would be possible for us to compute the potential long-term effects caused by climate change on AEL based on today's re/insurance book. However, we do not consider this to be meaningful as a stand-alone exercise, for the following reasons outlined below.

Looking at climate effects in isolation would mean ignoring the other factors that will shape Swiss Re's future re/insurance book and thus also our future AEL. These include our strategy and risk appetite, market conditions, capital costs, insurance penetration, storm hardening and other climate adaptation measures. Since our re/insurance book and current AEL are the result of a complex interaction between all of these factors, any future scenario would have to consider all of them, in the process rendering the effect of climate change on the resulting AEL marginal. Moreover, the future AEL for Swiss Re's weather-related re/insurance book will depend both on our future market share and scenario projections of overall business volume. Independent studies have shown a wide uncertainty range for future market business volumes (see eg Kunreuther et. al., 2012)[3], thus rendering any long-term projections highly uncertain.

On a societal level, our Economics of Climate Adaptation studies have shown that climate change can lead to an increase of economic losses due to weather risks of up to 30% within the next 25 years. More importantly though, economic development, urbanisation, higher population densities and asset concentrations in flood plains are expected to be the dominant factors in increasing weather-related economic losses. As these factors become more pronounced, our models will gradually factor in this trend, since they are updated and refined at regular intervals.

To summarise, we do not consider climate change to be a single factor posing a fundamental threat to the resilience of our business. It is one of many equally important factors we will need to take into consideration when shaping our future business strategy. A key precondition for our ability to continue acting as an ultimate risk-taker is diversification, with regard to regions, lines of business, sectors and clients. In a world of strong or unmitigated climate change, however, the proportion of weather-related risks we could re/insure would decline and the protection gap would likely increase further. In light of the above, we are developing qualitative scenarios for physical and transition risks to be considered as part of our strategic business planning.

[3] Kunreuther, Howard; Michel-Kerjan, Erwann; and Ranger, Nicola, "Insuring Future Climate Catastrophes" (2012). Published Articles & Papers. Paper 171.

Climate risk management

The processes we use to identify, assess and manage climate-related risks are integrated into our risk management, underwriting and asset management.

Sound risk management, underwriting and asset management lie at the core of the re/insurance business. This enables us to use our existing processes and instruments to address climate-related risks.

Physical risks

To assess our P&C businesses accurately and to structure sound risk transfer solutions, we need to clearly understand the economic impact of natural catastrophes and the potential effect of climate change on their frequency and severity.

Natural catastrophes constitute one of the core risks modelled in Swiss Re's risk landscape. Specifically, they are one of three categories in which we classify and model our P&C re/insurance risks (the other two being man-made and geopolitical risks). These risks arise from the coverage we provide to our clients for property, liability, motor, accident and specialty risks.

We have an internal property risk modelling team that builds, maintains and updates sophisticated models for all relevant natural catastrophe risks (flood, tropical cyclones, wind storms, earthquakes). The models are based on current scientific knowledge and are regularly updated to include new scientific findings – including from our research collaborations with academic institutions – and to make use of advances in computing capabilities. Using statistical data spanning more than 100 years, our models are capable of simulating probabilistic "daughter" events that may have never occurred in reality but that may occur in the future.

Swiss Re's full, proprietary integrated risk model is an important tool for managing the business: we use it to determine the economic capital required to support the risks on our books as well as to allocate risk-taking capacity to our different lines of business.

Transition risks in our re/insurance business

To ensure appropriate management of transition risks and assess potential impacts on our business, we have set up a monitoring system that combines expertise in risk management and casualty underwriting, as well as for relevant legal developments.

For the other types of transition risks described on pages 156 and 158, we also have risk management systems in place. Technological developments are monitored through Swiss Re's respective underwriting units and pricing of associated covers is reviewed on an annual basis.

General sustainability risks in our re/insurance business

We use our Sustainable Business Risk Framework to identify and address potential sustainability risks in all our underwriting and investment transactions (see 2019 Sustainability Report, pages 35–37). This framework continuously evolves to reflect scientific knowledge and internal standards. With respect to climate change, this framework prevents us from offering any re/insurance cover to businesses with more than 30% exposure to thermal coal utilities or mining and for offshore drilling activities in the Arctic.

In 2019, we continued the implementation of our thermal coal policy for treaty business with over 300 engagements with insureds across all regions. We also intensified our efforts to decarbonise our business by committing to net-zero emissions by 2050 on the liability and the asset side.

Investments

Swiss Re is a long-term investor. Therefore, it is important that we also take a long-term view on the risk factors that may have an adverse impact on our portfolio, such as climate change. Hence, sustainability and climate change are essential topics for our Asset Management.

Our Sustainable Business Risk Framework enables us to identify and address environmental and human rights concerns throughout our business. Its criteria are fully applied to our investments. For further details, see above and our 2019 Sustainability Report, pages 35–37.

Swiss Re is committed to investing its assets responsibly via a controlled and structured investment process by integrating ESG criteria. In 2017, as part of our continuous improvement, we switched to benchmarks composed of higher ESG-rated companies for our active corporate credit and listed equities portfolios. For more information about our approach to ESG integration, see our publication "Responsible investments – The next steps in our journey", published in 2018 and available at swissre.com (www.swissre.com/ri-next-steps), as well as our 2019 brochure "Responsible investing – Our approach" (www.swissre.com/ri-our-approach).

At the 2019 UN Climate Summit in New York, the UN-convened Net-Zero Asset Owner Alliance (AOA) was launched. As a founding member of the AOA, we have committed to having a net-zero greenhouse gas investment portfolio by 2050 (www.swissre.com/un-climate-action-summit). We also joined the global Science Based Targets initiative and will develop science-based emission reduction targets (www.sciencebasedtargets.org). Our commitment also includes advocacy for measures aimed at a low-carbon transition of economic sectors.

As part of our dedicated approach towards climate risk management, we review our corporate credit and listed equities portfolios on an ongoing basis to track the development of our carbon footprint, as well as related forward-looking indicators. Additionally, we monitor our coal and oil sands-related investments that are below the set thresholds. As part of our active risk management, we stopped investing in coal and oil sands-related companies that are above the thresholds (for details, see page 157).

Further actions to support the transition to a low-carbon economy are described in the section "Opportunities for our investments" on pages 158–160.

Climate metrics and targets

We use a number of metrics and targets to assess and manage relevant climate-related risks and opportunities.

We assess and manage climate-related risks and opportunities in our re/insurance business (the liability side of our balance sheet), our own operations and our investments (the asset side of our balance sheet).

Re/insurance

Annual expected losses (AEL)

AEL for weather-related natural perils can be used as an indicator for our average current climate-related risk exposure. However, AEL figures do not, by definition, provide an adequate measure for the potential risk of individual years with intense natural catastrophe losses like in eg 2019, 2018 and 2017 (below table indicates our risk exposures to four major natural catastrophe scenarios, ie single-event losses with a 200-year return period). The AEL figures are the result of expected weather activities, the vulnerability of insured objects, their values and the volume and structure of our insurance products. Changes in the AEL figures will show the evolution of our climate risk exposure. This could be due to climate change, but also due to changes in the vulnerability of insured objects, their values or changes in our business strategy. AEL figures are updated on an annual basis.

The four weather-related perils with the highest gross AEL for our business as per the end of 2019 are indicated in the table to the right.

Weather-related catastrophes: insured vs uninsured losses

There is a substantial protection gap between total economic losses from weather-related catastrophes and insured losses in all regions. This data does not represent a company-specific metric but is an important overall risk indicator (see upper right table on page 165).

Climate protection offered to (sub-)sovereigns

In 2019, cover against natural catastrophes accounted for approximately 15% of premiums in our P&C Reinsurance business. As we regularly update our risk models to reflect any changes in the underlying parameters and renew contracts annually, we are in a position to offer our clients re/insurance protection against current climate-related risks.

Reflecting our efforts to help expand re/insurance protection by working with public-sector clients, we made a commitment to the United Nations to advise up to 50 sovereigns and sub-sovereigns on climate risk resilience and to offer them USD 10 billion of insurance cover against this risk by 2020. You can see the progress we have made against this goal in the middle table on page 165. We also made a commitment to the Insurance Development Forum (IDF), in line with the InsuResilience Vision 2025 goals. This includes delivering climate and other natural hazards risk modelling, developing risk transfer solutions as well as offering capacity for climate risk insurance to increase insurance protection for selected climate-exposed countries.

Aligning our carbon intensity

We have recently started to develop a carbon business steering mechanism. The introduction of our coal policy formed the first part of this. Additionally, in 2019, we began to work on a carbon footprint methodology, which was also conducted through the CRO Forum. Once finished, this will help us steer the overall carbon footprint embedded in our re/insurance businesses. Ultimately, it will support us in decarbonising our business model and in reaching net-zero emissions by 2050 on the liability side of our balance sheet, a goal that we committed to in 2019 by signing the UN Global Compact Business Ambition for 1.5°C, building on our earlier Paris Pledge for Action.

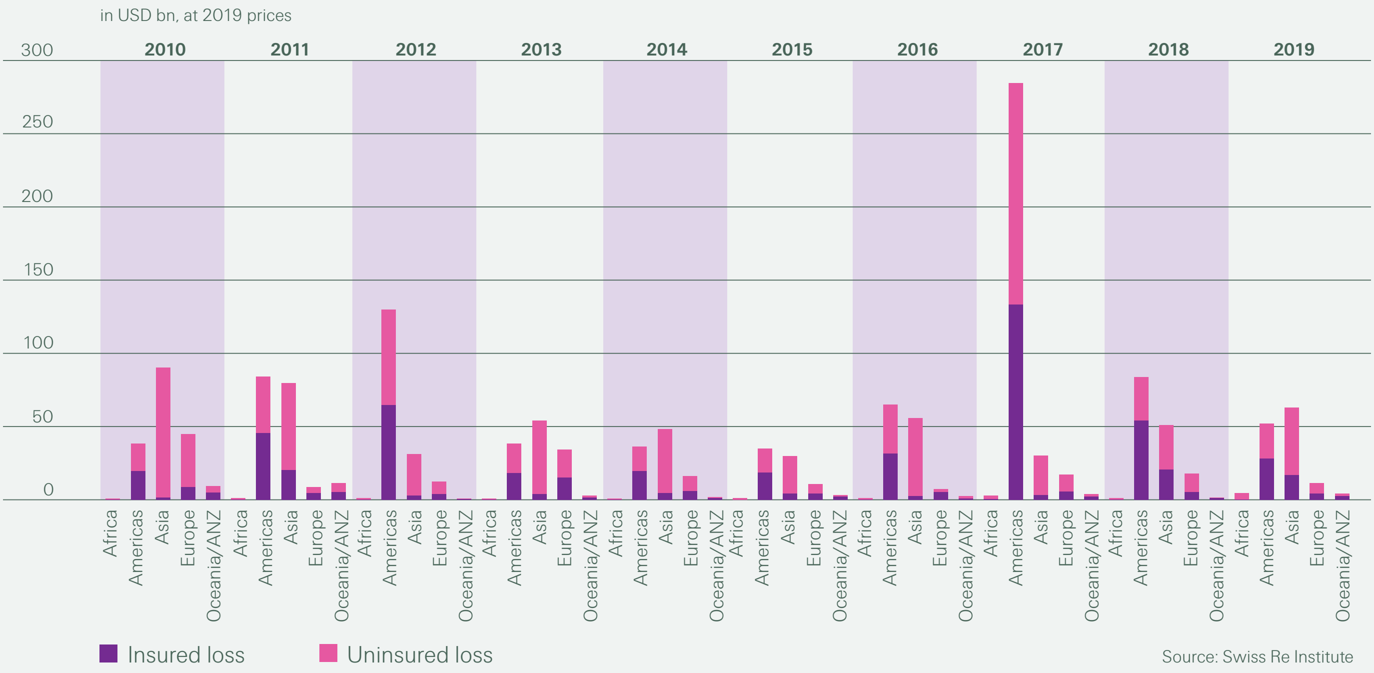
In 2019, we also took another important step in our carbon steering mechanism and developed a policy to shift away from high carbon intensity oil and gas production.

From July 2021, we will no longer provide individual insurance covers for those oil and gas companies that are responsible for the world's 5% most carbon-intensive oil and gas production.

Weather-related perils: Annual expected losses, Swiss Re Group

As of 31 December 2019	In USD millions
North Atlantic hurricane	680
US tornado	220
European windstorm	150
Japanese tropical cyclone	140

Insured vs uninsured weather-related catastrophe losses, per region



Total climate protection offered to (sub-)sovereigns since 2014

	by 2017	by 2018	by 2019
Number of (sub-)sovereigns advised	66	96	120
Amount of climate protection offered (in USD)	5.3 billion	8.2 billion	10.0 billion

From July 2023, we will no longer provide individual insurance cover for those oil and gas companies that are responsible for the world's 10% most carbon intensive oil and gas production.

Investments

We measure and monitor the level of integration of our climate-related investment activities.

Green bonds

Green bond proceeds are used to finance environmentally sustainable projects and facilitate the transition towards a low-carbon economy.

By the end of 2019, we held USD 1.8 billion in green bonds. As part of our adaptation strategy, we expanded our mandate to also consider social and sustainability bonds. This enables us not only to support the environment, but also underserved groups or populations, thus generating a positive impact on society. Additionally, we increased the specific investment target to USD 4 billion, to be achieved by the end of 2024.

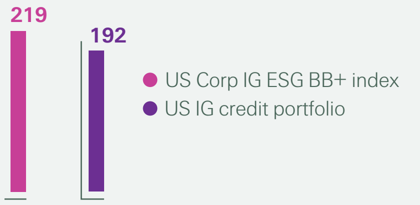
Absolute coal threshold

Coal assets are particularly carbon-intensive and susceptible to stranded asset risk given the long life of these assets, as well as the evolving regulations on carbon emissions. To ensure we actively manage such risks, we implemented an absolute coal threshold to identify large carbon emitters with a diversified business mix, where relative thresholds may provide inadequate guidance. Our willingness to tackle climate change challenges is reflected in our new, 2019 commitment to not invest in mining companies producing at least 20 million tonnes of coal per year and power utility generators with more than 10 gigawatts of installed coal fire capacity.

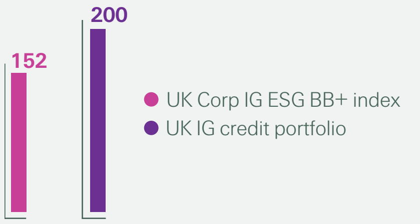
Carbon footprint of our investment portfolio

In line with TCFD guidelines, we monitor the carbon footprints of our corporate credit and listed equity portfolios on an ongoing basis as we have extended our internal tools to allow for interactive day-to-day analysis. We also monitor any coal-related activities in our private equity investments. For the carbon footprint, we use the metric "weighted average carbon intensity", which defines the portfolio carbon intensity based on relative investment share.

The US credit portfolio remains below its corresponding benchmark in terms of weighted average carbon intensity, given its continued underweight in high carbon intensity names after divestments in the energy and materials sector.



Since 2018, the UK credit portfolio carbon intensity decreased, whereas the index carbon intensity remained approximately stable.



The portfolio of listed equities continues to be significantly less carbon-intensive compared to the corresponding benchmark due to its focus on high quality companies with low-carbon intensity. Moreover, in 2019, the carbon intensity decreased as a result of the portfolio optimisation.

Since the end of 2015, carbon intensities in both the corporate credit and the listed equities portfolios decreased substantially as part of our fossil fuel divestment of more than USD 1.4 billion. In 2019, carbon footprints for both portfolios, the corporate credit and listed equities, further decreased.

Forward-looking carbon indicators

Companies may mitigate exposure to climate risk through adaptation to market forces or adherence to new and evolving requirements. In 2019, we therefore extended our capabilities further to analyse the impact of climate risk on investments, advanced our analytical toolset, and improved our monitoring of related risks and opportunities. For the corporate credit and listed equities portfolios, we focused on the most carbon-intensive sectors that are responsible for the vast majority of the portfolio carbon intensity.

The forward-looking indicators that form the basis of the climate risk analysis have been extended and refined. The extensions and refinements allow us to analyse climate risk-exposed industries down to the issuer level, which provides an important additional dimension to our carbon intensity analysis. These forward-looking indicators inform us about the preparedness of companies for a transition to a low-carbon economy, and identify potential leaders and laggards in such a transition.

Many issuers have set carbon reduction targets and are actively working towards lowering their energy consumption, which we consider an encouraging development. The analysis also shows that a transition to a low-carbon economy may be challenging and costly.

Swiss Re Group Scope 1, 2 and 3 greenhouse gas emissions

Reducing our operational carbon footprint is an important part of our Group Sustainability Strategy. As part of our Greenhouse Neutral Programme, we have publicly reported on our Scope 1 and 2 greenhouse gas emissions, plus a major source of Scope 3 emissions (business travel) since its launch in 2003. From 2013, we have expanded our reporting to include further Scope 3 emissions (see table below).

You can find out more about the Greenhouse Neutral Programme in our 2019 Sustainability Report, pages 58–61.

Additionally, in 2019, Swiss Re committed to reduce its operational CO_2 footprint to net-zero emissions by 2030. In 2020, we will start by reducing our air travel emissions by at least 15%, with further reduction ambitions planned. At the same time, we are moving from buying conventional carbon offsets to supporting carbon removal projects to compensate any unavoided emissions. Carbon removal is a new form of emission compensation that extracts CO_2 out of the atmosphere and stores it permanently. This is a necessary prerequisite for reaching any net-zero emissions target, including the Paris Agreement.

CO_2 emissions per employee (full-time equivalent, FTE), Swiss Re Group

		2013 kg/FTE	2018 kg/FTE	**2019 kg/FTE**	Change in % since 2018	Change in % since 2013
Scope 1	Heating	378	244	**210**	–13.8	–44.4
Scope 2	Power[1]	824	584	**472**	–19.1	–42.7
Scope 3	Business travel	3 713	3 892	**3 842**	–1.3	3.5
	Copy paper	40	16	**13**	–15.7	–66.3
	Waste	50	33	**28**	–13.7	–43.1
	Water	12	11	**8**	–23.7	–30.1
	Technical gases	27	6	**52**	764.3	92.1
	Commuting[2]	1 250	1 000	**1 000**	0.0	–20.0
Total		6 294	5 786	**5 627**	–2.7	–10.6

[1] Calculation based on a market-based approach taking into account the purchase of renewable energy instruments, with the exception of the UK, where the government requires companies to report an average grid factor.
[2] Commuting data are gathered biannually by means of a survey. The figures are rounded and fraught with considerable uncertainty.

Contents

Income statement

For the years ended 31 December

USD millions	Note	2018	2019
Revenues			
Gross premiums written	4	36 406	**42 228**
Net premiums written	4	34 042	**39 649**
Change in unearned premiums		–167	**–1 675**
Premiums earned	3	33 875	**37 974**
Fee income from policyholders	3	586	**620**
Net investment income – non-participating business[1]	7	4 075	**4 171**
Net realised investment gains/losses – non-participating business[2]	7	65	**1 580**
Net investment result – unit-linked and with-profit business	7	–1 593	**4 939**
Other revenues		39	**30**
Total revenues		37 047	**49 314**
Expenses			
Claims and claim adjustment expenses	3	–14 855	**–18 683**
Life and health benefits	3	–11 769	**–13 087**
Return credited to policyholders		1 033	**–4 633**
Acquisition costs	3	–6 919	**–7 834**
Operating expenses		–3 432	**–3 579**
Total expenses before interest expenses		–35 942	**–47 816**
Income before interest and income tax expense		1 105	**1 498**
Interest expenses		–555	**–589**
Income before income tax expense		550	**909**
Income tax expense	15	–69	**–140**
Net income before attribution of non-controlling interests		481	**769**
Income/loss attributable to non-controlling interests		–19	**–42**
Net income after attribution of non-controlling interests		462	**727**
Interest on contingent capital instruments, net of tax		–41	
Net income attributable to common shareholders		421	**727**
Earnings per share in USD			
Basic	14	1.37	**2.46**
Diluted	14	1.37	**2.39**
Earnings per share in CHF[3]			
Basic	14	1.34	**2.46**
Diluted	14	1.34	**2.40**

[1] Total impairments for the years ended 31 December of nil in 2018 and of USD 80 million in 2019, respectively, were fully recognised in earnings.
[2] Total impairments for the years ended 31 December of USD 16 million in 2018 and of USD 10 million in 2019, respectively, were fully recognised in earnings.
[3] The translation from USD to CHF is shown for informational purposes only and has been calculated using the Group's average exchange rates.

The accompanying notes are an integral part of the Group financial statements.

Statement of comprehensive income

For the years ended 31 December

USD millions	2018	2019
Net income before attribution of non-controlling interests	481	**769**
Other comprehensive income, net of tax:		
Change in net unrealised investment gains/losses	–2 389	**3 375**
Change in other-than-temporary impairment	–1	**2**
Change in cash flow hedges	15	**–9**
Change in foreign currency translation	–408	**46**
Change in adjustment for pension benefits	–4	**–29**
Change in credit risk of financial liabilities at fair value option		**–2**
Transactions with non-controlling interests	–259	**–56**
Other comprehensive income attributable to non-controlling interests	72	**341**
Total comprehensive income before attribution of non-controlling interests	–2 493	**4 437**
Interest on contingent capital instruments, net of tax	–41	
Comprehensive income attributable to non-controlling interests	–91	**–383**
Total comprehensive income attributable to common shareholders	–2 625	**4 054**

The accompanying notes are an integral part of the Group financial statements.

Reclassification out of accumulated other comprehensive income

For the years ended 31 December

2018 USD millions	Net unrealised investment gains/losses[1]	Other-than-temporary impairment[1]	Cash flow hedges[1]	Foreign currency translation[1, 2]	Adjustment for pension benefits[3]	Credit risk of financial liabilities at fair value option	Accumulated other comprehensive income
Balance as of 1 January	4 746	–2	–10	–5 548	–820	0	–1 634
Transactions with non-controlling interests	–325		1	52	13		–259
Impact of Accounting Standards Update[4]	–127				–17	5	–139
Change during the period	–3 129	–1	25	–303	–75		–3 483
Amounts reclassified out of accumulated other comprehensive income	154		–10	8	68		220
Tax	586			–113	3		476
Balance as of period end	1 905	–3	6	–5 904	–828	5	–4 819

2019 USD millions	Net unrealised investment gains/losses[1]	Other-than-temporary impairment[1]	Cash flow hedges[1]	Foreign currency translation[1, 2]	Adjustment for pension benefits[3]	Credit risk of financial liabilities at fair value option	**Accumulated other comprehensive income**
Balance as of 1 January	1 905	–3	6	–5 904	–828	5	**–4 819**
Transactions with non-controlling interests	–128		1	64	7		**–56**
Change during the period	5 668		–57		–93	–2	**5 516**
Amounts reclassified out of accumulated other comprehensive income	–1 491		48	135	46		**–1 262**
Tax	–802	2		–89	18		**–871**
Balance as of period end	**5 152**	**–1**	**–2**	**–5 794**	**–850**	**3**	**–1 492**

[1] Reclassification adjustment included in net income is presented in "Net realised investment gains/losses – non-participating business".
[2] Reclassification adjustment is limited to translation gains and losses realised upon sale or upon complete or substantially complete liquidation of an investment in a foreign entity.
[3] Reclassification adjustment included in net income is presented in "Operating expenses".
[4] Impact of ASU 2018-02 "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive income", ASU 2016-16 "Intra-Entity Transfers of Assets Other Than Inventory" and ASU 2016-01 "Recognition and Measurement of Financial Assets and Financial Liabilities". Please refer to the Annual Report 2018 for more details.

The accompanying notes are an integral part of the Group financial statements.

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Balance sheet

Assets
As of 31 December

USD millions	Note	2018	2019
Investments	7, 8, 9		
Fixed income securities:			
Available-for-sale (including 11 502 in 2018 and 14 175 in 2019 subject to securities lending and repurchase agreements) (amortised cost: 2018: 89 673; 2019: 74 780)		92 538	**79 163**
Trading (including 2 599 in 2018 and 1 911 in 2019 subject to securities lending and repurchase agreements)		3 414	**2 410**
Equity securities at fair value through earnings (including 480 in 2018 and 186 in 2019 subject to securities lending and repurchase agreements)		3 036	**2 993**
Policy loans, mortgages and other loans		4 542	**3 021**
Investment real estate		2 411	**2 528**
Short-term investments (including 552 in 2018 and 1 157 in 2019 subject to securities lending and repurchase agreements)		5 417	**5 768**
Other invested assets		6 398	**7 343**
Investments for unit-linked and with-profit business (including fixed income securities trading: 4 938 in 2018 and nil in 2019, equity securities at fair value through earnings: 23 123 in 2018 and 520 in 2019)		29 546	**520**
Total investments		147 302	**103 746**
Cash and cash equivalents (including 717 in 2018 and 1 257 in 2019 subject to securities lending, and 1 175 in 2018 and 4 in 2019 backing unit-linked and with-profit contracts)		5 985	**7 562**
Accrued investment income		1 052	**673**
Premiums and other receivables		13 789	**15 271**
Reinsurance recoverable on unpaid claims and policy benefits		7 058	**5 898**
Funds held by ceding companies		9 009	**9 472**
Deferred acquisition costs	6	8 217	**7 838**
Acquired present value of future profits	6	1 818	**1 042**
Goodwill		4 071	**3 945**
Income taxes recoverable		526	**466**
Deferred tax assets	15	5 411	**4 726**
Other assets		3 332	**3 489**
Assets held for sale[1]	11		**74 439**
Total assets		207 570	**238 567**

[1] Please refer to Note 11 "Assets held for sale" for more details.

The accompanying notes are an integral part of the Group financial statements.

Liabilities and Equity

USD millions	Note	2018	2019
Liabilities			
Unpaid claims and claim adjustment expenses	5	67 446	**72 373**
Liabilities for life and health policy benefits	8	39 593	**19 836**
Policyholder account balances		31 938	**5 405**
Unearned premiums		11 721	**13 365**
Funds held under reinsurance treaties		3 224	**3 521**
Reinsurance balances payable		920	**889**
Income taxes payable		597	**378**
Deferred and other non-current tax liabilities	15	6 471	**5 663**
Short-term debt	12	1 633	**185**
Accrued expenses and other liabilities	7	6 798	**7 191**
Long-term debt	12	8 502	**10 138**
Liabilities held for sale[1]	11		**68 586**
Total liabilities		178 843	**207 530**
Equity			
Common shares, CHF 0.10 par value			
2018: 338 619 465; 2019: 327 404 704 shares authorised and issued		32	**31**
Additional paid-in capital		496	**256**
Treasury shares, net of tax		–2 291	**–2 220**
Accumulated other comprehensive income:			
Net unrealised investment gains/losses, net of tax		1 905	**5 152**
Other-than-temporary impairment, net of tax		–3	**–1**
Cash flow hedges, net of tax		6	**–2**
Foreign currency translation, net of tax		–5 904	**–5 794**
Adjustment for pension and other post-retirement benefits, net of tax		–828	**–850**
Credit risk of financial liabilities at fair value option, net of tax		5	**3**
Total accumulated other comprehensive income		–4 819	**–1 492**
Retained earnings		34 512	**32 676**
Shareholders' equity		27 930	**29 251**
Non-controlling interests		797	**1 786**
Total equity		28 727	**31 037**
Total liabilities and equity		207 570	**238 567**

[1] Please refer to Note 11 "Assets held for sale" for more details.

The accompanying notes are an integral part of the Group financial statements.

Statement of shareholders' equity

For the years ended 31 December

USD millions	2018	2019
Contingent capital instruments		
Balance as of 1 January	750	**0**
Changes during the period	–750	
Balance as of period end	0	**0**
Common shares		
Balance as of 1 January	33	**32**
Cancellation of shares bought back	–1	**–1**
Balance as of period end	32	**31**
Additional paid-in capital		
Balance as of 1 January	368	**496**
Transactions with non-controlling interests[1]	123	**–241**
Contingent capital instrument issuance costs	11	
Cancellation of shares bought back	–85	**–23**
Share-based compensation	–6	**–9**
Realised gains/losses on treasury shares	85	**33**
Balance as of period end	496	**256**
Treasury shares, net of tax		
Balance as of 1 January	–1 842	**–2 291**
Purchase of treasury shares	–1 454	**–1 041**
Cancellation of shares bought back	1 032	**1 020**
Issuance of treasury shares, including share-based compensation to employees	–27	**92**
Balance as of period end	–2 291	**–2 220**
Net unrealised investment gains/losses, net of tax		
Balance as of 1 January	4 746	**1 905**
Transactions with non-controlling interests[1]	–325	**–128**
Impact of ASU 2018-02[2]	176	
Impact of ASU 2016-16[2]	44	
Impact of ASU 2016-01[2]	–347	
Changes during the period	–2 389	**3 375**
Balance as of period end	1 905	**5 152**
Other-than-temporary impairment, net of tax		
Balance as of 1 January	–2	**–3**
Changes during the period	–1	**2**
Balance as of period end	–3	**–1**
Cash flow hedges, net of tax		
Balance as of 1 January	–10	**6**
Transactions with non-controlling interests[1]	1	**1**
Changes during the period	15	**–9**
Balance as of period end	6	**–2**

The accompanying notes are an integral part of the Group financial statements.

USD millions	2018	2019
Foreign currency translation, net of tax		
Balance as of 1 January	–5 548	**–5 904**
Transactions with non-controlling interests[1]	52	**64**
Changes during the period	–408	**46**
Balance as of period end	–5 904	**–5 794**
Adjustment for pension and other post-retirement benefits, net of tax		
Balance as of 1 January	–820	**–828**
Transactions with non-controlling interests[1]	13	**7**
Impact of ASU 2018-02[2]	–17	
Changes during the period	–4	**–29**
Balance as of period end	–828	**–850**
Credit risk of financial liabilities at fair value option, net of tax		
Balance as of 1 January	0	**5**
Impact of ASU 2016-01[2]	5	
Changes during the period		**–2**
Balance as of period end	5	**3**
Retained earnings		
Balance as of 1 January	36 449	**34 512**
Net income after attribution of non-controlling interests	462	**727**
Interest on contingent capital instruments, net of tax	–41	
Dividends on common shares	–1 592	**–1 659**
Cancellation of shares bought back	–946	**–996**
Impact of ASU 2018-02[2]	–159	
Impact of ASU 2016-16[2]	–3	
Impact of ASU 2016-01[2]	342	
Impact of ASU 2016-02[3]		**92**
Balance as of period end	34 512	**32 676**
Shareholders' equity	27 930	**29 251**
Non-controlling interests		
Balance as of 1 January	170	**797**
Transactions with non-controlling interests[1]	688	**606**
Income/loss attributable to non-controlling interests	19	**42**
Other comprehensive income attributable to non-controlling interests:		
Change in net unrealised investment gains/losses	191	**380**
Change in foreign currency translation	–109	**–25**
Other	–10	**–14**
Dividends to non-controlling interests	–152	
Balance as of period end	797	**1 786**
Total equity	28 727	**31 037**

[1] In 2018, MS&AD Insurance Group Holdings Inc (MS&AD) acquired a 15% non-controlling interest in ReAssure Group Plc (ReAssure), a subsidiary of the Group. In the first quarter of 2019, MS&AD acquired an additional 10% stake, increasing its total non-controlling interest to 25%. In the second quarter of 2019, MS&AD restructured its 25% holding within ReAssure. In the fourth quarter of 2019, the Group agreed to reacquire the 25% stake in ReAssure in connection with the agreement to sell ReAssure to Phoenix Group Holdings plc.
[2] Impact of ASU 2018-02 "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive income", ASU 2016-16 "Intra-Entity Transfers of Assets Other Than Inventory" and ASU 2016-01 "Recognition and Measurement of Financial Assets and Financial Liabilities". Please refer to the Annual Report 2018 for more details.
[3] Impact of ASU 2016-02 "Leases". Please refer to Note 1 "Organisation and summary of significant accounting policies" for more details.

The accompanying notes are an integral part of the Group financial statements.

Statement of cash flows

For the years ended 31 December

USD millions	2018	2019
Cash flows from operating activities		
Net income attributable to common shareholders	421	**727**
Add income/loss attributable to non-controlling interests	19	**42**
Adjustments to reconcile net income to net cash provided/used by operating activities:		
Depreciation, amortisation and other non-cash items	331	**538**
Net realised investment gains/losses	2 530	**–5 515**
Income from equity-accounted investees, net of dividends received	4	**–283**
Change in:		
Technical provisions and other reinsurance assets and liabilities, net	–1 796	**10 659**
Funds held by ceding companies and under reinsurance treaties	212	**–5**
Reinsurance recoverable on unpaid claims and policy benefits	656	**–571**
Other assets and liabilities, net	–421	**–472**
Income taxes payable/recoverable	–682	**–471**
Trading positions, net	298	**–252**
Net cash provided/used by operating activities	1 572	**4 397**
Cash flows from investing activities		
Fixed income securities:		
Sales	44 679	**51 008**
Maturities	5 159	**7 732**
Purchases	–49 816	**–58 240**
Net purchases/sales/maturities of short-term investments	–761	**–405**
Equity securities:		
Sales	1 908	**2 225**
Purchases	–1 578	**–1 495**
Securities purchased/sold under agreement to resell/repurchase, net	3 464	**–869**
Cash paid/received for acquisitions/disposals and reinsurance transactions, net	–11	**340**
Net purchases/sales/maturities of other investments	–869	**581**
Net purchases/sales/maturities of investments held for unit-linked and with-profit business	1 288	**1 584**
Net cash provided/used by investing activities	3 463	**2 461**
Cash flows from financing activities		
Policyholder account balances, unit-linked and with-profit business:		
Deposits	557	**551**
Withdrawals	–2 939	**–2 629**
Issuance/repayment of long-term debt	346	**3 614**
Issuance/repayment of short-term debt	–428	**–2 205**
Issuance/repayment of contingent capital instrument	–750	
Purchase/sale of treasury shares	–1 446	**–946**
Dividends paid to shareholders	–1 592	**–1 659**
Dividends paid to non-controlling interests	–152	
Transactions with non-controlling interests	811	**634**
Net cash provided/used by financing activities	–5 593	**–2 640**

The accompanying notes are an integral part of the Group financial statements.

USD millions	2018	2019
Total net cash provided/used	–558	**4 218**
Effect of foreign currency translation	–263	**88**
Change in cash and cash equivalents	–821	**4 306**
Cash and cash equivalents as of 1 January	6 806	**5 985**
Reclassified to assets held for sale		**–2 729**
Cash and cash equivalents as of 31 December	5 985	**7 562**

Interest paid was USD 631 million and USD 572 million (thereof USD 43 million and USD 24 million for letter of credit fees) for 2018 and 2019, respectively. Tax paid was USD 740 million and USD 611 million for 2018 and 2019, respectively.

Cash and cash equivalents include restricted cash and cash equivalents, for instance pledged cash and cash equivalents (please refer to Note 7 "Investments").

The accompanying notes are an integral part of the Group financial statements.

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Notes to the Group financial statements

1 Organisation and summary of significant accounting policies

Nature of operations
The Swiss Re Group, which is headquartered in Zurich, Switzerland, comprises Swiss Re Ltd (the parent company) and its subsidiaries (collectively, the "Swiss Re Group" or the" Group"). The Swiss Re Group is a wholesale provider of reinsurance, insurance and other insurance-based forms of risk transfer. Working through brokers and a network of offices around the globe, the Group serves a client base made up of insurance companies, mid- to large-sized corporations and public-sector clients.

Basis of presentation
The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (US GAAP) and comply with Swiss law. All significant intra-group transactions and balances have been eliminated on consolidation.

The Group agreed to sell its subsidiary ReAssure Group plc in December 2019 to Phoenix Group Holdings plc. The corresponding held for sale assets and liabilities are separately disclosed on the balance sheet. Further details on the agreed sale are provided in Note 11 "Assets held for sale".

The Board of Directors of Swiss Re Ltd has decided that as of 1 January 2024 the Group's consolidated financial statements will be prepared in accordance with International Financial Reporting Standards (IFRS). Financial statements for periods ending on or prior to 31 December 2023 will continue to be prepared in accordance with US GAAP.

Principles of consolidation
The Group's financial statements include the consolidated financial statements of Swiss Re Ltd and its subsidiaries. Voting entities which Swiss Re Ltd directly or indirectly controls through holding a majority of the voting rights are consolidated in the Group's accounts. Variable interest entities (VIEs) are consolidated when the Swiss Re Group is the primary beneficiary. The Group is the primary beneficiary when it has power over the activities that impact the VIE's economic performance and at the same time has the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE. Companies which the Group does not control, but over which it directly or indirectly exercises significant influence, are accounted for using the equity method or the fair value option and are included in other invested assets. The Swiss Re Group's share of net profit or loss in investments accounted for under the equity method is included in net investment income. Equity and net income of these companies are adjusted as necessary to be in line with the Group's accounting policies. The results of consolidated subsidiaries and investments accounted for using the equity method are included in the financial statements for the period commencing from the date of acquisition.

Use of estimates in the preparation of financial statements
The preparation of financial statements requires management to make significant estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses as well as the related disclosure, including contingent assets and liabilities. The Swiss Re Group's liabilities for unpaid claims and claim adjustment expenses and policy benefits for life and health include estimates for premium, claim and benefit data not received from ceding companies at the date of the financial statements. In addition, the Group uses certain financial instruments and invests in securities of certain entities for which exchange trading does not exist. The Group determines these estimates based on historical information, actuarial analyses, financial modelling and other analytical techniques. Actual results could differ significantly from the estimates described above.

Foreign currency remeasurement and translation
Transactions denominated in foreign currencies are remeasured to the respective subsidiary's functional currency at average exchange rates. Monetary assets and liabilities are remeasured to the functional currency at closing exchange rates, whereas non-monetary assets and liabilities are remeasured to the functional currency at historical rates. Remeasurement gains and losses on monetary assets and liabilities and trading securities are reported in earnings. Remeasurement gains and losses on available-for-sale securities, investments in consolidated subsidiaries and investments accounted for using the equity method are reported in shareholders' equity.

For consolidation purposes, assets and liabilities of subsidiaries with functional currencies other than US dollars are translated from the functional currency to US dollars at closing rates. Revenues and expenses are translated at average exchange rates. Translation adjustments are reported in shareholders' equity.

Valuation of financial assets
The fair value of the majority of the Group's financial instruments is based on quoted prices in active markets or observable inputs. These instruments include government and agency securities, commercial paper, most investment-grade corporate debt, most high-yield debt securities, exchange-traded derivative instruments, most mortgage- and asset-backed securities and listed equity securities. In markets with reduced or no liquidity, spreads between bid and offer prices are normally wider compared to spreads in highly liquid markets. Such market conditions affect the valuation of certain asset classes of the Group, such as some asset-backed securities as well as certain derivative structures referencing such asset classes.

The Group considers both the credit risk of its counterparties and own risk of non-performance in the valuation of derivative instruments and other over-the-counter financial assets. In determining the fair value of these financial instruments, the assessment of the Group's exposure to the credit risk of its counterparties incorporates consideration of existing collateral and netting arrangements entered into with each counterparty. The measure of the counterparty credit risk is estimated by incorporating the observable credit spreads, where available, or credit spread estimates derived based on the benchmarking techniques where market data is not available. The impact of the Group's own risk of non-performance is analysed in a manner consistent with the aforementioned approach, with consideration given to the Group's observable credit spreads. The value representing such risk is incorporated into the fair value of the financial instruments (primarily derivatives), in a liability position as of the measurement date. The change in this adjustment from period to period is reflected in realised investment gains and losses in the income statement.

For assets or derivative structures at fair value, the Group uses market prices or inputs derived from market prices. A separate internal price verification process, independent of the trading function, provides an additional control over the market prices or market inputs used to determine the fair values of such assets. Although management considers that appropriate values have been ascribed to such assets, there is always a level of uncertainty and judgement related to these valuations. Subsequent valuations could differ significantly from the results of the process described above. The Group may become aware of counterparty valuations, either directly through the exchange of information or indirectly, for example through collateral demands. Any implied differences are considered in the independent price verification process and may result in adjustments to initially indicated valuations. As of 31 December 2019, the Group had not provided any collateral on financial instruments in excess of its own market value estimates.

Investments
The Group's investments in fixed income securities are classified as available-for-sale (AFS) or trading. Fixed income securities AFS are carried at fair value, based on quoted market prices, with the difference between the applicable measure of cost and fair value being recognised in shareholders' equity. Trading fixed income securities are carried at fair value with unrealised gains and losses recognised in earnings. A trading classification is used for securities that are bought and held principally for the purpose of selling them in the near term.

For fixed income securities AFS that are other-than-temporary impaired and for which there is not an intention to sell, the impairment is separated into (i) the estimated amount relating to credit loss, and (ii) the amount relating to all other factors. The estimated credit loss amount is recognised in earnings, with the remainder of the loss amount recognised in other comprehensive income. In cases where there is an intention or requirement to sell and the fair value is lower than cost expressed in functional currency terms, the cost of fixed income securities AFS is reduced to fair value, with a corresponding charge to realised investment losses. Subsequent recoveries are not recognised in earnings.

Equity investments are carried at fair value with unrealised gains and losses recognised in earnings, with the exception of equity method investments and investments that result in consolidation.

Interest on fixed income securities is recorded in net investment income when earned and is adjusted for the amortisation of any purchase premium or discount. Dividends on equity securities are recognised as investment income on the ex-dividend date. Realised gains and losses on sales are included in earnings and are calculated using the specific identification method.

Policy loans, mortgages and other loans are carried at amortised cost. Interest income is recognised in accordance with the effective yield method.

Investment in real estate that the Group intends to hold for the production of income is carried at depreciated cost, net of any write-downs for impairment in value. Depreciation on buildings is recognised on a straight-line basis over the estimated useful life of the asset. Land is recognised at cost and not depreciated. Impairment in value is recognised if the sum of the estimated future undiscounted cash flows from the use of the real estate is lower than its carrying value. The impairment loss is measured as the amount by which the asset's carrying amount exceeds its fair value and is recognised in realised investment losses. Depreciation and other related charges or credits are included in net investment income. Investment in real estate held for sale is carried at the lower of cost or fair value, less estimated selling costs, and is not depreciated. Reductions in the carrying value of real estate held for sale are included in realised investment losses.

Short-term investments are measured at fair value with changes in fair value recognised in net income. The Group considers highly liquid investments with a remaining maturity at the date of acquisition of one year or less, but greater than three months, to be short-term investments.

Other invested assets include affiliated companies, equity accounted companies, derivative financial instruments, collateral receivables, securities purchased under agreement to resell, deposits and time deposits, and investments without readily determinable fair value (including limited partnership investments). Investments in limited partnerships where the Group's interest equals or exceeds 3% are accounted for using the equity method. Investments in limited partnerships where the Group's interest is below 3% and equity investments in corporate entities which are not publicly traded are accounted for at estimated fair value with changes in fair value recognised in earnings.

The Group enters into securities lending arrangements under which it loans certain securities in exchange for collateral and receives securities lending fees. The Group's policy is to require collateral, consisting of cash or securities, equal to at least 102% of the carrying value of the securities loaned. In certain arrangements, the Group may accept collateral of less than 102% if the structure of the overall transaction offers an equivalent level of security. Cash received as collateral is recognised along with an obligation to return the cash. Securities received as collateral that can be sold or repledged are also recognised along with an obligation to return those securities. Securities lending fees are recognised over the term of the related loans.

Derivative financial instruments and hedge accounting

The Group uses a variety of derivative financial instruments including swaps, options, forwards and exchange-traded financial futures for the Group's trading and hedging strategy in line with the overall risk management strategy. Derivative financial instruments are primarily used as a means of managing exposure to price, foreign currency and/or interest rate risk on planned or anticipated investment purchases, existing assets or existing liabilities and also to lock in attractive investment conditions for funds which become available in the future. The Group recognises all of its derivative instruments on the balance sheet at fair value. Changes in fair value on derivatives that are not designated as hedging instruments are recorded in income.

If the derivative is designated as a hedge of the fair value of assets or liabilities, changes in the fair value of the derivative are recognised in earnings, together with changes in the fair value of the related hedged item. If the derivative is designated as a hedge of the variability in expected future cash flows related to a particular risk, changes in the fair value of the derivative are reported in other comprehensive income until the hedged item is recognised in earnings. The ineffective portion of the hedge is recognised in earnings. When hedge accounting is discontinued on a cash flow hedge, the net gain or loss remains in accumulated other comprehensive income and is reclassified to earnings in the period in which the formerly hedged transaction is reported in earnings. When the Group discontinues hedge accounting because it is no longer probable that a forecasted transaction will occur within the required time period, the derivative continues to be carried on the balance sheet at fair value, and gains and losses that were previously recorded in accumulated other comprehensive income are recognised in earnings.

The Group recognises separately derivatives that are embedded within other host instruments if the economic characteristics and risks are not clearly and closely related to the economic characteristics and risks of the host contract and if it meets the definition of a derivative if it were a free-standing contract.

Derivative financial instrument assets are generally included in other invested assets and derivative financial instrument liabilities are generally included in accrued expenses and other liabilities.

The Group also designates non-derivative and derivative monetary financial instruments as hedges of the foreign currency exposure of its net investment in certain foreign operations. From the inception of the hedging relationship, remeasurement gains and losses on the designated non-derivative and derivative monetary financial instruments and translation gains and losses on the hedged net investment are reported as translation gains and losses in shareholders' equity.

Cash and cash equivalents

Cash and cash equivalents include cash on hand, short-term deposits, certain short-term investments in money market funds and highly liquid debt instruments with a remaining maturity at the date of acquisition of three months or less.

Deferred acquisition costs

The Group incurs costs in connection with acquiring new and renewal reinsurance and insurance business. Some of these costs, which consist primarily of commissions, are deferred as they are directly related to the successful acquisition of such business.

Deferred acquisition costs for short-duration contracts are amortised in proportion to premiums earned. Future investment income is considered in determining the recoverability of deferred acquisition costs for short-duration contracts. Deferred acquisition costs for long-duration contracts are amortised over the life of underlying contracts. Deferred acquisition costs for universal-life and similar products are amortised based on the present value of estimated gross profits. Estimated gross profits are updated quarterly.

Modifications of insurance and reinsurance contracts

The Group accounts for modifications of insurance and reinsurance contracts that result in a substantially unchanged contract as a continuation of the replaced contract. The associated deferred acquisition costs and present value of future profits (PVFP) will continue to be amortised. The Group accounts for modifications of insurance and reinsurance contracts that result in a substantially changed contract as an extinguishment of the replaced contract. The associated deferred acquisition costs or PVFP are written off immediately through income and any new deferrable costs associated with the replacement contract are deferred.

Business combinations

The Group applies the acquisition method of accounting for business combinations. This method allocates the cost of the acquired entity to the assets and liabilities assumed based on their estimated fair values at the date of acquisition.

Life Capital closed blocks of business can be acquired in different legal forms, either through an acquisition of an entity's share capital or through a reinsurance transaction. The Group's policy is to treat these transactions consistently regardless of the legal form of the acquisition. Accordingly, the Group records the acquired assets and liabilities directly to the balance sheet. Premiums, life and health benefits and other income statement items are not recorded in the income statement on the date of the acquisition.

The underlying assets and liabilities acquired are subsequently accounted for according to the relevant US GAAP guidance. This includes specific requirements applicable to subsequent accounting for assets and liabilities recognised as part of the acquisition method of accounting, including present value of future profits, goodwill and other intangible assets.

Acquired present value of future profits

The acquired present value of future profits (PVFP) of business in force is recorded in connection with the acquisition of life and health business. The initial value is calculated as the difference between established reserves, which are set up in line with US GAAP accounting policies and assumptions of the Group, and their fair value at the acquisition date. The resulting PVFP, which could be positive or negative, is amortised on a constant yield basis over the expected revenue recognition period of the business acquired, generally over periods ranging up to 30 years, with the accrual of interest added to the unamortised balance at the earned rate. Amortisation and accrual of interest are recognised in acquisition costs. The earned rate corresponds to either the current earned rate or the original earned rate depending on the business written. The rate is consistently applied for the entire life of the applicable business. For universal-life and similar products, PVFP is amortised in line with estimated gross profits, which are updated quarterly. The carrying value of PVFP is reviewed periodically for indicators of impairment in value. Adjustments to PVFP reflecting impairment in value are recognised in acquisition costs during the period in which the determination of impairment is made, or in other comprehensive income for shadow loss recognition.

Goodwill

The excess of the purchase price of acquired businesses over the estimated fair value of net assets acquired is recorded as goodwill, which is reviewed periodically for indicators of impairment in value. Adjustments to reflect impairment in value are recognised in earnings in the period in which the determination of impairment is made.

Other assets

Other assets include deferred expenses on retroactive reinsurance, prepaid reinsurance premiums, receivables related to investing activities, real estate for own use, other classes of property, plant and equipment, accrued income, certain intangible assets and prepaid assets.

The excess of estimated liabilities for claims and claim adjustment expenses payable over consideration received in respect of retroactive property and casualty reinsurance contracts is recorded as a deferred expense. The deferred expense on retroactive reinsurance contracts is amortised through earnings over the expected claims-paying period.

Real estate for own use as well as other classes of property, plant and equipment are carried at depreciated cost. Depreciation on buildings is recognised on a straight-line basis over the estimated useful life. Land is recognised at cost and not depreciated.

Capitalised software costs

External direct costs of materials and services incurred to develop or obtain software for internal use, payroll and payroll-related costs for employees directly associated with software development and interest cost incurred while developing software for internal use are capitalised and amortised on a straight-line basis through earnings over the estimated useful life.

Income taxes

Deferred income tax assets and liabilities are recognised based on the difference between financial statement carrying amounts and the corresponding income tax bases of assets and liabilities using enacted income tax rates and laws. A valuation allowance is recorded against deferred tax assets when it is deemed more likely than not that some or all of the deferred tax assets may not be realised.

The Group recognises the effect of income tax positions only if sustaining those positions is more likely than not. Changes in recognition or measurement are reflected in the period in which a change in judgement occurs.

The Group releases stranded tax effects for unrealised gains/losses on AFS securities to earnings on a straight-line basis over the average duration of the relevant AFS portfolio as an approximation of when the individual securities within the portfolio are sold or mature. For adjustment for pension and other post-retirement benefits, stranded tax effects are released to earnings when the relevant pension plan is terminated. For foreign currency translation, stranded tax effects are released to earnings in line with the recycling of the underlying foreign currency translation amounts.

Unpaid claims and claim adjustment expenses

Liabilities for unpaid claims and claim adjustment expenses for property and casualty and life and health insurance and reinsurance contracts are accrued when insured events occur and are based on the estimated ultimate cost of settling the claims, using reports and individual case estimates received from ceding companies. A provision is also included for claims incurred but not reported, which is developed on the basis of past experience adjusted for current trends and other factors that modify past experience. The establishment of the appropriate level of reserves is an inherently uncertain process involving estimates and judgements made by management, and therefore there can be no assurance that ultimate claims and claim adjustment expenses will not exceed the loss reserves currently established. These estimates are regularly reviewed, and adjustments for differences between estimates and actual payments for claims and for changes in estimates are reflected in income in the period in which the estimates are changed or payments are made.

The Group does not discount liabilities arising from prospective property and casualty insurance and reinsurance contracts, including liabilities which are discounted for US statutory reporting purposes. Liabilities arising from property and casualty insurance and reinsurance contracts acquired in a business combination are initially recognised at fair value in accordance with the acquisition method of accounting.

The Group does not discount life and health claim reserves except for disability income claims in payment and mortality claims paid out in the form of an annuity. These claims are recognised at the estimated present value of the remaining ultimate net costs of the incurred claims.

Experience features which are directly linked to a reinsurance asset or liability are classified in a manner that is consistent with the presentation of that asset or liability.

Liabilities for life and health policy benefits
Liabilities for life and health policy benefits from reinsurance business are generally calculated using the net level premium method, based on assumptions as to investment yields, mortality, withdrawals, lapses and policyholder dividends. Assumptions are set at the time the contract is issued or, in the case of contracts acquired by purchase, at the purchase date. The assumptions are based on projections from past experience, making allowance for possible adverse deviation. Interest rate assumptions for life and health (re)insurance benefit liabilities are based on estimates of expected investment yields. Assumed mortality rates are generally based on experience multiples applied to the actuarial select and ultimate tables based on industry experience.

Liabilities for life and health policy benefits are increased with a charge to earnings if it is determined that future cash flows, including investment income, are insufficient to cover future benefits and expenses. Where assets backing liabilities for policy benefits are held as AFS, these liabilities for policyholder benefits are increased by a shadow adjustment, with a charge to other comprehensive income, where future cash flows at market rates are insufficient to cover future benefits and expenses.

Policyholder account balances
Policyholder account balances relate to universal-life-type contracts and investment contracts.

Universal-life-type contracts are long-duration insurance contracts, providing either death or annuity benefits, with terms that are not fixed and guaranteed.

Investment contracts are long-duration contracts that do not incorporate significant insurance risk, ie there is no mortality and morbidity risk, or the mortality and morbidity risk associated with the insurance benefit features offered in the contract is of insignificant amount or remote probability. Amounts received as payment for investment contracts are reported as policyholder account balances. Related assets are included in general account assets except for investments for unit-linked and with-profit business, which are presented in a separate line item on the face of the balance sheet.

Amounts assessed against policyholders for mortality, administration and surrender are shown as fee income. Amounts credited to policyholders are shown as interest credited to policyholders. Investment income and realised investment gains and losses allocable to policyholders are included in net investment income and net realised investment gains/losses except for unit-linked and with-profit business, which is presented in a separate line item on the face of the income statement.

Unit-linked and with-profit business are presented together as they are similar in nature. For unit-linked contracts, the investment risk is borne by the policyholder. For with-profit contracts, the majority of the investment risk is also borne by the policyholder, although there are certain guarantees that limit the downside risk for the policyholder, and a certain proportion of the returns may be retained by Swiss Re Group (typically 10%). Additional disclosures are provided in Note 7 "Investments".

Funds held assets and liabilities
On the asset side, funds held by ceding companies consist mainly of amounts retained by the ceding company for business written on a funds withheld basis. In addition, the account also includes amounts arising from the application of the deposit method of accounting to ceded retrocession or reinsurance contracts.

On the liability side, funds held under reinsurance treaties consist mainly of amounts arising from the application of the deposit method of accounting to inward insurance and reinsurance contracts. In addition, the account also includes amounts retained from ceded business written on a funds withheld basis.

Funds withheld assets are assets that would normally be paid to the Group but are withheld by the cedent to reduce a potential credit risk or to retain control over investments. In case of funds withheld liabilities, it is the Group that withholds assets related to ceded business in order to reduce its credit risk or retain control over the investments.

The deposit method of accounting is applied to insurance and reinsurance contracts that do not indemnify the ceding company or the Group against loss or liability relating to insurance risk. Under the deposit method of accounting, the deposit asset or liability is initially measured based on the consideration paid or received. For contracts that transfer neither significant timing nor underwriting risk, and contracts that transfer only significant timing risk, changes in estimates of the timing or amounts of cash flows are accounted for by recalculating the effective yield. The deposit is then adjusted to the amount that would have existed had the new effective yield been applied since the inception of the contract. The revenue and expense recorded for such contracts is included in net investment income. For contracts that transfer only significant underwriting risk, once a loss is incurred, the deposit is adjusted by the present value of the incurred loss. At each subsequent balance sheet date, the portion of the deposit attributable to the incurred loss is recalculated by discounting the estimated future cash flows. The resulting changes in the carrying amount of the deposit are recognised in claims and claim adjustment expenses.

Funds withheld balances are presented together with assets and liabilities arising from the application of the deposit method because of their common deposit-type character.

Shadow adjustments
Shadow adjustments are recognised in other comprehensive income reflecting the offset of adjustments to deferred acquisition costs and PVFP, typically related to universal-life-type contracts, and policyholder liabilities. The purpose is to reflect the fact that certain amounts recorded as unrealised investment gains and losses within shareholders' equity will ultimately accrue to policyholders and not shareholders.

Shadow loss recognition testing becomes relevant in low interest rate environments. The test considers whether the hypothetical sale of AFS securities and the reinvestment of proceeds at lower yields would lead to negative operational earnings in future periods, thereby causing a loss recognition event. For shadow loss recognition testing, the Group uses current market yields to determine best estimate US GAAP reserves rather than using locked-in or current book yields. If the unlocked best estimate US GAAP reserves based on current market rates are in excess of reserves based on locked-in or current book yields, a shadow loss recognition reserve is set up. These reserves are recognised in other comprehensive income and do not impact net income. In addition, shadow loss recognition reserves can reverse up to the amount of losses recognised due to past loss events.

Premiums
Property and casualty reinsurance premiums are recorded when written and include an estimate for written premiums receivable at period end. Premiums earned are generally recognised in income over the contract period in proportion to the amount of reinsurance provided. Unearned premiums consist of the unexpired portion of reinsurance provided. Life reinsurance premiums are earned when due. Related policy benefits are recorded in relation to the associated premium or gross profits so that profits are recognised over the expected lives of the contracts.

Life and health reinsurance premiums for group coverages are generally earned over the term of the coverage. For group contracts that allow experience adjustments to premiums, such premiums are recognised as the related experience emerges.

Reinstatement premiums are due where coverage limits for the remaining life of the contract are reinstated under pre-defined contract terms. The recognition of reinstatement premiums as written depends on individual contract features. Reinstatement premiums are either recognised as written at the time a loss event occurs or in line with the recognition pattern of premiums written of the underlying contract. The accrual of reinstatement premiums is based on actuarial estimates of ultimate losses. Reinstatement premiums are generally earned in proportion to the amount of reinsurance provided.

Insurance and reinsurance ceded
The Group uses retrocession arrangements to increase its aggregate underwriting capacity, to diversify its risk and to reduce the risk of catastrophic loss on reinsurance assumed. The ceding of risks to retrocessionaires does not relieve the Group of its obligations to its ceding companies. The Group regularly evaluates the financial condition of its retrocessionaires and monitors the concentration of credit risk to minimise its exposure to financial loss from retrocessionaires' insolvency. Premiums and losses ceded under retrocession contracts are reported as reductions of premiums earned and claims and claim adjustment expenses. Amounts recoverable for ceded short- and long-duration contracts, including universal-life-type and investment contracts, are reported as assets in the accompanying consolidated balance sheet.

The Group provides reserves for uncollectible amounts on reinsurance balances ceded, based on management's assessment of the collectability of the outstanding balances.

Receivables
Premium and claims receivables which have been invoiced are accounted for at face value. Together with assets arising from the application of the deposit method of accounting that meet the definition of financing receivables they are regularly assessed for impairment. Evidence of impairment is the age of the receivable and/or any financial difficulties of the counterparty. Allowances are set up on the net balance, meaning all balances related to the same counterparty are considered. The amount of the allowance is set up in relation to the time a receivable has been due and any financial difficulties of the debtor and can be as high as the outstanding net balance.

Pensions and other post-retirement benefits
The Group accounts for its pension and other post-retirement benefit costs using the accrual method of accounting. Amounts charged to expense are based on periodic actuarial determinations.

Share-based payment transactions
As of 31 December 2019, the Group has a Leadership Performance Plan, restricted shares and a Global Share Participation Plan. These plans are described in more detail in Note 17 "Share-based payments". The Group accounts for share-based payment transactions with employees using the fair value method. Under the fair value method, the fair value of the awards is recognised in earnings over the vesting period.

For share-based compensation plans which are settled in cash, compensation costs are recognised as liabilities, whereas for equity-settled plans, compensation costs are recognised as an accrual to additional paid-in capital within shareholders' equity.

Treasury shares
Treasury shares are reported at cost in shareholders' equity.

Earnings per common share
Basic earnings per common share are determined by dividing net income available to shareholders by the weighted average number of common shares entitled to dividends during the year. Diluted earnings per common share reflect the effect on earnings and average common shares outstanding associated with dilutive securities.

Subsequent events
Subsequent events for the current reporting period have been evaluated up to 18 March 2020. This is the date on which the financial statements are available to be issued.

Adoption of new accounting standards
In February 2016, the FASB issued ASU 2016-02 "Leases", which creates topic 842, "Leases". The core principle of topic 842 is that a lessee should recognise the assets and liabilities that arise from leases. A lessee should recognise in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing the right to use the underlying asset for the lease term. This accounting treatment applies to finance leases and operating leases. The accounting applied by a lessor is largely unchanged from that applied under the former lease guidance. The ASU also requires that for qualifying sale-leaseback transactions the seller recognises any gain or loss (based on the estimated fair value of the asset at the time of sale) when control of the asset is transferred instead of amortising it over the lease period. The Group adopted ASU 2016-02 on 1 January 2019 together with the following related ASUs on topic 842, "Leases": ASU 2018-01, ASU 2018-10, ASU 2018-11, ASU 2018-20 and ASU 2019-01. In line with the modified retrospective adoption approach provided by ASU 2018-11"Targeted Improvements", the Group applied the new leases standard to its leases on the adoption date and recognised at the same time a cumulative-effect adjustment to the opening balance of retained earnings. For operating leases, the adoption on 1 January 2019 led to the balance sheet recognition of a lease liability of USD 538 million and a right-of-use asset of USD 490 million, which equals the lease liability adjusted by existing lease incentive and straight-line rent reserve balances. The lease right-of-use asset is included in "other assets" and the lease liability is included in "accrued expenses and other liabilities" on the balance sheet. The Group elected a package of practical expedients under the transition guidance within the new standard, which among other things allowed it to carry forward the historical lease classification. The cumulative-effect adjustment to the opening balance of retained earnings of USD 92 million resulted from the release of a deferred profit from past sale-leaseback transactions which was carried in accrued expenses and other liabilities. The deferred profit release can be found in the statement of shareholders' equity. The required new disclosures on leases are provided in Note 13 "Leases".

In March 2017, the FASB issued ASU 2017-08, "Premium Amortization on Purchased Callable Debt Securities", an update to subtopic 310-20, "Receivables – Nonrefundable Fees and Other Costs". The update applies to certain purchased callable debt securities held at a premium. The ASU requires that those premiums should be amortised to the earliest call date and not to the maturity date. The Group adopted ASU 2017-08 on a modified retrospective basis on 1 January 2019. The adoption did not have a material impact on the Group's financial statements.

In July 2017, the FASB issued ASU 2017-11, "Accounting for Certain Financial Instruments with Down Round Features", an update to topic 260, "Earnings Per Share", topic 480, "Distinguishing Liabilities from Equity" and topic 815, "Derivatives and Hedging". A down round feature is a provision in an equity-linked financial instrument (or embedded features) that reduces the exercise price if the entity later sells stock for a lower price or issues an equity-linked instrument with a lower exercise price than the instrument's original exercise price. The amendments in this update change the classification analysis of certain equity-linked financial instruments (or embedded features) with down round features and require that a down round feature no longer precludes equity classification when assessing whether the instrument is indexed to an entity's own stock. The Group adopted ASU 2017-11 on 1 January 2019. The adoption did not have an impact on the Group's financial statements.

In August 2017, the FASB issued ASU 2017-12, "Targeted Improvements to Accounting for Hedging Activities", an update to topic 815, "Derivatives and Hedging". The update expands and refines hedge accounting for both nonfinancial and financial risk components and aligns the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. The ASU eliminates the requirement to separately measure and report hedge ineffectiveness and requires the presentation of all items that affect earnings in the same income statement line as the hedged item. The new standard also provides alternatives for applying hedge accounting to additional hedging strategies and for measuring the hedged item in fair value hedges of interest rate risk. Further, the standard reduces the cost and complexity of applying hedge accounting by easing the requirements for effectiveness testing, hedge documentation and application of the critical terms match method. The Group adopted ASU 2017-12 on 1 January 2019. The adoption did not have a material impact on the Group's financial statements. The additional and extended disclosures required by ASU 2017-12 are presented in Note 9 "Derivative financial instruments".

In June 2018, the FASB issued ASU 2018-07, "Improvements to Nonemployee Share-Based Payment Accounting", an update to topic 718, "Compensation – Stock Compensation". The update expands the scope of topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. The Group adopted ASU 2018-07 on 1 January 2019. The adoption did not have an impact on the Group's financial statements.

In June 2018, the FASB issued ASU 2018-08, "Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made", an update to topic 958, "Not-for-Profit Entities". The amendments in this update clarify and improve the former guidance about whether a transfer of assets (or the reduction, settlement, or cancellation of liabilities) is a contribution or an exchange transaction. The Group adopted ASU 2018-08 on a modified prospective basis on 1 January 2019. The adoption did not have an impact on the Group's financial statements.

In October 2018, the FASB issued ASU 2018-16, "Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes", an update to topic 815, "Derivatives and Hedging". The amendments in this update permit the use of the OIS rate based on SOFR as a US benchmark interest rate in order to facilitate the LIBOR to SOFR transition. The Group adopted ASU 2018-16 on 1 January 2019. The adoption did not have an impact on the Group's financial statements.

Future adoption of new accounting standards

In June 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses", an update to topic 326, "Financial Instruments – Credit Losses". ASU 2016-13 replaces the incurred loss impairment methodology in current US GAAP with a methodology that reflects expected credit losses. The standard is applicable to all financial assets such as financial instruments that are measured at amortised cost, available-for-sale debt securities and reinsurance recoverables. The objective of the expected credit loss model is that a reporting entity recognises its estimate of expected credit losses incorporating forward-looking information in a valuation allowance for financial assets in scope. As amended by ASU 2019-10 "Effective Dates", ASU 2016-13 is effective for annual and interim periods beginning after 15 December 2022. For most affected financial assets, the ASU must be adopted using a modified retrospective approach, with a cumulative effect adjustment recorded to opening retained earnings on the adoption date. The Group is currently assessing the impact of the new requirements.

In January 2017, the FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment", an update to topic 350, "Intangibles – Goodwill and Other". This ASU simplifies the subsequent measurement of goodwill and eliminates Step 2 from the goodwill impairment test. In computing the implied fair value of goodwill under Step 2, an entity has to perform procedures to determine the fair value of its assets and liabilities (including unrecognised assets and liabilities) at the impairment testing date following the procedure that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Instead, under the amendments in this update, an entity should perform its regular goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognise an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognised should not exceed the total amount of goodwill allocated to that reporting unit. As amended by ASU 2019-10 "Effective Dates", ASU 2017-04 is effective for goodwill impairment tests in annual and interim periods beginning after 15 December 2022. Early application of the ASU is permitted. The Group is currently assessing the impact of the new requirements.

In August 2018, the FASB issued ASU 2018-12, "Targeted Improvements to the Accounting for Long-Duration Contracts", an update to topic 944, "Financial Services – Insurance". This ASU requires that the cash flows and net premium ratio will be updated for changes in insurance assumptions (eg mortality, morbidity, terminations) when measuring the liability for future policy benefits for nonparticipating traditional and limited-payment insurance and reinsurance contracts. There will no longer be a provision for adverse deviation. In addition, the discount rate used to reflect the time value of money in the calculation of the liability for future policy benefits will be standardised. Further, the ASU requires deferred acquisition costs (DAC) relating to most long-duration contracts to be amortised on a constant basis over the expected term of the contract. As amended by ASU 2019-09 "Effective Date", ASU 2018-12 is effective for annual periods beginning after 15 December 2023, and interim periods beginning after 15 December 2024. Due to the decision of the Board of Directors of Swiss Re Ltd to prepare the Group's consolidated financial statements in accordance with IFRS beginning 1 January 2024, the Group does not plan to adopt ASU 2018-12.

2 Information on business segments

The Group provides reinsurance and insurance throughout the world through its business segments. The business segments are determined by the organisational structure and by the way in which management reviews the operating performance of the Group.

The Group presents four core operating business segments: Property & Casualty Reinsurance, Life & Health Reinsurance, Corporate Solutions and Life Capital. The presentation of each segment's balance sheet is closely aligned to the segment legal entity structure. The assignment of assets and liabilities for entities that span more than one segment is determined by considering local statutory requirements, legal and other constraints, the economic view of duration and currency requirements of the reinsurance business written and the capacity of the segments to absorb risks. Interest expense is based on the segment's capital funding position. The tax impact of a segment is derived from the legal entity tax obligations and the segmentation of the pre-tax result. While most of the tax items can be directly attributed to individual segments, the tax which impacts two or more segments is allocated to the segments on a reasonable basis. Property & Casualty Reinsurance and Life & Health Reinsurance share the same year-to-date effective tax rate as both business segments belong to the Reinsurance Business Unit.

Accounting policies applied by the business segments are in line with those described in the summary of significant accounting policies (please refer to Note 1).

The Group operating segments are outlined below.

Property & Casualty Reinsurance and Life & Health Reinsurance
Reinsurance consists of two segments, Property & Casualty and Life & Health. The Reinsurance Business Unit operates globally, both through brokers and directly with clients, and provides a large range of solutions for risk and capital management. Clients include stock and mutual insurance companies as well as public sector and governmental entities. In addition to traditional reinsurance solutions, Reinsurance offers insurance-linked securities and other insurance-related capital market products in both Property & Casualty and Life & Health.

Property & Casualty includes the business lines property, casualty (including motor) and specialty. Life & Health includes the life and health lines of business.

Corporate Solutions
Corporate Solutions offers innovative insurance capacity to mid-sized and large multinational corporations across the globe. Offerings range from standard risk transfer covers and multi-line programmes to customised solutions tailored to the needs of clients. Corporate Solutions serves customers from over 50 offices worldwide.

Life Capital
Life Capital manages Swiss Re's primary life and health business. It encompasses the closed and open life and health insurance books, including the ReAssure business and the primary life and health insurance business comprising elipsLife and iptiQ.

Through ReAssure, Swiss Re acquires closed blocks of inforce life and health insurance business, either through reinsurance or corporate acquisition, and typically assumes responsibility for administering the underlying policies. The administration of the business may be managed directly or, where appropriate, in partnership with a third party. In the open books business, elipsLife, the Group life and health insurance business, offers solutions to pension funds, corporates and affinity groups through an intermediated business to business to consumer ("B2B2C") model. The iptiQ business, primarily the individual life and health business, partners with distributors and enables individuals to address their protection needs on a white labelled basis.

In the fourth quarter of 2019, the Group entered into an agreement to sell its subsidiary ReAssure Group plc, currently within the Life Capital business segment, to Phoenix Group Holdings plc. For more details on the transaction, please refer to Note 11 "Assets held for sale".

Group items
Items not allocated to the business segments are included in the "Group items" column, which encompasses Swiss Re Ltd, the Group's ultimate parent company, the former Legacy business in run-off, Principal Investments and certain Treasury units. Swiss Re Ltd charges trademark licence fees to the business segments which are reported as other revenues. Certain administrative expenses of the corporate centre functions that are not recharged to the operating segments are reported as Group items.

Consolidation
Segment information is presented net of external and internal retrocession and other intra-group arrangements. The Group total is obtained after elimination of intra-group transactions in the "Consolidation" column. This includes significant intra-group reinsurance arrangements, recharge of trademark licence fees and intersegmental funding.

a) Business segments – income statement

For the year ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Revenues							
Gross premiums written	16 545	14 527	4 694	2 739		–2 099	36 406
Net premiums written	16 098	12 647	4 122	1 175			34 042
Change in unearned premiums	–3	36	–197	–3			–167
Premiums earned	16 095	12 683	3 925	1 172			33 875
Fee income from policyholders		152		434			586
Net investment income – non-participating business	1 380	1 305	207	1 256	262	–335	4 075
Net realised investment gains/losses – non-participating business	–16	347	16	66	–348		65
Net investment result – unit-linked and with-profit business		–33		–1 560			–1 593
Other revenues	36	1	3		353	–354	39
Total revenues	17 495	14 455	4 151	1 368	267	–689	37 047
Expenses							
Claims and claim adjustment expenses	–11 614		–3 241				–14 855
Life and health benefits		–10 280		–1 489			–11 769
Return credited to policyholders		–5		1 038			1 033
Acquisition costs	–4 012	–2 045	–607	–255			–6 919
Operating expenses	–1 114	–758	–763	–549	–599	351	–3 432
Total expenses before interest expenses	–16 740	–13 088	–4 611	–1 255	–599	351	–35 942
Income/loss before interest and income tax expense/benefit	755	1 367	–460	113	–332	–338	1 105
Interest expenses	–313	–410	–24	–41	–105	338	–555
Income/loss before income tax expense/benefit	442	957	–484	72	–437	0	550
Income tax expense/benefit	–72	–155	75	–26	109		–69
Net income/loss before attribution of non-controlling interests	370	802	–409	46	–328	0	481
Income/loss attributable to non-controlling interests			4	–23			–19
Net income/loss after attribution of non-controlling interests	370	802	–405	23	–328	0	462
Interest on contingent capital instruments, net of tax		–41					–41
Net income/loss attributable to common shareholders	370	761	–405	23	–328	0	421
Claims ratio in %	72.2		82.6				74.2
Expense ratio in %	31.8		34.9				32.4
Combined ratio in %	104.0		117.5				106.6
Management expense ratio[1] in %		5.4					
Net operating margin[2] in %	4.3	9.4	–11.1	3.9			2.9

[1] Management expense ratio is calculated as "Operating expenses" divided by "Total revenues" excluding "Net realised investment gains/losses – non-participating business" and "Net investment result – unit-linked and with-profit business".

[2] Net operating margin is calculated as "Income before interest and income tax expense" divided by "Total revenues" excluding "Net investment result – unit-linked and with-profit business".

Business segments – income statement
For the year ended 31 December

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Revenues							
Gross premiums written	21 562	14 452	4 974	2 831		–1 591	42 228
Net premiums written	20 882	12 734	4 253	1 780			39 649
Change in unearned premiums	–1 607	101	–87	–82			–1 675
Premiums earned	19 275	12 835	4 166	1 698			37 974
Fee income from policyholders		169		451			620
Net investment income – non-participating business	1 419	1 207	234	1 193	552	–434	4 171
Net realised investment gains – non-participating business	883	628	162	18	–111		1 580
Net investment result – unit-linked and with-profit business		118		4 821			4 939
Other revenues	18	4	5	1	414	–412	30
Total revenues	**21 595**	**14 961**	**4 567**	**8 182**	**855**	**–846**	**49 314**
Expenses							
Claims and claim adjustment expenses	–14 783		–3 900				–18 683
Life and health benefits		–10 587		–2 500			–13 087
Return credited to policyholders		–162		–4 471			–4 633
Acquisition costs	–4 810	–1 975	–640	–409			–7 834
Operating expenses	–1 189	–746	–788	–721	–547	412	–3 579
Total expenses before interest expenses	**–20 782**	**–13 470**	**–5 328**	**–8 101**	**–547**	**412**	**–47 816**
Income/loss before interest and income tax expense/benefit	**813**	**1 491**	**–761**	**81**	**308**	**–434**	**1 498**
Interest expenses	–352	–445	–40	–72	–114	434	–589
Income/loss before income tax expense/benefit	**461**	**1 046**	**–801**	**9**	**194**	**0**	**909**
Income tax expense/benefit	–65	–147	143	–133	62		–140
Net income/loss before attribution of non-controlling interests	**396**	**899**	**–658**	**–124**	**256**	**0**	**769**
Income/loss attributable to non-controlling interests			11	–53			–42
Net income/loss after attribution of non-controlling interests	**396**	**899**	**–647**	**–177**	**256**	**0**	**727**
Interest on contingent capital instruments, net of tax							0
Net income/loss attributable to common shareholders	**396**	**899**	**–647**	**–177**	**256**	**0**	**727**
Claims ratio in %	76.7		93.6				79.7
Expense ratio in %	31.1		34.3				31.7
Combined ratio in %	107.8		127.9				111.4
Management expense ratio[1] in %		5.2					
Net operating margin[2] in %	3.8	10.0	–16.7	2.4			3.4

[1] Management expense ratio is calculated as "Operating expenses" divided by "Total revenues" excluding "Net realised investment gains/losses – non-participating business" and "Net investment result – unit-linked and with-profit business".
[2] Net operating margin is calculated as "Income before interest and income tax expense" divided by "Total revenues" excluding "Net investment result – unit-linked and with-profit business".

Business segments – balance sheet
As of 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Assets							
Fixed income securities	35 968	29 158	8 157	22 637	32		95 952
Equity securities	1 776	670	180	69	341		3 036
Other investments	13 298	3 200	132	2 550	6 447	–12 276	13 351
Short-term investments	2 547	1 174	451	1 207	38		5 417
Investments for unit-linked and with-profit business		424		29 122			29 546
Cash and cash equivalents	1 651	1 705	796	1 605	228		5 985
Deferred acquisition costs	2 156	4 784	488	789			8 217
Acquired present value of future profits		804		1 014			1 818
Reinsurance recoverable	2 345	4 359	5 486	4 914		–10 046	7 058
Other reinsurance assets	9 715	9 304	2 461	6 859		–5 541	22 798
Goodwill	1 908	1 823	206	134			4 071
Other	8 798	4 169	2 108	1 823	1 752	–8 329	10 321
Total assets	80 162	61 574	20 465	72 723	8 838	–36 192	207 570
Liabilities							
Unpaid claims and claim adjustment expenses	45 659	12 192	11 929	2 601	1	–4 936	67 446
Liabilities for life and health policy benefits		17 888	501	26 314		–5 110	39 593
Policyholder account balances		1 356		30 582			31 938
Other reinsurance liabilities	10 331	4 162	3 816	3 365	3	–5 812	15 865
Short-term debt	2 735	5 075		238		–6 415	1 633
Long-term debt	2 402	7 749	798	1 515	552	–4 514	8 502
Other	9 551	6 878	1 483	2 342	3 017	–9 405	13 866
Total liabilities	70 678	55 300	18 527	66 957	3 573	–36 192	178 843
Shareholders' equity	9 483	6 274	1 795	5 113	5 265	0	27 930
Non-controlling interests	1		143	653			797
Total equity	9 484	6 274	1 938	5 766	5 265	0	28 727
Total liabilities and equity	80 162	61 574	20 465	72 723	8 838	–36 192	207 570

Business segments – balance sheet
As of 31 December

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Assets							
Fixed income securities	38 877	32 008	7 473	3 088	127		81 573
Equity securities	1 749	620	172	57	395		2 993
Other investments	14 606	4 871	147	865	5 009	–12 606	12 892
Short-term investments	3 283	1 678	380	377	50		5 768
Investments for unit-linked and with-profit business		520					520
Cash and cash equivalents	3 674	1 694	1 698	494	2		7 562
Deferred acquisition costs	2 613	4 529	483	213			7 838
Acquired present value of future profits		577		465			1 042
Reinsurance recoverable	2 325	4 887	7 058	3 111		–11 483	5 898
Other reinsurance assets	12 524	8 471	2 667	5 951	3	–4 873	24 743
Goodwill	1 895	1 846	204				3 945
Other	7 723	5 325	2 342	658	2 256	–8 950	9 354
Assets held for sale[1]				74 983		–544	74 439
Total assets	**89 269**	**67 026**	**22 624**	**90 262**	**7 842**	**–38 456**	**238 567**
Liabilities							
Unpaid claims and claim adjustment expenses	49 963	13 094	12 881	2 489		–6 054	72 373
Liabilities for life and health policy benefits		20 679	728	4 250		–5 821	19 836
Policyholder account balances		1 401		4 004			5 405
Other reinsurance liabilities	12 899	2 904	4 987	2 034	2	–5 051	17 775
Short-term debt	915	1 500		66	60	–2 356	185
Long-term debt	5 511	11 225	798	838	494	–8 728	10 138
Other	11 662	7 970	1 093	1 015	1 900	–10 408	13 232
Liabilities held for sale[1]				68 624		–38	68 586
Total liabilities	**80 950**	**58 773**	**20 487**	**83 320**	**2 456**	**–38 456**	**207 530**
Shareholders' equity	**8 318**	**8 253**	**2 005**	**5 289**	**5 386**	**0**	**29 251**
Non-controlling interests	1		132	1 653			1 786
Total equity	**8 319**	**8 253**	**2 137**	**6 942**	**5 386**	**0**	**31 037**
Total liabilities and equity	**89 269**	**67 026**	**22 624**	**90 262**	**7 842**	**–38 456**	**238 567**

[1] Please refer to Note 11 "Assets held for sale" for more details.

b) Property & Casualty Reinsurance business segment – by line of business
For the year ended 31 December

2018 USD millions	Property	Casualty	Specialty	Unallocated	Total
Revenues					
Gross premiums written	6 403	7 595	2 547		16 545
Net premiums written	6 047	7 548	2 503		16 098
Change in unearned premiums	–18	116	–101		–3
Premiums earned	6 029	7 664	2 402		16 095
Net investment income				1 380	1 380
Net realised investment gains/losses				–16	–16
Other revenues				36	36
Total revenues	6 029	7 664	2 402	1 400	17 495
Expenses					
Claims and claim adjustment expenses	–4 284	–5 860	–1 470		–11 614
Acquisition costs	–1 189	–2 228	–595		–4 012
Operating expenses	–547	–388	–179		–1 114
Total expenses before interest expenses	–6 020	–8 476	–2 244	0	–16 740
Income/loss before interest and income tax expense	9	–812	158	1 400	755
Interest expenses				–313	–313
Income/loss before income tax expense	9	–812	158	1 087	442
Claims ratio in %	71.1	76.5	61.2		72.2
Expense ratio in %	28.8	34.1	32.2		31.8
Combined ratio in %	99.9	110.6	93.4		104.0

Property & Casualty Reinsurance business segment – by line of business

For the year ended 31 December

2019 USD millions	Property	Casualty	Specialty	Unallocated	Total
Revenues					
Gross premiums written	7 927	10 497	3 138		21 562
Net premiums written	7 329	10 452	3 101		20 882
Change in unearned premiums	–122	–1 166	–319		–1 607
Premiums earned	7 207	9 286	2 782		19 275
Net investment income				1 419	1 419
Net realised investment gains/losses				883	883
Other revenues				18	18
Total revenues	**7 207**	**9 286**	**2 782**	**2 320**	**21 595**
Expenses					
Claims and claim adjustment expenses	–5 328	–7 675	–1 780		–14 783
Acquisition costs	–1 365	–2 758	–687		–4 810
Operating expenses	–610	–395	–184		–1 189
Total expenses before interest expenses	**–7 303**	**–10 828**	**–2 651**	**0**	**–20 782**
Income/loss before interest and income tax expense	**–96**	**–1 542**	**131**	**2 320**	**813**
Interest expenses				–352	–352
Income/loss before income tax expense	**–96**	**–1 542**	**131**	**1 968**	**461**
Claims ratio in %	73.9	82.6	64.0		76.7
Expense ratio in %	27.4	34.0	31.3		31.1
Combined ratio in %	101.3	116.6	95.3		107.8

c) Life & Health Reinsurance business segment – by line of business
For the year ended 31 December

2018 USD millions	Life	Health	Unallocated	Total
Revenues				
Gross premiums written	10 356	4 171		14 527
Net premiums written	8 606	4 041		12 647
Change in unearned premiums	29	7		36
Premiums earned	8 635	4 048		12 683
Fee income from policyholders	152			152
Net investment income – non-participating business	1 001	304		1 305
Net realised investment gains/losses – non-participating business	59	–4	292	347
Net investment result – unit-linked and with-profit business	–33			–33
Other revenues	1			1
Total revenues	9 815	4 348	292	14 455
Expenses				
Life and health benefits	–7 128	–3 152		–10 280
Return credited to policyholders	–5			–5
Acquisition costs	–1 449	–596		–2 045
Operating expenses	–513	–245		–758
Total expenses before interest expenses	–9 095	–3 993	0	–13 088
Income before interest and income tax expense	720	355	292	1 367
Interest expenses			–410	–410
Income/loss before income tax expense	720	355	–118	957
Management expense ratio[1] in %	5.2	5.6		5.4
Net operating margin[2] in %	7.3	8.2		9.4

[1] Management expense ratio is calculated as "Operating expenses" divided by "Total revenues" excluding "Net realised investment gains/losses – non-participating business" and "Net investment result – unit-linked and with-profit business".
[2] Net operating margin is calculated as "Income before interest and income tax expense" divided by "Total revenues" excluding "Net investment result – unit-linked and with-profit business".

Life & Health Reinsurance business segment – by line of business

For the year ended 31 December

2019 USD millions	Life	Health	Unallocated	Total
Revenues				
Gross premiums written	10 123	4 329		14 452
Net premiums written	8 522	4 212		12 734
Change in unearned premiums	126	–25		101
Premiums earned	8 648	4 187		12 835
Fee income from policyholders	169			169
Net investment income – non-participating business	912	295		1 207
Net realised investment gains/losses – non-participating business	–24		652	628
Net investment result – unit-linked and with-profit business	118			118
Other revenues	3	1		4
Total revenues	**9 826**	**4 483**	**652**	**14 961**
Expenses				
Life and health benefits	–7 316	–3 271		–10 587
Return credited to policyholders	–162			–162
Acquisition costs	–1 295	–680		–1 975
Operating expenses	–472	–274		–746
Total expenses before interest expenses	**–9 245**	**–4 225**	**0**	**–13 470**
Income before interest and income tax expense	**581**	**258**	**652**	**1 491**
Interest expenses			–445	–445
Income before income tax expense	**581**	**258**	**207**	**1 046**
Management expense ratio[1] in %	4.8	6.1		5.2
Net operating margin[2] in %	6.0	5.8		10.0

[1] Management expense ratio is calculated as "Operating expenses" divided by "Total revenues" excluding "Net realised investment gains/losses – non-participating business" and "Net investment result – unit-linked and with-profit business".

[2] Net operating margin is calculated as "Income before interest and income tax expense" divided by "Total revenues" excluding "Net investment result – unit-linked and with-profit business".

d) Net premiums earned and fee income from policyholders by geography

Net premiums earned and fee income from policyholders by region for the years ended 31 December

USD millions	2018	2019
Americas	16 075	18 158
Europe (including Middle East and Africa)	11 044	12 017
Asia-Pacific	7 342	8 419
Total	34 461	**38 594**

Net premiums earned and fee income from policyholders by country for the years ended 31 December.

USD millions	2018	2019
United States	13 519	15 804
United Kingdom	3 487	3 593
China	1 644	2 136
Australia	2 061	2 026
Japan	1 426	1 620
Germany	1 226	1 330
Canada	1 209	1 205
Switzerland	952	1 071
France	789	941
Netherlands	837	913
South Korea	558	731
Other	6 753	7 224
Total	34 461	**38 594**

Net premiums earned and fee income from policyholders are allocated by country, based on the underlying contract.

3 Insurance information

Premiums earned and fees assessed against policyholders

For the years ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Premiums earned, thereof:					
Direct		67	3 429	2 053	5 549
Reinsurance	16 314	13 358	916	110	30 698
Intra-group transactions (assumed and ceded)	161	577	−161	−577	0
Premiums earned before retrocession to external parties	16 475	14 002	4 184	1 586	36 247
Retrocession to external parties	−380	−1 319	−259	−414	−2 372
Net premiums earned	16 095	12 683	3 925	1 172	33 875
Fee income from policyholders, thereof:					
Direct				337	337
Reinsurance		153		97	250
Gross fee income before retrocession to external parties		153		434	587
Retrocession to external parties		−1			−1
Net fee income	0	152	0	434	586

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Premiums earned, thereof:					
Direct		14	3 837	2 211	6 062
Reinsurance	19 577	13 836	910	95	34 418
Intra-group transactions (assumed and ceded)	265	205	−265	−205	0
Premiums earned before retrocession to external parties	19 842	14 055	4 482	2 101	40 480
Retrocession to external parties	−567	−1 220	−316	−403	−2 506
Net premiums earned	**19 275**	**12 835**	**4 166**	**1 698**	**37 974**
Fee income from policyholders, thereof:					
Direct				360	360
Reinsurance		170		91	261
Gross fee income before retrocession to external parties		170		451	621
Retrocession to external parties		−1			−1
Net fee income	**0**	**169**	**0**	**451**	**620**

Claims and claim adjustment expenses

For the year ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Claims paid, thereof:					
Gross claims paid to external parties	–10 802	–10 346	–3 150	–3 454	–27 752
Intra-group transactions (assumed and ceded)	–209	–408	209	408	0
Claims before receivables from retrocession to external parties	–11 011	–10 754	–2 941	–3 046	–27 752
Retrocession to external parties	748	1 214	444	501	2 907
Net claims paid	–10 263	–9 540	–2 497	–2 545	–24 845
Change in unpaid claims and claim adjustment expenses; life and health benefits, thereof:					
Gross – with external parties	–1 251	–629	–261	1 031	–1 110
Intra-group transactions (assumed and ceded)	294	–78	–294	78	0
Unpaid claims and claim adjustment expenses; life and health benefits before impact of retrocession to external parties	–957	–707	–555	1 109	–1 110
Retrocession to external parties	–394	–33	–189	–53	–669
Net unpaid claims and claim adjustment expenses; life and health benefits	–1 351	–740	–744	1 056	–1 779
Claims and claim adjustment expenses; life and health benefits	–11 614	–10 280	–3 241	–1 489	–26 624

Acquisition costs

For the year ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Acquisition costs, thereof:					
Gross acquisition costs with external parties	–4 073	–2 211	–660	–364	–7 308
Intra-group transactions (assumed and ceded)	–4	–58	4	58	0
Acquisition costs before impact of retrocession to external parties	–4 077	–2 269	–656	–306	–7 308
Retrocession to external parties	65	224	49	51	389
Net acquisition costs	–4 012	–2 045	–607	–255	–6 919

Claims and claim adjustment expenses

For the year ended 31 December

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Claims paid, thereof:					
Gross claims paid to external parties	–12 453	–10 077	–3 836	–3 481	–29 847
Intra-group transactions (assumed and ceded)	–585	–165	585	165	0
Claims before receivables from retrocession to external parties	–13 038	–10 242	–3 251	–3 316	–29 847
Retrocession to external parties	352	1 049	264	472	2 137
Net claims paid	**–12 686**	**–9 193**	**–2 987**	**–2 844**	**–27 710**
Change in unpaid claims and claim adjustment expenses; life and health benefits, thereof:					
Gross – with external parties	–2 151	–1 394	–1 143	409	–4 279
Intra-group transactions (assumed and ceded)	–25	–8	25	8	0
Unpaid claims and claim adjustment expenses; life and health benefits before impact of retrocession to external parties	–2 176	–1 402	–1 118	417	–4 279
Retrocession to external parties	79	8	205	–73	219
Net unpaid claims and claim adjustment expenses; life and health benefits	**–2 097**	**–1 394**	**–913**	**344**	**–4 060**
Claims and claim adjustment expenses; life and health benefits	**–14 783**	**–10 587**	**–3 900**	**–2 500**	**–31 770**

Acquisition costs

For the year ended 31 December

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Acquisition costs, thereof:					
Gross acquisition costs with external parties	–4 875	–2 148	–729	–458	–8 210
Intra-group transactions (assumed and ceded)	–28	–4	28	4	0
Acquisition costs before impact of retrocession to external parties	–4 903	–2 152	–701	–454	–8 210
Retrocession to external parties	93	177	61	45	376
Net acquisition costs	**–4 810**	**–1 975**	**–640**	**–409**	**–7 834**

Reinsurance recoverable on unpaid claims and policy benefits

As of 31 December 2018 and 2019, the Group had a reinsurance recoverable of USD 7 058 million and USD 5 898 million, respectively. The concentration of credit risk is regularly monitored and evaluated. The reinsurance programme with Berkshire Hathaway and subsidiaries accounted for 29% and 33% of the Group's reinsurance recoverable as of year-end 2018 and 2019, respectively.

Reinsurance receivables

Reinsurance receivables as of 31 December were as follows:

USD millions	2018	**2019**
Premium receivables invoiced	3 041	3 589
Receivables invoiced from ceded re/insurance business	445	444
Assets arising from the application of the deposit method of accounting and meeting the definition of financing receivables	124	249
Recognised allowance	–58	–56

Policyholder dividends

Policyholder dividends are recognised as an element of policyholder benefits. The relative percentage of participating insurance of the life and health policy benefits in 2018 and 2019 was 9% and 10%, respectively. The amount of policyholder dividend expense in 2018 and 2019 was USD 245 million and USD 165 million, respectively.

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4 Premiums written

For the years ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Consolidation	Total
Gross premiums written, thereof:						
Direct		67	3 648	2 055		5 770
Reinsurance	16 269	13 310	947	110		30 636
Intra-group transactions (assumed)	276	1 150	99	574	–2 099	0
Gross premiums written	16 545	14 527	4 694	2 739	–2 099	36 406
Intra-group transactions (ceded)	–99	–574	–276	–1 150	2 099	0
Gross premiums written before retrocession to external parties	16 446	13 953	4 418	1 589		36 406
Retrocession to external parties	–348	–1 306	–296	–414		–2 364
Net premiums written	16 098	12 647	4 122	1 175	0	34 042

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Consolidation	Total
Gross premiums written, thereof:						
Direct		14	3 869	2 230		6 113
Reinsurance	21 189	13 794	1 037	95		36 115
Intra-group transactions (assumed)	373	644	68	506	–1 591	0
Gross premiums written	21 562	14 452	4 974	2 831	–1 591	42 228
Intra-group transactions (ceded)	–68	–506	–373	–644	1 591	0
Gross premiums written before retrocession to external parties	21 494	13 946	4 601	2 187		42 228
Retrocession to external parties	–612	–1 212	–348	–407		–2 579
Net premiums written	**20 882**	**12 734**	**4 253**	**1 780**	**0**	**39 649**

5 Unpaid claims and claim adjustment expenses

A reconciliation of the opening and closing reserve balances for unpaid claims and claim adjustment expenses for the years ended 31 December is presented as follows:

USD millions	2018	**2019**
Balance as of 1 January	66 795	67 446
Reinsurance recoverable	–4 458	–3 606
Deferred expense on retroactive reinsurance	–240	–169
Net balance as of 1 January	62 097	**63 671**
Incurred related to:		
Current year	27 457	29 338
Prior year	42	2 231
Amortisation of deferred expense on retroactive reinsurance and impact of commutations	–41	–23
Total incurred	27 458	**31 546**
Paid related to:		
Current year	–9 344	–9 702
Prior year	–15 501	–18 008
Total paid	–24 845	**–27 710**
Foreign exchange	–1 748	161
Effect of acquisitions, disposals, new retroactive reinsurance and other items	709	1 302
Net balance as of period end	63 671	**68 970**
Reinsurance recoverable	3 606	3 732
Deferred expense on retroactive reinsurance	169	168
Reclassified to liabilities held for sale		–497
Balance as of period end	67 446	**72 373**

Prior-year development

Non-life claims development during 2019 on prior accident years is mainly due to adverse development for Casualty impacted by large man-made losses predominantly in North America. Property was impacted by adverse natural catastrophe development in Asia as well as large man-made losses, partly offset by reserves releases from North America natural catastrophe events. Specialty was impacted by large man-made losses and adverse development, partly offset by reserves releases from North America natural catastrophe events.

For life and health lines of business, claims development on prior year business was mainly driven by adverse development for the disability portfolio in Australia, Continental Europe and the US. This was partly offset by positive experience in other regions and lines of business including Canada, Asia, and the UK. Claims development related to prior years for the disability portfolio also includes an element of interest accretion for unpaid claims reported at an estimated present value. Unfavourable claims development for the Australia group disability portfolio is offset by a reduction in profit share reserve.

A summary of prior year net claims and claim adjustment expenses development by lines of business for the years ended 31 December is shown below[1]:

USD millions	2018	2019
Line of business:		
Property	–340	367
Casualty	428	1 425
Specialty	–295	105
Life and health	249	334
Total	42	**2 231**

[1] Adverse development is shown as positive numbers, and represents a charge to the income statement. Favourable development is shown as negative, and represents a credit to the income statement.

US asbestos and environmental claims exposure

The Group's obligation for claims payments and claims settlement charges also includes obligations for long-latent injury claims arising out of policies written prior to 1986, in particular in the area of US asbestos and environmental liability.

At the end of 2019, the Group carried net reserves for US asbestos and environmental liabilities equal to USD 1 584 million. During 2019, the Group incurred net losses of USD 32 million and net paid of USD 308 million in relation to these liabilities.

The net paid losses include a settlement of USD 190 million for late asbestos and environmental reported claims presented by one cedent in Q2 2019.

Estimating ultimate asbestos and environmental liabilities is particularly complex for a number of reasons relating in part to the long period between exposure and manifestation of claims, and in part to other factors, which include risks and lack of predictability inherent in complex litigation, changes in projected costs to resolve, and in the projected number of, asbestos and environmental claims, the effect of bankruptcy protection, insolvencies, and changes in the legal, legislative and regulatory environment. As a result, the Group believes that projection of exposures for asbestos and environmental claims is subject to far less predictability relative to non-environmental and non-asbestos exposures. Management believes that its reserves for asbestos and environmental claims are appropriately established based upon known facts and the current state of the law. However, reserves are subject to revision as new information becomes available and as claims develop. Additional liabilities may arise for amounts in excess of reserves, and the Group's estimate of claims and claim adjustment expenses may change. Any such additional liabilities or increases in estimates cannot be reasonably estimated in advance but could result in charges that could be material to operating results.

Short duration contract unpaid claims and claim adjustment expenses

Basis of presentation for claims development information

This section of the note provides claims development information on an accident year basis.

Claims development information and information on reserves for claims relating to insured events that have occurred but have not yet been reported or not enough reported ("IBNR") are generally presented by line of business for individually significant categories. Starting from a line of business split, additional aggregation or disaggregation is provided where appropriate, necessary and practicable ("disaggregation categories"). For instance, Reinsurance liability and motor lines of business are further disaggregated into proportional and non-proportional treaty types to provide more specific information on claims development, whereas specialty is shown as one distinct category.

In the Property & Casualty Reinsurance and Corporate Solutions segments, all contracts that transfer significant insurance risk are included in scope to the extent they can be allocated to a disaggregation category. For many reinsurance contracts, proportional contracts in particular, ceding companies do not report losses by accident year. In these cases, the Group has allocated reported losses by underwriting year to accident year to produce the accident year tables. Similarly, IBNR is calculated on an underwriting year basis and then the liabilities are allocated to accident year.

In the Life & Health Reinsurance segment, contracts classified as short duration include group life business, certain types of disability and long-term care contracts, group accident, health coverage including critical illness and medical expenses. The Group provides claims development information for Life & Health Reinsurance where reported accident year information is available and there is potential for claims development. This primarily applies to the Group's disability lines classified as short duration. This business is generally considered to have relatively higher claims estimation uncertainty than other life and health lines such as group life, due to longer claims development periods.

In the Life Capital segment, short duration contracts include mainly disability medical expenses business. The Group provides no claims development information for Life Capital as its short duration reserves are not material.

Amounts shown in the claims development tables are net of external retrocession and retrocession between business segments to the extent a retrocession program can be allocated to a disaggregation category. Ceded retroactive reinsurance is not included in the claims development table if it cannot be allocated on a reasonable basis to the disaggregation categories used to present claims development information.

Claims development information and information on IBNR reserves are shown on a nominal basis, also for cases where the Group discounts claims liabilities for measurement under US GAAP. Information is shown per accident year and by reporting period. The number of years shown in the claims development tables differs by business segment:

For Property & Casualty Reinsurance and for Life & Health Reinsurance long-tail, the Group discloses data for ten accident years and reporting periods.

The Corporate Solutions business segment was created in 2012. Therefore, seven accident years and reporting periods are shown for this business unit. All but an immaterial portion of claims arising from accident years prior to 2012 relate to accident years which are over ten years ago and therefore out of the required range of disclosure. Business ceded to Property & Casualty Reinsurance prior to 2012 is included in the net claims development information reported by this segment.

The current reporting period estimate of net claims liabilities for accident years older than the number of years shown in the claims development tables is presented as a total after disclosure of cumulative paid claims.

The information presented in claims development tables is presented at current balance sheet foreign exchange rates as of the date of these financial statements to permit an analysis of claims development excluding the impact of foreign exchange movements.

Some of the information provided in the following tables, is Required Supplementary Information (RSI) under US GAAP. Therefore it does not form part of these consolidated audited financial statements. Claims development information for all periods except the current reporting period and any information derived from it – including average annual percentage payout of claims incurred – is considered RSI and is identified as RSI in the tables presented.

Methodology for determining the presented amounts of liabilities for IBNR claims

The liability for unpaid claims and claim adjustment expenses is based on an estimate of the ultimate cost of settling the claims based on both information reported to us by ceding companies and internal estimates.

Non-life re/insurance contracts

For reinsurance business, cedents report their case reserves and their estimated IBNR to the Group. The Group develops and recognises its own estimate of IBNR claims, which includes circumstances in which the cedent has not reported any claims to the Group or where the Group's estimate of reserves needed to cover reported claims differs from the amounts reported by cedents. For reinsurance business, case reserves and estimated IBNR reported by cedents to the Group have been accounted for as case reserves in previous years. IBNR reported by cedents are presented together with the Group's own estimate of IBNR as IBNR in the claims development tables. Reserving for insurance business is performed similarly, except that the Group estimates case reserves as well. Reserving is done on portfolio or contract level depending on the features of the contract:

For business reviewed on a portfolio level, the expected ultimate losses are set for most lines and types of business based on analysis performed using standard actuarial techniques. In general, contracts are aggregated into portfolios by combining contracts with similar features.

In most cases, these standard actuarial techniques encompass a number of loss development factor techniques applied to claim tables of paid and reported losses. Other actuarial techniques may be applicable to specific categories. For instance, the analysis of frequency and severity could be applied in all disaggregation categories. Life contingency techniques for projecting regular payments related to bodily injury claims are applied to motor proportional, motor non-proportional, liability proportional, liability non-proportional, accident and health and similar Corporate Solutions lines, where the information is available. In some cases, techniques specific to the projection of future payments for specific risks such as asbestos or pollution claims are applied to both proportional and non-proportional liability claims, also in Corporate Solutions (see also separate section "US asbestos and environmental claims exposure" on page 207).

Contract-level reserving is based on standard actuarial techniques but requires more detailed contract, pricing, claim and exposure information than required for the business reviewed on a portfolio level.

In addition, the following applies to all non-life re/insurance business:

- For the most recent underwriting years, reliance may be made on the Group's costing and underwriting functions for the initial estimates of claims, although the initial reserving estimates may differ from these pricing estimates if there is good reason to believe losses are likely to emerge higher or lower, and in light of the limited claims experience to date. Reviews of those initial estimates are performed regularly, forming a basis for adjustments on both the current and prior underwriting years.

- The reserving process considers any information available in respect of either a specific case or a large loss event and the impact of any unusual features in the technical accounting of information provided by cedents.

Life and health re/insurance contracts

For the Life & Health Reinsurance long tail business, the liability for IBNR claims includes provision for "not yet reported claims" expected to have been incurred in respect of both already processed and not yet processed reinsurance accounts and generally includes provisions for the cost of claims on disability contracts that currently are within their deferred period. The IBNR reserving calculations have been made using appropriate techniques, such as chain ladder and/or Bornhuetter-Ferguson approaches, depending upon the level of detail available and the assumed level of development of the claim. For certain lines of business, IBNR claims reserves include reported but not admitted claims, allowing for expected rates of decline for these claims.

Claims frequency information

Claims frequency information is not available for the disaggregation categories of Property & Casualty Reinsurance, as cedents do not report claims frequency information to the Group for most of the assumed reinsurance contract types. These contracts are to be found in all disaggregation categories presented.

Life & Health Reinsurance reports claims frequency information based on individual incidence. The number of reported claims is the actual number of claims booked. For Group income protection business, claims with multiple payments in a year are counted as one claim with the corresponding amount annualised. Claims that are reported but not admitted are included in the claim count.

For Corporate Solutions, claims frequency is displayed for direct business only, as individual claims information is generally not available for assumed and ceded business. Claims are counted individually per contract to produce the claims frequency table. For some direct business, summary reports are received and multiple claims are booked under a single claim code; this is usually done at a program, policy year, state, country and/or line of business level of detail. This approach may be applied to business which has a high volume of claim counts, but with only minor claims dollars associated with each claim.

Property & Casualty Reinsurance – Property

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	thereof IBNR
2010	*2 494*	*2 447*	*2 317*	*2 337*	*2 422*	*2 464*	*2 572*	*2 544*	*2 504*	2 482	9
2011		*4 311*	*4 372*	*4 187*	*4 242*	*4 195*	*4 190*	*4 208*	*4 245*	4 247	12
2012			*2 683*	*2 512*	*2 311*	*2 269*	*2 240*	*2 225*	*2 225*	2 219	4
2013				*3 111*	*3 128*	*2 954*	*2 870*	*2 846*	*2 831*	2 826	0
2014					*2 719*	*2 562*	*2 383*	*2 351*	*2 348*	2 335	4
2015						*2 817*	*2 753*	*2 579*	*2 548*	2 508	31
2016							*3 901*	*3 632*	*3 333*	3 327	47
2017								*6 024*	*5 929*	5 692	66
2018	*RSI*								*4 648*	5 110	392
2019										5 166	2 553
Total										**35 912**	**3 118**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2010	*381*	*1 494*	*1 785*	*1 895*	*2 090*	*2 242*	*2 385*	*2 428*	*2 442*	2 450
2011		*673*	*2 407*	*3 215*	*3 654*	*3 938*	*4 039*	*4 159*	*4 182*	4 196
2012			*236*	*1 584*	*1 971*	*2 090*	*2 133*	*2 152*	*2 164*	2 172
2013				*537*	*1 988*	*2 489*	*2 682*	*2 741*	*2 762*	2 778
2014					*462*	*1 702*	*2 081*	*2 208*	*2 253*	2 269
2015						*465*	*1 646*	*2 160*	*2 325*	2 401
2016							*637*	*2 211*	*2 840*	3 051
2017								*978*	*3 666*	4 754
2018	*RSI*								*631*	3 443
2019										915
Total										**28 429**
All liabilities before 2010										170
Liabilities for claims and claim adjustment expenses, net of reinsurance										**7 653**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Property (RSI)	*16.6%*	*49.7%*	*17.6%*	*6.5%*	*3.9%*	*2.2%*	*2.4%*	*0.9%*	*0.4%*	*0.3%*

The liability for unpaid claims and claim adjustment expenses for property in Property & Casualty Reinsurance shows positive development on most recent accident years. Claims in accident year 2011 were at a high level due to several large natural catastrophes including the earthquake and tsunami in Japan, the earthquakes in Christchurch, New Zealand, and floods in Thailand. The 2017 accident year claims incurred are higher due to natural catastrophes, mainly stemming from Cyclone Debbie, hurricanes Harvey, Irma and Maria in the Americas, the two earthquakes in Mexico and the wildfires in California. The 2018 to 2019 accident year claims incurred are lower than 2017 but include a higher level of natural catastrophes than 2012 to 2016.

Property & Casualty Reinsurance – Liability, proportional

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	thereof IBNR
2010	836	982	922	902	898	901	890	856	832	837	69
2011		640	697	721	668	626	622	596	590	589	62
2012			518	602	558	530	502	511	502	516	61
2013				727	749	757	752	756	746	745	108
2014					993	984	997	986	975	1 010	223
2015						1 260	1 309	1 400	1 473	1 546	390
2016							1 705	1 714	1 712	1 815	750
2017								1 960	2 069	2 210	1 177
2018	RSI								1 894	2 071	1 459
2019										2 703	2 331
Total										**14 042**	**6 630**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	29	159	318	409	517	612	662	693	713	732
2011		3	108	181	250	336	382	416	439	461
2012			13	115	181	240	294	352	387	423
2013				14	126	232	347	429	504	558
2014					23	157	291	429	565	660
2015						34	209	423	652	902
2016							46	101	396	662
2017								50	251	542
2018	RSI								52	309
2019										83
Total										**5 332**
All liabilities before 2010										1 117
Liabilities for claims and claim adjustment expenses, net of reinsurance										**9 827**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Liability, proportional (RSI)	2.3%	13.0%	14.4%	13.2%	13.1%	10.0%	6.5%	4.9%	3.1%	2.2%

The increase in the incurred losses for accident years 2013 to 2019 is driven by volume increases of business being written. The increases in the incurred losses in reporting year 2019 for accident years 2015 to 2018 are driven by US business.

In line with the Group's policy, cash flows under Loss Portfolio Transfers are reported through claims paid. For longer-tailed lines and depending on the business volume written, timing of cash flows can lead to net inward payments across the whole portfolio in the first development year of the contract for some accident years.

Property & Casualty Reinsurance – Liability, non-proportional

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	526	440	405	380	359	338	329	314	318	312	31
2011		403	432	469	428	384	351	344	329	331	42
2012			329	347	307	279	258	248	225	220	49
2013				409	390	354	299	274	252	253	67
2014					434	439	407	364	336	355	118
2015						1 806	1 846	1 815	1 832	1 857	154
2016							585	568	594	641	175
2017								491	508	591	219
2018	RSI								449	452	298
2019										2 412	580
Total										**7 424**	**1 733**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	1	12	36	53	88	106	125	149	157	166
2011		1	10	65	111	138	145	158	172	189
2012			–4	11	35	53	84	99	113	128
2013				–2	11	37	59	83	108	132
2014					–2	8	40	71	99	141
2015						0	92	199	329	480
2016							13	208	233	285
2017								–2	18	47
2018	RSI								–1	21
2019										209
Total										**1 798**
All liabilities before 2010										4 063
Liabilities for claims and claim adjustment expenses, net of reinsurance										**9 689**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Liability, non-proportional (RSI)	0.8%	7.1%	8.7%	8.6%	9.8%	7.3%	6.5%	6.2%	3.9%	3.0%

The increase in incurred losses for accident year 2015 compared to other years is due to an increase in volume of business written in that year. Accident year 2019 includes an Adverse Development Cover and a Loss Portfolio Transfer written with Corporate Solutions. Liabilities before 2010 include reserves for historic US asbestos and environmental losses.

In line with the Group's policy, cash flows under Loss Portfolio Transfers are reported through claims paid. For longer-tailed lines and depending on the business volume written, timing of cash flows can lead to net inward payments across the whole portfolio in the first development year of the contract for some accident years.

Property & Casualty Reinsurance – Accident & Health

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	thereof IBNR
2010	273	225	231	219	216	218	211	206	201	200	22
2011		228	248	244	236	239	233	233	229	228	26
2012			321	331	316	306	303	297	295	290	29
2013				342	349	336	326	318	316	311	44
2014					300	334	326	314	304	302	56
2015						432	430	408	398	389	64
2016							590	625	620	584	141
2017								731	765	726	238
2018	RSI								722	810	249
2019										799	476
Total										**4 639**	**1 345**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2010	25	84	115	130	138	145	148	156	158	160
2011		48	120	141	152	161	165	174	177	180
2012			76	174	200	216	226	235	239	243
2013				53	137	177	200	214	221	228
2014					30	102	144	171	189	205
2015						61	136	189	221	240
2016							73	177	269	325
2017								95	232	331
2018	RSI								97	311
2019										111
Total										**2 334**
All liabilities before 2010										3 164
Liabilities for claims and claim adjustment expenses, net of reinsurance										**5 469**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Accident & Health (RSI)	15.4%	25.3%	13.0%	7.4%	4.4%	3.2%	2.3%	2.0%	1.2%	1.4%

The increase in incurred losses from accident year 2015 onwards is due to an increase in the volume of workers' compensation written on a proportional basis. The 2010 and prior accident years include the run-off of business written by entities acquired as part of the acquisition of General Electric Insurance Solutions during 2006. This business, which generally had a longer payment pattern, was not renewed.

Property & Casualty Reinsurance – Motor, proportional
Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	585	646	686	692	690	692	691	690	690	690	0
2011		989	983	954	911	913	912	911	902	905	–18
2012			1 467	1 457	1 440	1 429	1 420	1 418	1 415	1 415	22
2013				1 536	1 511	1 517	1 491	1 485	1 480	1 480	10
2014					1 975	1 939	1 938	1 922	1 912	1 910	–4
2015						1 902	1 902	1 906	1 910	1 910	10
2016							2 475	2 592	2 642	2 644	63
2017								2 366	2 385	2 371	216
2018	RSI								2 026	2 061	393
2019										2 024	1 088
Total										**17 410**	**1 780**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	197	449	533	569	646	655	664	669	671	673
2011		263	662	842	875	893	903	910	913	916
2012			468	1 089	1 247	1 296	1 327	1 347	1 360	1 369
2013				566	1 156	1 336	1 382	1 412	1 427	1 436
2014					731	1 453	1 696	1 773	1 808	1 828
2015						788	1 428	1 669	1 770	1 814
2016							818	1 811	2 158	2 338
2017								753	1 515	1 847
2018	RSI								619	1 326
2019										651
Total										**14 198**
All liabilities before 2010										311
Liabilities for claims and claim adjustment expenses, net of reinsurance										**3 523**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Motor, proportional (RSI)	33.3%	37.7%	13.5%	4.5%	3.6%	1.2%	0.9%	0.5%	0.3%	0.2%

The increase in the incurred losses from accident years 2010 to 2016 is driven by new business volume across all regions. Proportional motor business includes both longer-tailed liability business and shorter-tailed hull business.

The negative IBNRs are due to overstated case reserves, mainly on the German business, and accident year 2011 includes the effects of an outwards proportional contract on inwards non-proportional business.

Property & Casualty Reinsurance – Motor, non-proportional
Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	*324*	*288*	*283*	*269*	*262*	*254*	*246*	*242*	*244*	244	31
2011		*406*	*444*	*429*	*427*	*412*	*405*	*393*	*420*	412	105
2012			*335*	*352*	*331*	*316*	*317*	*300*	*309*	304	58
2013				*433*	*455*	*458*	*441*	*427*	*432*	432	62
2014					*408*	*441*	*437*	*435*	*429*	408	72
2015						*388*	*411*	*446*	*442*	455	96
2016							*471*	*588*	*551*	545	154
2017								*580*	*611*	599	210
2018	*RSI*								*492*	532	260
2019										1 190	434
Total										**5 121**	**1 482**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	*5*	*22*	*48*	*67*	*83*	*100*	*113*	*120*	*130*	138
2011		*-10*	*20*	*56*	*80*	*104*	*118*	*134*	*144*	151
2012			*2*	*25*	*50*	*85*	*111*	*137*	*158*	170
2013				*7*	*84*	*148*	*193*	*219*	*246*	261
2014					*4*	*60*	*104*	*143*	*187*	217
2015						*–1*	*33*	*92*	*157*	203
2016							*8*	*65*	*126*	181
2017								*9*	*59*	126
2018	*RSI*								*4*	36
2019										91
Total										**1 574**
All liabilities before 2010										2 802
Liabilities for claims and claim adjustment expenses, net of reinsurance										**6 349**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Motor, non-proportional (RSI)	*1.4%*	*9.5%*	*11.1%*	*9.9%*	*8.0%*	*6.5%*	*4.9%*	*3.1%*	*2.9%*	*3.4%*

Claims development in non-proportional motor business is considered long-tailed as it is dominated by liability exposures leading to bodily injury claims which pay out for the lifetime of the claimant.

For accident year 2011, negative claims paid in the first year are due to the commutation of an external retrocession on acquired retroactive business and the increase in incurred losses for accident year 2019 compared to other years is due to an increase in volume of business written.

In line with the Group's policy, cash flows under Loss Portfolio Transfers are reported through claims paid. For longer-tailed lines and depending on the business volume written, timing of cash flows can lead to net inward payments across the whole portfolio in the first development year of the contract for some accident years.

Property & Casualty Reinsurance – Specialty

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	*1 219*	*1 231*	*1 176*	*1 151*	*1 131*	*1 100*	*1 079*	*1 080*	*1 071*	1 081	27
2011		*1 285*	*1 276*	*1 190*	*1 107*	*1 152*	*1 148*	*1 164*	*1 146*	1 144	4
2012			*940*	*1 000*	*1 021*	*1 002*	*1 002*	*990*	*987*	982	11
2013				*1 086*	*1 013*	*973*	*938*	*928*	*906*	894	21
2014					*1 098*	*1 090*	*990*	*964*	*950*	954	36
2015						*1 232*	*1 212*	*1 197*	*1 189*	1 187	61
2016							*1 280*	*1 268*	*1 222*	1 226	148
2017								*1 608*	*1 531*	1 400	229
2018	*RSI*								*1 641*	1 730	707
2019										1 745	1 084
Total										**12 343**	**2 328**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	*195*	*462*	*653*	*752*	*829*	*944*	*965*	*983*	*995*	1 006
2011		*165*	*559*	*775*	*877*	*927*	*963*	*1 027*	*1 049*	1 065
2012			*125*	*441*	*675*	*765*	*821*	*863*	*897*	916
2013				*147*	*415*	*597*	*706*	*760*	*796*	819
2014					*172*	*406*	*586*	*683*	*739*	778
2015						*134*	*385*	*688*	*848*	951
2016							*142*	*475*	*718*	886
2017								*181*	*579*	859
2018	*RSI*								*184*	646
2019										276
Total										**8 202**
All liabilities before 2010										635
Liabilities for claims and claim adjustment expenses, net of reinsurance										**4 776**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Specialty (RSI)	*14.2%*	*27.7%*	*20.6%*	*11.0%*	*6.3%*	*5.2%*	*3.4%*	*1.8%*	*1.3%*	*1.0%*

This category contains several individual large losses on marine, aviation and space lines, including the Costa Concordia event in accident year 2012. The 2017 accident year claims incurred is higher due to natural catastrophes mainly stemming from hurricanes Harvey, Irma and Maria in the Americas which have reduced in reporting year 2019.

Corporate Solutions

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**	**Cumulative number of reported claims (in nominals)**
2012	*1 299*	*1 227*	*1 152*	*1 120*	*1 117*	*1 174*	*1 155*	1 201	49	12 955
2013		*1 597*	*1 576*	*1 506*	*1 422*	*1 420*	*1 409*	1 383	105	26 173
2014			*1 833*	*1 774*	*1 704*	*1 708*	*1 679*	1 608	202	21 507
2015				*1 888*	*2 054*	*2 123*	*2 093*	1 910	243	17 785
2016					*2 013*	*2 099*	*2 137*	2 124	380	16 806
2017						*3 009*	*3 237*	2 987	488	19 928
2018	*RSI*						*2 695*	2 621	545	23 430
2019								2 792	1 500	12 707
Total								**16 626**	**3 512**	**151 291**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year							
Accident year	2012	2013	2014	2015	2016	2017	2018	**2019**
2012	*182*	*556*	*717*	*811*	*900*	*972*	*1 005*	1 034
2013		*272*	*667*	*936*	*1 092*	*1 161*	*1 237*	1 285
2014			*272*	*829*	*1 121*	*1 264*	*1 354*	1 452
2015				*350*	*907*	*1 303*	*1 500*	1 634
2016					*372*	*1 140*	*1 392*	1 657
2017						*383*	*1 506*	2 112
2018	*RSI*						*415*	1 422
2019								527
Total								**11 123**
All liabilities before 2012								457
Liabilities for claims and claim adjustment expenses, net of reinsurance								**5 960**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8
Corporate Solutions (RSI)	*16.9%*	*33.7%*	*17.3%*	*10.2%*	*6.2%*	*5.9%*	*3.1%*	*2.5%*

For the 2019 reporting year, a Loss Portfolio Transfer to P&C Reinsurance of US liability lines of business reduced reserves by USD 1.2 billion in total across all accident years. Excluding this impact, there was unfavourable prior-year development across all lines of business, in particular US liability, mainly driven by large and medium-sized man-made losses. The impact of this unfavourable development was reduced by recoveries under an Adverse Development Cover with P&C Reinsurance in place for the second half of the year. A recovery in 2019 of USD 0.6 billion under this cover is included in the 2018 accident year above. P&C Reinsurance reports both the Adverse Development Cover and the Loss Portfolio Transfer under accident year 2019 (see "Property & Casualty Reinsurance – Liability, non-proportional" on page 212).

Life & Health Reinsurance, long tail
Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year											
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	thereof IBNR	Cumulative number of reported claims (in nominals)
2010	184	186	181	204	205	216	191	188	190	195	24	4 827
2011		210	219	277	289	302	281	275	276	282	31	6 801
2012			260	347	350	374	339	341	338	352	30	9 300
2013				468	461	458	424	422	424	447	36	11 881
2014					458	418	398	400	422	445	44	13 736
2015						392	425	411	412	441	51	16 395
2016							412	428	414	443	101	13 571
2017								420	426	447	149	15 348
2018	RSI								391	422	182	13 060
2019										363	248	4 914
Total										**3 837**	**896**	**109 833**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2010	8	39	61	78	91	102	111	120	125	131
2011		18	59	96	120	140	160	175	188	198
2012			26	84	134	171	203	224	242	258
2013				36	117	178	236	276	301	323
2014					31	104	190	250	285	312
2015						34	102	181	229	266
2016							13	83	152	204
2017								11	72	156
2018	RSI								11	71
2019										12
Total										**1 931**
All liabilities before 2010										263
Liabilities for claims and claim adjustment expenses, net of reinsurance										**2 169**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Life & Health Reinsurance, long tail (RSI)	5.2%	15.6%	15.5%	11.0%	7.9%	6.1%	5.0%	4.5%	3.3%	3.0%

In the reporting year 2013, the Group significantly strengthened IBNR claims liabilities in Australia for some lines of business. In addition, for 2013 and 2014 the effect of business volume increases is discernible as well. The decrease in incurred losses for accident year 2019 is due to the lower volume of business being written in Australia.

Reconciliation of gross liability for unpaid claims and claim adjustment expenses
The following table reconciles the Group's net outstanding liabilities to the gross liabilities for unpaid claims and claim adjustment expenses.

The net outstanding liabilities correspond to the total liabilities for unpaid claims and claim adjustment expenses, net of reinsurance for each disaggregation category.

Other short duration contract lines includes reserves for business that is not material to the Group and where accident year information is not available. For Life & Health Reinsurance, in certain markets, cedents do not provide sufficient information to reinsurers to split claims incurred and claims paid by accident year. This is based on existing market practice. For these markets, an assessment of available information from other sources was made along with investigating approximations that could be used to provide claims development information by accident year. However, these alternate sources and estimates, based on currently available data and methods, could not be used to generate meaningful and representative accident year information and therefore have been excluded from disclosure. Other short duration contract lines also contain other treaties from Property & Casualty Reinsurance and Corporate Solutions which could not be allocated on a consistent basis to disaggregation categories or specific accident years.

For details on consolidation please refer to Note 2.

For the year ended 31 December

USD millions	2019
Net outstanding liabilities	
Property & Casualty Reinsurance	
Property	7 653
Liability, proportional	9 827
Liability, non-proportional	9 689
Accident & Health	5 469
Motor, proportional	3 523
Motor, non-proportional	6 349
Specialty	4 776
Corporate Solutions	5 960
Life & Health Reinsurance, long tail	2 169
Total net undiscounted outstanding liabilities excluding other short duration contract lines and before unallocated reinsurance recoverable	55 415
Discounting impact on (Life & Health Reinsurance) short duration contracts	–305
Impact of acquisition accounting	–489
Total net discounted outstanding liabilities excluding other short duration contract lines and before unallocated reinsurance recoverable	54 621
Other short duration contract lines	3 028
Total net discounted outstanding short duration liabilities	**57 649**
Allocated reinsurance recoverables on unpaid claims:	
Property & Casualty Reinsurance	
Property	674
Liability, proportional	289
Liability, non-proportional	235
Accident & Health	216
Motor, proportional	65
Motor, non-proportional	224
Specialty	551
Corporate Solutions	5 506
Consolidation	–5 360
Impact of acquisition accounting	–92
Other short duration contract lines	618
Total short duration reinsurance recoverable on outstanding liabilities	**2 926**
Exclusions:	
Unallocated claim adjustment expenses	1 111
Long duration contracts	11 184
Total other reconciling items	**12 295**
Liabilities reclassified to held for sale	–497
Total unpaid claims and claim adjustment expenses	**72 373**

Discounting information

The following disclosure covers the discounting impact for the disaggregation categories included in the claims development information. Discounting information for Life & Health Reinsurance long tail as of 31 December was as follows:

USD millions	2018	**2019**
Carrying amount of discounted claims	1 223	1 318
Aggregate amount of the discount	–291	–305
Interest accretion[1]	35	28
Range of interest rates	3.0–3.6%	3.0–3.4%

[1] Interest accretion is shown as part of "Life and health benefits" in the income statement.

Please refer to Note 1 for more details about the Group's discounting approach for unpaid claims and claim adjustment expenses.

6 Deferred acquisition costs (DAC) and acquired present value of future profits (PVFP)

As of 31 December, the DAC were as follows:

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Opening balance as of 1 January	2 146	4 234	454	37	6 871
Deferred	4 048	1 235	634	978	6 895
Amortisation	–4 012	–496	–595	–187	–5 290
Effect of foreign currency translation and other changes	–26	–189	–5	–39	–259
Closing balance	2 156	4 784	488	789	8 217

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Opening balance as of 1 January	2 156	4 784	488	789	8 217
Deferred	5 269	434	621	229	6 553
Effect of acquisitions/disposals and retrocessions		–256		68	–188
Amortisation	–4 809	–445	–626	–240	–6 120
Effect of foreign currency translation and other changes	–3	12		24	33
Reclassified to assets held for sale				–657	–657
Closing balance	**2 613**	**4 529**	**483**	**213**	**7 838**

Retroceded DAC may arise on retrocession of reinsurance portfolios, including reinsurance undertaken as part of a securitisation. The associated potential retrocession recoveries are determined by the nature of the retrocession agreements and by the terms of the securitisation.

As of 31 December, the PVFP was as follows:

2018 USD millions	Life & Health Reinsurance	Life Capital Positive PVFP	Life Capital Negative PVFP	Life Capital Total	Total
Opening balance as of 1 January	921	1 612	–544	1 068	1 989
Amortisation	–140	–170	40	–130	–270
Interest accrued on unamortised PVFP	45	107	–17	90	135
Effect of change in unrealised gains/losses		18		18	18
Effect of foreign currency translation	–22	–62	30	–32	–54
Closing balance	804	1 505	–491	1 014	1 818

2019 USD millions	Life & Health Reinsurance	Life Capital Positive PVFP	Life Capital Negative PVFP	Life Capital Total	**Total**
Opening balance as of 1 January	**804**	1 505	–491	**1 014**	**1 818**
Effect of acquisitions/disposals and retrocessions	**–161**[1]	203[2]		**203**	**42**
Amortisation	**–108**	–220	46	**–174**	**–282**
Interest accrued on unamortised PVFP	**32**	103	–15	**88**	**120**
Effect of change in unrealised gains/losses		–13		**–13**	**–13**
Effect of foreign currency translation	**10**	43	–16	**27**	**37**
Reclassified to assets held for sale		–1 156	476	**–680**	**–680**
Closing balance	**577**	**465**	**0**	**465**	**1 042**

[1] Impact from termination of a reinsurance arrangement included.
[2] Please refer to Note 10 "Acquisitions".

Retroceded PVFP may arise on retrocession of reinsurance portfolios, including reinsurance undertaken as part of a securitisation. The associated potential retrocession recoveries are determined by the nature of the retrocession agreements and by the terms of the securitisation.

The percentage of PVFP which is expected to be amortised in each of the next five years is 16%, 14%, 13%, 12% and 12%.

7 Investments

Investment income

Net investment income by source (excluding unit-linked and with-profit business) was as follows:

USD millions	2018	2019
Fixed income securities	2 905	2 859
Equity securities	71	66
Policy loans, mortgages and other loans	213	162
Investment real estate	220	226
Short-term investments	62	93
Other current investments	128	127
Share in earnings of equity-accounted investees	166	387
Cash and cash equivalents	47	75
Net result from deposit-accounted contracts	250	149
Deposits with ceding companies	447	452
Gross investment income	4 509	**4 596**
Investment expenses	–419	–412
Interest charged for funds held	–15	–13
Net investment income – non-participating business	4 075	**4 171**

Dividends received from investments accounted for using the equity method were USD 170 million and USD 104 million for 2018 and 2019, respectively.

Share in earnings of equity-accounted investees included impairments of the carrying amount of equity-accounted investees of USD 80 million for 2019.

Realised gains and losses

Realised gains and losses for fixed income securities, equity securities and other investments (excluding unit-linked and with-profit business) were as follows:

USD millions	2018	2019
Fixed income securities available-for-sale:		
Gross realised gains	526	1 590
Gross realised losses	–225	–143
Other-than-temporary impairments	–9	–5
Net realised investment gains/losses on equity securities	21	200
Change in net unrealised investment gains/losses on equity securities	–483	478
Net realised investment gains/losses on trading securities	–69	153
Change in net unrealised investment gains/losses on trading securities	39	–26
Net realised/unrealised gains/losses on other investments	117	–197
Net realised/unrealised gains/losses on insurance-related activities	97	108
Foreign exchange gains/losses	51	–348
Loss related to agreed sale of ReAssure[1]		–230
Net realised investment gains/losses – non-participating business	65	**1 580**

[1] For more details on the transaction, please refer to Note 11 "Assets held for sale".

Net realised/unrealised gains/losses on insurance-related activities included impairments of USD 7 million and USD 5 million for 2018 and 2019, respectively.

Investment result – unit-linked and with-profit business

For unit-linked contracts, the investment risk is borne by the policyholder. For with-profit contracts, the majority of the investment risk is also borne by the policyholder, although there are certain guarantees that limit the downside risk for the policyholder, and a certain proportion of the returns may be retained by the Group (typically 10%).

Net investment result on unit-linked and with-profit business credited to policyholders was as follows:

USD millions	2018 Unit-linked	2018 With-profit	2019 Unit-linked	2019 With-profit
Investment income – fixed income securities	68	120	58	101
Investment income – equity securities	715	72	733	76
Investment income – other	17	10	25	11
Total investment income – unit-linked and with-profit business	800	202	**816**	**188**
Realised gains/losses – fixed income securities	–61	–140	89	135
Realised gains/losses – equity securities	–2 124	–257	3 333	279
Realised gains/losses – other	–14	1	90	9
Total realised gains/losses – unit-linked and with-profit business	–2 199	–396	**3 512**	**423**
Total net investment result – unit-linked and with-profit business	–1 399	–194	**4 328**	**611**

Impairment on fixed income securities related to credit losses

Other-than-temporary impairments for debt securities are bifurcated between credit and non-credit components, with the credit component recognised through earnings and the non-credit component recognised in other comprehensive income. The credit component of other-than-temporary impairments is defined as the difference between a security's amortised cost basis and the present value of expected cash flows. Methodologies for measuring the credit component of impairment are aligned to market observer forecasts of credit performance drivers. Management believes that these forecasts are representative of median market expectations.

For securitised products, cash flow projection analysis is conducted by integrating forward-looking evaluation of collateral performance drivers, including default rates, prepayment rates and loss severities and deal-level features, such as credit enhancement and prioritisation among tranches for payments of principal and interest. Analytics are differentiated by asset class, product type and security-level differences in historical and expected performance. For corporate bonds and hybrid debt instruments, an expected loss approach based on default probabilities and loss severities expected in the current and forecasted economic environment is used for securities identified as credit-impaired to project probability-weighted cash flows. Expected cash flows resulting from these analyses are discounted, and the present value is compared to the amortised cost basis to determine the credit component of other-than-temporary impairments.

A reconciliation of other-than-temporary impairments related to credit losses recognised in earnings was as follows:

USD millions	2018	2019
Balance as of 1 January	91	80
Credit losses for which an other-than-temporary impairment was not previously recognised	5	5
Reductions for securities sold during the period	–12	–24
Increase of credit losses for which an other-than-temporary impairment has been recognised previously, when the Group does not intend to sell, or more likely than not will not be required to sell before recovery	2	2
Impact of increase in cash flows expected to be collected	–4	–3
Impact of foreign exchange movements	–2	1
Balance as of 31 December	80	**61**

Investments available-for-sale

Amortised cost or cost, estimated fair values and other-than-temporary impairments of fixed income securities classified as available-for-sale as of 31 December were as follows:

2018 USD millions	Amortised cost or cost	Gross unrealised gains	Gross unrealised losses	Other-than-temporary impairments recognised in other comprehensive income	Estimated fair value
Debt securities issued by governments and government agencies:					
US Treasury and other US government corporations and agencies	12 144	218	–156		12 206
US Agency securitised products	6 416	18	–130		6 304
States of the United States and political subdivisions of the states	1 584	55	–19		1 620
United Kingdom	7 837	1 085	–74		8 848
Germany	2 723	229	–7		2 945
Canada	2 721	192	–29		2 884
France	1 723	205	–6		1 922
Japan	872	74	–8		938
Other	9 812	213	–130		9 895
Total	45 832	2 289	–559		47 562
Corporate debt securities	39 630	1 617	–542		40 705
Mortgage- and asset-backed securities	4 211	117	–56	–1	4 271
Fixed income securities available-for-sale	89 673	4 023	–1 157	–1	92 538

2019 USD millions	Amortised cost or cost	Gross unrealised gains	Gross unrealised losses	Other-than-temporary impairments recognised in other comprehensive income	Estimated fair value
Debt securities issued by governments and government agencies:					
US Treasury and other US government corporations and agencies	14 192	377	–31		14 538
US Agency securitised products	7 034	104	–14		7 124
States of the United States and political subdivisions of the states	1 783	168	–3		1 948
United Kingdom	7 936	1 309	–26		9 219
Germany	2 870	298	–35		3 133
Canada	2 256	139	–4		2 391
France	2 095	343	–13		2 425
Japan	2 028	98	–2		2 124
Other	10 589	583	–33		11 139
Total	50 783	3 419	–161		54 041
Corporate debt securities	37 293	3 749	–46		40 996
Mortgage- and asset-backed securities	4 397	195	–14	–2	4 576
Reclassified to assets held for sale	–17 693	–2 785	28		–20 450
Fixed income securities available-for-sale	74 780	4 578	–193	–2	79 163

The "Other-than-temporary impairments recognised in other comprehensive income" column includes only securities with a credit-related loss recognised in earnings. Subsequent recovery in fair value of securities previously impaired in other comprehensive income is also presented in the "Other-than-temporary impairments recognised in other comprehensive income" column.

Unrealised losses on securities available-for-sale

The following table shows the fair value and unrealised losses of the Group's fixed income securities, aggregated by investment category and length of time that individual securities were in a continuous unrealised loss position as of 31 December 2018 and 2019.

2018 USD millions	Less than 12 months Fair value	Less than 12 months Unrealised losses	12 months or more Fair value	12 months or more Unrealised losses	Total Fair value	Total Unrealised losses
Debt securities issued by governments and government agencies:						
US Treasury and other US government corporations and agencies	1 157	33	6 170	123	7 327	156
US Agency securitised products	1 013	11	3 710	119	4 723	130
States of the United States and political subdivisions of the states	108	2	518	17	626	19
United Kingdom	1 372	47	442	27	1 814	74
Germany	109	4	156	3	265	7
Canada	549	8	855	21	1 404	29
France	381	5	15	1	396	6
Japan	160	0	73	8	233	8
Other	2 629	70	1 097	60	3 726	130
Total	7 478	180	13 036	379	20 514	559
Corporate debt securities	12 135	275	6 334	267	18 469	542
Mortgage- and asset-backed securities	1 111	15	1 718	42	2 829	57
Total	20 724	470	21 088	688	41 812	1 158

2019 USD millions	Less than 12 months Fair value	Less than 12 months Unrealised losses	12 months or more Fair value	12 months or more Unrealised losses	Total Fair value	Total Unrealised losses
Debt securities issued by governments and government agencies:						
US Treasury and other US government corporations and agencies	2 357	31	97	0	2 454	31
US Agency securitised products	1 842	7	654	7	2 496	14
States of the United States and political subdivisions of the states	39	1	30	2	69	3
United Kingdom	1 297	22	83	4	1 380	26
Germany	669	34	17	1	686	35
Canada	863	3	62	1	925	4
France	340	12	16	1	356	13
Japan	443	1	2	1	445	2
Other	1 492	17	315	16	1 807	33
Total	9 342	128	1 276	33	10 618	161
Corporate debt securities	2 562	18	531	28	3 093	46
Mortgage- and asset-backed securities	730	5	404	11	1 134	16
Reclassified to assets held for sale	–1 071	–8	–301	–20	–1 372	–28
Total	**11 563**	**143**	**1 910**	**52**	**13 473**	**195**

Maturity of fixed income securities available-for-sale

The amortised cost or cost and estimated fair values of investments in fixed income securities available-for-sale by remaining maturity are shown below. Fixed maturity investments are assumed not to be called for redemption prior to the stated maturity date. As of 31 December 2018 and 2019, USD 18 601 million and USD 20 188 million, respectively, of fixed income securities available-for-sale were callable.

USD millions	2018 Amortised cost or cost	2018 Estimated fair value	**2019** Amortised cost or cost	**2019** Estimated fair value
Due in one year or less	10 449	10 379	7 294	7 324
Due after one year through five years	24 547	24 614	27 559	28 083
Due after five years through ten years	16 183	16 471	15 994	17 115
Due after ten years	34 749	37 262	37 865	43 144
Mortgage- and asset-backed securities with no fixed maturity	3 745	3 812	3 761	3 947
Reclassified to assets held for sale			–17 693	–20 450
Total fixed income securities available-for-sale	89 673	92 538	**74 780**	**79 163**

Investments trading and at fair value through earnings
The carrying amounts of fixed income securities classified as trading and equity securities at fair value through earnings (excluding unit-linked and with-profit business) as of 31 December were as follows:

USD millions	2018	2019
Debt securities issued by governments and government agencies	3 314	2 358
Corporate debt securities	37	
Mortgage- and asset-backed securities	63	52
Fixed income securities trading – non-participating business	3 414	**2 410**
Equity securities at fair value through earnings – non-participating business	3 036	**2 993**

Investments held for unit-linked and with-profit business
The carrying amounts of investments held for unit-linked and with-profit business as of 31 December were as follows:

		2018		2019
USD millions	Unit-linked	With-profit	Unit-linked	With-profit
Fixed income securities trading	2 253	2 685	1 963	2 717
Equity securities at fair value through earnings	21 326	1 797	35 528	2 078
Investment real estate	537	230	512	200
Other	702	16	692	3
Reclassified to assets held for sale			–38 175	–4 998
Total investments for unit-linked and with-profit business	24 818	4 728	**520**	**0**

Mortgage, policy and other loans, and investment real estate
As of 31 December, the carrying and respective fair values of investments in mortgage, policy and other loans, and investment real estate (excluding unit-linked and with-profit business) were as follows:

		2018		2019
USD millions	Carrying value	Fair value	Carrying value[1]	Fair value
Policy loans	84	84	50	50
Mortgage loans	2 890	2 882	2 104	2 144
Other loans	1 568	1 587	2 314	2 376
Investment real estate	2 411	4 307	2 674	4 706

[1] Policy loans, mortgages and other loans include a total of USD 1 447 million which were reclassified to assets held for sale. Investment real estate of USD 146 million was reclassified to assets held for sale.

Depreciation expense related to investment real estate was USD 57 million and USD 61 million for 2018 and 2019, respectively. Accumulated depreciation on investment real estate totalled USD 609 million and USD 660 million as of 31 December 2018 and 2019, respectively. Investment real estate held by the Group includes residential and commercial investment real estate.

Substantially all mortgage, policy and other loan receivables are secured by buildings, land or the underlying policies.

Maturity of lessor cash flows
As of 31 December 2019, the total undiscounted cash flows to be received from operating leases of investment real estate for the next five years and thereafter were as follows:

USD millions	Operating leases
2020	191
2021	174
2022	157
2023	136
2024	107
After 2024	420
Total cash flows	1 185

The Group manages risk associated with the residual value of its leased properties through careful property selection as well as diversification by geographical region and property type. Lease contracts for residential real estate in Switzerland and Germany are usually open-ended. Cash flows for such contracts have been projected taking into consideration the average turnover rate in the region. Lease contracts for residential real estate in the US with a lease term of one year or less have been excluded from the projected cash flows in the table above. Rental income for those leases for the year ended 31 December 2019 was USD 28 million.

Other financial assets and liabilities by measurement category

As of 31 December 2018 and 2019, "Other invested assets" and "Accrued expenses and other liabilities" by measurement category were as follows:

2018 USD millions	Fair value	Investments measured at net asset value as practical expedient	Amortised cost or cost	Equity-accounted	Not in scope[1]	Total
Other invested assets						
Derivative financial instruments	564					564
Reverse repurchase agreements			1 051			1 051
Securities lending/borrowing	302		11			313
Equity-accounted investments	312			2 660		2 972
Other	52	812	634			1 498
Other invested assets	1 230	812	1 696	2 660	0	6 398
Accrued expenses and other liabilities						
Derivative financial instruments	582					582
Repurchase agreements			581			581
Securities lending	301		59			360
Securities sold short	1 538					1 538
Other			1 077		2 660	3 737
Accrued expenses and other liabilities	2 421	0	1 717	0	2 660	6 798

2019 USD millions	Fair value	Investments measured at net asset value as practical expedient	Amortised cost or cost	Equity-accounted	Not in scope[1]	Total
Other invested assets						
Derivative financial instruments	472					472
Reverse repurchase agreements			2 089			2 089
Securities lending/borrowing	457		21			478
Equity-accounted investments	335			2 580		2 915
Other	76	913	905			1 894
Reclassified to assets held for sale	–60		–445			–505
Other invested assets	**1 280**	**913**	**2 570**	**2 580**	**0**	**7 343**
Accrued expenses and other liabilities						
Derivative financial instruments	692					692
Repurchase agreements			678			678
Securities lending	458		115			573
Securities sold short	1 764					1 764
Other			1 653		2 512	4 165
Reclassified to liabilities held for sale	–161		–329		–191	–681
Accrued expenses and other liabilities	**2 753**	**0**	**2 117**	**0**	**2 321**	**7 191**

[1] Amounts do not relate to financial assets or liabilities.

Offsetting of derivatives, financial assets and financial liabilities

Offsetting of derivatives, financial assets and financial liabilities as of 31 December was as follows:

2018 USD millions	Gross amounts of recognised financial assets	Amounts set-off in the balance sheet	Net amounts of financial assets presented in the balance sheet	Related financial instruments not set-off in the balance sheet	Net amount
Derivative financial instruments – assets	1 620	–1 052	568		568
Reverse repurchase agreements	4 285	–3 234	1 051	–1 051	0
Securities borrowing	110	–99	11	–11	0
Total	6 015	–4 385	1 630	–1 062	568

2018 USD millions	Gross amounts of recognised financial liabilities	Amounts set-off in the balance sheet	Net amounts of financial liabilities presented in the balance sheet	Related financial instruments not set-off in the balance sheet	Net amount
Derivative financial instruments – liabilities	–1 505	923	–582	21	–561
Repurchase agreements	–3 334	2 753	–581	581	0
Securities lending	–940	580	–360	339	–21
Total	–5 779	4 256	–1 523	941	–582

2019 USD millions	Gross amounts of recognised financial assets	Amounts set-off in the balance sheet	Net amounts of financial assets presented in the balance sheet	Related financial instruments not set-off in the balance sheet	Net amount
Derivative financial instruments – assets	1 662	–1 184	478	–2	**476**
Reverse repurchase agreements	5 185	–3 096	2 089	–2 061	**28**
Securities borrowing	171	–150	21	–20	**1**
Total	**7 018**	**–4 430**	**2 588**	**–2 083**	**505**

2019 USD millions	Gross amounts of recognised financial liabilities	Amounts set-off in the balance sheet	Net amounts of financial liabilities presented in the balance sheet	Related financial instruments not set-off in the balance sheet	Net amount
Derivative financial instruments – liabilities	–1 750	1 058	–692	75	**–617**
Repurchase agreements	–3 352	2 674	–678	653	**–25**
Securities lending	–1 145	572	–573	524	**–49**
Total	**–6 247**	**4 304**	**–1 943**	**1 252**	**–691**

Collateral pledged or received between two counterparties with a master netting arrangement in place, but not subject to balance sheet netting, is disclosed at fair value. The fair values represent the gross carrying value amounts at the reporting date for each financial instrument received or pledged by the Group. Management believes that master netting agreements provide for legally enforceable set-off in the event of default, which substantially reduces credit exposure. Upon occurrence of an event of default, the non-defaulting party may set off the obligation against collateral received regardless if it has been offset on the balance sheet prior to the defaulting event. The net amounts of the financial assets and liabilities presented on the balance sheet were recognised in "Other invested assets", "Investments for unit-linked and with-profit business" and "Accrued expenses and other liabilities".

Assets pledged

As of 31 December 2018 and 2019, investments with a carrying value of USD 5 776 million and USD 5 239 million, respectively, were on deposit with regulatory agencies in accordance with local requirements, of which USD 277 million and USD 223 million, respectively, were cash and cash equivalents. As of 31 December 2018 and 2019, investments with a carrying value of USD 12 959 million and USD 14 659 million, respectively, were placed on deposit or pledged to secure certain reinsurance liabilities, including pledged investments in subsidiaries, of which USD 404 million and USD 485 million, respectively, were cash and cash equivalents. Cash and cash equivalents pledged include some instances where cash is legally restricted from usage or withdrawal.

As of 31 December 2018 and 2019, securities of USD 15 850 million and USD 18 686 million, respectively, were transferred to third parties under securities lending transactions and repurchase agreements on a fully collateralised basis. Corresponding liabilities of USD 941 million and USD 1 251 million, respectively, were recognised in accrued expenses and other liabilities for the obligation to return collateral that the Group has the right to sell or reuse.

As of 31 December 2018 and 2019, a real estate portfolio with a carrying value of USD 191 million and USD 188 million, respectively, served as collateral for a credit facility, allowing the Group to withdraw funds up to CHF 500 million.

Collateral accepted which the Group has the right to sell or repledge

As of 31 December 2018 and 2019, the fair value of the equity securities, government and corporate debt securities received as collateral was USD 4 239 million and USD 5 477 million, respectively. Of this, the amount that was sold or repledged as of 31 December 2018 and 2019 was USD 1 721 million and USD 2 025 million, respectively. The sources of the collateral are securities borrowing, reverse repurchase agreements and derivative transactions.

Recognised gross liability for the obligation to return collateral (from repurchase agreements and securities lending)

As of 31 December 2018 and 2019, the gross amounts of liabilities related to repurchase agreements and securities lending by the class of securities transferred to third parties and by the remaining maturity are shown below.

2018 USD millions	Remaining contractual maturity of the agreements Overnight and continuous	Up to 30 days	30–90 days	Greater than 90 days	Total
Repurchase agreements					
Debt securities issued by governments and government agencies	149	2 894	100	141	3 284
Corporate debt securities	9	41			50
Total repurchase agreements	158	2 935	100	141	3 334
Securities lending					
Debt securities issued by governments and government agencies	110	146	242	431	929
Corporate debt securities	7	4			11
Total securities lending	117	150	242	431	940
Gross amount of recognised liabilities for repurchase agreements and securities lending					4 274

2019 USD millions	Remaining contractual maturity of the agreements Overnight and continuous	Up to 30 days	30–90 days	Greater than 90 days	Total
Repurchase agreements					
Debt securities issued by governments and government agencies	30	3 312			3 342
Corporate debt securities	3	7			10
Total repurchase agreements	**33**	**3 319**	**0**	**0**	**3 352**
Securities lending					
Debt securities issued by governments and government agencies	295		493	299	1 087
Corporate debt securities	58				58
Total securities lending	**353**	**0**	**493**	**299**	**1 145**
Gross amount of recognised liabilities for repurchase agreements and securities lending					**4 497**

The programme is structured in a conservative manner with a clearly defined risk framework. Yield enhancement is conducted on a non-cash basis, thereby taking no re-investment risk.

8 Fair value disclosures

Fair value, as defined by the Fair Value Measurements and Disclosures Topic, is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Fair Value Measurements and Disclosures Topic requires all assets and liabilities that are measured at fair value to be categorised within the fair value hierarchy. This three-level hierarchy is based on the observability of the inputs used in the fair value measurement. The levels of the fair value hierarchy are defined as follows:

Level 1 inputs are unadjusted, quoted prices in active markets for identical assets or liabilities that the Group has the ability to access. Level 1 inputs are the most persuasive evidence of fair value and are to be used whenever possible. The types of instruments include most US government and sovereign obligations, active listed equities, certain exchange-traded derivative instruments and most money market securities.

Level 2 inputs are market-based inputs that are directly or indirectly observable, but not considered level 1 quoted prices. Level 2 inputs consist of (i) quoted prices for similar assets or liabilities in active markets; (ii) quoted prices for identical assets or liabilities in non-active markets (eg markets which have few transactions and where prices are not current or price quotations vary substantially); (iii) inputs other than quoted prices that are observable (eg interest rates, yield curves, volatilities, prepayment speeds, credit risks and default rates); (iv) inputs derived from, or corroborated by, observable market data; and (v) quoted prices provided by third-party brokers. The types of instruments that trade in markets that are not considered to be active include most government agency securities, investment-grade corporate bonds, certain mortgage- and asset-backed products, certain exchange-traded derivative instruments, catastrophe bonds, less liquid listed equities and state, municipal and provincial obligations.

Level 3 inputs are unobservable inputs. These inputs reflect the Group's own assumptions about market pricing using the best internal and external information available. Certain financial instruments are classified within level 3 of the fair value hierarchy because they trade infrequently and therefore have little or no price transparency. Such instruments include private equity, less liquid corporate debt securities and certain asset-backed securities (ABS). Certain over-the-counter (OTC) derivatives trade in less liquid markets with limited pricing information, and the determination of fair value for these derivatives is inherently more difficult. When appropriate, valuations are adjusted for various factors such as liquidity, bid/offer spreads and credit considerations. Such adjustments are generally based on available market evidence. In the absence of such evidence, management's best estimate is used.

Pursuant to the election of the fair value option, the Group classifies certain liabilities for life and health policy benefits in level 3 of the fair value hierarchy. When appropriate, valuations are adjusted for various factors such as liquidity, bid/offer spreads and credit considerations. Such adjustments are generally based on available market evidence. In the absence of such evidence, management's best estimate is used.

The fair values of assets are adjusted to incorporate the counterparty risk of non-performance. Similarly, the fair values of liabilities reflect the risk of non-performance of the Group, captured by the Group's credit spread. These valuation adjustments from assets and liabilities measured at fair value using significant unobservable inputs are recognised in net realised gains and losses. For 2019, these adjustments were not material. Whenever the underlying assets or liabilities are reported in a specific business segment, the valuation adjustment is allocated accordingly. Valuation adjustments not attributable to any business segment are reported in Group items.

In certain situations, the Group uses inputs to measure the fair value of asset or liability positions that fall into different levels of the fair value hierarchy. In these situations, the Group will determine the appropriate level based on the lowest level input that is significant to the determination of the fair value.

Valuation techniques

US government securities typically have quoted market prices in active markets and are categorised as level 1 instruments in the fair value hierarchy. Non-US government holdings are generally classified as level 2 instruments and are valued on the basis of the quotes provided by pricing services, which are subject to the Group's pricing validation reviews and pricing vendor challenge process. Valuations provided by pricing vendors are generally based on the actual trade information as substantially all of the Group's non-US government holdings are traded in a transparent and liquid market.

Corporate debt securities mainly include US and European investment-grade positions, which are priced on the basis of quotes provided by third-party pricing vendors and first utilise valuation inputs from actively traded securities, such as bid prices, bid spreads to Treasury securities, Treasury curves and same or comparable issuer curves and spreads. Issuer spreads are determined from actual quotes and traded prices and incorporate considerations of credit/default, sector composition, and liquidity and call features. Where market data is not available, valuations are developed based on the modelling techniques that utilise observable inputs and option-adjusted spreads and incorporate considerations of the security's seniority, maturity and the issuer's corporate structure.

Values of mortgage- and asset-backed securities are obtained both from third-party pricing vendors and through quoted prices, some of which may be based on the prices of comparable securities with similar structural and collateral features. Values of certain ABS for which there are no significant observable inputs are developed using benchmarks to similar transactions or indices. For both residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), cash flows are derived based on the transaction-specific information, which incorporates priority in the capital structure, and are generally adjusted to reflect benchmark yields, market prepayment data, collateral performance (default rates and loss severity) for specific vintage and geography, credit enhancements and ratings. For certain RMBS and CMBS with low levels of market liquidity, judgements may be required to determine comparable securities based on the loan type and deal-specific performance. CMBS terms may also incorporate lock-out periods that restrict borrowers from prepaying the loans or provide disincentives to prepay and therefore reduce prepayment risk of these securities, compared to RMBS. The factors specifically considered in valuation of CMBS include borrower-specific statistics in a specific region, such as debt service coverage and loan-to-value ratios, as well as the type of commercial property. Mortgage- and asset-backed securities also includes debt securitised by credit card, student loan and auto loan receivables. Pricing inputs for these securities also focus on capturing, where relevant, collateral quality and performance, payment patterns and delinquencies.

The Group uses third-party pricing vendor data to value agency securitised products, which mainly include collateralised mortgage obligations (CMO) and mortgage-backed government agency securities. The valuations generally utilise observable inputs consistent with those noted above for RMBS and CMBS.

Equity securities held by the Group for proprietary investment purposes are mainly classified in level 1. Securities classified in level 1 are traded on public stock exchanges for which quoted prices are readily available.

The category "Other invested assets" includes the Group's private equity and hedge fund investments which are made directly or via ownership of funds. Valuation of direct private equity investments requires significant management judgement due to the absence of quoted market prices and the lack of liquidity. Initial valuation is based on the acquisition cost, and is further refined based on the available market information for the public companies that are considered comparable to the Group's holdings in the private companies being valued, and the private company-specific performance indicators, both historic and projected. Subsequent valuations also reflect business or asset appraisals, as well as market transaction data for private and public benchmark companies and the actual companies being valued, such as financing rounds and mergers and acquisitions activity. The Group's holdings in private equity and hedge funds are generally valued utilising net asset values (NAV), subject to adjustments, as deemed necessary, for restrictions on redemption (lock-up periods and amount limitations on redemptions). These investments are included under investments measured at net asset value as a practical expedient.

The Group holds both exchange-traded and OTC interest rate, foreign exchange, credit and equity derivative contracts for hedging and trading purposes. The fair values of exchange-traded derivatives measured using observable exchange prices are classified in level 1. Long-dated contracts may require adjustments to the exchange-traded prices which would trigger reclassification to level 2 in the fair value hierarchy. OTC derivatives are generally valued by the Group based on the internal models, which are consistent with industry standards and practices, and use both observable (dealer, broker or market consensus prices, spot and forward rates, interest rate and credit curves and volatility indices) and unobservable inputs (adjustments for liquidity, inputs derived from the observable data based on the Group's judgements and assumptions).

The Group's OTC interest rate derivatives primarily include interest rate swaps, futures, options, caps and floors and are valued based on the cash flow discounting models which generally utilise as inputs observable market yield curves and volatility assumptions.

The Group's OTC foreign exchange derivatives primarily include forward, spot and option contracts and are generally valued based on the cash flow discounting models, utilising as main inputs observable foreign exchange forward curves.

The Group's investments in equity derivatives primarily include OTC equity option contracts on single or baskets of market indices and equity options on individual or baskets of equity securities, which are valued using internally developed models (such as the Black-Scholes type option pricing model and various simulation models) calibrated with the inputs, which include underlying spot prices, dividend curves, volatility surfaces, yield curves and correlations between underlying assets.

The Group's OTC credit derivatives can include index and single-name credit default swaps. Plain vanilla credit derivatives, such as index and single-name credit default swaps, are valued by the Group based on the models consistent with the industry valuation standards for these credit contracts, and primarily utilise observable inputs published by market data sources, such as credit spreads and recovery rates. These valuation techniques warrant classification of plain vanilla OTC derivatives as level 2 financial instruments in the fair value hierarchy.

Governance around level 3 fair valuation

The Asset Valuation Committee, endorsed by the Group Executive Committee, has a primary responsibility for governing and overseeing all of the Group's asset and derivative valuation policies and operating parameters (including level 3 measurements). The Asset Valuation Committee delegates the responsibility for implementation and oversight of consistent application of the Group's pricing and valuation policies to the Pricing and Valuation Committee.

The Pricing and Valuation Committee, which is a joint Risk Management & Finance management control committee, is responsible for the implementation and consistent application of the pricing and valuation policies. Key functions of the Pricing and Valuation Committee include: oversight over the entire valuation process, approval of internal valuation methodologies, approval of external pricing vendors, monitoring of the independent price verification (IPV) process and resolution of significant or complex valuation issues.

A formal IPV process is undertaken monthly by members of the Valuation Risk Management team within a Financial Risk Management function. The process includes monitoring and in-depth analyses of approved pricing methodologies and valuations of the Group's financial instruments aimed at identifying and resolving pricing discrepancies.

The Risk Management function is responsible for independent validation and ongoing review of the Group's valuation models. The Product Control group within Finance is tasked with reporting of fair values through the vendor- and model-based valuations, the results of which are also subject to the IPV process.

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Assets and liabilities measured at fair value on a recurring basis

As of 31 December, the fair values of assets and liabilities measured on a recurring basis by level of input were as follows:

2018 USD millions	Quoted prices in active markets for identical assets and liabilities (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Impact of netting[1]	Investments measured at net asset value as practical expedient	Total
Assets						
Fixed income securities held for proprietary investment purposes	11 668	82 906	1 378			95 952
Debt securities issued by US government and government agencies	11 668	2 186				13 854
US Agency securitised products		6 551				6 551
Debt securities issued by non-US governments and government agencies		30 468	3			30 471
Corporate debt securities		39 372	1 370			40 742
Mortgage- and asset-backed securities		4 329	5			4 334
Fixed income securities backing unit-linked and with-profit business		4 938				4 938
Equity securities held for proprietary investment purposes	3 023	13				3 036
Equity securities backing unit-linked and with-profit business	23 111	12				23 123
Short-term investments held for proprietary investment purposes	1 220	4 197				5 417
Short-term investments backing unit-linked and with-profit business		11				11
Derivative financial instruments	11	1 205	404	–1 052		568
Interest rate contracts	6	424	6			436
Foreign exchange contracts		399				399
Equity contracts	1	377	339			717
Credit contracts						0
Other contracts	2		59			61
Contracts backing unit-linked and with-profit business	2	5				7
Investment real estate			166			166
Other invested assets	286	16	364		812	1 478
Funds held by ceding companies		206				206
Total assets at fair value	39 319	93 504	2 312	–1 052	812	134 895
Liabilities						
Derivative financial instruments	–14	–974	–517	923		–582
Interest rate contracts	–3	–318	–3			–324
Foreign exchange contracts		–169				–169
Equity contracts	–8	–484	–43			–535
Credit contracts		–1				–1
Other contracts			–471			–471
Contracts backing unit-linked and with-profit business	–3	–2				–5
Liabilities for life and health policy benefits			–119			–119
Accrued expenses and other liabilities	–302	–1 538				–1 840
Total liabilities at fair value	–316	–2 512	–636	923	0	–2 541

[1] The netting of derivative receivables and derivative payables is permitted when a legally enforceable master netting agreement exists between two counterparties. A master netting agreement provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default or on the termination of any one contract.

2019 USD millions	Quoted prices in active markets for identical assets and liabilities (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Impact of netting[1]	Investments measured at net asset value as practical expedient	Reclassified to assets held for sale	Total
Assets							
Fixed income securities held for proprietary investment purposes	14 057	86 270	1 696			–20 450	81 573
Debt securities issued by US government and government agencies	14 057	2 510				–121	16 446
US Agency securitised products		7 175					7 175
Debt securities issued by non-US governments and government agencies		32 654	3			–5 283	27 374
Corporate debt securities		39 303	1 693			–14 671	26 325
Mortgage- and asset-backed securities		4 628				–375	4 253
Fixed income securities backing unit-linked and with-profit business		4 680				–4 680	0
Equity securities held for proprietary investment purposes	2 992	1					2 993
Equity securities backing unit-linked and with-profit business	37 550	56				–37 086	520
Short-term investments held for proprietary investment purposes	1 098	4 812				–142	5 768
Short-term investments backing unit-linked and with-profit business							0
Derivative financial instruments	11	1 426	225	–1 184		–65	413
Interest rate contracts		492				–8	484
Foreign exchange contracts		381				–51	330
Equity contracts	2	530	186				718
Credit contracts		17					17
Other contracts	6	3	39				48
Contracts backing unit-linked and with-profit business	3	3				–6	0
Investment real estate			143			–143	0
Other invested assets	317	140	411		913		1 781
Funds held by ceding companies		174					174
Total assets at fair value	**56 025**	**97 559**	**2 475**	**–1 184**	**913**	**–62 566**	**93 222**
Liabilities							
Derivative financial instruments	–5	–1 280	–465	1 058		161	–531
Interest rate contracts		–415	–2			50	–367
Foreign exchange contracts		–296				1	–295
Equity contracts	–5	–506	–20				–531
Credit contracts		–63					–63
Other contracts			–443			111	–332
Contracts backing unit-linked and with-profit business						–1	–1
Liabilities for life and health policy benefits			–91				–91
Accrued expenses and other liabilities	–340	–1 882					–2 222
Total liabilities at fair value	**–345**	**–3 162**	**–556**	**1 058**	**0**	**161**	**–2 844**

[1] The netting of derivative receivables and derivative payables is permitted when a legally enforceable master netting agreement exists between two counterparties. A master netting agreement provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default or on the termination of any one contract.

Assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (level 3)

As of 31 December, the reconciliations of the fair values of assets and liabilities measured on a recurring basis using significant unobservable inputs were as follows:

2018 USD millions	Fixed income securities	Equity securities	Derivative assets	Investment real estate	Other invested assets	Total assets	Derivative liabilities	Liabilities for life and health policy benefits	Total liabilities
Assets and liabilities									
Balance as of 1 January	1 353	4	386	198	509	2 450	–479	–126	–605
Realised/unrealised gains/losses:									
Included in net income			67	13	–19	61	44	7	51
Included in other comprehensive income	–39					–39			0
Purchases	201		11			212			0
Issuances						0	–159		–159
Sales	–7		–8	–33	–129	–177	23		23
Settlements	–44		–52			–96	48		48
Transfers into level 3[1]					19	19	–3		–3
Transfers out of level 3[1]	–18	–4			–3	–25			0
Impact of foreign exchange movements	–68			–12	–13	–93	9		9
Closing balance as of 31 December	1 378	0	404	166	364	2 312	–517	–119	–636

[1] Transfers are recognised at the date of the event or change in circumstances that caused the transfer.

2019 USD millions	Fixed income securities	Equity securities	Derivative assets	Investment real estate	Other invested assets	**Total assets**	Derivative liabilities	Liabilities for life and health policy benefits	**Total liabilities**
Assets and liabilities									
Balance as of 1 January	1 378	0	404	166	364	**2 312**	–517	–119	**–636**
Realised/unrealised gains/losses:									
Included in net income	4		–151	16	20	**–111**	120	32	**152**
Included in other comprehensive income	73					**73**		–4	**–4**
Purchases	417		16		20	**453**			**0**
Issuances						**0**	–147		**–147**
Sales	–56		–9	–46	–2	**–113**	24		**24**
Settlements	–82		–37			**–119**	60		**60**
Transfers into level 3[1]					2	**2**			**0**
Transfers out of level 3[1]	–76					**–76**			**0**
Impact of foreign exchange movements	38		2	7	7	**54**	–5		**–5**
Closing balance as of 31 December	**1 696**	**0**	**225**	**143**	**411**	**2 475**	**–465**	**–91**	**–556**

[1] Transfers are recognised at the date of the event or change in circumstances that caused the transfer.

Gains and losses on assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (level 3)

The gains and losses relating to the assets and liabilities measured at fair value using significant unobservable inputs (level 3) for the years ended 31 December were as follows:

USD millions	2018	2019
Gains/losses included in net income for the period	112	41
Whereof change in unrealised gains/losses relating to assets and liabilities still held at the reporting date	33	–45

Quantitative information about level 3 fair value measurements

Unobservable inputs for major level 3 assets and liabilities as of 31 December were as follows:

USD millions	2018 Fair value	2019 Fair value	Valuation technique	Unobservable input	Range (weighted average)
Assets					
Corporate debt securities	1 370	**1 693**			
Infrastructure loans	920	1 147	Discounted cash flow model	Valuation spread	75–526 bps (173 bps)
Private placement corporate debt	341	504	Corporate spread matrix	Credit spread	48–321 bps (175 bps)
Private placement credit tenant leases	42	42	Discounted cash flow model	Illiquidity premium	125–150 bps (146 bps)
Derivative equity contracts	339	**186**			
OTC equity option referencing correlated equity indices	339	186	Proprietary option model	Correlation	–50–55% (20%)[1]
Investment real estate	166	**143**	Discounted cash flow model	Discount rate	5% per annum
Liabilities					
Derivative equity contracts	–43	**–20**			
OTC equity option referencing correlated equity indices	–43	–20	Proprietary option model	Correlation	–30–95% (42%)[1]
Other derivative contracts and liabilities for life and health policy benefits	–590	**–534**			
Variable annuity and fair valued GMDB contracts	–327	–311	Discounted cash flow model	Risk margin	4% (n/a)
				Volatility	9.5–46.5%
				Lapse	1.5–15%
				Mortality improvement	0–2%
				Withdrawal rate	0–90%
Swap liability referencing real estate investments	–127	–110	Discounted cash flow model	Discount rate	5% per annum
Weather contracts	–77	–76	Proprietary option model	Risk margin	5–11% (9%)
				Correlation	–74–60% (25%)
				Volatility (power/gas)	27–118% (67%)
				Volatility (temperature)	69–304 (95) HDD/CAT[2]
				Index value (temperature)	199–2 894 (1 115) HDD/CAT[2]

[1] Represents average input value for the reporting period.
[2] Heating Degree Days (HDD); Cumulative Average Temperature (CAT).

Sensitivity of recurring level 3 measurements to changes in unobservable inputs

The significant unobservable input used in the fair value measurement of the Group's infrastructure loans is valuation spread. A significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement. The significant unobservable input used in the fair value measurement of the Group's private placement corporate debt securities is credit spread. A significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement. The significant unobservable input used in the fair value measurement of the Group's private placement credit tenant leases is illiquidity premium. A significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement.

The significant unobservable input used in the fair value measurement of the Group's OTC equity option referencing correlated equity indices is correlation. Where the Group is long correlation risk, a significant increase (decrease) in this input in isolation would result in a significantly higher (lower) fair value measurement. Where the Group is short correlation risk, a significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement.

The significant unobservable input used in the fair value measurement of the Group's investment real estate and swap liability referencing real estate investment is the rate used to discount future cash flows from property sales. A significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement.

The significant unobservable inputs used in the fair value measurement of the Group's variable annuity and fair valued guaranteed minimum death benefit (GMDB) contracts are: risk margin, volatility, lapse, mortality improvement rate and withdrawal rate. A significant increase (decrease) in isolation in each of the following inputs: risk margin, volatility and withdrawal rate would result in a significantly lower (higher) fair value of the Group's obligation. A significant increase (decrease) in isolation in lapse rate would, in general, result in a significantly higher (lower) fair value of the Group's obligation due to the maturity of the contracts. Changes in the mortality improvement rate impact the fair value of the Group's obligation differently for living-benefit products, compared to death-benefit products. For the former, a significant increase (decrease) in the mortality improvement rate (ie decrease (increase) in mortality) in isolation would result in a decrease (increase) in fair value of the Group's liability. For the latter, a significant increase (decrease) in the mortality improvement rate in isolation would result in an increase (decrease) in fair value of the Group's liability.

The significant unobservable inputs used in the fair value measurement of the Group's weather contracts are risk margin, correlation, volatility and index value. Where the Group has a long position, a significant increase (decrease) in the risk margin input in isolation would result in a significantly higher (lower) fair value measurement. Where the Group has a long volatility or correlation position, a significant increase (decrease) in the correlation and volatility inputs would result in a significantly higher (lower) fair value measurement. Where the Group has a long index position, an increase (decrease) in the index value input in isolation would result in a significantly higher (lower) fair value measurement. Where the Group has a short position, a significant increase (decrease) in the risk margin input in isolation would result in a significantly lower (higher) fair value measurement. Where the Group has a short volatility or correlation position, a significant increase (decrease) in the correlation and volatility inputs would result in a significantly lower (higher) fair value measurement. Where the Group has a short index position, an increase (decrease) in the index value input in isolation would result in a significantly lower (higher) fair value measurement.

Other invested assets measured at net asset value

Other invested assets measured at net asset value as of 31 December were as follows:

USD millions	2018 Fair value	2019 Fair value	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Private equity funds	504	565	647	non-redeemable	n/a
Hedge funds	196	208		redeemable[1]	45–95 days[2]
Private equity direct	69	128	42	non-redeemable	n/a
Real estate funds	43	12	15	non-redeemable	n/a
Total	812	**913**	**704**		

[1] The redemption frequency varies by position.
[2] Cash distribution can be delayed for an extended period depending on the sale of the underlyings.

The hedge fund investments employ a variety of strategies, including relative value and event-driven across various asset classes.

The private equity direct portfolio consists of equity and equity-like investments directly in other companies. These investments have no contractual term and are generally held based on financial or strategic intent.

Private equity and real estate funds generally have limitations imposed on the amount of redemptions from the fund during the redemption period due to illiquidity of the underlying investments. Fees may apply for redemptions or transferring of interest to other parties. Distributions are expected to be received from these funds as the underlying assets are liquidated over the life of the fund, which is generally from 10 to 12 years.

The redemption frequency of hedge funds varies depending on the manager as well as the nature of the underlying product. Additionally, certain funds may impose lock-up periods and redemption gates as defined in the terms of the individual investment agreement.

Fair value option

The fair value option under the Financial Instruments Topic permits the choice to measure specified financial assets and liabilities at fair value on an instrument-by-instrument basis. The Group elected the fair value option for positions in the following line items:

Other invested assets

The Group elected the fair value option for certain investments classified as equity method investees within other invested assets in the balance sheet. The Group applied the fair value option, as the investments are managed on a fair value basis. The changes in fair value of these elected investments are recorded in earnings.

Funds held by ceding companies

For operational efficiencies, the Group elected the fair value option for funds held by the cedent under three of its reinsurance agreements. The assets are carried at fair value and changes in fair value are reported as a component of earnings.

Liabilities for life and health policy benefits

The Group elected the fair value option for existing GMDB reserves related to certain variable annuity contracts which are classified as universal-life-type contracts. The Group has applied the fair value option, as the equity risk associated with those contracts is managed on a fair value basis and it is economically hedged with derivative options in the market. The liability is carried at fair value and changes in fair value attributable to instrument-specific credit risk are reported in other comprehensive income and all other changes in fair value are reported as a component of earnings.

Other derivative liabilities

For operational efficiencies, the Group elected the fair value option on a hybrid financial instrument, where the host contract is a debt instrument and the embedded derivative is pegged to the performance of the fund's real estate portfolio. The liability is carried at fair value and changes in fair value are reported as a component of earnings. In the balance sheet and the following fair value disclosures, this item was included under "Accrued expenses and other liabilities" for the year ended 31 December 2018 and is included under "Liabilities held for sale" for the year ended 31 December 2019.

Assets and liabilities measured at fair value pursuant to election of the fair value option

Pursuant to the election of the fair value option for the items described, the balances as of 31 December were as follows:

USD millions	2018	2019
Assets		
Other invested assets	6 398	7 343
of which at fair value pursuant to the fair value option	312	335
Funds held by ceding companies	9 009	9 472
of which at fair value pursuant to the fair value option	206	174
Liabilities		
Liabilities for life and health policy benefits	–39 593	–19 836
of which at fair value pursuant to the fair value option	–119	–91
Accrued expenses and other liabilities	–6 798	
of which at fair value pursuant to the fair value option	–127	
Liabilities held for sale		–68 586
of which at fair value pursuant to the fair value option		–110

Changes in fair values for items measured at fair value pursuant to election of the fair value option

Gains/losses included in earnings for items measured at fair value pursuant to election of the fair value option including foreign exchange impact for the years ended 31 December were as follows:

USD millions	2018	2019
Other invested assets	6	16
Funds held by ceding companies		11
Liabilities for life and health policy benefits	6	32
Accrued expenses and other liabilities	–11	
Liabilities held for sale		–10
Total	1	**49**

Fair value changes from other invested assets and funds held by ceding companies are reported in "Net investment income – non-participating business". Fair value changes from the GMDB reserves are shown in "Life and health benefits". Fair value changes from accrued expenses and other liabilities are reported in "Net realised investment gains/losses – non-participating business".

Assets and liabilities not measured at fair value but for which the fair value is disclosed

Assets and liabilities not measured at fair value but for which the fair value is disclosed as of 31 December were as follows:

2018 USD millions	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Total
Assets			
Policy loans		84	84
Mortgage loans		2 882	2 882
Other loans		1 587	1 587
Investment real estate		4 141	4 141
Total assets	0	8 694	8 694
Liabilities			
Debt	−7 576	−4 109	−11 685
Total liabilities	−7 576	−4 109	−11 685

2019 USD millions	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Total
Assets			
Policy loans		50	50
Mortgage loans		2 144	2 144
Other loans		2 376	2 376
Investment real estate		4 563	4 563
Total assets	**0**	**9 133**	**9 133**
Liabilities			
Debt	−10 639	−3 565	−14 204
Total liabilities	**−10 639**	**−3 565**	**−14 204**

Policy loans, other loans and certain mortgage loans are classified as level 3 measurements, as they do not have an active exit market. Some of these positions need to be assessed in conjunction with the corresponding insurance business, whilst the fair value of some other positions does not differ materially from the carrying amount. Considering these circumstances for these positions, the Group presents the carrying amount as an approximation for the fair value. For certain commercial mortgage loans and infrastructure loans, which are included in mortgage loans and other loans respectively, the fair value can be estimated using discounted cash flow models which are based on discount curves and spread inputs that require management's judgement.

Investments in real estate are fair valued primarily by external appraisers based on proprietary discounted cash flow models that incorporate applicable risk premium adjustments to discount yields and projected market rental income streams based on market-specific data. These fair value measurements are classified in level 3 in the fair value hierarchy.

Debt positions, which are fair valued based on executable broker quotes or the discounted cash flow method using observable inputs, are classified as level 2 measurements. Fair value of the majority of the Group's level 3 debt positions is judged to approximate carrying value due to the highly tailored nature of the obligation and short-notice termination provisions.

9 Derivative financial instruments

The Group uses a variety of derivative financial instruments including swaps, options, forwards, credit derivatives and exchange- traded financial futures in its trading and hedging strategies, in line with the Group's overall risk management strategy. The objectives include managing exposure to price, foreign currency and/or interest rate risk on planned or anticipated investment purchases, existing assets or liabilities, as well as locking in attractive investment conditions for future available funds.

The fair values represent the gross carrying value amounts at the reporting date for each class of derivative contract held or issued by the Group. The gross fair values are not an indication of credit risk, as many over-the-counter transactions are contracted and documented under ISDA master agreements or their equivalent. Management believes that such agreements provide for legally enforceable set-off in the event of default, which substantially reduces credit exposure.

Fair values and notional amounts of derivative financial instruments

As of 31 December, the fair values and notional amounts of the derivatives outstanding were as follows:

2018 USD millions	Notional amount assets/liabilities	Fair value assets	Fair value liabilities	Carrying value assets/liabilities
Derivatives not designated as hedging instruments				
Interest rate contracts	52 719	441	–326	115
Foreign exchange contracts	19 415	186	–148	38
Equity contracts	12 493	719	–538	181
Credit contracts	379		–1	–1
Other contracts	11 385	61	–471	–410
Total	96 391	1 407	–1 484	–77
Derivatives designated as hedging instruments				
Foreign exchange contracts	12 679	213	–21	192
Total	12 679	213	–21	192
Total derivative financial instruments	109 070	1 620	–1 505	115
Amount offset				
Where a right of set-off exists		–623	623	
Due to cash collateral		–429	300	
Total net amount of derivative financial instruments		568	–582	–14

2019 USD millions	Notional amount assets/liabilities	Fair value assets	Fair value liabilities	Carrying value assets/liabilities
Derivatives not designated as hedging instruments				
Interest rate contracts	27 544	494	–395	99
Foreign exchange contracts	26 256	291	–108	183
Equity contracts	16 089	721	–531	190
Credit contracts	3 283	17	–63	–46
Other contracts	10 290	48	–443	–395
Total	**83 462**	**1 571**	**–1 540**	**31**
Derivatives designated as hedging instruments				
Interest rate contracts	1 403	1	–22	–21
Foreign exchange contracts	15 038	90	–188	–98
Total	**16 441**	**91**	**–210**	**–119**
Total derivative financial instruments	**99 903**	**1 662**	**–1 750**	**–88**
Amount offset				
Where a right of set-off exists		–675	675	
Due to cash collateral		–509	383	
Total net amount of derivative financial instruments		**478**	**–692**	**–214**

The notional amounts of derivative financial instruments give an indication of the Group's volume of derivative activity. The fair value assets are included in "Other invested assets", "Investments for unit-linked and with-profit business" and "Assets held for sale". The fair value liabilities are included in "Accrued expenses and other liabilities" and "Liabilities held for sale". The fair value amounts that were not offset were nil as of 31 December 2018 and 2019.

Non-hedging activities

The Group primarily uses derivative financial instruments for risk management and trading strategies. Gains and losses of derivative financial instruments not designated as hedging instruments are recorded in "Net realised investment gains/losses — non-participating business" and "Net investment result — unit-linked and with-profit business" in the income statement.

For the years ended 31 December, the gains and losses of derivative financial instruments not designated as hedging instruments were as follows:

USD millions	2018	**2019**
Derivatives not designated as hedging instruments		
Interest rate contracts	–178	–116
Foreign exchange contracts	–60	8
Equity contracts	30	–183
Credit contracts	–7	–51
Other contracts	73	112
Total gains/losses recognised in income	–142	**–230**

Hedging activities

The Group designates certain derivative financial instruments as hedging instruments. The designation of derivative financial instruments is primarily used for overall portfolio and risk management strategies. As of 31 December 2018 and 2019, the following hedging relationships were outstanding:

Fair value hedges

The Group enters into foreign exchange and interest rate swaps to reduce the exposure to foreign exchange and interest rate volatility for certain fixed income securities and its issued long-term debt positions. These derivative instruments are designated as hedging instruments in qualifying fair value hedges.

For the years ended 31 December, the gains and losses attributable to the hedged risks were as follows:

			2018			**2019**
USD millions	Net realised investment gains/losses — non-participating business	Interest expenses	Other comprehensive income - Net unrealised investment gains/losses	Net realised investment gains/losses — non-participating business	Interest expenses	Other comprehensive income - Net unrealised investment gains/losses
Total amounts of income and expense line items	65	–555	1 905	1 580	–589	5 152
Foreign exchange contracts						
Gains/losses on derivatives	430			40		
Gains/losses on hedged items	–430			–40		
Amounts excluded from the effectiveness assessment						–2
Interest rate contracts						
Gains/losses on derivatives					–18	
Gains/losses on hedged items					20	

As of 31 December, the carrying values of the hedged assets and liabilities, and the cumulative amounts of fair value hedging adjustments included there within, recognised in the balance sheet, were as follows:

		2019
USD millions	Carrying value	Cumulative basis adjustment
Assets		
Fixed income securities available-for-sale	9 555	
Liabilities		
Long-term debt	–1 355	20

Cash flow hedges

The Group entered into cross-currency swaps to reduce the exposure to foreign exchange volatility for a long-term debt instrument issued in the second quarter of 2016. These derivative instruments are designated as cash flow hedging instruments.

For the years ended 31 December, the gains and losses recorded in accumulated other comprehensive income, and reclassified into income were as follows:

USD millions	Net realised investment gains/losses — non-participating business	2018 Other comprehensive income - Cash flow hedges	Net realised investment gains/losses — non-participating business	2019 Other comprehensive income - Cash flow hedges
Total amounts of income and expense line items	65	6	1 580	–2
Foreign exchange contracts				
Gains/losses on derivatives	10	25	–48	–57

As of 31 December 2019, the maximum length of time over which the Group hedged its exposure to the variability in future cash flows for forecasted transactions, excluding those forecasted transactions related to the payment of variable interest on existing financial instruments, was three years.

The Group believes that the net gains and losses associated with cash flow hedges expected to be reclassified from accumulated other comprehensive income within the next 12 months cannot be reasonably estimated as they relate to foreign exchange volatility.

Hedges of the net investment in foreign operations

The Group designates derivative and non-derivative monetary financial instruments as hedging the foreign currency exposure of its net investment in certain foreign operations.

For the years ended 31 December 2018 and 2019, the Group recorded an accumulated net unrealised foreign currency remeasurement gain of USD 2 102 million and USD 1 895 million, respectively, in "Other comprehensive income - Foreign currency translation". These offset translation gains and losses on the hedged net investment.

Maximum potential loss

In consideration of the rights of set-off and the qualifying master netting arrangements with various counterparties, the maximum potential loss as of 31 December 2018 and 2019 was approximately USD 997 million and USD 987 million, respectively. The maximum potential loss is based on the positive market replacement cost assuming non-performance of all counterparties, excluding cash collateral.

Credit risk-related contingent features

Certain derivative instruments held by the Group contain provisions that require its debt to maintain an investment-grade credit rating. If the Group's credit rating were downgraded or no longer rated, the counterparties could request immediate payment, guarantee or an ongoing full overnight collateralisation on derivative instruments in net liability positions.

The total fair value of derivative financial instruments containing credit risk-related contingent features amounted to USD 108 million and USD 75 million as of 31 December 2018 and 2019, respectively. For derivative financial instruments containing credit risk-related contingent features, the Group posted collateral of nil as of 31 December 2018 and 2019, respectively. In the event of a reduction of the Group's credit rating to below investment grade, a fair value of USD 75 million additional collateral would have had to be posted as of 31 December 2019. The total equals the amount needed to settle the instruments immediately as of 31 December 2019.

10 Acquisitions

Old Mutual Wealth Life Assurance Limited

On 31 December 2019, the Group through its ReAssure subsidiary acquired 100% of the UK closed book business of Quilter plc, consisting of Old Mutual Wealth Life Assurance Limited and its subsidiary Old Mutual Wealth Pensions Trustees Limited, including around 300 employees. The business acquired provides pension schemes, protection products, investment solutions and savings offerings predominantly to the UK retail market.

The transaction is consistent with ReAssure's strategy to grow its closed-book business and adds approximately 0.2 million customer policies increasing ReAssure's total policy count to 3.2 million. The acquisition was funded from ReAssure's internal resources.

The total consideration paid was USD 591 million in cash. The purchase price has been allocated based on estimated fair values of assets acquired and liabilities assumed as of the date of acquisition. The allocation required significant judgement.

Historic intangibles have been eliminated. The Group established acquired PVFP of USD 209 million which qualifies as purchased intangible assets. There was no goodwill recognised upon acquisition.

As the business was acquired by ReAssure, it was recognised as held for sale upon acquisition and the pro forma revenue and earnings related to the acquisition are not presented. Assets held for sale of USD 13 603 million (including investments of USD 10 994 million) and liabilities held for sale of USD 13 382 million (including policyholder account balances of USD 12 184 million) related to this acquisition are included in the balances which are further discussed in Note 11 "Assets held for sale".

11 Assets held for sale

In the fourth quarter of 2019, the Group entered into an agreement to sell its subsidiary ReAssure Group plc (ReAssure), currently within the Life Capital business segment, to Phoenix Group Holdings plc (Phoenix). The transaction is expected to close in mid-2020, subject to approvals by regulators and anti-trust authorities.

Swiss Re will receive a cash payment of USD 1.6 billion, shares in Phoenix representing a 13% to 17% stake and be entitled to a seat on its Board of Directors. ReAssure's minority shareholder, MS&AD Insurance Group Holdings Inc, will receive shares in Phoenix representing an 11% to 15% stake. An expected future loss of USD 230 million on the disposal of the net assets was recognised in the fourth quarter 2019.

The principal products administered by ReAssure are long-term life and pension products, permanent health insurance, critical illness products and retirement annuities. The Group reassessed goodwill based on the agreement to sell ReAssure to Phoenix. USD 139 million of the estimated loss has been allocated against the goodwill held by ReAssure, reducing its carrying amount to zero. For the remainder of USD 91 million an additional liability has been established within "Liabilities held for sale". The loss has been reflected in the "Net realised investment gains/losses" line in the income statement. This loss will be adjusted based on the ultimate purchase price to be determined as of the closing of the transaction.

For the year ended 31 December 2018 and 2019, ReAssure reported a pre-tax income of USD 272 million and USD 120 million, of which USD 231 million and USD 32 million were attributable to the Swiss Re Group respectively.

The major classes of assets and liabilities held for sale are listed below.

USD millions	2019
Assets	
Fixed income securities available-for-sale	20 450
Short-term and other investments	2 240
Investments for unit-linked and with-profit business	43 173
Cash and cash equivalents	2 729
Reinsurance recoverable	3 134
Deferred acquisition costs	657
Acquired present value of future profits	680
Other assets	1 376
Total assets held for sale	74 439
Liabilities	
Unpaid claims and claim adjustment expenses	497
Liabilities for life and health policy benefits	22 624
Policyholder account balances	41 459
Other reinsurance liabilities	309
Other liabilities	3 606
Loss accrual upon held for sale	91
Total liabilities held for sale	68 586

12 Debt and contingent capital instruments

The Group enters into long- and short-term debt arrangements to obtain funds for general corporate use and specific transaction financing. The Group defines short-term debt as debt having a maturity at the balance sheet date of not greater than one year and long-term debt as having a maturity of greater than one year. For subordinated debt positions, maturity is defined as the first optional redemption date (notwithstanding that optional redemption could be subject to regulatory consent). Interest expense is classified accordingly.

The Group's debt as of 31 December was as follows:

USD millions	2018	2019
Senior financial debt	235	
Subordinated financial debt	637	
Contingent capital instruments classified as financial debt	761	185
Short-term debt	1 633	**185**
Senior financial debt	3 428	2 809
Senior operational debt	388	244
Subordinated financial debt	1 892	5 993
Subordinated operational debt	2 112	1 918
Contingent capital instruments classified as financial debt	682	494
Reclassified to liabilities held for sale		–1 320
Long-term debt	8 502	**10 138**
Total carrying value	10 135	**10 323**
Total fair value	11 685	**14 204**

As of 31 December 2018 and 2019, operational debt, ie debt related to operational leverage, amounted to USD 2.5 billion (thereof USD 2.1 billion limited- or non-recourse) and USD 2.2 billion (thereof USD 1.9 billion limited- or non-recourse), respectively. Operational leverage is subject to asset/liability matching and is excluded from rating agency financial leverage calculations.

Maturity of long-term debt

As of 31 December, long-term debt as reported above had the following maturities:

USD millions	2018	2019
Due in 2020	188	0
Due in 2021	816	152
Due in 2022	817	804
Due in 2023	855	840
Due in 2024	1 246	2 573
Due after 2024	4 580	7 089
Reclassified to liabilities held for sale		–1 320
Total carrying value	8 502	**10 138**

Senior long-term debt

Maturity	Instrument	Issued in	Currency	Nominal in millions	Interest rate	Book value in USD millions
2022	Senior notes	2012	USD	250	2.88%	249
2023	Senior notes	2016	EUR	750	1.38%	838
2024	EMTN	2014	CHF	250	1.00%	257
2026	Senior notes[1]	1996	USD	397	7.00%	465
2027	EMTN	2015	CHF	250	0.75%	259
2030	Senior notes[1]	2000	USD	193	7.75%	251
2042	Senior notes	2012	USD	500	4.25%	490
Various	Payment undertaking agreements	various	USD	226	various	244
Total senior long-term debt as of 31 December 2019						**3 053**
Total senior long-term debt as of 31 December 2018						3 816

[1] Assumed in the acquisition of GE Insurance Solutions.

Subordinated long-term debt

Maturity	Instrument	Issued in	Currency	Nominal in millions	Interest rate	First call in	Book value in USD millions
2026	Tier 3 subordinated notes[1]	2019	GBP	250	4.02%		333
2029	Tier 2 resettable callable subordinated notes[1]	2019	GBP	250	5.77%	2024	331
2029	Tier 2 subordinated notes[1]	2019	GBP	500	5.87%		656
2042	Subordinated fixed-to-floating rate loan note	2012	EUR	500	6.63%	2022	555
2044	Subordinated fixed rate resettable callable loan note	2014	USD	500	4.50%	2024	498
2049	Subordinated fixed rate reset step-up callable loan note	2019	USD	1 000	5.00%	2029	991
2050	Subordinated fixed rate reset step-up callable loan note	2019	EUR	750	2.53%	2030	838
2057	Subordinated private placement (amortising, limited recourse)	2007	GBP	1 448	6.04%		1 918
	Perpetual subordinated fixed spread callable note	2019	USD	1 000	4.25%	2024	991
	Perpetual subordinated fixed-to-floating rate callable loan note	2015	EUR	750	2.60%	2025	800
Total subordinated long-term debt as of 31 December 2019							**7 911**
Total subordinated long-term debt as of 31 December 2018							4 004

[1] Reclassified to liabilities held for sale.

Contingent capital instruments classified as long-term debt

Maturity	Instrument	Issued in	Currency	Nominal in millions	Interest rate	Book value in USD millions
2024	Senior unsecured exchangeable instrument with issuer stock settlement	2018	USD	500	3.25%	494
Total contingent capital instruments classified as long-term debt as of 31 December 2019						**494**
Total contingent capital instruments classified as long-term debt as of 31 December 2018						682

Interest expense on long-term debt and contingent capital instruments classified as equity

Interest expense on long-term debt for the years ended 31 December was as follows:

USD millions	2018	2019
Senior financial debt	100	87
Senior operational debt	11	10
Subordinated financial debt	108	174
Subordinated operational debt	118	111
Contingent capital instruments classified as financial debt	38	22[1]
Total	375	**404**

[1] The figure includes interest expense on the senior unsecured exchangeable instrument with issuer stock settlement in the amount of USD 17 million.

In addition to the above, interest expense on contingent capital instruments classified as equity was USD 41 million and nil for the years ended 31 December 2018 and 2019, respectively.

Long-term debt issued in 2019

In March 2019, Swiss Re Finance (Luxembourg) S.A., a subsidiary of Swiss Reinsurance Company Ltd, issued 31-year guaranteed subordinated fixed rate reset step-up callable notes, which are callable after 11 years. The instruments have an aggregate face value of EUR 750 million, with a fixed coupon of 2.534% per annum until the first optional redemption date (30 April 2030). The notes are guaranteed on a subordinated basis by Swiss Reinsurance Company Ltd.

In April 2019, Swiss Re Finance (Luxembourg) S.A., a subsidiary of Swiss Reinsurance Company Ltd, issued 30-year guaranteed subordinated fixed rate reset step-up callable notes, which are callable after ten years. The instruments have an aggregate face value of USD 1 billion, with a fixed coupon of 5% per annum until the first optional redemption date (2 April 2029). The notes are guaranteed on a subordinated basis by Swiss Reinsurance Company Ltd.

In June 2019, ReAssure Group plc issued Tier 2 subordinated notes due 2029. The notes have an aggregate face value of GBP 500 million, with a fixed coupon of 5.867% per annum.

In June 2019, ReAssure Group plc issued Tier 3 subordinated notes due 2026. The notes have an aggregate face value of GBP 250 million, with a fixed coupon of 4.016% per annum. The notes were initially issued to Swiss Re Finance (Jersey) Limited and, in July 2019, were sold to a third party outside the Swiss Re Group.

In June 2019, ReAssure Group plc issued callable Tier 2 subordinated notes due 2029, which are callable in 2024. The notes have an aggregate face value of GBP 250 million, with a fixed coupon of 5.766% per annum until the first optional redemption date (13 June 2024). The notes were initially issued to Swiss Re Finance (Jersey) Limited and, in July 2019, a portion was sold to a third party outside the Swiss Re Group. In August 2019, the remaining portion was sold to the same third party.

In September 2019, Swiss Re Finance (Luxembourg) S.A., a subsidiary of Swiss Reinsurance Company Ltd, issued perpetual guaranteed subordinated fixed spread callable notes, which are callable every five years. The instruments have an aggregate face value of USD 1 billion, with a fixed coupon of 4.25% per annum until the first optional redemption date (4 September 2024). The coupon is reset every five years to the then prevailing US Treasury rate plus the initial credit spread. The notes are guaranteed on a subordinated basis by Swiss Reinsurance Company Ltd.

13 Leases

As part of its normal business operations, the Group as a lessee enters into a number of lease agreements mainly for office space. Certain lease agreements include rental payments adjusted periodically for inflation. Renewal or termination options that are reasonably certain of exercise by the lessee are included in the lease term. The lease agreements do not contain any material residual value guarantees or material restrictive covenants.

In line with the elected transition method provided by ASU 2018-11 "Targeted Improvements", the comparative lease information was not restated and continues to be reported in line with the requirements in ASC 840 Leases.

Lease liabilities and right-of-use assets

Lease liabilities and right-of-use assets for operating leases as of 31 December were as follows:

USD millions	2019
Operating lease right-of-use assets	485
Operating lease liabilities	531

Operating lease right-of-use assets are included in "Other assets" and operating lease liabilities are included in "Accrued expenses and other liabilities" on the balance sheet.

Maturity of lease liabilities

As of 31 December 2019, the total undiscounted cash flows due to operating leases for the next five years and thereafter were as follows:

USD millions	**2019**
2020	89
2021	77
2022	69
2023	61
2024	55
After 2024	239
Total undiscounted cash flows	**590**
Less imputed interest	–59
Total lease liability	**531**

Undiscounted sublease cash flows over the next four years are USD 15 million.

The discount rates used to determine the lease liability reflect the collateralised borrowing rates for the Group, where the underlying collateral is assumed to be real estate.

The weighted average discount rate for operating leases as of 31 December 2019 was 2.5%. The weighted average remaining lease term for operating leases as of 31 December 2019 was 8.9 years.

As of 31 December 2018, future minimum lease commitments as determined prior to the adoption of ASU 2016-02 were as follows:

USD millions	2018
2019	86
2020	78
2021	63
2022	57
2023	49
After 2023	255
Total operating lease commitments	**588**
Less minimum non-cancellable sublease rentals	–12
Total net future minimum lease commitments	**576**

Lease cost
The composition of total lease cost for all operating leases for the year ended 31 December was as follows:

USD millions	2018	2019
Fixed operating lease cost		87
Other lease cost[1]		3
Total operating lease cost[2]	86	**90**
Less sublease income from operating leases	–2	–9
Total lease cost	84	**81**

[1] "Other lease cost" includes variable lease cost.
[2] A distinction between "Fixed operating lease cost" and "Other lease cost" is not available for 2018 comparative information.

Other information
For the year ended 31 December 2019, cash paid for amounts included in the measurement of operating lease liabilities was USD 91 million and right-of-use assets obtained in exchange for new operating lease liabilities were USD 68 million.

14 Earnings per share

Earnings per share for the years ended 31 December were as follows:

USD millions (except share data)	2018	2019
Basic earnings per share		
Net income	481	769
Non-controlling interests	–19	–42
Interest on contingent capital instruments[1]	–41	
Net income attributable to common shareholders	421	**727**
Weighted average common shares outstanding	306 841 773	295 660 059
Net income per share in USD	1.37	**2.46**
Net income per share in CHF[2]	1.34	**2.46**
Effect of dilutive securities		
Change in income available to common shares due to contingent capital instruments[1]	8	14
Change in average number of shares due to contingent capital instruments	6 203 404	13 143 130
Change in average number of shares due to employee options	604 473	704 411
Diluted earnings per share		
Net income assuming debt conversion and exercise of options	429	**741**
Weighted average common shares outstanding	313 649 650	309 507 600
Net income per share in USD	1.37	**2.39**
Net income per share in CHF[2]	1.34	**2.40**

[1] Please refer to Note 12 "Debt and contingent capital instruments".
[2] The translation from USD to CHF is shown for informational purposes only and has been calculated using the Group's average exchange rates.

Dividends are declared in Swiss francs. During the years ended 31 December 2018 and 2019, the parent company of the Group (Swiss Re Ltd) paid dividends per share of CHF 5.00 and CHF 5.60, respectively.

At the 2018 Annual General Meeting held on 20 April 2018, Swiss Re Ltd's shareholders authorised the SRL Board of Directors to repurchase up to a maximum CHF 1 billion purchase value of Swiss Re Ltd's own shares by way of a public share buyback programme for cancellation purposes prior to the 2019 Annual General Meeting.

At the 2019 Annual General Meeting held on 17 April 2019, Swiss Re Ltd's shareholders authorised a public share buyback programme consisting of two tranches of each up to CHF 1 billion purchase value of Swiss Re Ltd's own shares for cancellation purposes prior to the 2020 Annual General Meeting, the first tranche being conditional on obtaining all necessary legal and regulatory approvals and Board of Directors approval and the second tranche being conditional on (in addition to obtaining all necessary legal and regulatory approvals and Board of Directors approval) the 2019 development of the Group's excess capital position and subject to the Group's capital management priorities.

The public share buyback programme approved by the 2018 Annual General Meeting was completed as of 15 February 2019. The total number of shares repurchased amounted to 11.2 million, of which 10 million and 1.2 million shares were repurchased as of 31 December 2018 and between 1 January and 15 February 2019, respectively.

On 17 April 2019, the 2019 Annual General Meeting resolved the cancellation of the 11.2 million repurchased shares by way of share capital reduction. The share capital reduction was registered in the Commercial Register of the Canton of Zurich on 11 July 2019 and publication in the Swiss Commercial Gazette occurred on 16 July 2019.

The first tranche of the public share buyback programme approved by the 2019 Annual General Meeting commenced on 6 May 2019 and was completed on 18 February 2020. The total number of shares repurchased amounted to 9.9 million, of which 8.2 million and 1.7 million shares were repurchased as of 31 December 2019 and between 1 January and 18 February 2020, respectively.

As announced on 31 October 2019, the SRL Board of Directors decided not to launch the second tranche of the public share buyback programme approved by the 2019 Annual General Meeting.

15 Income taxes

The Group is generally subject to corporate income taxes based on the taxable net income in various jurisdictions in which it operates. The components of the income tax expense were:

USD millions	2018	2019
Current taxes	636	496
Deferred taxes	–567	–356
Income tax expense	69	**140**

Tax rate reconciliation

The following table reconciles the expected tax expense at the Swiss statutory tax rate to the actual tax expense in the accompanying income statement:

USD millions	2018	2019
Income tax at the Swiss statutory tax rate of 21.0%	115	191
Increase (decrease) in the income tax charge resulting from:		
Foreign income taxed at different rates	122	27
Impact of foreign exchange movements	–64	16
Tax exempt income/dividends received deduction	–61	–142
Change in valuation allowance	–92	–16
Non-deductible expenses	55	38
Change in statutory rate	25	6
Other income based taxes	–2	76
Change in liability for unrecognised tax benefits including interest and penalties	72	–42
Intra-entity transfers	–68	20
Other, net[1]	–33	–34
Total	69	**140**

[1] Other, net includes tax return to tax provision adjustments from various jurisdictions.

For the year ended 31 December 2019, the Group reported a tax charge of USD 140 million on a pre-tax income of USD 909 million, compared to a charge of USD 69 million on a pre-tax income of USD 550 million for 2018. This translates into an effective tax rate in the current and prior year reporting periods of 15.4% and 12.5%, respectively.

For the year ended 31 December 2019, the tax rate was largely driven by tax benefits from effective settlement of tax audits and tax-exempt income, partially offset by tax charges from other income-based taxes and non-deductible expenses. The lower rate in the year ended 31 December 2018 was largely driven by tax benefits from foreign currency translation differences between statutory and US GAAP accounts, the releases of valuation allowances on net operating losses and tax benefits from intra-entity transfers, partially offset by the impact of different rates in various jurisdictions and tax charges from unrecognised tax benefits.

Deferred and other non-current taxes

The components of deferred and other non-current taxes were as follows:

USD millions	2018	2019
Deferred tax assets		
Income accrued/deferred	212	238
Technical provisions	560	519
Unearned premium reserves	236	318
Pension provisions	293	303
Benefit on loss carryforwards	2 675	2 446
Currency translation adjustments	423	316
Unrealised gains in income	424	651
Investment valuation in income	171	269
Other	805	774
Reclassified to assets held for sale		–604
Gross deferred tax asset	5 799	5 230
Valuation allowance	–366	–505
Unrecognised tax benefits offsetting benefits on loss carryforwards	–22	1
Total deferred tax assets	5 411	**4 726**
Deferred tax liabilities		
Present value of future profits	–294	–241
Income accrued/deferred	–199	–148
Investment valuation in income	–382	–448
Deferred acquisition costs	–1 071	–1 036
Technical provisions	–2 264	–2 230
Unrealised gains on investments	–584	–1 443
Foreign exchange provisions	–602	–489
Other	–780	–728
Reclassified to liabilities held for sale		1 321
Total deferred tax liabilities	–6 176	**–5 442**
Liability for unrecognised tax benefits including interest and penalties	–295	–250
Reclassified to liabilities held for sale		29
Total deferred and other non-current tax liabilities	–6 471	**–5 663**

As of 31 December 2019, a tax benefit of USD 6 million arises from revaluing the Swiss deferred assets and liabilities to the new Swiss statutory tax rate (combined federal and cantonal) of 19.7% (from 21% for ordinary companies and 7.8% for holding companies), under the Swiss tax reform. Accordingly, the revaluing reduced the Swiss deferred tax assets by USD 35 million and the Swiss deferred tax liabilities by USD 41 million (net USD 6 million). Moreover, the transitional impact of Swiss tax reform had led to the recognition of an intangible deferred tax asset of USD 142 million (included within "Other" above) which has been fully offset by a valuation allowance.

As of 31 December 2019, the aggregate amount of temporary differences associated with investment in subsidiaries, branches and associates and interests in joint ventures, for which deferred tax liabilities have not been recognised amount to approximately USD 3.2 billion. In the remote scenario in which these temporary differences were to reverse simultaneously, the resulting tax liabilities would be very limited due to participation exemption rules.

As of 31 December 2019, the Group had USD 10 553 million net operating tax loss carryforwards, expiring as follows: USD 12 million in 2020, USD 8 million in 2021, USD 7 million in 2022, USD 6 million in 2023, USD 6 171 million in 2024 and beyond, and USD 4 349 million never expire.

As of 31 December 2019, the Group had capital loss carryforwards of USD 1 080 million that never expires.

For the year ended 31 December 2019, net operating tax losses of USD 4 051 million and net capital tax losses of USD 43 million were utilised.

Income taxes paid in 2018 and 2019 were USD 740 million and USD 611 million, respectively.

Unrecognised tax benefits

A reconciliation of the opening and closing amount of gross unrecognised tax benefits (excluding interest and penalties) is as follows:

USD millions	2018	2019
Balance as of 1 January	206	257
Additions based on tax positions related to current year	49	38
Additions based on tax positions related to prior years	57	8
Reductions for tax positions of current year	–8	–7
Reductions for tax positions of prior years	–15	–83
Statute expiration	–19	–2
Settlements	–7	–16
Other (including foreign currency translation)	–6	–1
Reclassified to assets/liabilities held for sale		–24
Balance as of 31 December	257	**170**

As of 31 December 2018 and 2019, the amount of gross unrecognised tax benefits within the tabular reconciliation that, if recognised, would affect the effective tax rate were approximately USD 257 million and USD 170 million, respectively.

Interest and penalties related to unrecognised tax benefits are recorded in income tax expense. For the years ended 31 December 2018 and 2019, such expenses were USD 7 million and USD 5 million, respectively. For the years ended 31 December 2018 and 2019, USD 60 million and USD 55 million, respectively, were accrued for the payment of interest (net of tax benefits) and penalties. The accrued interest balance as of 31 December 2019 is included within the deferred and other non-current taxes section reflected above and in the balance sheet.

The balance of gross unrecognised tax benefits as of 31 December 2019 presented in the table above excludes accrued interest and penalties (USD 55 million).

During the year, certain tax positions and audits in Switzerland, the United States, France, the United Kingdom, Brazil, Germany, Japan and Malaysia were effectively settled.

The Group continually evaluates proposed adjustments by taxing authorities. The Group believes that it is reasonably possible (more than remote and less than likely) that the balance of unrecognised tax benefits could increase or decrease over the next 12 months due to settlements or expiration of statutes. However, quantification of an estimated range cannot be made at this time.

The following table summarises jurisdictions and tax years that remain subject to examination:

Australia	2014–2019
Brazil	2014–2019
Canada	2012–2019
China	2009–2019
Colombia	2016–2019
Denmark	2014–2019
France	2017–2019
Germany	2017–2019
Hong Kong	2013–2019
India	2004–2019
Ireland	2015–2019
Israel	2014–2019
Italy	2015–2019
Japan	2011–2019
Korea	2013–2019
Luxembourg	2015–2019
Malaysia	2012–2019
Mexico	2014–2019
Netherlands	2015–2019
New Zealand	2014–2019
Nigeria	2016–2019
Singapore	2014–2019
Slovakia	2014–2019
South Africa	2015–2019
Spain	2015–2019
Switzerland	2015–2019
United Kingdom	2008–2009, 2013–2019
United States	2011–2019

16 Benefit plans

Defined benefit pension plans and post-retirement benefits

The Group sponsors various funded defined benefit pension plans. Employer contributions to the plans are charged to income on a basis which recognises the costs of pensions over the expected service lives of employees covered by the plans. The Group's funding policy for these plans is to contribute annually at a rate that is intended to maintain a level percentage of compensation for the employees covered. A full valuation is prepared at least every three years.

The Group also provides certain healthcare and life insurance benefits for retired employees and their dependants. Employees become eligible for these benefits when they become eligible for pension benefits.

The measurement date of these plans is 31 December for each year presented.

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Benefit obligation as of 1 January	3 948	2 464	413	6 825
Service cost	120	8	5	133
Interest cost	23	68	9	100
Amendments		1	–61	–60
Actuarial gains/losses	–43	–81	–25	–149
Benefits paid	–202	–91	–18	–311
Employee contribution	25			25
Effect of settlement, curtailment and termination	4			4
Effect of foreign currency translation	–43	–99	–4	–146
Benefit obligation as of 31 December	3 832	2 270	319	6 421
Fair value of plan assets as of 1 January	3 887	2 565	0	6 452
Actual return on plan assets	–73	–46		–119
Company contribution	162	16	18	196
Benefits paid	–202	–91	–18	–311
Employee contribution	25			25
Effect of settlement, curtailment and termination	4			4
Effect of foreign currency translation	–43	–108		–151
Fair value of plan assets as of 31 December	3 760	2 336	0	6 096
Funded status	–72	66	–319	–325

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Benefit obligation as of 1 January	3 832	2 270	319	6 421
Service cost	99	8	3	110
Interest cost	29	67	7	103
Amendments			–1	–1
Actuarial gains/losses	307	297	24	628
Benefits paid	–59	–95	–16	–170
Employee contribution	32			32
Effect of settlement, curtailment and termination	–150			–150
Effect of foreign currency translation	75	42	4	121
Benefit obligation as of 31 December	**4 165**	**2 589**	**340**	**7 094**
Fair value of plan assets as of 1 January	3 760	2 336	0	6 096
Actual return on plan assets	391	323		714
Company contribution	97	16	16	129
Benefits paid	–59	–95	–16	–170
Employee contribution	32			32
Effect of settlement, curtailment and termination	–150			–150
Effect of foreign currency translation	74	53		127
Fair value of plan assets as of 31 December	**4 145**	**2 633**	**0**	**6 778**
Funded status	**–20**	**44**	**–340**	**–316**

Amounts recognised in "Other assets" and "Accrued expenses and other liabilities" in the Group's balance sheet as of 31 December were as follows:

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Non-current assets		238		238
Current liabilities		–3	–17	–20
Non-current liabilities	–72	–169	–302	–543
Net amount recognised	–72	66	–319	–325

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Non-current assets		242		242
Current liabilities		–3	–17	–20
Non-current liabilities	–20	–195	–323	–538
Net amount recognised	**–20**	**44**	**–340**	**–316**

Amounts recognised in accumulated other comprehensive income, gross of tax, as of 31 December were as follows:

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	864	393	–12	1 245
Prior service cost/credit	–100	3	–61	–158
Total	764	396	–73	1 087

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	818	441	13	1 272
Prior service cost/credit	–85	2	–50	–133
Total	**733**	**443**	**–37**	**1 139**

Components of net periodic benefit cost

The components of pension and post-retirement cost for the years ended 31 December were as follows:

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Service cost (net of participant contributions)	120	8	5	133
Interest cost	23	68	9	100
Expected return on assets	–93	–85		–178
Amortisation of:				
Net gain/loss	64	19		83
Prior service cost	–15			–15
Effect of settlement, curtailment and termination	4			4
Net periodic benefit cost	103	10	14	127

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Service cost (net of participant contributions)	99	8	3	110
Interest cost	29	67	7	103
Expected return on assets	–93	–88		–181
Amortisation of:				
Net gain/loss	35	15	–2	48
Prior service cost	–15		–15	–30
Effect of settlement, curtailment and termination	28			28
Net periodic benefit cost	**83**	**2**	**–7**	**78**

Other changes in plan assets and benefit obligations recognised in other comprehensive income for the years ended 31 December were as follows:

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	123	50	–25	148
Prior service cost/credit		1	–61	–60
Amortisation of:				
Net gain/loss	–64	–19		–83
Prior service cost	15			15
Effect of settlement, curtailment and termination				0
Exchange rate gain/loss recognised during the year		–13		–13
Total recognised in other comprehensive income, gross of tax	74	19	–86	7
Total recognised in net periodic benefit cost and other comprehensive income, gross of tax	177	29	–72	134

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	10	55	24	89
Prior service cost/credit			–1	–1
Amortisation of:				
Net gain/loss	–35	–15	2	–48
Prior service cost	15		15	30
Effect of settlement, curtailment and termination	–26			–26
Exchange rate gain/loss recognised during the year		3		3
Total recognised in other comprehensive income, gross of tax	**–36**	**43**	**40**	**47**
Total recognised in net periodic benefit cost and other comprehensive income, gross of tax	**47**	**45**	**33**	**125**

The estimated net loss and prior service credit for the defined benefit pension plans that will be amortised from accumulated other comprehensive income into net periodic benefit cost in 2020 are USD 80 million and USD 15 million, respectively. The estimated net gain and prior service credit for the other defined post-retirement benefits that will be amortised from accumulated other comprehensive income into net periodic benefit cost in 2020 are nil and USD 15 million, respectively.

The accumulated benefit obligation (the current value of accrued benefits excluding future salary increases) for pension benefits was USD 6 043 million and USD 6 687 million as of 31 December 2018 and 2019, respectively.

Pension plans with an accumulated benefit obligation in excess of plan assets as of 31 December were as follows:

USD millions	2018	**2019**
Projected benefit obligation	4 898	628
Accumulated benefit obligation	4 856	619
Fair value of plan assets	4 654	430

Principal actuarial assumptions

	Swiss plan		Foreign plans weighted average		Other benefits weighted average	
	2018	**2019**	2018	**2019**	2018	**2019**
Assumptions used to determine obligations at the end of the year						
Discount rate	0.8%	0.1%	3.0%	2.1%	2.2%	1.5%
Rate of compensation increase	1.8%	1.8%	3.0%	2.9%	2.1%	2.1%
Assumptions used to determine net periodic pension costs for the year ended						
Discount rate	0.6%	0.8%	2.8%	3.0%	2.1%	2.2%
Expected long-term return on plan assets	2.5%	2.5%	3.6%	3.7%		
Rate of compensation increase	1.8%	1.8%	3.0%	3.0%	2.1%	2.1%
Assumed medical trend rates at year end						
Medical trend – initial rate					4.7%	4.4%
Medical trend – ultimate rate					3.6%	3.6%
Year that the rate reaches the ultimate trend rate					2021	2023

The expected long-term rates of return on plan assets are based on long-term expected inflation, interest rates, risk premiums and targeted asset category allocations. The estimates take into consideration historical asset category returns.

Assumed healthcare cost trend rates have a significant effect on the amounts reported for the healthcare plans. A one percentage point change in assumed healthcare cost trend rates would have had the following effects for 2019:

USD millions	1 percentage point increase	1 percentage point decrease
Effect on total of service and interest cost components	0	0
Effect on post-retirement benefit obligation	18	–16

Plan asset allocation by asset category

The actual asset allocation by major asset category for defined benefit pension plans as of the respective measurement dates in 2018 and 2019 was as follows:

	Swiss plan allocation			Foreign plans allocation		
	2018	**2019**	**Target allocation**	2018	**2019**	**Target allocation**
Asset category						
Equity securities	23%	26%	23%	13%	8%	13%
Debt securities	46%	41%	46%	73%	76%	81%
Real estate	24%	18%	23%	2%	0%	0%
Other	7%	15%	8%	12%	16%	6%
Total	100%	**100%**	**100%**	100%	**100%**	**100%**

Actual asset allocation is determined by a variety of current economic and market conditions and considers specific asset class risks.

Equity securities include Swiss Re shares of USD 4 million (0.1% of total plan assets) and USD 3 million (0.04% of total plan assets) as of 31 December 2018 and 2019, respectively.

The Group's pension plan investment strategy is to match the maturity profiles of the assets and liabilities in order to reduce the future volatility of pension expense and funding status of the plans. This involves balancing investment portfolios between equity and fixed income securities. Tactical allocation decisions that reflect this strategy are made on a quarterly basis.

Assets measured at fair value

For a description of the different fair value levels and valuation techniques see Note 8 "Fair value disclosures".

Certain items reported as pension plan assets at fair value in the following table are not within the scope of Note 8, namely two positions: real estate and an insurance contract.

Real estate positions classified as level 1 and level 2 are exchange-traded real estate funds where a market valuation is readily available. Real estate reported on level 3 is property owned by the pension funds. These positions are accounted for at the capitalised income value. The capitalisation based on sustainable recoverable earnings is conducted at interest rates that are determined individually for each property, based on the property's location, age and condition. If properties are intended for disposal, the estimated selling costs and taxes are recognised in provisions. Sales gains or losses are allocated to income from real estate when the contract is concluded.

The fair value of the insurance contract is based on the fair value of the assets backing the contract.

As of 31 December, the fair values of pension plan assets by level of input were as follows:

2018 USD millions	Quoted prices in active markets for identical assets (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Investments measured at net asset value as practical expedient	Total
Assets					
Fixed income securities:					
Debt securities issued by the US government and government agencies	32	209			241
Debt securities issued by non-US governments and government agencies		1 227			1 227
Corporate debt securities		1 769	10		1 779
Residential mortgage-backed securities		16			16
Commercial mortgage-backed securities		1			1
Agency securitised products		7			7
Other asset-backed securities		3			3
Equity securities at fair value through earnings	901	308			1 209
Short-term investments		48			48
Derivative financial instruments		10			10
Real estate			721		721
Other assets		91		659	750
Total assets at fair value	933	3 689	731	659	6 012
Cash	84				84
Total plan assets	1 017	3 689	731	659	6 096

2019 USD millions	Quoted prices in active markets for identical assets (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Investments measured at net asset value as practical expedient	Total
Assets					
Fixed income securities:					
Debt securities issued by the US government and government agencies	50	211			261
Debt securities issued by non-US governments and government agencies		1 365			1 365
Corporate debt securities		2 011	11		2 022
Residential mortgage-backed securities		9			9
Commercial mortgage-backed securities		1			1
Agency securitised products					0
Other asset-backed securities		3			3
Equity securities at fair value through earnings	1 082	205			1 287
Short-term investments		43			43
Derivative financial instruments		36			36
Real estate	4		756		760
Other assets		95		698	793
Total assets at fair value	**1 136**	**3 979**	**767**	**698**	**6 580**
Cash	198				198
Total plan assets	**1 334**	**3 979**	**767**	**698**	**6 778**

Assets measured at fair value using significant unobservable inputs (level 3)

For the years ended 31 December, the reconciliation of fair value of pension plan assets using significant unobservable inputs were as follows:

2018 USD millions	Real estate	Other assets	Total
Balance as of 1 January	692	113	805
Realised/unrealised gains/losses:			
Relating to assets still held at the reporting date	27	–14	13
Relating to assets sold during the period		27	27
Purchases, issuances and settlements	10	–11	–1
Transfers in and/or out of level 3		–103	–103
Impact of foreign exchange movements	–8	–2	–10
Closing balance as of 31 December	721	10	731

2019 USD millions	Real estate	Other assets	Total
Balance as of 1 January	721	10	731
Realised/unrealised gains/losses:			
Relating to assets still held at the reporting date	20	1	21
Relating to assets sold during the period			0
Purchases, issuances and settlements	2		2
Transfers in and/or out of level 3			0
Impact of foreign exchange movements	13		13
Closing balance as of 31 December	**756**	**11**	**767**

Expected contributions and estimated future benefit payments

The employer contributions expected to be made in 2020 to the defined benefit pension plans are USD 117 million and to the post-retirement benefit plan are USD 17 million.

As of 31 December 2019, the projected benefit payments, which reflect expected future service, not adjusted for transfers in and for employees' voluntary contributions, are as follows:

USD millions	Swiss plan	Foreign plans	Other benefits	Total
2020	216	96	17	329
2021	212	101	17	330
2022	203	104	18	325
2023	198	106	18	322
2024	201	110	18	329
Years 2025–2029	966	585	90	1 641

Defined contribution pension plans

The Group sponsors a number of defined contribution plans to which employees and the Group make contributions. The accumulated balances are paid as a lump sum at the earlier of retirement, termination, disability or death. The amount expensed in 2018 and 2019 was USD 85 million and USD 86 million, respectively.

17 Share-based payments

As of 31 December 2018 and 2019, the Group had the share-based compensation plans as described below.

The total compensation cost for share-based compensation plans recognised in net income was USD 47 million and USD 30 million in 2018 and 2019, respectively. The related tax benefit was USD 10 million and USD 6 million, respectively.

Restricted shares

The Group granted 24 627 and 51 036 restricted shares to selected employees in 2018 and 2019, respectively. Moreover, as an alternative to the Group's cash bonus plan, 154 743 shares were delivered during 2018 and for 2019 this alternative has been discontinued. In addition, 39 793 and 37 593 shares were delivered to members of the Board of Directors during 2018 and 2019, respectively, which are generally not subject to forfeiture risk.

A summary of the movements in shares relating to outstanding awards granted under the restricted share plans for the year ended 31 December 2019 is as follows:

	Weighted average grant date fair value in CHF[1]	Number of shares
Non-vested at 1 January	93	380 307
Granted	96	88 629
Forfeited	89	–436
Vested	97	–230 375
Outstanding as of 31 December	**91**	**238 125**

[1] Equal to the market price of the shares at grant.

Leadership Performance Plan

The Leadership Performance Plan (LPP) awards are expected to be settled in shares, and the requisite service as well as the maximum contractual term are three years. For LPP 2016, LPP 2017, LPP 2018 and LPP 2019 awards, an additional two-year holding period applies for all members of the Group EC and other key executives. At grant date, the award is split equally into two underlying components — Restricted Share Units (RSUs) and Performance Share Units (PSUs). The RSUs are measured against a return on equity performance condition and will vest within a range of 0–100%. The PSUs are based on relative total shareholder return, measured against a pre-defined group of peers and will vest within a range of 0–200%. The fair values of both components are measured separately, based on stochastic models.

The fair value assumptions in the grant valuations include market estimates for dividends and the risk-free rate based on the average of the 10-year US Treasury bond taken monthly over each year in the performance period. This resulted in risk-free rates between 1.8% and 3.1% for all LPP awards.

For the year ended 31 December 2019, the outstanding units were as follows:

RSUs	LPP 2016	LPP 2017	LPP 2018	LPP 2019
Non-vested at 1 January	323 151	487 353	345 257	0
Granted				324 191
Forfeited	–2 175	–40 242	–28 045	–9 912
Vested	–320 976	–317	–143	–128
Outstanding as of 31 December	**0**	**446 794**	**317 069**	**314 151**
Grant date fair value in CHF	**67.91**	**47.41**	**70.18**	**78.22**

PSUs				
Non-vested at 1 January	438 448	664 378	279 780	0
Granted				312 236
Forfeited	–2 949	–54 856	–22 725	–9 545
Vested	–435 499	–432	–116	–124
Outstanding as of 31 December	**0**	**609 090**	**256 939**	**302 567**
Grant date fair value in CHF	**50.04**	**34.78**	**86.62**	**81.25**

Unrecognised compensation cost

As of 31 December 2019, the total unrecognised compensation cost (net of forfeitures) related to non-vested, share-based compensation awards was USD 46 million and the weighted average period over which that cost is expected to be recognised is 1.9 years.

The number of shares authorised for the Group's share-based payments to employees was 4 172 886 and 3 660 142 as of 31 December 2018 and 2019, respectively. The Group's policy is to ensure that sufficient treasury shares are available at all times to settle future share-based compensation plans.

Global Share Participation Plan

In June 2013, Swiss Re introduced the Global Share Participation Plan, which is a share purchase plan that was rolled out for the benefit of employees of companies within the Group. Swiss Re makes a financial contribution to participants in the plan, by matching the commitment that they make during the plan cycle with additional Swiss Re shares.

If the employee is still employed by Swiss Re at the end of a plan cycle, the employee will receive an additional number of shares equal to 30% of the total number of purchased and dividend shares held at that time. In 2018 and 2019, Swiss Re contributed USD 11 million and USD 12 million to the plans and authorised 197 194 and 169 772 shares as of 31 December 2018 and 2019, respectively.

18 Compensation, participations and loans of members of governing bodies

The disclosure requirements under Swiss law in respect of compensation and loans to the members of the Board of Directors and of the Group Executive Committee, as well as closely related persons, are detailed in the Compensation Report on pages 143–148 of the Financial Report of the Swiss Re Group.

The disclosure requirements under Swiss law in respect of participations of members of the Board of Directors and the Group Executive Committee, as well as closely related persons, are detailed on pages 296–297 of the Annual Report of Swiss Re Ltd.

19 Related parties

The Group defines the following as related parties to the Group: subsidiaries of Swiss Re Ltd, entities in which the Group has significant influence, pension plans, members of the Board of Directors (BoD) and the Group Executive Committee (EC) and their close family members, and entities which are directly and indirectly controlled by members of governing bodies of the Group and their close family members.

As part of the consolidation process, transactions between Swiss Re Ltd and subsidiaries are eliminated in consolidation and are not disclosed in the notes.

As of 31 December 2018 and 2019, the Group's investment in mortgages and other loans included USD 373 million and USD 4 million, respectively, of loans due from employees, and USD 212 million and nil, respectively, due from officers. These loans generally consist of mortgages offered at variable and fixed interest rates.

Contributions made to defined benefit pension plans and post-retirement benefit plans are disclosed in Note 16 "Benefit plans". Plan assets of the defined benefit pension plans include Swiss Re common stock of USD 4 million (0.1% of total plan assets) and USD 3 million (0.04% of total plan assets) as of 31 December 2018 and 2019, respectively.

The total number of shares, options and related instruments held by members of the BoD and the Group EC, as well as closely related persons, amounts to less than 1% of the shares issued by Swiss Re Ltd. None of the members of the BoD and the Group EC has any significant business connection with Swiss Re Ltd or any of its Group companies. The Board member Susan L. Wagner is also a Board member of BlackRock, Inc. BlackRock, Inc. acts as an external asset manager for the Group.

Share in earnings and dividends received from equity-accounted investees for the years ended 31 December, were as follows:

USD millions	2018	**2019**
Share in earnings of equity-accounted investees	166	387
Dividends received from equity-accounted investees	170	104

20 Commitments and contingent liabilities

As a participant in limited and other investment partnerships, the Group commits itself to making available certain amounts of investment funding, callable by the partnerships for periods of up to ten years. The total commitments remaining uncalled as of 31 December 2019 were USD 2 339 million.

The Group enters into a number of contracts in the ordinary course of reinsurance and financial services business which, if the Group's credit rating and/or defined statutory measures decline to certain levels, would require the Group to post collateral or obtain guarantees. The contracts typically provide alternatives for recapture of the associated business.

Legal proceedings
In the normal course of business operations, the Group is involved in various claims, lawsuits and regulatory matters. In the opinion of management, the resolution of these matters is not expected to have a material adverse effect on the Group's business, consolidated financial position, results of operations or cash flows.

21 Significant subsidiaries and equity investees

		Share capital (millions)	Affiliation in % as of 31.12.2019	Method of consolidation
Europe				
Germany				
Swiss Re Germany GmbH, Munich	EUR	45	100	f
Ireland				
Ark Life Assurance Company dac, Dublin	EUR	19	75	f
Jersey				
ReAssure Holdings Limited, St Helier	GBP	0	100	f
ReAssure Jersey One Limited, St Helier	GBP	0	100	f
ReAssure Jersey Two Limited, St Helier	GBP	3	100	f
Swiss Re ReAssure Limited, St Helier	GBP	3	100	f
Swiss Re ReAssure Midco Limited, St Helier	GBP	0	100	f
Liechtenstein				
Elips Life AG, Triesen	CHF	12	100	f
Elips Versicherungen AG, Triesen	CHF	5	100	f
Luxembourg				
iptiQ Life S.A., Luxembourg	EUR	6	100	f
Swiss Re Europe Holdings S.A., Luxembourg	EUR	105	100	f
Swiss Re Europe S.A., Luxembourg	EUR	350	100	f
Swiss Re Finance (Luxembourg) S.A., Luxembourg	EUR	0	100	f
Swiss Re Funds (Lux) I, Senningerberg[1]	EUR	14 412	100	f
Swiss Re International SE, Luxembourg	EUR	182	100	f
Netherlands				
elipsLife EMEA Holding B.V., Hoofddorp	EUR	0	100	f
Swiss Re Life Capital EMEA Holding B.V., Hoofddorp	EUR	0	100	f
Switzerland				
Swiss Pillar Investments Ltd, Zurich	CHF	0	100	f
Swiss Re Corporate Solutions Ltd, Zurich	CHF	100	100	f
Swiss Re Direct Investments Company Ltd, Zurich	CHF	0	100	f
Swiss Re Investments Company Ltd, Zurich	CHF	0	100	f
Swiss Re Investments Holding Company Ltd, Zurich	CHF	0	100	f
Swiss Re Investments Ltd, Zurich	CHF	1	100	f
Swiss Re Life Capital Ltd, Zurich	CHF	0	100	f
Swiss Re Life Capital Reinsurance Ltd, Zurich	CHF	10	100	f
Swiss Re Management Ltd, Adliswil	CHF	0	100	f
Swiss Re Principal Investments Company Ltd, Zurich	CHF	0	100	f
Swiss Re Reinsurance Holding Company Ltd, Zurich	CHF	0	100	f
Swiss Reinsurance Company Ltd, Zurich	CHF	34	100	f

[1] Net asset value instead of share capital.

		Share capital (millions)	Affiliation in % as of 31.12.2019	Method of consolidation
United Kingdom				
IptiQ Holdings Limited, London	GBP	0	100	f
Old Mutual Wealth Life Assurance Limited, Southampton	GBP	64	75	f
ReAssure FSH UK Limited, Shropshire	GBP	710	75	f
ReAssure Group Plc, Telford	GBP	100	75	f
ReAssure Midco Limited, Shropshire	GBP	73	75	f
ReAssure Limited, Shropshire	GBP	387	75	f
ReAssure UK Services Limited, Shropshire	GBP	105	75	f
Swiss Re Capital Markets Limited, London	USD	60	100	f
Swiss Re Life Capital Regions Holding Ltd, London	GBP	0	100	f
Swiss Re Services Limited, London	GBP	2	100	f

Americas and Caribbean

Brazil				
Swiss Re Brasil Resseguros S.A., Sao Paulo	BRL	295	100	f
Swiss Re Corporate Solutions Brasil Seguros S.A., Sao Paulo	BRL	318	60	f
Cayman Islands				
FWD Group Ltd, Grand Cayman	USD	1	15	e
PEP SR I Umbrella L.P., George Town	USD	443	100	f
Colombia				
Compañía Aseguradora de Fianzas S.A. Confianza, Bogota	COP	224 003	51	f
United States				
Claret LLC, Colchester	USD	0	100	f
Claret Re Inc., Colchester	USD	5	100	f
Facility Holding Corporation, Wilmington	USD	0	100	f
First Specialty Insurance Corporation, Jefferson City	USD	5	100	f
iptiQ Americas Inc., Wilmington	USD	0	100	f
Lumico Life Insurance Company, Jefferson City	USD	0	100	f
North American Capacity Insurance Company, Manchester	USD	4	100	f
North American Elite Insurance Company, Manchester	USD	4	100	f
North American Specialty Insurance Company, Manchester	USD	5	100	f
Pecan Re Inc., Colchester	USD	5	100	f
Pillar RE Holdings LLC, Wilmington	USD	0	100	f
SR Corporate Solutions America Holding Corporation, Wilmington	USD	0	100	f
Sterling Re Inc., Colchester	USD	213	100	f
Swiss Re America Holding Corporation, Wilmington	USD	0	100	f
Swiss Re Capital Markets Corporation, New York	USD	0	100	f
Swiss Re Corporate Solutions Global Markets Inc., New York	USD	0	100	f
Swiss Re Financial Markets Corporation, Wilmington	USD	0	100	f
Swiss Re Financial Products Corporation, Wilmington	USD	0	100	f
Swiss Re Life & Health America Holding Company, Wilmington	USD	0	100	f
Swiss Re Life & Health America Inc., Jefferson City	USD	4	100	f
Swiss Re Life Capital Americas Holding Inc., Wilmington	USD	0	100	f
Swiss Re Management (US) Corporation, Wilmington	USD	0	100	f
Swiss Re Property & Casualty America Inc., Kansas City	USD	1	100	f
Swiss Re Risk Solutions Corporation, Wilmington	USD	0	100	f
Swiss Re Treasury (US) Corporation, Wilmington	USD	0	100	f
Swiss Reinsurance America Corporation, Armonk	USD	10	100	f
Westport Insurance Corporation, Jefferson City	USD	6	100	f
Wing Re II Inc., Jefferson City	USD	0	100	f

		Share capital (millions)	Affiliation in % as of 31.12.2019	Method of consolidation
Africa				
South Africa				
Swiss Re Africa Limited, Cape Town	ZAR	2	100	f
Asia-Pacific				
Australia				
Swiss Re Australia Ltd, Sydney	AUD	845	100	f
Swiss Re Life & Health Australia Limited, Sydney	AUD	980	100	f
China				
Swiss Re Corporate Solutions Insurance China Ltd, Shanghai	CNY	569	100	f
Singapore				
Swiss Re Asia Holding Pte. Ltd., Singapore	USD	0	100	f
Swiss Re Asia Pte. Ltd., Singapore	USD	253	100	f
Vietnam				
Vietnam National Reinsurance Corporation, Hanoi	VND	1 310 759	25	e

Significance is defined by the total assets of the subsidiaries and equity investees in relation to the total assets of the Group. The threshold is set at 0.05%.

Method of consolidation

f full
e equity

22 Variable interest entities

The Group enters into arrangements with variable interest entities (VIEs) in the normal course of business. The involvement ranges from being a passive investor to designing, structuring and managing the VIEs. The variable interests held by the Group arise primarily as a result of the Group's involvement in certain insurance-linked securitisations, life and health funding transactions, swaps in trusts, debt financing, investment, senior commercial mortgage and infrastructure loans as well as other entities, which meet the definition of a VIE.

When analysing whether the entity is a VIE, the Group mainly assesses if (1) the equity is sufficient to finance the entity's activities without additional subordinated financial support, (2) the equity holders have the right to make significant decisions affecting the entity's operations and (3) the holders of the voting rights substantively participate in the gains and losses of the entity.

When one of these criteria is not met, the entity is considered a VIE and is assessed for consolidation under the VIE section of the Consolidation Topic.

The party that has a controlling financial interest is called a primary beneficiary and consolidates the VIE. The party is deemed to have a controlling financial interest if it has both:

- the power to direct the activities of the VIE that most significantly impact the entity's economic performance; and
- the obligation to absorb the entity's losses that could potentially be significant to the VIE or the right to receive benefits from the entity that could potentially be significant to the VIE.

For all its variable interests in VIEs, the Group assesses whether it has a controlling financial interest in these entities and, thus, is the primary beneficiary. The Group identifies the activities that most significantly impact the entity's performance and determines whether the Group has the power to direct those activities. In conducting the analysis, the Group considers the purpose, the design and the risks that the entity was designed to create and pass through to its variable interest holders. Additionally, the Group assesses if it has the obligation to absorb losses or if it has the right to receive benefits of the VIE that could potentially be significant to the entity. If both criteria are met, the Group has a controlling financial interest in the VIE and consolidates the entity.

The Group monitors changes to the facts and circumstances of the existing involvement with legal entities to determine whether they require reconsideration of the entity's designation as a VIE or voting interest entity. For VIEs, the Group regularly reassesses the primary beneficiary determination.

Insurance-linked securitisations
The insurance-linked securitisations transfer pre-existing insurance risk to investors through the issuance of insurance-linked securities. In insurance-linked securitisations, the securitisation vehicle assumes the insurance risk from a sponsor through insurance or derivative contracts. The securitisation vehicle generally retains the issuance proceeds as collateral, which consists of investment-grade securities. The Group does not have potentially significant variable interest in these vehicles and therefore is not a primary beneficiary.

Typically, the variable interests held by the Group arise through ownership of insurance-linked securities, in which case the Group's maximum loss equals the principal amount of the securities held by the Group.

Life and health funding vehicles
The Group participates in certain structured transactions that retrocede longevity and mortality risks to captive reinsurers with an aim to provide regulatory capital credit to a transaction sponsor through the creation of funding notes by a separate funding vehicle which is generally considered a VIE. The Group's participation in these transactions is generally limited to providing contingent funding support via a financial contract with a funding vehicle, which represents a potentially significant variable interest in the funding vehicle. The Group does not have power to direct activities of the funding vehicles and therefore is not a primary beneficiary of the funding vehicles in these transactions. The Group's maximum exposure in these transactions equals either the total contract notional or outstanding balance of the funding notes issued by the vehicle, depending on the specific contractual arrangements.

Swaps in trusts

The Group provides interest rate and foreign exchange risk hedges to certain asset securitisation trusts which qualify as VIEs. As the Group's involvement is limited to interest rate and foreign exchange derivatives, it does not have the power to direct any activities of the trusts and therefore does not qualify as primary beneficiary of any of these trusts. These activities are in run-off.

Debt financing vehicles

The Group consolidates a debt-financing vehicle created to collateralise reinsurance coverage provided by the Group. The Group manages the asset portfolio in the vehicle and absorbs the variability of the investment return of the vehicle's portfolio, thereby satisfying both criteria for a controlling financial interest: power over activities most significant to the vehicle's economic performance and significant economic interest.

Investment vehicles

The Group consolidates a real estate investment entity, which holds real estate backing annuities business. The Group is its primary beneficiary, because it has both power over the entity's investment decisions as well as a significant variable interest in the entity.

The Group's variable interests in investment partnerships arise through ownership of the limited partner interests. Many investment partnerships are VIEs because the limited partners as a group lack kick-out or participating rights. The Group does not hold the general partner interest in the limited partnerships and therefore does not direct investment activities of the entity. Therefore, the Group lacks power over the relevant activities of the vehicles and, consequently, does not qualify as the primary beneficiary. The Group is exposed to losses when the values of the investments held by the investment vehicles decrease. The Group's maximum exposure to loss equals the Group's share of the investment.

The Group is a passive investor in structured securitisation vehicles issuing residential and commercial mortgage-backed securities (RMBS and CMBS, respectively) and other asset-backed securities (ABS). The Group's investments in RMBS, CMBS and other ABS are passive in nature and do not obligate the Group to provide any financial or other support to the issuer entities. By design, RMBS, CMBS and ABS securitisation entities are not adequately capitalised and therefore considered VIEs. The Group is not the primary beneficiary, because it does not have power to direct most significant activities. These investments are accounted for as available-for-sale as described in the investment note and not included in the tables on the following pages.

The Group consolidates an investment vehicle, because the Group holds the entire interest in the entity and makes investment decisions related to the entity. The investment vehicle is a VIE because it is structured as an umbrella company comprised of multiple sub-funds. The majority of the investments held in this vehicle are accounted for as available-for-sale and are disclosed in the investment note and not included in the tables on the following pages.

Investment vehicles for unit-linked business

Additionally, the Group invests on behalf of the policyholders as a passive investor in a variety of investment funds across various jurisdictions. By design, many of these funds meet a VIE definition. While the Group may have a potentially significant variable interest in some of these entities due to its share of the fund's total net assets, in most cases it does not have power over the fund's investment decisions or unilateral kick-out rights relative to the decision maker.

The Group consolidates an investment vehicle for unit-linked business, where the Group holds over three quarters of the voting power, which given the structure of the fund, gives it the power to make investment decisions related to the entity. The investment vehicle is consolidated at fair value in the Group's balance sheet.

The Group is not exposed to losses in the aforementioned investment vehicles, as the investment risk is borne by the policyholder.

Senior commercial mortgage and infrastructure loans
The Group also invests in structured commercial mortgage and infrastructure loans, which are held for investment.

The commercial mortgage loans are made to non-recourse special purpose entities collateralised with commercial real estate. The entities are adequately capitalised and generally structured as voting interest entities. Occasionally, the borrower entities can be structured as limited partnerships where the limited partners do not have kick-out or participating rights, which results in the VIE designation.

The infrastructure loans are made to non-recourse special purpose entities collateralised with infrastructure project assets. Some borrower entities may have insufficient equity investment at risk, which results in the VIE designation.

The Group does not have power over the activities most significant to the aforementioned borrower entities designated as VIEs and therefore does not consolidate them.

The Group's maximum exposure to loss from its investments equals the loan outstanding amount.

Other
The Group consolidates a vehicle providing reinsurance to its members, because it serves as a decision maker over the entity's investment and underwriting activities, as well as provides retrocession for the majority of the vehicle's insurance risk and receives performance-based fees. Additionally, the Group is obligated to provide the vehicle with loans in case of a deficit. The vehicle is a VIE, primarily because its total equity investment at risk is insufficient and the members lack decision-making rights.

The Group did not provide financial or other support to any VIEs during 2019 that it was not previously contractually required to provide.

Consolidated VIEs
The following table shows the total assets and liabilities in the Group's balance sheet related to VIEs of which the Group is the primary beneficiary as of 31 December:

USD millions	2018	**2019**
Fixed income securities available-for-sale	3 444	3 423
Investment real estate	166	143
Short-term investments	79	260
Investments for unit-linked and with-profit business		654
Cash and cash equivalents	20	49
Accrued investment income	30	27
Premiums and other receivables	26	31
Funds held by ceding companies		1
Deferred acquisition costs	3	3
Deferred tax assets	212	182
Other assets	16	15
Reclassified to assets held for sale		–812
Total assets	3 996	**3 976**
Unpaid claims and claim adjustment expenses	66	55
Unearned premiums	8	12
Funds held under reinsurance treaties		4
Reinsurance balances payable	15	21
Deferred and other non-current tax liabilities	180	152
Accrued expenses and other liabilities	144	129
Long-term debt	2 112	1 918
Reclassified to liabilities held for sale		–114
Total liabilities	2 525	**2 177**

The assets of the consolidated VIEs may only be used to settle obligations of these VIEs and to settle any investors' ownership liquidation requests. There is no recourse to the Group for the consolidated VIEs' liabilities. The assets of the consolidated VIEs are not available to the Group's creditors.

Non-consolidated VIEs

The following table shows the total assets and liabilities on the Group's balance sheet related to VIEs in which the Group held a variable interest but was not the primary beneficiary as of 31 December:

USD millions	2018	2019
Fixed income securities available-for-sale	935	1 187
Equity securities at fair value through earnings	272	113
Policy loans, mortgages and other loans	1 313	1 735
Other invested assets	1 953	2 160
Investments for unit-linked and with-profit business	5 999	17 131
Reclassified to assets held for sale		–17 590
Total assets	10 472	**4 736**
Accrued expenses and other liabilities	58	43
Total liabilities	58	**43**

The following table shows the Group's assets, liabilities and maximum exposure to loss related to VIEs in which the Group held a variable interest but was not the primary beneficiary as of 31 December:

			2018			2019
USD millions	Total assets	Total liabilities	Maximum exposure to loss[1]	Total assets	Total liabilities	Maximum exposure to loss[1]
Insurance-linked securitisations	447		462	598		627
Life and health funding vehicles	25		2 174	22		2 300
Swaps in trusts	76	58	–[2]	83	43	–[2]
Investment vehicles	2 130		2 130	2 174		2 174
Investment vehicles for unit-linked business	5 999			17 131		
Senior commercial mortgage and infrastructure loans	1 795		1 795	2 318		2 318
Reclassified to held for sale				–17 590		–607
Total	10 472	58	–[2]	**4 736**	**43**	**–[2]**

[1] Maximum exposure to loss is the loss the Group would absorb from a variable interest in a VIE in the event that all of the assets of the VIE are deemed worthless.
[2] The maximum exposure to loss for swaps in trusts cannot be meaningfully quantified due to their derivative character.

The assets and liabilities for the swaps in trusts represent the positive and negative fair values of the derivatives the Group has entered into with the trusts.

23 Subsequent events

The rapid spread of the coronavirus, which has been declared a pandemic, and the actions being taken to contain it on an increasingly global basis have led to significant volatility in the financial markets and are having an adverse impact on global business and economic activity. There is an increasing likelihood that the coronavirus and containment efforts could have adverse effects on the global economy and could possibly lead to a global recession. The Group is closely monitoring developments and the potential impact of the spread of infection and global responses on, for example, asset prices and insurance exposures, as well as on its operations.

Report of the statutory auditor

to the General Meeting of Swiss Re Ltd

Zurich

Report of the statutory auditor on the consolidated financial statements

As statutory auditor, we have audited the accompanying consolidated financial statements of Swiss Re Ltd and its subsidiaries (the 'Company'), which comprise the income statement and statement of comprehensive income for the year ended 31 December 2019, the balance sheet as at 31 December 2019 and the statement of shareholders' equity and the statement of cash flows for the year then ended, and notes to the Group financial statements (pages 170 to 278).

Board of Directors' responsibility

The Board of Directors is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America (US GAAP) and the requirements of Swiss law. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Swiss law, Swiss Auditing Standards and auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying consolidated financial statements for the year ended 31 December 2019 present fairly, in all material respects, the financial position, the results of operations and the cash flows in accordance with accounting principles generally accepted in the United States of America (US GAAP) and comply with Swiss law.

Other Matter

Accounting principles generally accepted in the United States of America (US GAAP) requires that the supplementary information based on the requirements of ASU 2015-09, Disclosures about Short-Duration Contracts, on pages 210 to 218 be presented to supplement the consolidated financial statements. Such information, although not part of the consolidated financial statements, is required by the Financial Accounting Standards Board, which considers it an essential part of financial reporting for placing the consolidated financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of the Company about the methods of preparing the information and comparing the information for consistency with the Company's responses to our inquiries, the consolidated financial statements and other knowledge we obtained during our audit of the consolidated financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

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Report on key audit matters based on the circular 1/2015 of the Federal Audit Oversight Authority

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Unobservable or interpolated inputs used for the valuation of certain level 2 and 3 investments

Key audit matter	How our audit addressed the key audit matter
Investment valuation continues to be an area with inherent risk for certain level 2 and 3 investments that have unobservable or interpolated inputs. The risk is not the same for all investment types and is greatest for those listed below. These investments are more difficult to value because quoted prices are not always available, and valuation requires unobservable or interpolated inputs and complex valuation models: • Fixed income securitised products • Fixed income mortgage and asset-backed securities • Private placements and infrastructure loans • Private equities • Derivatives • Insurance-related financial products	We assessed and tested the design and operating effectiveness of selected key controls around the valuation models for level 2 and 3 investments, including the Company's independent price verification process. We also tested the Company's data integrity and change management controls relating to the valuation models. In relation to the matters set out opposite, our substantive testing procedures included the following: • Challenging the Company's methodology and assumptions, in particular, the yield curves, discounted cash flows, perpetual growth rates and liquidity premiums used in the valuation models. • Comparing the assumptions used against appropriate benchmarks and investigating significant differences. • Engaging our own valuation specialists to perform independent valuations of selected level 2 and 3 investments. Based on the work performed, we consider the methodology and assumptions used by the Company in determining the valuation to be appropriate.

Valuation of actuarially determined Property & Casualty ('P&C') loss reserves

Key audit matter	How our audit addressed the key audit matter
Valuation of actuarially determined P&C loss reserves involves a high degree of subjectivity and complexity. Reserves for losses and loss adjustment expenses represent estimates of future payments of reported and unreported claims for losses and related expenses at a given date. Furthermore, on a regular basis, the Company enters into large and/or structured transactions which often have material or complex financial reporting and reserving consequences. The reserving for such transactions is subject to increased risk of error due to the non-routine nature of transactions and the judgmental nature of reserving. The Company uses a range of actuarial methodologies and methods to estimate these reserves. Actuarially determined P&C loss reserves require significant judgment relating to certain factors and assumptions. Among the most significant reserving assumptions are the A-priori loss ratios, which typically drive the estimates of P&C loss reserves for the most recent contract years. Other key factors and assumptions include, but are not limited to changes in interest rates, exposures and mix as well as inflation trends, claims trends and regulatory decisions. In particular, loss reserves for 'long tail' lines of business (for example, the Liability, US Asbestos and Environmental, Motor Liability and Workers' Compensation portfolios) generally require more judgment to estimate. This is due to the protracted period over which claims may be reported and/or settled as well as the fact that claim settlements are often less frequent but of higher magnitude. Moreover, not all natural catastrophe events and significant man-made losses can be modelled using traditional actuarial methodologies, which increases the degree of judgment needed in establishing reserves for these events.	We assessed and tested the design and operating effectiveness of selected key controls relating to the application of the actuarial methodology, data collection and analysis, as well as the processes for determining the assumptions used by the Company in the valuation of actuarially determined P&C loss reserves. In relation to the matters set out opposite, our substantive testing procedures included the following, which are applicable for both the standard reserving and large and/or structured transactions: • Testing the completeness and accuracy of underlying data utilised by the Company's actuaries in estimating P&C loss reserves. • Applying IT audit techniques to analyse claims through the recalculation of claims triangles. • Involving PwC's internal actuarial specialists to independently test the Company's estimates of P&C loss reserves and evaluate the reasonableness of the methodology and assumptions used by comparing them with recognised actuarial practices and by applying our industry knowledge and experience. • Performing independent projections of selected portfolios. For these portfolios, we compared our calculations of projected reserves with those of the Company taking into account the available corroborating and contrary evidence and challenging the Company's assumptions as appropriate. • Assessing the process and related judgments of the Company in relation to natural catastrophes and other large losses, including using our industry knowledge to assess the reasonableness of market loss estimates and other significant assumptions. • Performing sensitivity tests to determine the impact of selected key assumptions. • Evaluating the appropriateness of any significant adjustments made by the Company to P&C loss reserve estimates. • Evaluating the appropriateness of the recognition, accounting and disclosures for large and/or structured transactions. Based on the work performed, we consider the methodologies and assumptions used by the Company in the valuation of actuarially determined P&C loss reserves to be appropriate.

Valuation of actuarially determined Life & Health ('L&H') reserves

Key audit matter	How our audit addressed the key audit matter
The Company's valuation of liabilities for L&H policy benefits and policyholder account balances involves complex judgments about future events affecting the business. Actuarial assumptions selected by the Company with respect to interest rates, inflation trends, investment returns, mortality, morbidity, lapse in coverage, longevity, persistency, expenses, stock market volatility and future policyholder behaviour may result in material impacts on the valuation of L&H reserves. The methodology and methods used can also have a material impact on the valuation of actuarially determined L&H reserves. Furthermore, on a regular basis, the Company enters into large and/or structured transactions which often have material or complex financial reporting and reserving consequences. The reserving for such transactions is subject to increased risk of error due to the non-routine nature of transactions and the judgmental nature of reserving. The valuation of actuarially determined L&H reserves depends on the use of complex models. The Company continues to migrate actuarial data and models from legacy systems and/or spreadsheets to new actuarial modelling systems. At the same time, the Company is validating models to ensure that new models are fit for use. Moving from one modelling platform to another is a complex and time-consuming process, frequently taking several years. Any resulting adjustments to reserves need to be assessed in terms of appropriateness and classified as a change in estimate or as an out-of-period adjustment.	We assessed and tested the design and operating effectiveness of selected key controls relating to the application of actuarial methodology, data collection and analysis, as well as the processes for determining the assumptions used by the Company in the valuation of actuarially determined L&H reserves. In relation to the matters set out opposite, our substantive testing procedures included the following, which are applicable for both the standard reserving and large and/or structured transactions: • Testing the completeness and accuracy of the underlying data by vouching against the source documentation. • Testing the migration of actuarial data from legacy systems and/or spreadsheets to the new actuarial systems for completeness and accuracy. • Involving our life insurance actuarial specialists to perform independent model validation procedures, including detailed testing of models, independent recalculations and back testing. • Challenging the Company's methodology and methods, focusing on changes to L&H actuarial methodology and methods during the year, by applying our industry knowledge and experience to check whether the methodology and methods are consistent with recognised actuarial practices and reporting requirements. • Evaluating the appropriateness of the recognition, accounting, and disclosures for large and/or structured transactions. Based on the work performed, we consider the methodologies and assumptions used by the Company in the valuation of actuarially determined L&H reserves to be appropriate.

Completeness and valuation of uncertain tax positions

Key audit matter	How our audit addressed the key audit matter
The Company operates in various countries and is subject to income taxes in those jurisdictions. The assessment of the valuation of deferred tax assets, resulting from net operating losses and temporary differences, and provisions for uncertain tax positions is based on complex calculations and depends on sensitive and judgmental assumptions made by the Company. These include, amongst others, future profitability and local fiscal regulations and developments. Changes in those estimates may have a material impact (through income tax expense) on the Company`s results.	We assessed and tested the design and operating effectiveness of selected key controls in place to determine the completeness of the uncertain tax items and the Company's assessment of the items for recognition and valuation. In relation to the matters set out opposite, our substantive testing procedures included the following: • Involving our own tax specialists to critically review the Company's 'more likely than not' tax assessments and to evaluate the Company's judgments and estimates of the probabilities and the amounts. • Assessing how the Company considered new information or changes in tax law or case law and assessing the Company's judgment of how these impact the Company's position or measurement of the required provision. • Examining tax audit documentation to validate the appropriateness of releases of uncertain tax provisions. • Evaluating the appropriateness of the Company's assessment of completeness of uncertain tax positions. • Examining material movements within uncertain tax positions in each jurisdiction. Based on the work performed, we determined the Company's assessment of the completeness and valuation of uncertain tax positions to be appropriate.

Report on other legal requirements

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

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

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

PricewaterhouseCoopers AG

Roy Clark

Audit expert
Auditor in charge

Frank Trauschke

Audit expert

Zurich, 18 March 2020

Group financial years 2010–2019

USD millions	2010	2011	2012[1]
Income statement			
Revenues			
Premiums earned	19 652	21 300	24 661
Fee income	918	876	785
Net investment income	5 422	5 469	5 302
Net realised investment gains/losses	2 783	388	2 688
Other revenues	60	50	188
Total revenues	28 835	28 083	33 624
Expenses			
Claims and claim adjustment expenses	–7 254	–8 810	–7 763
Life and health benefits	–8 236	–8 414	–8 878
Return credited to policyholders	–3 371	–61	–2 959
Acquisition costs	–3 679	–4 021	–4 548
Other operating costs and expenses	–3 620	–3 902	–3 953
Total expenses	–26 160	–25 208	–28 101
Income before income tax expense	2 675	2 875	5 523
Income tax expense	–541	–77	–1 125
Net income before attribution of non-controlling interests	2 134	2 798	4 398
Income/loss attributable to non-controlling interests	–154	–172	–141
Net income after attribution of non-controlling interests	1 980	2 626	4 257
Interest on contingent capital instruments, net of tax	–1 117		–56
Net income attributable to common shareholders	863	2 626	4 201
Balance sheet			
Assets			
Investments	156 947	162 224	152 812
Other assets	71 456	63 675	68 691
Assets held for sale			
Total assets	228 403	225 899	221 503
Liabilities			
Unpaid claims and claim adjustment expenses	64 690	64 878	63 670
Liabilities for life and health policy benefits	39 551	39 044	36 117
Unearned premiums	6 305	8 299	9 384
Other liabilities	72 524	65 850	62 020
Long-term debt	18 427	16 541	16 286
Liabilities held for sale			
Total liabilities	201 497	194 612	187 477
Shareholders' equity	25 342	29 590	34 002
Non-controlling interests	1 564	1 697	24
Total equity	26 906	31 287	34 026
Earnings per share in USD	2.52	7.68	11.85
Earnings per share in CHF	2.64	6.79	11.13

[1] The Group updated its balance sheet presentation of deferred tax assets and liabilities. Deferred tax assets and liabilities are presented on a gross basis as per the first quarter 2013. The comparative period has been adjusted accordingly and is consistent with the relevant income tax disclosure in the notes to the financial statements in the prior year.

2013	2014	2015	2016	2017	2018	**2019**
28 276	30 756	29 751	32 691	33 119	33 875	**37 974**
542	506	463	540	586	586	**620**
4 735	4 992	4 236	4 740	4 702	5 077	**5 175**
3 325	1 059	1 220	5 787	4 048	–2 530	**5 515**
24	34	44	28	32	39	**30**
36 902	37 347	35 714	43 786	42 487	37 047	**49 314**
–9 655	–10 577	–9 848	–12 564	–16 730	–14 855	**–18 683**
–9 581	–10 611	–9 080	–10 859	–11 083	–11 769	**–13 087**
–3 678	–1 541	–1 166	–5 099	–3 298	1 033	**–4 633**
–4 895	–6 515	–6 419	–6 928	–6 977	–6 919	**–7 834**
–4 268	–3 876	–3 882	–3 964	–3 874	–3 987	**–4 168**
–32 077	–33 120	–30 395	–39 414	–41 962	–36 497	**–48 405**
4 825	4 227	5 319	4 372	525	550	**909**
–312	–658	–651	–749	–132	–69	**–140**
4 513	3 569	4 668	3 623	393	481	**769**
–2		–3	3	5	–19	**–42**
4 511	3 569	4 665	3 626	398	462	**727**
–67	–69	–68	–68	–67	–41	
4 444	3 500	4 597	3 558	331	421	**727**
150 075	143 987	137 810	155 016	161 897	147 302	**103 746**
63 445	60 474	58 325	60 049	60 629	60 268	**60 382**
						74 439
213 520	204 461	196 135	215 065	222 526	207 570	**238 567**
61 484	57 954	55 518	57 355	66 795	67 446	**72 373**
36 033	33 605	30 131	41 176	42 561	39 593	**19 836**
10 334	10 576	10 869	11 629	11 769	11 721	**13 365**
57 970	53 670	55 033	59 402	56 959	51 581	**23 232**
14 722	12 615	10 978	9 787	10 148	8 502	**10 138**
						68 586
180 543	168 420	162 529	179 349	188 232	178 843	**207 530**
32 952	35 930	33 517	35 634	34 124	27 930	**29 251**
25	111	89	82	170	797	**1 786**
32 977	36 041	33 606	35 716	34 294	28 727	**31 037**
12.97	10.23	13.44	10.72	1.03	1.37	**2.46**
12.04	9.33	12.93	10.55	1.02	1.34	**2.46**

Annual Report Swiss Re Ltd

Swiss Re Ltd (the Company), domiciled in Zurich, Switzerland, is the ultimate holding company of the Swiss Re Group (the Group). Its principal activity is the holding of investments in Swiss Re Group companies.

Income statement
Net income for 2019 amounted to CHF 932 million (2018: CHF 3 077 million).

Revenues were mainly driven by cash dividends from subsidiaries and affiliated companies of CHF 2 230 million, trademark licence fees of CHF 407 million and reported net realised foreign exchange gains of CHF 40 million.

Expenses were mainly driven by valuation adjustments on investments in subsidiaries and affiliated companies of CHF 1 702 million and administrative expenses of CHF 143 million.

Assets
Total assets decreased from CHF 25 360 million as of 31 December 2018 to CHF 24 247 million as of 31 December 2019.

Current assets decreased by CHF 1 229 million to CHF 2 927 million as of 31 December 2019, mainly driven by a decrease in loans to subsidiaries and affiliated companies, partially offset by an increase in receivables from subsidiaries and affiliated companies.

Non-current assets increased by CHF 116 million to CHF 21 320 million as of 31 December 2019, mainly driven by capital contributions to subsidiaries, an increase in loans to subsidiaries and affiliated companies, partially offset by a decrease in investments in subsidiaries and affiliated companies.

Liabilities
Total liabilities increased from CHF 890 million as of 31 December 2018 to CHF 1 447 million as of 31 December 2019.

Short-term liabilities increased by CHF 667 million to CHF 930 million as of 31 December 2019, mainly driven by an increase in loans from subsidiaries and affiliated companies.

Long-term liabilities decreased by CHF 110 million to CHF 517 million as of 31 December 2019, mainly due to a movement in the provision for currency fluctuation.

Shareholders' equity
Shareholders' equity decreased from CHF 24 470 million as of 31 December 2018 to CHF 22 800 million as of 31 December 2019, mainly due to dividends to shareholders of CHF 1 674 million and share buyback programmes of CHF 927 million partially offset by net income of CHF 932 million.

Share capital decreased by CHF 1 million to CHF 33 million as of 31 December 2019 and legal profit reserves decreased by CHF 982 million to CHF 5 312 million as of 31 December 2019 resulting from the cancellation of own shares.

Own shares (directly held by the Company) decreased by CHF 56 million to CHF 1 890 million as of 31 December 2019 due to net purchases of own shares of CHF 17 million and share buyback programmes of CHF 927 million, partially offset by the cancellation of own shares of CHF 1 000 million.

Income statement Swiss Re Ltd

For the years ended 31 December

CHF millions	Notes	2018	2019
Revenues			
Investment income	2	3 778	**2 629**
Trademark licence fees		340	**407**
Other revenues		70	**41**
Total revenues		4 188	**3 077**
Expenses			
Administrative expenses	3	–133	**–143**
Investment expenses	2	–870	**–1 893**
Other expenses		–107	**–105**
Total expenses		–1 110	**–2 141**
Income before income tax expense		3 078	**936**
Income tax expense		–1	**–4**
Net income		3 077	**932**

The accompanying notes are an integral part of Swiss Re Ltd's financial statements.

Balance sheet Swiss Re Ltd

As of 31 December

Assets

CHF millions	Notes	2018	2019
Current assets			
Cash and cash equivalents		1	**0**
Short-term investments	4	39	**48**
Receivables from subsidiaries and affiliated companies	2	442	**703**
Other receivables and accrued income		18	**16**
Loans to subsidiaries and affiliated companies		3 656	**2 160**
Total current assets		4 156	**2 927**
Non-current assets			
Loans to subsidiaries and affiliated companies		719	**911**
Investments in subsidiaries and affiliated companies	5	20 485	**20 409**
Total non-current assets		21 204	**21 320**
Total assets		25 360	**24 247**

The accompanying notes are an integral part of Swiss Re Ltd's financial statements.

Liabilities and shareholders' equity

CHF millions	Notes	2018	2019
Liabilities			
Short-term liabilities			
Payables to subsidiaries and affiliated companies		120	**149**
Other liabilities and accrued expenses		143	**152**
Loans from subsidiaries and affiliated companies		–	**629**
Total short-term liabilities		263	**930**
Long-term liabilities			
Provisions		134	**33**
Debt	7	493	**484**
Total long-term liabilities		627	**517**
Total liabilities		890	**1 447**
Shareholders' equity	8		
Share capital	10	34	**33**
Legal reserves from capital contributions		*192*	***192***
Other legal capital reserves		*0*	***0***
Legal capital reserves		192	**192**
Legal profit reserves		6 294	**5 312**
Reserve for own shares (indirectly held by subsidiaries)		18	**17**
Voluntary profit reserves		16 797	**18 200**
Retained earnings brought forward		4	**4**
Net income for the financial year		3 077	**932**
Own shares (directly held by the Company)	9	–1 946	**–1 890**
Total shareholders' equity		24 470	**22 800**
Total liabilities and shareholders' equity		25 360	**24 247**

The accompanying notes are an integral part of Swiss Re Ltd's financial statements.

Notes
Swiss Re Ltd

1 Significant accounting principles

Basis of presentation
The financial statements are prepared in accordance with Swiss Law.

Time period
The financial year 2019 comprises the accounting period from 1 January 2019 to 31 December 2019.

Use of estimates in the preparation of annual accounts
The preparation of the annual accounts requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses as well as the related disclosures. Actual results could differ from these estimates.

Foreign currency translation
Assets and liabilities denominated in foreign currencies are converted into Swiss francs at year-end exchange rates, with the exception of participations, which are reported in Swiss francs at historical exchange rates. Income and expenses in foreign currencies are converted into Swiss francs at average exchange rates for the reporting year.

Cash and cash equivalents
Cash and cash equivalents include cash at bank, short-term deposits and certain investments in money market funds with an original maturity of three months or less. Such current assets are held at nominal value.

Short-term investments
Short-term investments contain investments with an original maturity between three months and one year. Such investments are carried at cost, less necessary and legally permissible depreciation.

Receivables from subsidiaries and affiliated companies/ Other receivables
These assets are generally carried at nominal value. Value adjustments are recorded where the expected recovery value is lower than the nominal value.

Receivables from subsidiaries and affiliated companies/ Other receivables also include derivative financial instruments. For the first time in 2019, derivative financial instruments which have an observable market price and are traded in an active and liquid market are recorded at market value. In 2018, derivative financial instruments were carried at the lower of cost or market value.

Accrued income
Accrued income consists of both other expenditures incurred during the financial year but relating to a subsequent financial year, and revenues relating to the current financial year but receivable in a subsequent financial year.

Loans to subsidiaries and affiliated companies
Loans to subsidiaries and affiliated companies are carried at nominal value. Value adjustments are recorded where the expected recovery value is lower than the nominal value.

Investments in subsidiaries and affiliated companies
These assets are carried at cost less necessary value adjustments to reflect other than temporary decreases in the value in use.

Payables to subsidiaries and affiliated companies/ Other liabilities
These liabilities are generally carried at nominal value.

Payables to subsidiaries and affiliated companies/ Other liabilities also include derivative financial instruments. For the first time in 2019, derivative financial instruments which have an observable market price and are traded in an active and liquid market are recorded at market value. In 2018, derivative financial instruments were carried at the lower of cost or market value.

Accrued expenses
Accrued expenses consist of both income received before the balance sheet date but relating to a subsequent financial year, and charges relating to the current financial year but payable in a subsequent financial year.

Loans from subsidiaries and affiliated companies
Loans from subsidiaries and affiliated companies are carried at nominal value.

Provisions
Provisions contain provision for currency fluctuation and provision for taxation.

The provision for currency fluctuation comprises the net effect of foreign exchange gains and losses arising from the yearly revaluation of the opening balance sheet and the translation adjustment of the income statement from average to closing exchange rates at year-end. These net impacts are recognised in the income statement over a period of up to three years. Where the provision for currency fluctuation is insufficient to absorb net foreign exchange losses for the financial year, the provision for currency fluctuation is reduced to zero and the excess foreign exchange loss is recognised in the income statement.

The provision for taxation represents an estimate of taxes payable in respect of the reporting year.

Debt
Debt is held at redemption value.

Other legal capital reserves
Other legal capital reserves reflect gains and losses from sale of own shares (directly held by the Company).

Reserve for own shares (indirectly held by subsidiaries)
Reserve for own shares is accounted for at the book value of those shares in the statutory financial statements of the respective subsidiary.

Own shares (directly held by the Company)
Own shares are carried at cost and presented as a deduction in shareholders´ equity.

Foreign exchange transaction gains and losses
Foreign exchange gains and losses arising from foreign exchange transactions are recognised in the income statement and reported in other expenses or other revenues, respectively.

Dividends from subsidiaries and affiliated companies
Dividends from subsidiaries and affiliated companies are recognised as investment income in the year in which they are declared.

Trademark licence fees
Trademark licence fees are charged by the Company to its direct and indirect subsidiaries and their branches that benefit from the use of the Swiss Re brand.

Capital and indirect taxes
Capital and indirect taxes related to the financial year are included in other expenses. Value-added taxes are included in the respective expense lines in the income statement.

Income tax expense
As a holding company incorporated in Switzerland, Swiss Re Ltd is exempt from income taxation at cantonal/communal level.

At the federal level, dividends from subsidiaries and affiliated companies are indirectly exempt from income taxation (participation relief). However, income tax is payable on trademark licence fees charged to certain subsidiaries and affiliated companies.

Subsequent events
Subsequent events for the current reporting period have been evaluated up to 18 March 2020. This is the date on which the financial statements are available to be issued.

2 Investment income and expenses

CHF millions	2018	2019
Cash dividends from subsidiaries and affiliated companies	3 562	**2 230**
Realised gains on sale of investments	19	**155**
Valuation adjustments on derivative financial instruments [1]	–	**35**
Income from short-term investments	0	**1**
Income from loans to subsidiaries and affiliated companies	113	**131**
Investment management income	0	**0**
Other interest revenues	84	**77**
Investment income	3 778	**2 629**

CHF millions	2018	2019
Realised losses on sale of investments	66	**157**
Valuation adjustments on derivative financial instruments [1]	16	**14**
Valuation adjustments on investments in subsidiaries and affiliated companies	776	**1 702**
Investment management expenses	0	**1**
Other interest expenses	12	**19**
Investment expenses	870	**1 893**

[1] The derivative financial instruments are included in Receivables from subsidiaries and affiliated companies and Payables to subsidiaries and affiliated companies.

As of 31 December 2019, the Company's assets for derivative financial instruments carried at market value amounted to CHF 101 millions.

3 Administrative expenses and personnel information

Swiss Re Ltd receives management and other services from Swiss Re Management Ltd and Swiss Reinsurance Company Ltd and has no employees of its own.

4 Securities lending

As of 31 December 2019, securities of CHF 47.1 million (2018: CHF 10.7 million) were lent to Group companies under securities lending agreements. As of 31 December 2019 and 2018, there were no securities lent to third parties.

5 Investments in subsidiaries and affiliated companies

As of 31 December 2019 and 2018, Swiss Re Ltd held directly the following investments in subsidiaries and affiliated companies:

As of 31 December 2019	Domicile	Currency	Share capital (millions)	Affiliation in %	Voting interest in %
Swiss Reinsurance Company Ltd	Zurich	CHF	34.4	100	100
Swiss Re Corporate Solutions Ltd	Zurich	CHF	100.0	100	100
Swiss Re Life Capital Ltd[1]	Zurich	CHF	0.1	100	100
Swiss Re Investments Holding Company Ltd	Zurich	CHF	0.1	100	100
Swiss Re Principal Investments Company Ltd	Zurich	CHF	0.1	100	100
Swiss Re Management Ltd	Zurich	CHF	0.1	100	100
Swiss Re Specialised Investments Holdings (UK) Ltd	London	GBP	1.0	100	100

As of 31 December 2018	Domicile	Currency	Share capital (millions)	Affiliation in %	Voting interest in %
Swiss Reinsurance Company Ltd	Zurich	CHF	34.4	100	100
Swiss Re Corporate Solutions Ltd	Zurich	CHF	100.0	100	100
Swiss Re Life Capital Ltd	Zurich	CHF	0.1	100	100
Swiss Re Investments Holding Company Ltd	Zurich	CHF	0.1	100	100
Swiss Re Principal Investments Company Ltd	Zurich	CHF	0.1	100	100
Swiss Re Management Ltd	Zurich	CHF	0.1	100	100
Swiss Re Specialised Investments Holdings (UK) Ltd	London	GBP	1.0	100	100

[1] In the fourth quarter of 2019, the Group entered into an agreement to sell its subsidiary ReAssure Group plc, currently a subsidiary of Swiss Re Life Capital Ltd, to Phoenix Group Holdings plc. The transaction is expected to close in mid-2020, subject to approvals by regulators and anti-trust authorities. Detailed information is included in Note 11 "Assets held for sale" on page 249 in the notes to the Group's 2019 financial statements.

Further disclosures in respect of investments in significant indirect subsidiaries and affiliated companies are detailed in Note 21 "Significant subsidiaries and equity investees" on pages 271 to 273 in the notes to the Group's 2019 financial statements, where the voting interests are equal to the affiliations disclosed.

6 Commitments

The Company has established subordinated debt facilities which allow the Company to issue subordinated callable notes at any time. The Company pays a fee on the available commitment under the facility and an interest rate on issued notes. Notes, when issued, will be classified as subordinated debt. As of 31 December 2018 and 2019, no notes have been issued under the facilities.

An overview of the subordinated debt facilities is provided in the following table:

Instrument	Issued in	Currency	Nominal value in millions	Commitment fee (paid on undrawn amount)	Interest rate on issued notes	Facility first termination date	Issued notes' scheduled maturity date
Dated subordinated fixed-to-floating rate callable notes facility	2015	USD	700	3.53%	5.75%[1]	2025	2050
Dated subordinated fixed rate callable notes facility	2016	USD	400	3.92%	6.05%[1]	2031	2056
Dated subordinated fixed-to-floating rate callable notes facility	2016	USD	800	3.67%	5.625%[1]	2027	2052
Perpetual subordinated fixed spread callable notes facility	2017	USD	750	2.77%	4.625%[1]	2022	Perpetual[2]

[1] Until first optional redemption date.
[2] First optional redemption date in 2022 and every five years thereafter.

The Company has entered into subordinated funding facilities with its subsidiary Swiss Reinsurance Company Ltd under which Swiss Reinsurance Company Ltd has the right, among others, to issue subordinated notes to the Company at any time. For its various rights, Swiss Reinsurance Company Ltd owes the Company an unconditional fixed commitment fee on the total facility amount, payable in annual instalments. Annually, Swiss Reinsurance Company Ltd receives a partial reimbursement of the commitment fee on the undrawn facility amount. As of 31 December 2018 and 2019, the facilities were undrawn.

An overview of the subordinated funding facilities is provided in the following table:

Instrument	Borrower	Issued in	Currency	Nominal value in millions	Total commitment fee calculated and paid on nominal value	Reimbursement fee paid on undrawn amount	Net commitment fee paid on undrawn amount	Maturity
Subordinated funding facility	Swiss Reinsurance Company Ltd	2015	USD	700	5.80%	2.22%	3.58%	2030
Subordinated funding facility	Swiss Reinsurance Company Ltd	2016	USD	400	6.10%	2.13%	3.97%	2036
Subordinated funding facility	Swiss Reinsurance Company Ltd	2016	USD	800	5.68%	1.95%	3.73%	2032

7 Debt

As of 31 December 2019, Swiss Re Ltd had outstanding debt of CHF 484 million (2018: CHF 493 million).

Instrument	Issued in	Currency	Nominal in millions	Interest rate	Maturity	Book value CHF millions
Convertible debt	2018	USD	500	3.25%	2024	484

8 Change in shareholders' equity

CHF millions	Share capital	Legal capital reserves[3]	Legal profit reserves	Reserves for own shares	Voluntary profit reserves	Retained earnings brought forward	Net income for the financial year	Own shares	Total shareholders' equity
Shareholders' equity 1.1.2019	34	192	6294	18	16797	4	3077	–1946	24470
Allocations relating to the dividend paid					3077		–3077		0
Dividend for the financial year 2018					–1674				–1674
Net income for the financial year							932		932
Share buyback programme 2018[1]								–111	–111
Share cancellation[1]	–1	–16	–983					1000	0
Share buyback programme 2019[2]								–816	–816
Other movements in own shares		16	1	–1				–17	–1
Shareholders' equity 31.12.2019	**33**	**192**	**5312**	**17**	**18200**	**4**	**932**	**–1890**	**22800**

CHF millions	Share capital	Legal capital reserves	Legal profit reserves	Reserves for own shares	Voluntary profit reserves	Retained earnings brought forward	Net income for the financial year	Own shares	Total shareholders' equity
Shareholders' equity 1.1.2018	35	193	7285	16	14305	4	4043	–1636	24245
Allocations relating to the dividend paid					4043		–4043		0
Dividend for the financial year 2017					–1551				–1551
Net income for the financial year							3077		3077
Share buyback programme 2017								–415	–415
Share cancellation	–1	–10	–989					1000	0
Share buyback programme 2018								–889	–889
Other movements in own shares		9	–2	2				–6	3
Shareholders' equity 31.12.2018	34	192	6294	18	16797	4	3077	–1946	24470

[1] At the 154th Annual General Meeting held on 20 April 2018, the Group's shareholders authorised the Board of Directors to repurchase up to a maximum CHF 1 billion purchase value of the Group's own shares prior to the 2019 Annual General Meeting through a public share buyback programme for cancellation purposes. The buyback programme was completed on 15 February 2019. The total number of shares repurchased amounted to 11.2 million, of which 10 million and 1.2 million shares were repurchased by 31 December 2018 and between 1 January and 15 February 2019, respectively. On 17 April 2019, the 155th Annual General Meeting resolved the cancellation of the repurchased 11.2 million shares by way of share capital reduction. The shares were cancelled on 16 July 2019, after completion of the procedure in respect of a share capital reduction as set forth in Article 732 et seqq of the Swiss Code of Obligations.

[2] At the 155th Annual General Meeting held on 17 April 2019, the Group's shareholders authorised the Board of Directors to repurchase two tranches of up to a maximum CHF 1 billion purchase value each of the Group's own shares prior to the 2020 Annual General Meeting through a public share buyback programme for cancellation purposes.

[3] Under current Swiss tax legislation, CHF 0.7 million of the legal reserves have been confirmed by the Swiss Federal Tax Administration to qualify as reserves out of capital contributions and can be distributed exempt from Swiss federal withholding tax. For Swiss resident individual shareholders holding shares in private wealth, distributions out of the confirmed reserves from capital contributions are also exempt from Swiss income taxes.

9 Own shares (directly and indirectly held by the Company)

Number of own shares	2018	2019
Own shares held by subsidiaries	*162 487*	***197 194***
Own shares held by Swiss Re Ltd directly	*34 704 029*	***38 378 130***
Opening balance own shares	34 866 516	**38 575 324**
Purchase of own shares[1]	482 229	**1 111 638**
Sale of own shares[2]	–476 363	**–1 125 758**
Share buyback programme (153rd AGM 2017)[3]	4 485 316	**–**
Share buyback programme (154th AGM 2018)[4]	10 050 442	**1 164 319**
Cancellation of shares bought back	–10 832 816	**–11 214 761**
Share buyback programme (155th AGM 2019)[5]	–	**8 239 000**
Own shares as of 31 December	38 575 324	**36 749 762**

[1] Purchased at average price of CHF 98.75 (2018: CHF 93.17).
[2] Sold at average price of CHF 98.03 (2018: CHF 94.49).
[3] Purchased at average price of CHF 92.52.
[4] Purchased at average price of CHF 94.98 (2018: CHF 88.50).
[5] Purchased at average price of CHF 98.99.

10 Major shareholders

As of 31 December 2019, there was one shareholder with a participation exceeding the 3% threshold of Swiss Re Ltd's share capital:

Shareholder	Number of shares	% of voting rights and share capital[1]	Creation of the obligation to notify
BlackRock, Inc	17 108 297	5.05	27 May 2019

[1] The percentage of voting rights is calculated at the date the obligation was created and notified.

Further information in respect of major shareholders are detailed in "Group structure and shareholders" on page 83 of the Group's 2019 financial report.

In addition, Swiss Re Ltd held, as of 31 December 2019, directly and indirectly 36 749 762 (2018: 38 575 324) own shares, representing 11.22% (2018: 11.39%) of voting rights and share capital. Swiss Re Ltd cannot exercise the voting rights of own shares held.

11 Release of undisclosed reserves

In 2019 and 2018, no net undisclosed reserves were released.

12 Share ownership, options and related instruments of governing bodies

This section is in line with Articles 663c para. 3 and 959c para. 2 cif. 11 of the Swiss Code of Obligations, which require disclosure of shareholdings, options and related instruments held by members of the Board of Directors and Group Executive Committee (Group EC) at the end of the reporting year and of share-based compensation for the Board of Directors during the reporting year. Further disclosures in respect of shareholding and compensation for the members of the Board of Directors and the Group EC, and persons closely related, are detailed in the Compensation Report on pages 143–148 of the Financial Report of the Swiss Re Group.

Share ownership

The number of shares held as of 31 December were:

Members of the Group EC	2018	**2019**
Christian Mumenthaler, Group Chief Executive Officer	71 733	75 305
Urs Baertschi, CEO Reinsurance EMEA/Regional President EMEA	n/a	546
Andreas Berger, CEO Corporate Solutions	n/a	34
Anette Bronder, Group Chief Operating Officer	n/a	0
John R. Dacey, Group Chief Financial Officer	27 124	29 809
Nigel Fretwell, Group Chief Human Resources Officer	n/a	12 272
Guido Fürer, Group Chief Investment Officer	66 007	53 983
Agostino Galvagni, former CEO Corporate Solutions[1]	99 521	n/a
Hermann Geiger, Group Chief Legal Officer	n/a	49 318
Russell Higginbotham, CEO Reinsurance Asia/Regional President Asia	3 918	4 662
Thierry Léger, CEO Life Capital	53 785	56 167
Moses Ojeisekhoba, CEO Reinsurance	38 998	40 704
Jayne Plunkett, former CEO Reinsurance Asia/Regional President Asia[2]	36 264	n/a
Patrick Raaflaub, Group Chief Risk Officer[3]	3 944	16 590
Edouard Schmid, Chairman Swiss Re Institute & Group Chief Underwriting Officer	30 936	31 794
J. Eric Smith, CEO Reinsurance Americas/Regional President Americas	24 004	25 262
Thomas Wellauer, former Group Chief Operating Officer[4]	110 520	n/a
Total	566 754	**396 446**

[1] The number of shares held on 31 December 2018 when Agostino Galvagni stepped down from the Group EC was 99 521.
[2] The number of shares held on 8 July 2019 when Jayne Plunkett stepped down from the Group EC was 30 406.
[3] For personal reasons, Patrick Raaflaub has extended time to meet the share ownership levels required under Swiss Re's Stock Ownership Guidelines.
[4] The number of shares held on 30 June 2019 when Thomas Wellauer stepped down from the Group EC was 83 102.

Members of the Board of Directors	2018	**2019**
Walter B. Kielholz, Chairman	407 523	423 878
Renato Fassbind, Vice Chairman, Lead Independent Director, Chair Audit and Nomination Committees	27 593	31 143
Raymond K.F. Ch'ien, member	22 946	21 345
Karen Gavan, member[1]	1 512	2 803
Trevor Manuel, member	5 558	7 065
Jay Ralph, member	2 115	3 299
Joerg Reinhardt, member	14 415	25 684
Eileen Rominger, member	813	1 997
Philip K. Ryan, member, Chair Finance and Risk Committee	11 611	15 693
Sir Paul Tucker, member	4 004	5 403
Jacques de Vaucleroy, member, Chair Compensation Committee	2 706	4 835
Susan L. Wagner, member, Chair Investment Committee	11 360	13 920
Larry Zimpleman, member	813	1 997
Total	512 969	**559 062**

[1] Shareholdings for 2018 and 2019 include 2 500 American Depository Receipts (ADRs), equivalent to 625 shares.

Share-based compensation

The share-based compensation for the members of the Board of Directors for 2018 and 2019 was:

Members of the Board of Directors	2018 Fees in blocked shares[1] (CHF thousands)	2018 Number of shares[2]	**2019 Fees in blocked shares[1] (CHF thousands)**	**2019 Number of shares[2]**
Walter B. Kielholz, Chairman	1 547	17 536	1 520	16 355
Renato Fassbind, Vice Chairman, Lead Independent Director, Chair Audit and Nomination Committees	330	3 739	330	3 550
Raymond K.F. Ch'ien, member	130	1 474	130	1 399
Mary Francis, former member[3]	47	552	n/a	n/a
Karen Gavan, member	80	887	120	1 291
Rajna Gibson Brandon, former member[3]	43	513	n/a	n/a
C. Robert Henrikson, former member, former Chair Compensation Committee[3]	63	749	n/a	n/a
Trevor Manuel, member	140	1 586	140	1 507
Jay Ralph, member	110	1 247	110	1 184
Joerg Reinhardt, member	110	1 247	118	1 269
Eileen Rominger, member	74	813	110	1 184
Philip K. Ryan, member, Chair Finance and Risk Committee	240	2 719	240	2 582
Sir Paul Tucker, member	130	1 474	130	1 399
Jacques de Vaucleroy, member, Chair Compensation Committee	163	1 838	198	2 129
Susan L. Wagner, member, Chair Investment Committee	230	2 606	238	2 560
Larry Zimpleman, member	74	813	110	1 184
Total	**3 511**	**39 793**	**3 494**	**37 593**

[1] Represents the portion (40%) of the total fees for the members of the Board of Directors that is delivered in Swiss Re Ltd shares, with a four-year blocking period.
[2] The number of shares is calculated by dividing the portion (40%) of the total fees with the average closing price of the shares on the SIX Swiss Exchange during the ten trading days preceding the AGM less the amount of any dividend resolved by such AGM.
[3] Term of office expired after the completion of the AGM of 20 April 2018 and did not stand for re-election.

Restricted shares

For the years ended 31 December 2018 and 2019, neither the members of the Board of Directors nor the members of the Group EC held any restricted shares.

Vested options

For the years ended 31 December 2018 and 2019, neither the members of the Board of Directors nor the members of the Group EC held any vested options.

13 Subsequent events

The rapid spread of the coronavirus, which has been declared a pandemic, and the actions being taken to contain it on an increasingly global basis have led to significant volatility in the financial markets and are having an adverse impact on global business and economic activity. There is an increasing likelihood that the coronavirus and containment efforts could have adverse effects on the global economy and could possibly lead to a global recession. The Group is closely monitoring developments and the potential impact of the spread of infection and global responses, for example on asset prices and insurance exposures, as well as on its operations.

Proposal for allocation of disposable profit

The Board of Directors proposes to the Annual General Meeting to be held in Zurich on 17 April 2020 to approve the following allocations and dividend payment:

CHF millions	2018	2019
Retained earnings brought forward	4	**4**
Net income for the financial year	3 077	**932**
Disposable profit	3 081	**936**
Allocation to voluntary profit reserves	–3 077	**–936**
Retained earnings after allocation	4	**0**

CHF millions	2018	2019
Voluntary profit reserves brought forward	16 797	**18 200**
Allocation from retained earnings	3 077	**936**
Ordinary dividend payment out of voluntary profit reserves	–1 674[1]	**–1 715[2]**
Voluntary profit reserves after allocation and dividend payment	18 200	**17 421**

[1] Since the Board of Directors' proposal for allocation of disposable profit, included in the Annual Report 2018, the number of registered shares eligible for dividend, at the dividend payment date of 25 April 2019, decreased due to the share buyback programme of 1 164 319 shares and transfer of 40 744 shares for employee participation purposes from not eligible to eligible for dividend. This resulted in a lower dividend of CHF 6 million, compared to the Board of Directors' proposal, and higher voluntary profit reserves by the same amount.
[2] The Board of Directors' proposal to the Annual General Meeting of 17 April 2020 is based on the number of shares eligible for dividend as of 31 December 2019. The actual dividend payment will depend on the number of shares eligible for dividend as of 20 April 2020.

Dividend

If the Board of Directors' proposal for allocations and dividend payment is accepted, an ordinary dividend of CHF 5.90 per share will be paid on 23 April 2020 from voluntary profit reserves.

Share structure per 31 December 2019	Number of registered shares	Nominal capital in CHF
Eligible for dividend[1]	290 654 942	**29 065 494**
Not eligible for dividend	36 749 762	**3 674 976**
Total shares issued	327 404 704	**32 740 470**

[1] The Board of Directors' proposal to the Annual General Meeting of 17 April 2020 is based on the number of shares eligible for dividend as of 31 December 2019. The actual dividend payment will depend on the number of shares eligible for dividend as of 20 April 2020.

Zurich, 18 March 2020

Report of the statutory auditor
to the General Meeting of Swiss Re Ltd
Zurich

Report of the statutory auditor on the financial statements

As statutory auditor, we have audited the accompanying financial statements of Swiss Re Ltd (the 'Company'), which comprise the income statement, balance sheet and notes (pages 287 to 297), for the year ended 31 December 2019.

Board of Directors' responsibility

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

Auditor's responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the Company's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements for the year ended 31 December 2019 comply with Swiss law and the Company's Articles of Association.

PricewaterhouseCoopers AG, Birchstrasse 160, Postfach, CH-8050 Zürich, Switzerland
Telefon: +41 58 792 44 00, Telefax: +41 58 792 44 10, www.pwc.ch

Report on key audit matter based on the circular 1/2015 of the Federal Audit Oversight Authority

A key audit matter is a matter that, in our professional judgment, was of most significance in our audit of the financial statements of the current period. The matter was addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on this matter.

Impairment assessment of investments in subsidiaries and affiliated companies

Key audit matter	How our audit addressed the key audit matter
The Company applies individual valuations of investments in subsidiaries and affiliated companies in accordance with Swiss Law. The impairment assessments of investments in subsidiaries and affiliated companies are based on the selected valuation model that reflects specific characteristics of the investment and corresponding assumptions as model inputs. The impairment assessment is considered a key audit matter due to the considerable judgment in the assumptions and adjustments applied to the valuation model as well as the materiality of this account to the Company.	In relation to the matter set out opposite, our substantive testing procedures included the following: • Evaluating the model used by the Company to determine a market value. • Assessing whether the assumptions used are reasonable. • Understanding judgments applied by the Company for each investment to ensure they are in accordance with our own expectation based on our knowledge of the business and industry. Based on the work performed, we consider the methods and assumptions used by the Company to be appropriate.

Report on other legal requirements

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

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

We further confirm that the proposal for allocation of disposable profit complies with Swiss law and the Company's Articles of Association. We recommend that the financial statements submitted to you be approved.

PricewaterhouseCoopers AG

Roy Clark	Frank Trauschke
Audit expert Auditor in charge	Audit expert

Zurich, 18 March 2020

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Headquartered in Zurich, Switzerland, Swiss Re has operations across the globe. Our success is built on our solid client relationships, capital strength and risk knowledge company approach. We make the world more resilient.

Contents

Glossary

Acquisition costs That portion of an insurance premium which represents the cost of obtaining the insurance business: it includes the intermediaries' commission, the company's sales expense and other related expenses.

Asset-backed securities Securities backed by notes or receivables against financial assets such as auto loans, credit cards, royalties, student loans and insurance profits.

Asset-liability management (ALM) Management of an insurance business in a way that coordinates investment-related decisions on assets and liabilities. Specifically, the ongoing process of formulating, implementing, monitoring and revising investment strategies related to assets and liabilities in an attempt to achieve financial objectives, while managing exposure to financial market risks, such as interest rates, credit spreads and currency movements.

Aviation insurance Insurance of accident and liability risks, as well as hull damage, connected with the operation of aircraft.

Benchmark investment result Includes changes in the economic value of liabilities (as represented by the replicating portfolio) as a result of movements in risk-free discount rates, the passage of time, changes in credit spreads, changes in equity prices or changes in the economic value of embedded options and guarantees.

Book value per share The ratio of ordinary shareholders' equity to the number of common shares entitled to dividend.

Business interruption Insurance covering the loss of earnings resulting from, and occurring after, destruction of property; also known as "loss of profits" or "business income protection insurance".

Capacity Maximum amount of risk that can be accepted in insurance. Capacity also refers to the amount of insurance coverage allocated to a particular policyholder or in the marketplace in general.

Catastrophe bonds Securities used by insurance and reinsurance companies to transfer peak insurance risks, including natural catastrophes, to the capital markets. Catastrophe bonds help to spread peak exposures (see insurance-linked securities).

Cession Insurance that is reinsured: the passing of the insurer's risks to the reinsurer against payment of a premium. The insurer is referred to as the ceding company or cedent.

Claim Demand by an insured for indemnity under an insurance contract.

Claims and benefits Claims and benefits in the EVM income statement represent the present value of all estimated future claims and benefits on contracts written during the year. Changes in estimates of claims and benefits payable on contracts written in prior years are reflected in previous years' business profit, along with changes in other underwriting cash flows relating to previous years.

Claims handling Activities in connection with the investigation, settlement and payment of claims from the time of their occurrence until settlement.

Claims incurred and claim adjustment expenses All claims payments plus the adjustment in the outstanding claims provision of a business year and claim adjustment expenses.

Claims ratio Sum of claims paid and change in the provisions for unpaid claims and claim adjustment expenses in relation to premiums earned.

Coinsurance Arrangement by which a number of insurers and/or reinsurers share a risk.

Combined ratio The ratio is a combination of the non-life claims ratio and the expense ratio.

Commission	Remuneration paid by the insurer to its agents, brokers or intermediaries, or by the reinsurer to the insurer, for costs in connection with the acquisition and administration of insurance business.
Commutation	The termination of a reinsurance contract by agreement of the parties on the basis of one or more lump sum payments by the reinsurer which extinguish its liability under the contract. The payment made by the reinsurer commonly relates to incurred losses under the contract.
Cover	Insurance and reinsurance protection of one or more specific risk exposures based on a contractual agreement.
Credit insurance	Insurance against financial losses sustained through the failure, for commercial reasons, of policyholders' clients to pay for goods or services supplied to them.
Credit spreads	Difference in yield between a fixed income security which has default risk and one which is considered to be risk-free, such as U.S. Treasury securities.
Directors' and officers' liability insurance (D&O)	Liability insurance for directors and officers of an entity, providing cover for their personal legal liability towards shareholders, creditors, employees and others arising from wrongful acts such as errors and omissions.
Disability insurance	Insurance against the incapacity to exercise a profession as a result of sickness or other infirmity.
Earnings per share (EPS)	Portion of a company's profit allocated to each outstanding share of common stock. Earnings per share is calculated by dividing net income by the weighted average number of common shares outstanding during the period.
Economic net worth	Economic net worth (ENW) is defined as the difference between the market-consistent value of assets and liabilities. ENW is an economic measure of shareholders' equity and the starting point in determining available capital under the Swiss Solvency Test (SST).
EVM	Economic Value Management (EVM) is Swiss Re Group's proprietary integrated economic valuation and accounting framework for planning, pricing, reserving, and steering our business.
EVM capital	EVM capital is the capital required to support uncertainty related to estimated cash flows arising from existing underwriting and investment activities.
EVM profit	EVM profit is a risk-adjusted measure of performance that can be compared across all business activities.
Expense ratio	Sum of acquisition costs and other operating costs and expenses, in relation to premiums earned.
G-SIIs	Globally systemically important insurers.
Gross outperformance	Defined as the difference between the mark-to-market investment result and the benchmark investment result.
Gross underwriting result – new business	Gross underwriting result from new business is defined as present value of new business underwriting cash flows (eg premiums, claims, commissions, etc) before internal expenses, taxes and capital costs.
Guaranteed minimum death benefit (GMDB)	A feature of variable annuity business. The benefit is a predetermined minimum amount that the beneficiary will receive upon the death of the insured.
Health insurance	Generic term applying to all types of insurance indemnifying or reimbursing for losses caused by bodily injury or sickness or for expenses of medical treatment necessitated by sickness or accidental bodily injury.

Incurred but not reported (IBNR)
Provision for claims incurred but not reported by the balance sheet date. In other words, it is anticipated that an event will affect a number of policies, although no claims have been made so far, and is therefore likely to result in liability for the insurer.

Insurance-linked securities (ILS)
Security for which the payment of interest and/or principal depends on the occurrence or severity of an insurance event. The underlying risk of the security is a peak or volume insurance risk.

Layer
Section of cover in a non-proportional reinsurance programme in which total coverage is divided into a number of consecutive layers starting at the retention or attachment point of the ceding company up to the maximum limit of indemnity. Individual layers may be placed with different insurers or reinsurers.

Liability insurance
Insurance for damages that a policyholder is obliged to pay because of bodily injury or property damage caused to another person or entity based on negligence, strict liability or contractual liability.

Life insurance
Insurance that provides for the payment of a sum of money upon the death of the insured, or upon the insured surviving a given number of years, depending on the terms of the policy. In addition, life insurance can be used as a means of investment or saving.

Longevity risk
The risk to which a pension fund or life insurance company could be exposed as a result of higher-than-expected payout ratios. Increasing life expectancy trends among policyholders and pensioners can result in payout levels that are higher than originally expected.

Marine insurance
Line of insurance which includes coverage for property in transit (cargo), means of transportation (except aircraft and motor vehicles), offshore installations and valuables, as well as liabilities associated with marine risks and professions.

Mark-to-market
Adjustment of the book value or collateral value of a security, portfolio or account to current fair market value.

Mark-to-market investment result
Includes net investment income, realised gains and losses and changes in unrealised gains and losses reported under the accounting principles generally accepted in the United States of America (US GAAP). In addition, it includes changes in market value of investment positions carried at amortised cost under US GAAP. It excludes the following US GAAP items: investment income from cedants, unit-linked and with-profit business and certain loans as well as minority interest and depreciation on real estate.

Market value margin
The market value margin (MVM) represents the minimum cost of holding capital after the one-year SST period until the end of a potential run-off period.

Motor insurance
Line of insurance which offers coverage for property, accident and liability losses involving motor vehicles.

Net outperformance
Defined as the gross outperformance after deducting the actual costs incurred by managing our actual investment portfolio in excess of the internal fee paid by underwriting for the purchase and maintenance of the investment portfolio replicating the best-estimate liability and backing the associated capital requirements.

Net reinsurance assets
Receivables related to deposit accounting contracts (contracts which do not meet risk transfer requirements) less payables related to deposit contracts.

Net underwriting result – new business
Net underwriting result from new business is defined as the gross underwriting result from new business net of the present value of internal expenses allocated to new business but before taxes and capital costs.

Non-life insurance
All classes of insurance business excluding life insurance.

Non-proportional reinsurance
Form of reinsurance in which coverage is not in direct proportion to the original insurer's loss; instead the reinsurer is liable for a specified amount which exceeds the insurer's retention; also known as "excess of loss reinsurance".

Operating margin ratio
The operating margin is calculated as operating result divided by total operating revenues. The operating result is before interest expenses, taxes and net realised gains/losses.

Operating revenues
Premiums earned plus net investment income plus other revenues.

Operational risk
Risk arising from failure of operational processes, internal procedures and controls leading to financial loss.

Premium
The payment, or one of the periodical payments, a policyholder agrees to make for an insurance policy.

Premiums and fees
Premiums and fees in the EVM income statement represent the present value of all estimated future premiums and fees on contracts written during the year. Gross premiums and fees represent premiums and fees before external retrocessions. Gross premiums and fees in the EVM income statement of the business segments also exclude retrocessions to other segments of the Group.

Premiums earned
Premiums an insurance company has recorded as revenues during a specific accounting period.

Premiums written
Premiums for all policies sold during a specific accounting period.

Present value of future profits (PVFP)
Intangible asset primarily arising from the purchase of life and health insurance companies or portfolios.

Principal Investments and Acquisitions
Principal Investments and Acquisitions is a unit of Swiss Re that manages all strategic acquisition activities of the Group as well as a portfolio of minority holdings in primarily insurance and insurance-related businesses with the goal of generating long-term value.

Product liability insurance
Insurance covering the liability of the manufacturer or supplier of goods for damage caused by their products.

Professional indemnity insurance
Liability insurance cover which protects professional specialists such as physicians, architects, engineers, lawyers, accountants and others against third-party claims arising from activities in their professional field; policies and conditions vary according to profession.

Profit margin
Profit margin is calculated for new business, previous years' business and investment activities. The new business profit margin is the ratio of new business profit/loss to EVM capital allocated to new business over the lifetime of the business. The previous years' business profit margin is the ratio of previous years' business profit/loss to EVM capital allocated to previous years' business in the current year. Investment profit margin is the ratio of investment profit/loss to EVM capital allocated to investment activities in the current year. These ratios can be used to compare profitability across all underwriting and investment activities on a consistent, risk-adjusted basis.

Property insurance
Collective term for fire and business interruption insurance as well as burglary, fidelity guarantee and allied lines.

Proportional reinsurance
Form of reinsurance arrangement in which the premiums earned and the claims incurred of the cedent are shared proportionally by the cedent and the reinsurer.

Provision for capital costs
Frictional capital costs provide compensation to shareholders for agency costs, costs for potential financial distress and regulatory (illiquidity) costs. Frictional capital costs include risk capital costs and funding costs. Risk capital costs are charged at 4.5% of eligible economic capital which consists of ENW and eligible hybrid debt. Funding costs are charged or credited at the legal entity level depending on the liquidity the respective legal entity uses or generates. In addition, the provision for capital costs includes an allowance for double taxation on the risk free return on capital allocated to underwriting activities.

Quota share reinsurance — Form of proportional reinsurance in which a defined percentage of the premiums earned and the claims incurred by the cedent in a specific line is reinsured for a given period. Quota share reinsurance arrangements represent a sharing of business in a fixed ratio or proportion.

Reinsurance — Insurance which lowers the risk carried by primary insurance companies. Reinsurance includes various forms such as facultative, financial, non-proportional, proportional, quota share, surplus and treaty reinsurance.

Reserves — Amount required to be carried as a liability in the financial statements of an insurer or reinsurer to provide for future commitments under outstanding policies and contracts.

Retention — Amount of risk which the policyholder or insurer does not insure or reinsure but keeps for its own account.

Retrocession — Amount of the risk accepted by the reinsurer which is then passed on to other reinsurance companies.

Return on equity — Net income as a percentage of time-weighted shareholders' equity.

Return on investments — Investment-related operating income as a percentage of invested assets. Invested assets include investments, securities in transit, certain financial liabilities and exclude policy loans, cash and cash equivalents, as well as assets related to securities lending, repurchase agreements and collateral balances.

Risk — Condition in which there is a possibility of injury or loss; also used by insurance practitioners to indicate the property insured or the peril insured against.

Risk management — Management tool for the comprehensive identification and assessment of risks based on knowledge and experience in the fields of natural sciences, technology, economics and statistics.

Running yield — Net investment income on long-term fixed income positions, including coupon income and amortisation, as a percentage of the average market value of the long-term fixed income portfolio.

Securitisation — Financial transaction in which future cash flows from financial assets (or insurable risks) are pooled, converted into tradable securities and transferred to capital market investors. The financial assets are commonly sold to a special-purpose entity, which purchases them with cash raised through the issuance of beneficial interests (usually debt instruments) to third-party investors.

Solvency II — Regulatory framework for EU re/insurance solvency rules. Solvency II is a comprehensive, economic and risk-based regulation and includes prudential requirements on solvency capital, risk modelling, supervisory control and disclosure.

SST risk-bearing capital — The SST risk-bearing capital (SST RBC) is the amount of capital that is available to protect the policyholders of an entity in case of a large and unexpected adverse event.

SST target capital — Amount of capital that is required to support the risks assumed by an entity. It is based on the entity's total risk.

Stop-loss reinsurance — Form of reinsurance that protects the ceding insurer against an aggregate amount of claims over a period, in excess of either a stated amount or a specified percentage of estimated benefit costs. An example of this is employer stop-loss (ESL) coverage, which is used by US companies to cap losses on self-funded group health benefit programmes. The stop-loss can apply to specific conditions or aggregate losses.

Surety insurance — Sureties and guarantees issued to third parties for the fulfilment of contractual liabilities.

Surplus reinsurance — Form of proportional reinsurance in which risks are reinsured above a specified amount.

Swiss Solvency Test (SST)
An economic and risk-based insurance regulation, similar to the objectives of Solvency II to which all insurance and reinsurance companies writing business in Switzerland are subject.

Tail VaR
See "Value at risk".

Top-down investment strategy approach
An investment strategy process which analyses trends in the global economy and the associated impact on financial markets to assess the overall financial market outlook as well as their implications for various asset classes and risk exposures.

Total contribution to ENW
Total contribution to ENW is the total return generated for shareholders and includes the release of capital costs. Total contribution to ENW is therefore not a risk-adjusted performance measure.

Treaty reinsurance
Participation of the reinsurer in certain sections of the insurer's business as agreed by treaty, as opposed to single risks.

Underwriting result
Premiums earned less the sum of claims paid, change in the provision for unpaid claims and claim adjustment expenses and expenses (acquisition costs and other operating costs and expenses).

Unearned premium
Part of written premium (paid or owed) which relates to future coverage and for which services have not yet been provided; this is carried in an unearned premium reserve and may be refundable if the contract is cancelled before expiry.

Unit-linked policy
A life insurance contract which provides policyholder funds linked to an underlying investment product or fund. The performance of the policyholder funds is for the account of the policyholder.

US GAAP
United States generally accepted accounting principles.

Value at risk (VaR)
Maximum possible loss in market value of an asset portfolio within a given time span and at a given confidence level. 99% VaR measures the level of loss likely to be exceeded in only one year out of a hundred, while 99.5% VaR measures the loss likely to be exceeded in only one year out of two hundred. 99% tail VaR estimates the average annual loss likely to occur with a frequency of less than once in one hundred years.

With-profit policy
An insurance contract that has additional amounts added to the sum insured, or paid/credited separately to the policyholder as a bonus, which result from a share of the profit generated by the with-profits insurance funds, including these funds' interests in other blocks of business.

Some of the terms included in the glossary are explained in more detail in Note 1 to the Group financial statements.

Swiss Re uses some of the term definitions provided by the glossary of the International Association of Insurance Supervisors (IAIS).

Cautionary note on forward-looking statements

Certain statements and illustrations contained herein are forward-looking. These statements (including as to plans, objectives, targets, and trends) and illustrations provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to a historical fact or current fact.

Forward-looking statements typically are identified by words or phrases such as "anticipate", "assume", "believe", "continue", "estimate", "expect", "foresee", "intend", "may increase", "may fluctuate" and similar expressions, or by future or conditional verbs such as "will", "should", "would" and "could". These forward-looking statements involve known and unknown risks, uncertainties and other factors, which may cause the Group's actual results of operations, financial condition, solvency ratios, capital or liquidity positions or prospects to be materially different from any future results of operations, financial condition, solvency ratios, capital or liquidity positions or prospects expressed or implied by such statements or cause Swiss Re to not achieve its published targets. Such factors include, among others:

- the frequency, severity and development of insured claim events, particularly natural catastrophes, man-made disasters, pandemics, acts of terrorism or acts of war;
- mortality, morbidity and longevity experience;
- the cyclicality of the reinsurance sector;
- central bank intervention in the financial markets, trade wars or other protectionist measures relating to international trade arrangements, adverse geopolitical events, domestic political upheavals or other developments that adversely impact global economic conditions;
- increased volatility of, and/or disruption in, global capital and credit markets;
- the Group's ability to maintain sufficient liquidity and access to capital markets, including sufficient liquidity to cover potential recapture of reinsurance agreements, early calls of debt or debt-like arrangements and collateral calls due to actual or perceived deterioration of the Group's financial strength or otherwise;
- the Group's inability to realise amounts on sales of securities on the Group's balance sheet equivalent to their values recorded for accounting purposes;
- the Group's inability to generate sufficient investment income from its investment portfolio, including as a result of fluctuations in the equity and fixed income markets, the composition of the investment portfolio or otherwise;
- changes in legislation and regulation, or the interpretations thereof by regulators and courts, affecting the Group or its ceding companies, including as a result of comprehensive reform or shifts away from multilateral approaches to regulation of global operations;
- the lowering or loss of one of the financial strength or other ratings of one or more companies in the Group, and developments adversely affecting its ability to achieve improved ratings;
- uncertainties in estimating reserves, including differences between actual claims experience and underwriting and reserving assumptions;
- policy renewal and lapse rates;

- uncertainties in estimating future claims for purposes of financial reporting, particularly with respect to large natural catastrophes and certain large man-made losses, as significant uncertainties may be involved in estimating losses from such events and preliminary estimates may be subject to change as new information becomes available;
- legal actions or regulatory investigations or actions, including in respect of industry requirements or business conduct rules of general applicability;
- the outcome of tax audits, the ability to realise tax loss carryforwards and the ability to realise deferred tax assets (including by reason of the mix of earnings in a jurisdiction or deemed change of control), which could negatively impact future earnings, and the overall impact of changes in tax regimes on the Group's business model;
- changes in accounting estimates or assumptions that affect reported amounts of assets, liabilities, revenues or expenses, including contingent assets and liabilities;
- changes in accounting standards, practices or policies;
- strengthening or weakening of foreign currencies;
- reforms of, or other potential changes to, benchmark reference rates;
- failure of the Group's hedging arrangements to be effective;
- significant investments, acquisitions or dispositions, and any delays, unforeseen liabilities or other costs, lower-than-expected benefits, impairments, ratings action or other issues experienced in connection with any such transactions;
- extraordinary events affecting the Group's clients and other counterparties, such as bankruptcies, liquidations and other credit-related events;
- changing levels of competition;
- the effects of business disruption due to terrorist attacks, cyberattacks, natural catastrophes, public health emergencies, hostilities or other events;
- limitations on the ability of the Group's subsidiaries to pay dividends or make other distributions; and
- operational factors, including the efficacy of risk management and other internal procedures in anticipating and managing the foregoing risks.

These factors are not exhaustive. The Group operates in a continually changing environment and new risks emerge continually. Readers are cautioned not to place undue reliance on forward-looking statements. Swiss Re undertakes no obligation to publicly revise or update any forward-looking statements, whether as a result of new information, future events or otherwise.

This communication is not intended to be a recommendation to buy, sell or hold securities and does not constitute an offer for the sale of, or the solicitation of an offer to buy, securities in any jurisdiction, including the United States. Any such offer will only be made by means of a prospectus or offering memorandum, and in compliance with applicable securities laws.

Note on risk factors

General impact of adverse market conditions

The operations of Swiss Re Ltd ("Swiss Re") and its subsidiaries (collectively, the "Group") as well as its investment returns are subject to market volatility and macroeconomic factors, which are outside of the Group's control.

Financial, credit and foreign exchange markets are experiencing continued periods of volatility reflecting a range of political, economic and other uncertainties, some of the more significant of which are inter-related. These include the withdrawal of the United Kingdom from the European Union and significant uncertainty regarding the future relationship between the United Kingdom and the European Union; the possible emergence of trade barriers and other protection policies across a range of economies, including a sustained trade war between the United States and China; geopolitical tensions more broadly; a prolonged slowdown in one or more of the principal global economies, particularly in China, and possible recession; continued challenges faced by the Eurozone; the tightening of monetary policy; sustained challenges to multilateral institutions and frameworks; the domestic political situation in the United States, various member states of the European Union and potentially other countries; and heightened scrutiny of technology companies.

Further adverse developments or the continuation of adverse trends that, in turn, have a negative impact on financial markets and economic conditions could limit the Group's ability to access the capital markets and bank funding markets, could adversely affect the ability of counterparties to meet their obligations to the Group and could adversely affect the confidence of the ultimate buyers of insurance and reinsurance.

Any of the foregoing factors, developments and trends could have an adverse effect on the Group's investment results, which in the current low interest rate environment could have a material adverse effect on the Group's overall results, make it difficult to determine the value of certain assets in the Group's portfolio, make it more difficult to acquire suitable investments to meet its risk and return criteria and otherwise have a material adverse effect on its business and operations.

Coronavirus

The rapid spread of the coronavirus and the evolving actions being taken to contain it on a growing scale have led to significant volatility in the financial markets, have had an adverse impact on global economic activity and have led to heightened concerns of potentially significant adverse effects on the global economy, and possibly recession. Even countries that experience less severe direct effects of the coronavirus could be adversely affected by disruptions in the global supply chain and significantly curtailed international travel. Swiss Re is closely monitoring the spread of the coronavirus and the actions being taken to contain it, and continues to evaluate the potential impact on the Group. Contingency covers could be affected depending on the scope and severity of the spread of the virus as well as of the actions taken to contain it, and coronavirus-related financial market volatility could adversely affect the Group's investment result or access to the capital markets. The Group's operations and control processes could also be adversely affected by widening containment efforts (undertaken on a voluntary or mandatory basis). The coronavirus outbreak, the impact on business and economic activity of containment efforts and the related equity market volatility, together with the recent interest rate cuts, are likely to have an adverse effect on our SST ratio, as long as these factors remain operative. We are not providing an SST ratio that is more current than 1 January 2020 due to the elevated levels of uncertainty, but refer to sensitivity analyses in this report as a guide to the potential impact of stress scenarios on our economic capital and SST ratio.

Regulatory changes

Swiss Re and its subsidiaries operate in a highly regulated environment. The regulatory regimes to which members of the Group are subject have changed significantly in recent years and are expected to continue to evolve.

While some regulation is national in scope, the global nature of the Group's business means that its operations are subject in effect to a patchwork of global, national and regional standards. Swiss Re and its subsidiaries are subject to group supervision and Swiss Re's subsidiaries are also subject to applicable regulation in each of the jurisdictions in which they conduct business, particularly Switzerland, the United States, the United Kingdom, Luxembourg and Germany. The Group is subject to the Swiss Solvency Test and, through its legal entities organised in the EEA, Solvency II.

While certain regulatory processes are designed in part to foster convergence and achieve recognition of group supervisory schemes, the Group continues to face risks of extra-territorial application of regulations, particularly as to group supervision and group solvency requirements. In addition, regulators in jurisdictions beyond those where the Group has core operations increasingly are playing a far greater oversight role, requiring more localised resources and, despite a predominantly local focus, also raise issues of a cross-border nature. Furthermore, evolving regulatory schemes and requirements may be inconsistent or may conflict with each other, thereby subjecting the Group, particularly in light of the increasing focus on legal entities in isolation, to higher compliance and legal costs, as well as the possibility of higher operational, capital and liquidity costs. The effect of these trends could be exacerbated to the extent that the current political environment results in a return to more bilateral, and less harmonised, cross-border regulatory efforts.

While in recent years there has been an evolving focus on classifying certain insurance companies as systemically important, it is unclear whether and, if so, in what form reforms will be enacted. The Group could be designated as a global systemically important financial institution ("SIFI") under the framework for SIFIs developed by the Financial Stability Board, or as a systemically important insurer by the Financial Stability Oversight Council ("FSOC") in the United States. The International Association of Insurance Supervisors, an international body that represents insurance regulators and supervisors, has published and since refined its methodology for identifying global systemically important insurers ("G-SIIs"). Were the Group to be designated as a G-SII, it could be subject to one or both of the resulting regimes, including capital standards (the basic capital requirement for G-SIIs), which would have various implications for the Group, including additional compliance costs, reporting obligations and capital costs (in the form of capital charges or high loss absorption capacity), as well as heightened regulatory scrutiny in various jurisdictions. In addition, the Group ultimately will be subject to oversight of its Swiss regulator in respect of recovery and resolution planning.

The Group cannot predict which legislative and/or regulatory initiatives will be enacted or promulgated, what the scope and content of these initiatives ultimately will be, when they will be effective and what the implications will be for the industry, in general, and for the Group, in particular. The Group may be subject to changes in views of its regulators in respect of the models that the Group uses for capital and solvency purposes, and could be adversely affected if, for example, it is required to use standard models rather than internal models. Generally, legal and regulatory changes could have a material impact on the Group's business. Uncertainty regarding the future relationship between the United Kingdom and the European Union could also impact the legislative and/or regulatory regimes to which the Group is subject, both in the United Kingdom and in the European Union.

In addition, regulatory changes could occur in areas of broader application, such as competition policy and tax laws. Changes in tax laws, for example, could increase the taxes the Group pays, or impact, the attractiveness of products offered by the Group, the Group's investment activities and the value of deferred tax assets. Any number of these changes could apply to the Group and its operations. These changes, or inconsistencies between the various regimes that apply to the Group, could increase the costs of doing business (including due to increased capital requirements), reduce access to liquidity, limit the scope of current or future business or affect the competitive balance, or could make reinsurance less attractive to primary insurers.

Market risk

Volatility and disruption in the global financial markets could expose the Group to significant financial and capital markets risk, including changes in interest rates, credit spreads, equity prices and foreign currency exchange rates, which may adversely impact the Group's financial condition, results of operations, liquidity and capital position. The Group's exposure to interest rate risk is primarily related to the market price and cash flow variability associated with changes in interest rates. In general, a low interest rate environment, such as the one experienced in recent years, poses significant challenges to the insurance and reinsurance industries, with earnings capacity under stress unless lower investment returns from fixed income assets can be offset by lower combined ratios or higher returns from other asset classes. Exposure to credit spreads primarily relates to market price and cash flow variability associated with changes in credit spreads. When credit spreads widen, the net unrealised loss position of the Group's investment portfolio can increase, as could other-than-temporary impairments.

The Group is exposed to changes in the level and volatility of equity prices, as they affect the value of equity securities themselves as well as the value of securities or instruments that derive their value from a particular equity security, a basket of equity securities or a stock index. The Group is also subject to equity price risk to the extent that the values of life-related benefits under certain products and life contracts, most notably variable annuity business, are tied to financial market values; to the extent market values fall, the financial exposure on guarantees related to these contracts would increase to the extent this exposure is not hedged. While the Group has an extensive hedging programme covering its existing variable annuity business that it believes is sufficient, certain risks cannot be hedged, including actuarial, basis and correlation risks. Exposure to foreign exchange risk arises from exposures to changes in spot prices and forward prices as well as to volatile movements in exchange rates.

These risks can have a significant effect on investment returns and market values of securities positions, which in turn may affect both the Group's results of operations and financial condition. The Group continues to focus on asset-liability management for its investment portfolio, but pursuing even this strategy has its risks – including possible mismatch – that in turn can lead to reinvestment risk. The Group seeks to manage the risks inherent in its investment portfolio by repositioning the portfolio from time to time, as needed, and to reduce risk and fluctuations through the use of hedges and other risk management tools.

Credit risk

If the credit markets were again to deteriorate and further asset classes were to be impacted, the Group could experience losses. Changes in the market value of the underlying securities and other factors impacting their price could give rise to market value losses. If the credit markets were to deteriorate again, the Group could also face write-downs in other areas of its portfolio, including other structured instruments, and the Group and its counterparties could face difficulties in valuing credit-related instruments. Differences in opinion with respect to valuations of credit-related instruments could result in legal disputes among the Group and its counterparties as to their respective obligations, the outcomes of which are difficult to predict and could be material.

The Group is also subject to credit and other risks in its credit business, including reliance on banks that underwrite and monitor facilities in which the Group participates and potential default by borrowers under those facilities.

Liquidity risks

The Group's business requires, and its clients expect, that it has sufficient capital and sufficient liquidity to meet its re/insurance obligations, and that this would continue to be the case following the occurrence of any foreseeable event or series of events, including extreme catastrophes, that would trigger insurance or reinsurance coverage obligations. The Group's uses of funds include obligations arising in its insurance and reinsurance businesses (including claims and other payments as well as insurance provision repayments due to portfolio transfers, securitisations and commutations), which may include large and unpredictable claims (including catastrophe claims), funding of capital requirements and operating costs, payment of principal and interest on outstanding indebtedness and funding of acquisitions. The Group also has unfunded capital commitments in its private equity and hedge fund investments, which could result in funding obligations at a time when it is subject to liquidity constraints. In addition, the Group has potential collateral requirements in connection with a number of reinsurance arrangements, the amounts of which may be material and the meeting of which could require the Group to liquidate cash equivalents or other securities.

The Group manages liquidity and funding risks by focusing on the liquidity stress that is likely to result from extreme capital markets scenarios or from extreme loss events or combinations of the two. Generally, the ability to meet liquidity needs could be adversely impacted by factors that the Group cannot control, such as market dislocations or interruptions, adverse economic conditions, severe disruption in the financial and worldwide credit markets and the related increased constraints on the availability of credit; changes in interest rates, foreign exchange rates and credit spreads; or by perceptions among market participants of the extent of the Group's liquidity needs.

Unexpected liquidity needs (including to meet collateral calls) could require the Group to incur indebtedness or liquidate investments or other assets. The Group may not be able to secure new sources of liquidity or funding, should projected or actual liquidity fall below levels it requires. The ability to meet liquidity needs through asset sales may be constrained by market conditions and the related stress on valuations, and through third-party funding may be limited by constraints on the general availability of credit and willingness of lenders to lend. In addition, the Group's ability to meet liquidity needs may also be constrained by regulatory requirements that require regulated entities to maintain or increase regulatory capital, or that restrict intra-group transactions, the timing of dividend payments from subsidiaries or the fact that certain assets may be encumbered or otherwise non-tradable. Failure to meet covenants in lending arrangements could give rise to collateral-posting or defaults, and further constrain access to liquidity. Finally, any adverse ratings action could trigger a need for further liquidity (for example, by triggering termination provisions or collateral delivery requirements in contracts to which the Group is a party) at a time when the Group's ability to obtain liquidity from external sources is limited by such ratings action.

Counterparty risks

The Group is exposed to the risk of defaults, or concerns about defaults, by its counterparties. Securities trading counterparties, counterparties under swaps and other derivative contracts, and financial intermediaries may default on their obligations due to bankruptcy, insolvency, lack of liquidity, adverse economic conditions, operational failure, fraud or other reasons, which could have a material adverse effect on the Group. The Group has increased its allocation to higher return-generating strategies, including high-quality corporate debt and some alternative assets, which tend to also be subject to potentially greater counterparty risk.

The Group could also be adversely affected by the insolvency of, or other credit constraints affecting, counterparties in its insurance and reinsurance operations. Moreover, the Group could be adversely affected by liquidity issues at ceding companies or at third parties to whom the Group has retroceded risk, and such risk could be exacerbated to the extent any such exposures are concentrated.

Risks relating to credit rating downgrades

Ratings are an important factor in establishing the competitive position of reinsurance companies. Third-party rating agencies assess and rate the financial strength of reinsurers and insurers. These ratings are intended to measure a company's ability to repay its obligations and are based upon criteria established by the rating agencies. Ratings may be revised downward or revoked at the sole discretion of the rating agencies.

The Group's ratings reflect the current opinion of the relevant rating agencies. One or more of its ratings could be downgraded or withdrawn in the future, and market conditions could increase the risk of downgrade. Rating agencies may increase the frequency and scope of ratings reviews, revise their criteria or take other actions that may negatively impact the Group's ratings and/or the ratings of its legal entities. In addition, changes to the process or methodology of issuing ratings, or the occurrence of events or developments affecting the Group, could make it more difficult for the Group to achieve improved ratings which it would otherwise have expected.

As claims paying and financial strength ratings are key factors in establishing the competitive position of reinsurers, a decline in ratings alone could make reinsurance provided by the Group less attractive to clients relative to reinsurance from competitors with similar or stronger ratings. A decline in ratings could also cause the loss of clients who are required by policy or regulation to purchase reinsurance only from reinsurers with certain ratings. Certain larger reinsurance contracts contain terms that would allow the ceding companies to cancel the contract if the Group's ratings or those of its subsidiaries are downgraded beyond a certain threshold. Moreover, a decline in ratings could impact the availability and terms of unsecured financing (potentially impacting the Group's ability to rollover existing facilities or obtain new facilities) and obligate the Group to provide collateral or other guarantees in the course of its business or trigger early termination of funding arrangements, potentially resulting in a need for additional liquidity. As a ratings decline could also have a material adverse impact on the Group's costs of borrowing or ability to access the capital markets, the adverse implications of a downgrade could be more severe. These same factors could also impact the Group's insurance business.

Legal and regulatory risks

In the ordinary course of business, the Group is involved in lawsuits, arbitrations and other formal and informal dispute resolution procedures, the outcomes of which determine rights and obligations under the Group's insurance, reinsurance and other contractual agreements. From time to time, the Group may institute, or be named as a defendant in, legal proceedings, and the Group may be a claimant or respondent in arbitration proceedings. These proceedings could involve coverage or other disputes with ceding companies, disputes with parties to which the Group transfers risk under reinsurance arrangements, disputes with other counterparties or other matters. The Group cannot predict the outcome of any of the foregoing, which could be material for the Group.

The Group is also involved, from time to time, in investigations and regulatory proceedings, which could result in adverse judgments, settlements, fines and other outcomes. The number of these investigations and proceedings involving the financial services industry has increased in recent years, and the potential scope of these investigations and proceedings has also increased, not only in respect of matters covered by the Group's direct regulators, but also in respect of compliance with broader business conduct rules, including those in respect of market abuse, bribery, money laundering, trade sanctions and data protection and privacy. The Group also is subject to audits and challenges from time to time by tax authorities, which could result in increases in tax costs, changes to internal structures and interest and penalties. Tax authorities may also actively pursue additional taxes based on retroactive changes to tax laws. The Group could be subject to risks arising from alleged, or actual, violations of any of the foregoing, and could also be subject to risks arising from potential employee misconduct, including non-compliance with internal policies and procedures and malfeasance, such as undertaking or facilitating cyber attacks on internal systems. Substantial legal liability could materially adversely affect the Group's business, financial condition or results of operations or could cause significant reputational harm, which could seriously affect its business.

Insurance, operational and other risks

As part of the Group's ordinary course operations, the Group is subject to a variety of risks, including risks that reserves may not adequately cover future claims and benefits; risks that catastrophic events (including natural disasters, such as hurricanes, windstorms, floods, earthquakes, and man-made disasters, such as acts of terrorism and other disasters such as industrial accidents, explosions, and fires and pandemics) are inherently unpredictable in terms of both their frequency and severity and have exposed, and may expose the Group to unexpected large losses (and related uncertainties in estimating future claims in respect of such events); changes in the insurance industry that affect ceding companies, particularly those that further increase their sensitivity to counterparty risk; competitive conditions (including as a result of consolidation and the availability of significant levels of alternative capacity); cyclicality of the industry; risks related to emerging claims and coverage issues; macro developments giving rise to emerging risks, such as climate change and technological developments (including greater exposure to cyber risks (where accumulation risk is yet to be fully understood), which could have a range of consequences from operational disruption, to loss of proprietary or customer data, to greater regulatory burdens and potential liability); risks arising from the Group's dependence on policies, procedures and expertise of ceding companies; risks related to investments in emerging markets; and risks related to the failure of, or attacks directed at, the Group's operational systems and infrastructure, including its information technology networks and systems.

Any of the foregoing, as well as the occurrence of future risks that the Group's risk management procedures fail to identify or anticipate, could have a material adverse effect on the Group, and could also give rise to reputational risk.

Use of models; accounting matters

The Group is subject to risks relating to the preparation of estimates and assumptions that management uses, including as part of its risk models as well as those that affect the reported amounts of assets, liabilities, revenues and expenses in the Group's financial statements, including assumed and ceded business. For example, the Group estimates premiums pending receipt of actual data from ceding companies, which actual data could deviate from the estimates. In addition, particularly with respect to large natural catastrophes, it may be difficult to estimate losses, and preliminary estimates may be subject to a high degree of uncertainty and change as new information becomes available. Deterioration in market conditions could have an adverse impact on assumptions used for financial reporting purposes, which could affect possible impairment of present value of future profits, fair value of assets and liabilities, deferred acquisition costs or goodwill. Moreover, regulators could require the use of standard models instead of permitting the use of internal models. To the extent that management's estimates or assumptions prove to be incorrect, it could have a material impact on underwriting results (in the case of risk models) or on reported financial condition or results of operations, and such impact could be material.

The Group's results may be impacted by changes in accounting standards, or changes in the interpretation of accounting standards. Changes in accounting standards could impact future reported results or require restatement of past reported results. The Group's results may also be impacted if regulatory authorities take issue with any conclusions the Group may reach in respect of accounting matters.

The Group uses non-GAAP financial measures in its external financial reporting, including in this report. These measures are not prepared in accordance with US GAAP or any other comprehensive set of accounting rules or principles and should not be viewed as substitutes for measures prepared in accordance with US GAAP. Moreover, these may be different from, or otherwise inconsistent with, non-GAAP financial measures used by other companies. These measures have inherent limitations, are not required to be uniformly applied and are not audited.

The Group includes in its annual report a section in respect of its results, including financial statements, prepared in accordance with the Group's proprietary economic value management ("EVM") principles ("EVM report"). Financial information included in the EVM report contains non-GAAP financial measures. The EVM principles differ significantly from US GAAP and, accordingly, the Group's results prepared in accordance with US GAAP will differ from its EVM results, and those differences could be material. The Group's annual EVM results can be more volatile than the US GAAP results because, among other things, assets and liabilities are measured on a market consistent basis, profit recognition on new contracts is recognised at inception rather than over the life time of the contract, and life and health actuarial assumptions are on a best estimate basis as opposed to generally being locked-in. The Group's EVM financial statements should not be viewed as a substitute for the Group's US GAAP financial statements.

Risks related to the Swiss Re corporate structure

Swiss Re is a holding company, a legal entity separate and distinct from its subsidiaries, including Swiss Reinsurance Company Ltd. As a holding company with no operations of its own, Swiss Re is dependent upon dividends and other payments from Swiss Reinsurance Company Ltd and its other principal operating subsidiaries. The Group expects that, over time, its structure will continue to evolve. In the future it may, for example, elect again (having accepted an equity investment within its Life Capital Business Unit from a third party) to partner with minority investors in or within one or more of the Group's Business Units or sub-groups within its Business Units, which could alter historical approaches taken in respect of capital, liquidity, funding and/or dividends, as well as other governance matters, including strategy for such Business Unit or sub-group, or may elect otherwise to dispose of interests in Group businesses or portions thereof, or to grow through acquisitions. To the extent it undertakes acquisitions, it is subject to the risks inherent in acquiring and integrating new operations.

Contacts

Swiss Re has 80 office locations in more than 30 countries. For a full list of our office locations and service offerings, please visit www.swissre.com

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Corporate calendar

2020

17 April 2020
156th Annual General Meeting

30 April 2020
First quarter 2020 key financial data

31 July 2020
Half-year 2020 results

30 October 2020
Nine months 2020 key financial data

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