

Half-Year 2020 Report

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Swiss Re Ltd

Swiss Re Ltd is the holding company of the Swiss Re Group. Its shares are listed in accordance with the International Reporting Standard on the SIX Swiss Exchange and trade under the symbol SREN.

Financial highlights

For the six months ended 30 June

USD millions, unless otherwise stated	2019	2020	Change in %
Group			
Net income/loss attributable to shareholders	953	-1 135	_
Premiums earned and fee income	18 160	19329	6
Earnings per share in CHF	3.20	-3.79	_
Shareholders' equity (31.12.2019/30.06.2020)	29 251	27 933	-5
Return on equity in % ¹	6.6	-7.9	
Return on investments in %	4.2	3.2	
Net operating margin in %2	6.8	-5.1	
Number of employees ³ (31.12.2019/30.06.2020)	15 401	15842	3
Property & Casualty Reinsurance			
Net income/loss attributable to shareholders	771	-519	_
Premiums earned	8 7 1 9	9 6 0 1	10
Combined ratio in %	100.5	115.8	
Net operating margin in % ²	11.1	-5.0	
Return on equity in %1	15.9	-12.8	
Life & Health Reinsurance			
Net income attributable to shareholders	459	74	-84
Premiums earned and fee income	6 284	6 6 7 6	6
Net operating margin in % ²	10.9	3.9	
Return on equity in %1	13.1	1.8	
Corporate Solutions			
Net income/loss attributable to shareholders	-403	-301	-25
Premiums earned	2063	2004	-3
Combined ratio in %	132.8	122.6	
Net operating margin in % ²	-21.2	-17.6	
Return on equity in %1	-40.5	-29.6	
Life Capital			
Net income/loss attributable to shareholders	5	-217	_
Premiums earned and fee income	1094	1048	-4
Gross premiums written – open books	1 3 4 3	1 578	17
Net operating margin in % ²	6.2	-9.0	
Return on equity in %1	0.2	-8.0	

¹ Return on equity is calculated by dividing annualised net income attributable to shareholders by average 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.

Share performance & ratings

Share vs benchmarks

Performance in %	1 January 2014 to 29 July 2020 (p.a.)	Year to 29 July 2020
Swiss Re	-1.5	-31.5
Swiss Market Index	3.5	-3.2
STOXX Europe 600 Insurance Index	1.5	-21.9

As of 29 July 2020	
Share price in CHF	74.46
Market capitalisation in CHF millions	23 641

Ratings

Standard & Poor's	AA-
Moody's	Aa3
A.M.Best	A+

Creating shareholder value



Swiss Re

Swiss Market Index

STOXX Europe 600 Insurance Index

Letter to shareholders

Swiss Re maintains industryleading capital position in the first half of 2020 despite significant addition to COVID-19 loss reserves

Dear shareholders.

The year 2020 will undoubtedly be remembered worldwide for the COVID-19 pandemic. The human tragedy has been vast, and our deepest sympathies go to everyone who suffered personal loss and financial uncertainty. Swiss Re Institute estimates the cumulative global economic loss from the pandemic and the unprecedented wave of lockdowns around the globe will be USD 12 trillion over this year and next.

Pandemics are a well-known risk and have been part of re/insurers' risk models for over 20 years. However, the decision of governments around the world to shut large parts of their economies was unexpected. The re/insurance industry alone cannot cover a risk of this magnitude, not least because it is impossible to diversify. By definition, a pandemic affects many countries simultaneously, and most policies did not, therefore, offer cover for pandemics. This is why analysts' estimates for the re/insurance losses from COVID-19 represent only a small fraction of the economic damage. Industry losses will be significant, but they will be manageable.

At the same time, we now have a unique opportunity to help build greater resilience for future pandemics and other systemic risks through public-private partnerships. We are working with many countries to initiate such schemes and are encouraged by early progress in this regard. The re/insurance industry — with our risk knowledge, claims handling expertise and innovative solutions — has a very important contribution to make towards ensuring such systems are viable for the future.

Swiss Re is also doing its part in helping to cover losses from the current COVID-19 pandemic. Our Group went into this crisis with a very strong balance sheet and capital position. Our operations continued uninterrupted even when the vast majority of our employees had to work remotely. We took action early in the crisis to protect our balance sheet with hedges, which positively contributed to our first-half

results. And we are in the fortunate situation of being able to support our clients as demand for our expertise and solutions is rising, with the Group Swiss Solvency Test ratio above the target level of 220% as of 1 July 2020, despite the COVID-19 impact on our earnings.

Our teams have conducted a thorough and prudent analysis of all potential exposures related to COVID-19 across our businesses and we booked claims and reserves of USD 2.5 billion in the first half of 2020. The vast majority of this loss estimate are claims we think have incurred, but which have not yet been reported to us. Consequently, there is a high degree of uncertainty around this figure. Looking ahead, based on our current information and related assessments, and recognising the inherent uncertainty of the ongoing pandemic, we expect these claims and reserves to cover the majority of our ultimate COVID-19 losses. Many factors may impact claims development in the coming quarters, either positively or negatively, relative to our projections. These include the rates of infection or death resulting from COVID-19, the duration and scope of measures to mitigate the spread of the pandemic, how long it takes to develop and roll out an effective vaccine or alternative treatments, legislative or regulatory efforts and the outcome of court and arbitration cases on coverage issues, as well as the effectiveness of government stimulus packages and the severity and duration of recession.

While the impact of COVID-19 on our US GAAP financial results is significant, all our businesses are delivering improved underlying performance and executing on their strategic objectives. In Property & Casualty Reinsurance (P&C Re) we see continued profitable business growth in a hardening price environment. P&C Re treaty premium volume increased by 6% to USD 17.0 billion year to date, with a nominal price increase of 6%. Overall price quality was unchanged, reflecting the need to compensate further decreased interest rates and material adjustments to loss assumptions. In the July treaty



Walter B. Kielholz Chairman of the Board of Directors



Christian Mumenthaler Group CEO

renewals, Swiss Re achieved a 6% volume increase and significant rate hardening in natural catastrophe business. P&C Re achieved a return on equity (ROE), excluding the impact of COVID-19 losses, of 14.9% in the first half of 2020 and is on track to reach the normalised1 combined ratio estimate of 97% for this year. Life & Health Reinsurance (L&H Re) has maintained its strong performance in the first half of 2020, with an ROE, excluding the impact of COVID-19 losses, at 12.4%. We continue to see attractive opportunities to grow our L&H Re business, particularly in high-growth markets and through large transactions.

Corporate Solutions is well on track in its turnaround, thanks to the decisive management actions announced a year ago. The Business Unit has already achieved about 60% of the planned portfolio pruning and two thirds of cost reductions. Together with rate increases over the past year, this has lowered the normalised¹ combined ratio to a very encouraging 101.3% in the first half of 2020, ahead of the 105% estimate for the full year 2020. The Business Unit achieved rate increases of 15% in the first half of this year, and we expect this positive pricing momentum to continue.

With the completed sale of ReAssure to Phoenix Group Holdings plc, we delivered on another strategic milestone. Swiss Re received a cash payment of GBP 1.2 billion and shares in Phoenix representing a 13.3% stake, which we believe maximises the value for Swiss Re shareholders. As a result of the sale, we have decided to simplify our legal entity structure by disbanding the Life Capital Business Unit. Subject to applicable regulatory approvals, elipsLife, which provides life and health insurance solutions and services for corporate clients, will move to Corporate Solutions, allowing it to better leverage this Business Unit's relationships with corporates and brokers. Swiss Re's white-labelling digital insurance platform iptiQ will become a standalone division, effective 1 January 2021, enabling a greater focus on this business. Having grown dynamically over the past years, including winning seven new partners in the first half of 2020, iptiQ is on track to become a leading player in its field. We are pleased to welcome Carlo Bewersdorf, who has a long-standing track record in digital insurance innovation, to the newly created role of iptiQ CEO, effective 1 October 2020.

Thierry Léger, who is currently leading Life Capital, has been appointed the new Group Chief Underwriting Officer, effective 1 September 2020. He succeeds Edi Schmid, who has decided to step down from the Group Executive Committee for personal reasons and take on an advisory role. We will continue to evolve our capabilities in underwriting through cuttingedge research, access to more and better data and advanced analytics, furthering our leading position.

We are encouraged by the good progress we see in all of the Group's businesses so far this year, and we remain confident that the impact of the COVID-19 pandemic will be entirely manageable for Swiss Re. Thanks to our disciplined capital management, we are in a strong position to continue to support our clients and deploy capital for business growth in improving pricing conditions. Our employees continue to work tirelessly in these challenging times, and we would like to thank them for their commitment. We would also like to thank you, our shareholders, for continuing to place your trust in us.

Zurich, 31 July 2020

Walter B. Kielholz

Chairman of the Board of Directors

Christian Mumenthaler

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Group CEO

¹ Assumes an average large natural catastrophe loss burden and excludes prior-year reserve developments as well as the COVID-19 impact.

Key events

January

29 January: Swiss Re Institute's sigma study showed that digitalisation is transforming insurance for consumers and suppliers alike. It is leading to the development of new data-driven business models, which impact the entire insurance value chain.

February

18 February: Swiss Re's iptiQ and IKEA announced the launch of HEMSÄKER, a home insurance offering which provides easily accessible protection at an affordable price.

20 February: Swiss Re announced further measures to support the transition to a low-carbon economy. The Group will stop providing re/insurance to, and investing in, the most carbon-intensive oil and gas companies. In addition, Swiss Re has taken further actions to reduce the carbon intensity of its investment portfolio. For its own operations, Swiss Re has committed to achieving the goal of net-zero emissions by 2030.

20 February: Swiss Re reported full-year 2019 net income of USD 727 million, driven by a strong L&H Re result and excellent investment performance. The Board of Directors put forward proposals to increase the dividend by 5% to CHF 5.90 per share.

March

3 March: Swiss Re's Board of Directors will nominate Sergio P. Ermotti for election as a new, non-executive and independent member of the Board at the Annual General Meeting of shareholders (AGM) on 17 April 2020 for a one-year term of office. In 2021 he will be nominated to succeed Walter B. Kielholz as Chairman of the Board.

12 March: Swiss Re and Microsoft Corp. announced a strategic alliance to further advance insurance innovation and extend financial protection to more people globally. The centrepiece of the strategic alliance is the launch of Swiss Re's Digital Market Center.

April

- **8** April: Swiss Re Institute's *sigma* study showed that socio-economic developments and climate change effects will drive rising losses from severe weather events.
- **14 April:** Swiss Re pledged to donate CHF 5 million to support the needs of people and communities affected by the COVID-19 pandemic around the world.
- **17 April:** Swiss Re's shareholders approved all proposals put forward by the Board of Directors at the company's Annual General Meeting, including an increased regular dividend to CHF 5.90 per share.
- **30 April:** Swiss Re reported a net loss of USD 225 million for the first quarter of 2020, reflecting the impact of the COVID-19 crisis on the underwriting and investment results as well as the mark-to-market valuation of Phoenix Group Holdings plc shares. Swiss Re maintains its industry-leading capital position, with the Group SST ratio comfortably above 200% as of 31 March 2020.

June

- **4 June:** Swiss Re Institute published its 2020 SONAR report, which provides insights on emerging risks that have the potential to affect the insurance industry landscape.
- **17 June:** Swiss Re Institute's *sigma* study showed that investment in infrastructure development is set to be one of the main drivers of sustainable growth in the emerging markets after the COVID-19 crisis subsides.
- **19 June:** Swiss Re announced the appointment of Thierry Léger as Group Chief Underwriting Officer, succeeding Edi Schmid, as well as changes to the Life Capital Business Unit.

Swiss Re at a glance

The Swiss Re Group is one of the world's leading providers of reinsurance, insurance and other forms of insurance-based risk transfer, working to make the world more resilient.

Half-year ended 30 June 2020

Reinsurance

Reinsurance provides clients and brokers with reinsurance products, insurance-based capital market instruments and risk management services. Reinsurance operates globally through two segments – Property & Casualty and Life & Health.

Read more: page 12

Property & Casualty

Net premiums

Net income

earned

(USD billions) 2020 9.6 2019 8.7

(USD millions) 2020 -519 2019 771

Life & Health



-12.8Return on equity (2019: 15.9%)

115.8 Combined ratio (2019: 100.5%)

3.9% Net operating margin (2019: 10.9%)

Corporate Solutions

Corporate Solutions provides risk transfer solutions to large and mid-sized corporations around the world. Its innovative, highly customised products and standard insurance covers help to make businesses more resilient, while its industry-leading claims service provides additional peace of mind.

Read more: page 15

Net premiums

earned (USD billions)

2020 2019

Net income

2020

2019

(USD millions)

-301

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 which has been sold in 2020, and the primary life and health insurance business, comprising elipsLife and iptiQ. The open books businesses support and incubate entities in the B2B2C primary business and provide Swiss Re with alternative access to the primary insurance risk pool.

Read more: page 16

Following the completion of the sale of ReAssure, as announced, Swiss Re will simplify its organisational structure by disbanding the Life Capital Business Unit.

Net premiums earned and fee income

(USD billions)



Net income

(USD millions)



Group (After consolidation)

Net premiums earned and fee income by business segments

(Total USD 19.3 billion)



- 50% P&C Reinsurance
- 35% L&H Reinsurance
- 10% Corporate Solutions
- **5%** Life Capital

Return on equity (2019: -40.5%)

Combined ratio (2019: 132.8%)

Return on equity (2019: 0.2%)

Gross premiums written - open books (2019: USD 1343m)

Return on equity (2019: 6.6%)

Net operating margin (2019: 6.8%)

Group results

Swiss Re reported a net loss of USD 1.1 billion for the first six months of 2020, including claims and reserves related to COVID-19. Excluding the impact of COVID-19 losses, the Group net income was USD 865 million, reflecting a strong underlying business performance.

Swiss Re reported a net loss of USD 1.1 billion for the first six months of 2020 after booking claims and reserves related to COVID-19, which amounted to USD 2.5 billion for the period. The vast majority of the Group's COVID-19 losses are classified as incurred but not reported (IBNR) reserves and are primarily driven by estimates for affirmative property nondamage business interruption and event cancellation losses. Excluding the after-tax impact of COVID-19-related losses, the Group net income was USD 865 million, compared with USD 953 million in the same period in 2019. The net operating margin¹ for the 2020 period was -5.1%, compared with 6.8% for the first six months of 2019.

Reinsurance reported a net loss of USD 0.4 billion, including COVID-19 claims impacts. Excluding the after-tax impact of COVID-19-related claims and reserves, the Business Unit's net income was USD 1.2 billion, which remained stable compared with the same period in 2019.

Property & Casualty Reinsurance (P&C Re) reported a net loss of USD 519 million, including claims and reserves of USD 1.5 billion related to the COVID-19 crisis. Excluding the after-tax impact of COVID-19-related claims and reserves, the Business Unit contributed USD 646 million, a decrease from USD 771 million for the first half of 2019. The result was impacted by USD 536 million claims from large natural catastrophe losses, mainly in Australia, compared with a benign natural catastrophe period in 2019. The net operating margin was -5.0%, compared with 11.1% in the prior-year period.

Life & Health Reinsurance (L&H Re) reported a net income of USD 74 million for the period, including COVID-19-related claims and reserves, which amounted to USD 548 million in the first half of 2020.

Excluding the after-tax impact of COVID-19related losses, L&H Re's net income was USD 516 million for the first six months of 2020, an increase from USD 459 million for the same period in 2019. The increase was supported by a strong investment result, including hedges, with a return on investments (ROI) of 4.1%. The net operating margin was 3.9% in the first half of 2020 and 10.9% for the same period in 2019.

Corporate Solutions reported a net loss of USD 301 million, with claims and reserves related to COVID-19 totalling USD 485 million in the first half of 2020. Excluding the after-tax impact of COVID-19-related losses, the Business Unit swung to a net income of USD 81 million, compared with a net loss of USD 403 million in the prior-year period. The result reflected the benefits of the decisive management actions taken to improve performance.

Life Capital reported a net loss of USD 217 million for the first six months of 2020, compared with a net income of USD 5 million for the same period in 2019. The decrease was mainly attributable to a net mark-to-market charge of USD 92 million related to the decline in Phoenix Group Holdings plc's share price. COVID-19related losses for Life Capital remain minimal at USD 13 million. The net operating margin declined to -9.0% in the first six months of 2020 from 6.2% in the same period of the previous year.

Shareholders' equity, excluding noncontrolling interests, decreased to USD 27.9 billion as of 30 June 2020, compared with USD 29.3 billion at the end of December 2019, mainly reflecting a payment to shareholders of USD 2.0 billion for the 2019 regular dividend and the share buyback programme, as well as the net loss for the first half of 2020, partly offset by unrealised gains on fixed income securities of USD 1.7 billion.

The return on equity (ROE) was -7.9% for the first half of 2020, compared with 6.6% for the prior-year period. Earnings per share for the 2020 period were USD -3.92 or CHF -3.79, compared with USD 3.19 or CHF 3.20 for the first half of 2019.

Book value per share decreased to USD 96.65 or CHF 91.58 at the end of June 2020, compared with USD 100.64 or CHF 97.46 at the end of December 2019. Book value per share is based on shareholders' equity and excludes noncontrolling interests.

Business performance

Net premiums earned and fee income for the Group were USD 19.3 billion for the first six months of 2020, an increase from USD 18.2 billion in the same period of the previous year. The increase was mainly driven by growth across the property and casualty lines of business. At constant exchange rates, premiums and fees increased by 8.0%.

Net premiums earned by P&C Re were USD 9.6 billion, an increase from USD 8.7 billion for the same period of the previous year, driven by large transactions and growth in the natural catastrophe business from successful renewals. At constant exchange rates, premiums earned increased by 11.6%. The P&C Re combined ratio increased to 115.8% in the first six months of 2020 from 100.5% in the same period last year, mainly driven by COVID-19 losses. Excluding the pre-tax impact of COVID-19-related losses, the combined ratio was 100.5%.

L&H Re's net premiums earned and fee income amounted to USD 6.7 billion in the first half of 2020, an increase from USD 6.3 billion in the prior-year period, supported by individual large transactions including longevity deals. At constant exchange rates, premiums earned and fee income increased by 8.2%.

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".

Income statement

For the six months ended 30 June

USD millions	2019	2020	Change in %
Revenues			
Gross premiums written	22 672	23 558	4
Net premiums written	21 356	21 861	2
Change in unearned premiums	-3528	-2814	-20
Premiums earned	17 828	19 047	7
Fee income from policyholders	332	282	-15
Net investment income – non-participating business	1 907	1 4 4 8	-24
Net realised investment gains/losses – non-participating business	817	868	6
Net investment result – unit-linked and with-profit business	3 476	-2685	
Other revenues	11	18	64
Total revenues	24 371	18 978	-22
Expenses			
Claims and claim adjustment expenses	-7967	-9839	23
Life and health benefits	-6392	-6758	6
Return credited to policyholders	-3 237	2377	_
Acquisition costs	-3617	-4 171	15
Operating expenses	-1732	-1702	-2
Total expenses before interest expenses	-22945	-20093	-12
Income/loss before interest and income tax expense	1 426	-1 115	_
Interest expenses	-278	-298	7
Income/loss before income tax expense	1 148	-1 413	_
Income tax expense	-186	341	_
Net income/loss before attribution of non-controlling interests	962	-1 072	_
Income/loss attributable to non-controlling interests	-9	-63	_
Net income/loss attributable to shareholders	953	-1 135	

Corporate Solutions' net premiums earned decreased slightly to USD 2.0 billion from USD 2.1 billion in the prior-year period, as a result of active pruning of several underwriting portfolios, partly offset by rate increases and growth in selected lines of business. At constant exchange rates, net premiums earned decreased by 1.6%. The Corporate Solutions combined ratio improved to 122.6% for the first half of 2020 from 132.8% for the same period of the previous year. Excluding the pre-tax impact of COVID-19-related losses, the combined ratio was 98.4% for the period. The normalised combined ratio remains ahead of the 105% estimate for 2020.

Life Capital net premiums earned and fee income were slightly below the prior-year period at USD 1.0 billion, as growth in open book businesses was offset by lower fee income from the closed book business. At constant exchange rates, premiums earned and fee income decreased by 2.6%.

Investment result and expenses

The Group's non-participating investment portfolio decreased from USD 134.5 billion at the end of 2019 to USD 114.4 billion as of 30 June 2020, mainly due to the exclusion of the ReAssure related

investment portfolio, which was classified as held for sale until the completion of the sale of ReAssure Group plc.

The ROI was 3.2% for the first six months of 2020, compared with 4.2% for the same period of 2019. The strong investment result, although lower than in the prior-year period, was driven by timely and effective portfolio management actions throughout the global financial market turbulence. In 2020, the investment result related to ReAssure was excluded from the Group's ROI calculation, due to the classification of ReAssure as held for sale.

The Group's non-participating net investment income was USD 1.4 billion, compared with USD 1.9 billion for the first six months of 2019. The decrease was mainly driven by the impact of reinvestment into lower yields and a reduced contribution from equity-accounted investments. The Group's running yield for the six-month period was 2.5% in 2020, compared with 2.9% in 2019.

The Group reported non-participating net realised gains of USD 0.9 billion for the first six months of 2020, compared with USD 0.8 billion for the same period in 2019, as additional realised gains on sales of fixed

income positions offset losses on equity security valuations (net of hedges).

Acquisition costs for the Group increased to USD 4.2 billion for the first six months of 2020 from USD 3.6 billion for the same period of the previous year.

Operating expenses were stable at USD 1.7 billion in the first half of 2020.

Interest expenses were USD 298 million in the first six months of 2020, compared with USD 278 million in the 2019 period.

The Group reported a tax benefit of USD 341 million on a pre-tax loss of USD 1.4 billion for the first six months of 2020, compared with a tax expense of USD 186 million on a pre-tax income of USD 1.1 billion for the same period in 2019. This translates into an effective tax rate in the current and prior-year reporting periods of 24.1% and 16.2%, respectively. The tax rate in the first half of 2020 (tax benefit on a pre-tax loss) was driven by the release of valuation allowance, tax benefits on intra-entity transfers, and tax benefits from policyholder taxes, partly offset by no tax benefit on losses from subsidiaries held for sale.

Reinsurance

The Reinsurance Business Unit, which comprises the segments Property & Casualty Reinsurance and Life & Health Reinsurance, benefitted from a solid performance in the first six months of 2020, excluding the impact of COVID-19.

Property & Casualty Reinsurance

Property & Casualty Reinsurance (P&C Re) reported a net loss of USD 519 million for the first six months of 2020. The result reflected claims and reserves related to the COVID-19-crisis of USD 1.5 billion, reflecting affirmative non-damage business interruption, cancelled or postponed events, casualty and credit & surety losses. Excluding the after-tax impact of these losses, net income was USD 646 million, compared with USD 771 million in the same period of 2019. The decrease was driven by slightly higher-than-expected large natural catastrophe losses of USD 536 million, mainly stemming from hailstorms and floods in Australia as well as US tornadoes in the first quarter and the Calgary hailstorm in the second guarter. The result was also impacted by adverse prior-year development, mostly lower premiums than initially assumed in the first quarter and also higher cedent-reported claims in casualty. The net operating margin was -5.0%, compared with 11.1% in the previous period.

The investment portfolio made a strong contribution with an ROI of 3.6% for the first six months of 2020, as the impact of global financial market turbulence was partly mitigated by timely and effective portfolio management actions taken early on in the period.

The ROE, excluding the after-tax impact of COVID-19-related losses, was 14.9%. This was slightly below 15.9%, which was reported in the same period of 2019. Including the impact of COVID-19, the ROE for the first six months of 2020 was -12.8%.

Premiums

Gross premiums written increased by 3.0% to USD 12.8 billion in the first six months of 2020. Net premiums earned increased strongly by 10.1% to USD 9.6 billion, driven by large transactions and growth in the natural catastrophe business reflecting successful renewals. The premiums earned in the first six months of 2020 were only moderately impacted by adverse COVID-19-related losses, mainly in the motor and aviation business.

Combined ratio

The combined ratio was 115.8% in the first half of 2020, compared with 100.5% in the same period a year earlier. The deterioration was driven by COVID-19-related losses. The majority of COVID-19-related losses were due to incurred but not yet reported reserve increases for affirmative non-damage business interruption and event cancellation. Excluding the pre-tax impact of COVID-19-related losses, the combined ratio was 100.5%.

Administrative expense ratio¹

The administrative expense ratio decreased to 6.2% in the first six months of 2020. compared with 6.7% in the same period of 2019, due to higher net premiums earned while expenses remained contained.

Lines of business

The property combined ratio increased to 120.4% in the first six months of 2020 from 100.5% in the same period last year. The increase was driven by business interruption and event cancellation losses related to COVID-19 and slightly unfavourable large natural catastrophe experience. This was partly offset by reserve releases, particularly due to Typhoon Jebi and Hurricane Dorian.

The casualty combined ratio increased to 118.1% in the first six months of 2020 from 105.5% in 2019, driven by adverse prioryear experience reported in the first quarter of 2020 and COVID-19-related losses.

The specialty combined ratio increased to 96.4% for the first six months of 2020 from 82.7% in the first six months of 2019, reflecting COVID-19 claims impacts as well as unfavourable developments in the marine line of business, whereas the prior year benefitted from positive updates.

Investment result

The ROI was 3.6% for the first six months of 2020, compared with 4.4% in the same period of 2019, reflecting a decrease in the investment result of USD 198 million.

Net investment income decreased by USD 209 million to USD 446 million for the first six months of 2020, driven by declining yields on fixed income securities as well as lower income from equity-accounted investments.

Net realised gains were USD 524 million for the first six months of 2020, an increase of USD 11 million compared with the prioryear period. The result was largely driven by gains on sales within the fixed income portfolio, as well as a positive hedging contribution which offset unfavourable equity security valuations given the global financial market volatility.

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

Shareholders' equity

Shareholders' equity decreased to USD 7.9 billion as of 30 June 2020 from USD 8.3 billion as of 31 December 2019, primarily driven by the net loss and the dividend paid to the Group, partly offset by unrealised gains.

Outlook

For natural catastrophe business, we experienced generally favourable rate trends, initially focused on loss-impacted business and business exposed to tropical cyclones in the North Atlantic. Rate increases continued throughout the second quarter.

P&C Re observed rate increases for loss-affected lines and markets within specialty lines and otherwise stable terms and conditions.

For casualty, we see stronger rate momentum in several markets. In the US, proportional treaty business was supported by the material rate increases on the primary side as a response to the growing loss trends and reduced cession commissions. In EMEA and Asia, the rate outlook is also more positive.

P&C Re continues to see good opportunities for transactions and participated in those that meet its return requirements.

¹ Operating expenses divided by premiums earned.

Life & Health Reinsurance

Life & Health Reinsurance (L&H Re) reported a net income of USD 74 million for the period, including the impact of COVID-19. COVID-19-related claims and reserves amounted to USD 548 million in the first half of 2020, driven primarily by higher mortality claims (reported and IBNR) in the US and the UK versus expected levels. Excluding the after-tax impact of COVID-19-related losses, net income increased to USD 516 million in the first six months of 2020, compared with USD 459 million in the same period a year earlier. This result was supported by a strong investment performance, which delivered an ROI of 4.1%, despite the global financial market volatility. The underwriting result reflected continuous improvements in the Americas mortality experience.

The ROE, excluding the after-tax impact of COVID-19-related losses, was 12.4%. This was slightly below 13.1%, which was reported in the same period of 2019, due to a significantly higher average equity base in the current period. Reflecting the after-tax impact of COVID-19, the ROE was 1.8% for the first six months of 2020.

Premiums

Net premiums earned and fee income increased by 6.2% to USD 6.7 billion, compared with USD 6.3 billion in 2019, supported by individual large transactions including longevity deals. Gross premiums written in the first half of 2020 increased by USD 0.4 billion, or 5.8%, to USD 7.4 billion, compared with the first six months of 2019.

Net operating margin

The net operating margin, excluding the pre-tax impact of COVID-19-related losses, was 11.1% for the first six months of 2020. This compares with a margin of 10.9% reported in the same period of 2019.

Management expense ratio

The management expense ratio was 4.8%, a decrease compared with 5.4% in the prior-year period, driven by lower operating costs as well as higher operating revenues.

Lines of business

Earnings before interest and income tax expenses (EBIT) for the life business decreased to USD -103 million in the first six months of 2020 from USD 431 million in the prior-year period. The current-year result was impacted by COVID-19 losses of USD 531 million, while the prior-year result benefitted from active portfolio management.

EBIT for the health business was USD 127 million in the first six months of 2020, compared with USD 135 million in the prior-year period. The result benefitted from lower allocated operating expenses, while the underwriting result included an impact of USD -17 million related to COVID-19.

Investment result

The ROI was 4.1% in the first six months of 2020, compared with 4.4% in the same period of 2019, with the decline reflecting the impact of global financial market volatility.

Net investment income of USD 544 million for the first six months of 2020 was broadly in line with the prior-year period and driven by recurring income on the fixed income portfolio. The running yield was 3.1% in the reporting period, compared with 3.4% in the prior-year period.

Net realised gains were USD 251 million for the first six months of 2020, compared with USD 227 million for the same period in 2019. The increase reflected additional gains within the fixed income portfolio, partly offset by equity market valuation losses and impairments.

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

Shareholders' equity

Shareholders' equity decreased to USD 8.0 billion as of 30 June 2020, compared with USD 8.3 billion as of 31 December 2019. Net income for the period and a positive change in net unrealised gains were more than offset by the dividend paid to the Group.

Outlook

L&H Re expects increases in life and health treaty reinsurance new business to be driven by high-growth markets, with more modest growth 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. L&H Re 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.

Corporate Solutions

The normalised¹ combined ratio was 101.3% for the first half of 2020, ahead of the 105% estimate for 2020, reflecting the benefits of the management actions to improve profitability.

Corporate Solutions reported a net loss of USD 301 million, with claims and reserves related to COVID-19 amounting to USD 485 million. Approximately half of the losses are claims and reserves related to event cancellations, a line of business which Corporate Solutions exited in 2019, with the rest mainly covering affirmative non-damage business interruption and credit&surety losses. Excluding the after-tax impact of COVID-19-related losses, Corporate Solutions' net income was USD 81 million for the first half of 2020, compared with a net loss of USD 403 million in the same period of 2019. The strong improvement in the ex-COVID-19 result reflected the benefits of portfolio repositioning, reduced costs and rate increases achieved for new business. The Business Unit has already achieved about 60% of the planned portfolio pruning and two thirds of the cost reductions. The net operating margin was -17.6%, compared with -21.2% for the prior-year period.

Premiums

Gross premiums written increased by 1.7% to USD 2.2 billion in the first six months of 2020. Net premiums earned decreased by 2.9% to USD 2.0 billion in the first six months of 2020 from USD 2.1 billion in the same period of 2019, as a result of active pruning of several underwriting portfolios, partly offset by rate increases and growth in selected lines of business.

Combined ratio

The normalised¹ combined ratio was 101.3% for the first half of the year, ahead of the 105% estimate for 2020, reflecting the benefits of the management actions to improve profitability. Despite COVID-19related losses, the overall combined ratio improved to 122.6% in the first six months of 2020, compared with 132.8% in the

same period of 2019. The previous period was impacted by reserve increases, mainly on large- and medium-sized man-made losses, and a premium for an Adverse Development Cover with P&C Re.

Lines of business

The property combined ratio for the first six months of 2020 deteriorated by 21.5 percentage points to 138.8%, driven by higher large losses, mainly due to COVID-19 reserves for claims related to event cancellations.

The casualty combined ratio decreased to 112.7% in the first six months of 2020, compared with 156.2% in the same period of 2019. Both periods were impacted by large man-made losses, mainly from prior accident years, though to a significantly lesser extent in the current period.

The specialty combined ratio for the first six months of 2020 improved by 6.7 percentage points to 114.5%, driven by management actions to improve profitability, partly offset by COVID-19-related losses, mainly in credit&surety.

Investment result

The ROI was 3.0% in the first six months of 2020, compared with 3.2% in the same period of 2019, reflecting a decrease in net investment income.

Net investment income declined by USD 33 million to USD 89 million in the first six months of 2020, mainly due to lower yields, as well as a lower average invested asset base.

Net realised gains were USD 39 million, compared with USD 33 million in the first six months of 2019, reflecting additional realised gains on sales of fixed income securities and hedging gains in the first half of 2020, which offset current-period losses on equity securities.

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 losses of USD 46 million in the first six months of 2020, compared with net realised gains of USD 52 million in the same period of 2019. The current period was impacted by the mild winter temperatures in Europe.

Shareholders' equity

Shareholders' equity increased to USD 2.1 billion since the end of 2019, due to the conversion of a hybrid loan of USD 300 million from debt to equity in the second quarter of 2020 and unrealised gains for the first half of the year, partly offset by the net loss for the period. The ROE was -29.6% in the first six months of 2020, compared with -40.5% in the same period of 2019.

Outlook

The commercial insurance market gained significant price momentum in 2019, with most segments improving at a continuously accelerating pace throughout the year. Swiss Re expects the positive momentum in commercial insurance rates to continue after achieving a broad-based 15% rate increases in the first half of 2020. Further rate hardening is required until the price level is sufficient across all lines of business.

¹ Assumes an average large natural catastrophe loss burden and excludes prior-year reserves development as well as COVID-19-related losses.

Life Capital

Life Capital completed the sale of ReAssure, achieving a key strategic milestone; the Business Unit reports strong growth in the open book businesses.

On 22 July 2020, the sale of ReAssure Group plc to Phoenix Group Holdings plc was completed, following the receipt of all required regulatory and antitrust approvals. The transaction valued ReAssure at GBP 3.25 billion and as part of the sale, Swiss Re received a cash payment of GBP 1.2 billion and shares in Phoenix. representing a 13.3% stake. This transaction is a significant strategic milestone for the Swiss Re Group.

In the first half of 2020, Life Capital reported a net loss of USD 217 million, driven by a mark-to-market charge related to the decline in Phoenix's share price, partly offset by a hedge on the broader UK equity market. Losses related to COVID-19, reflecting the expected mortality impacts, were minimal at USD 13 million.

Premiums

Gross premiums written on the open book businesses increased by 20% when measured at constant foreign exchange rates. Net premiums earned and fee income were slightly below the prior-year period at USD 1.0 billion for the first six months of 2020, with growth in the open book businesses offset by lower fee income driven by market conditions affecting the closed book business.

Investment result

The ROI was 3.5% in the first six months of 2020, compared with 3.2% in the same period in 2019. In 2020, the investment result related to ReAssure was excluded from the ROI calculation for the Business Unit and the Group, due to the classification of ReAssure as held for sale.

Net investment income was USD 58 million, a decrease of USD 340 million compared with the first six months of 2019 mainly due to the exclusion of ReAssure from the investment result

Net realised gains decreased by USD 7 million to USD 20 million in the first six months of 2020. The current-period result was largely driven by market value gains on equity securities while the prior-year period included losses on equity derivatives, partly offset by gains on sales of fixed income securities.

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

Operating expenses

Operating expenses were USD 373 million in the first six months of 2020, compared with USD 325 million in the prior year. The increase was mainly due to expenses related to investment into expansion of the open book businesses.

Shareholders' equity

Shareholders' equity increased by USD 0.2 billion since 31 December 2019 to USD 5.5 billion. The increase was mainly driven by higher net unrealised investment gains and capital contributions, partly offset by the net loss. The ROE was -8.0% for the first six months of 2020, compared with 0.2% for 2019.

Outlook

During the first half of 2020, the open book businesses saw strong growth in gross premiums written across both iptiQ and elipsLife. iptiQ added seven new distribution partners and continued strong weekly policy sales despite challenging markets in 2020. The businesses continue to pursue growth and increase access to attractive risk pools, with an ambition to grow via innovation and the use of digital technology, as well as through partnering with trusted brands and intermediaries.

As announced in June 2020, following the completion of the ReAssure sale, the Life Capital Business Unit will be disbanded, which is expected to be concluded by the end of December 2020, subject to regulatory approvals. elipsLife will move to the Corporate Solutions Business Unit, while Swiss Re's white-labelling digital insurance platform iptiQ will become a standalone division reporting directly to the Group CEO, effective 1 January 2021. This does not change the strategy to increase access to the primary insurance risk pool through the fast growing B2B2C digital platform, applying leading-edge technology and smart use of data to offer affordable insurance products to more consumers.

Group financial statements (unaudited)

Income statement

For the six months ended 30 June

USD millions	Note	2019	2020
Revenues			
Gross premiums written	4	22 672	23 558
Net premiums written	4	21 356	21 861
Change in unearned premiums		-3 528	-2 814
Premiums earned	3	17 828	19 047
Fee income from policyholders	3	332	282
Net investment income – non-participating business ¹	7	1 907	1 448
Net realised investment gains/losses – non-participating business ²	7	817	868
Net investment result – unit-linked and with-profit business	7	3 476	-2 685
Other revenues		11	18
Total revenues		24 371	18 978
Expenses			
Claims and claim adjustment expenses	3	-7 967	-9 839
Life and health benefits	3	-6 392	-6 758
Return credited to policyholders		-3 237	2 377
Acquisition costs	3	-3 617	-4 171
Operating expenses		-1 732	-1 702
Total expenses before interest expenses		-22 945	-20 093
Income/loss before interest and income tax expense/benefit		1 426	-1 115
Interest expenses		-278	-298
Income/loss before income tax expense/benefit		1 148	-1 413
Income tax expense/benefit		-186	341
Net income/loss before attribution of non-controlling interests		962	-1 072
Income/loss attributable to non-controlling interests		-9	-63
Net income/loss attributable to common shareholders		953	-1 135
tee moonly 1935 decibatable to common shareholders		000	1 100
Earnings per share in USD			
Basic	13	3.19	-3.92
Diluted	13	3.09	-3.92
Earnings per share in CHF ³			
Basic	13	3.20	-3.79
Diluted	13	3.09	-3.79

¹ Total impairments for the six months ended 30 June of USD 18 million in 2019 and nil in 2020, respectively, were fully recognised in earnings.
² Total impairments for the six months ended 30 June of USD 5 million in 2019 and USD 29 million in 2020, 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.

Statement of comprehensive income

For the six months ended 30 June

USD millions 2019	2020
Net income/loss before attribution of non-controlling interests 962	-1 072
Other comprehensive income, net of tax:	
Change in net unrealised investment gains/losses 3 224	1 728
Change in other-than-temporary impairment 2	
Change in cash flow hedges 1	2
Change in foreign currency translation 17	-34
Change in adjustment for pension benefits 7	29
Change in credit risk of financial liabilities at fair value option —1	3
Transactions with non-controlling interests –56	
Other comprehensive income/loss attributable to non-controlling interests 263	-4
Total comprehensive income before attribution of non-controlling interests 4 419	652
Comprehensive income/loss attributable to non-controlling interests —272	-59
Total comprehensive income attributable to common shareholders 4 147	593

Reclassification out of accumulated other comprehensive income

For the six months ended 30 June

2019 USD millions	Net unrealised investment gains/losses ¹	Other-than- temporary impairment	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	4 474		-2	15	1	-1	4 487
Amounts reclassified out of accumulated other							
comprehensive income	-443		3	-6	9		-437
Tax	-807	2		8	-3		-800
Balance as of period end	5 001	-1	8	-5 823	-814	4	-1 625

2020 USD millions	Net unrealised investment gains/losses ¹	Other-than- temporary impairment	Cash flow hedges ¹	Foreign currency translation ^{1, 2}	Adjustment for pension benefits ³	Credit risk of financial liabilities at fair value option	· ·
Balance as of 1 January	5 152	-1	-2	-5 794	-850	3	-1 492
Change during the period	3 251		17	-23	8	4	3 257
Amounts reclassified out of accumulated other							
comprehensive income	-1 078		-15		30		-1 063
Tax	-445			-11	-9	-1	-466
Balance as of period end	6 880	-1	0	-5 828	-821	6	236

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".

Balance sheet

Assets

USD millions	Note	31.12.2019	30.06.2020
Investments	7, 8, 9		
Fixed income securities:			
Available-for-sale (including 14 175 in 2019 and 5 889 in 2020 subject to securities			
lending and repurchase agreements) (amortised cost: 2019: 74 780; 2020: 70 579)		79 163	76 927
Trading (including 1 911 in 2019 and 1 445 in 2020 subject to securities			
lending and repurchase agreements)		2 410	2 134
Equity securities at fair value through earnings (including 186 in 2019 and 2 in 2020			
subject to securities lending and repurchase agreements)		2 993	2 747
Policy loans, mortgages and other loans		3 021	2 978
Investment real estate		2 528	2 522
Short-term investments (including 1 157 in 2019 and 1 002 in 2020			
subject to securities lending and repurchase agreements)		5 768	9 013
Other invested assets		7 343	7 223
Investments for unit-linked and with-profit business (including equity securities at fair value through			
earnings: 520 in 2019 and 369 in 2020)		520	369
Total investments		103 746	103 913
Cash and cash equivalents (including 1 257 in 2019 and 744 in 2020 subject to securities lending,			
and 4 in 2019 and 3 in 2020 backing unit-linked and with-profit contracts)		7 562	10 847
Accrued investment income		673	606
Premiums and other receivables		15 271	17 639
Reinsurance recoverable on unpaid claims and policy benefits		5 898	5 786
Funds held by ceding companies		9 472	10 285
Deferred acquisition costs	6	7 838	8 115
Acquired present value of future profits	6	1 042	976
Goodwill		3 945	3 878
Income taxes recoverable		466	311
Deferred tax assets		4 726	5 585
Other assets		3 489	4 171
Assets held for sale ¹	11	74 439	66 787
Total courts		000 507	220.022
Total assets		238 567	238 899

 $^{^{\}rm 1}$ Please refer to Note 11 "Assets held for sale" for more details.

Liabilities and Equity

USD millions	Note	31.12.2019	30.06.2020
Liabilities			
Unpaid claims and claim adjustment expenses	5	72 373	74 678
Liabilities for life and health policy benefits	8	19 836	20 932
Policyholder account balances		5 405	5 244
Unearned premiums		13 365	16 414
Funds held under reinsurance treaties		3 521	4 486
Reinsurance balances payable		889	1 299
Income taxes payable		378	279
Deferred and other non-current tax liabilities		5 663	6 399
Short-term debt	12	185	186
Accrued expenses and other liabilities	7	7 191	7 497
Long-term debt	12	10 138	10 915
Liabilities held for sale ¹	11	68 586	60 792
Total liabilities		207 530	209 121
Equity			
Common shares, CHF 0.10 par value			
2019: 327 404 704: 2020: 327 404 704 shares authorised and issued		31	31
Additional paid-in capital		256	295
Treasury shares, net of tax		-2 220	-2 405
Accumulated other comprehensive income:			
Net unrealised investment gains/losses, net of tax		5 152	6 880
Other-than-temporary impairment, net of tax		-1	-1
Cash flow hedges, net of tax		-2	
Foreign currency translation, net of tax		-5 794	-5 828
Adjustment for pension and other post-retirement benefits, net of tax		-850	-821
Credit risk of financial liabilities at fair value option, net of tax		3	6
Total accumulated other comprehensive income		-1 492	236
Detained cornings		32 676	29 776
Retained earnings			
Shareholders' equity		29 251	27 933
Non-controlling interests		1 786	1 845
Total equity		31 037	29 778
Total liabilities and equity		238 567	238 899

 $^{^{\}rm 1}$ Please refer to Note 11 "Assets held for sale" for more details.

Statement of shareholders' equity

For the twelve months ended 31 December and the six months ended 30 June

USD millions	2019	2020
Common shares		
Balance as of 1 January	32	31
Cancellation of shares bought back	-1	
Balance as of period end	31	31
Additional paid-in capital		
Balance as of 1 January	496	256
Transactions with non-controlling interests ¹	-241	30
Cancellation of shares bought back	-23	
Share-based compensation	-9	-8
Realised gains/losses on treasury shares	33	17
Balance as of period end	256	295
Treasury shares, net of tax		
Balance as of 1 January	-2 291	-2 220
Purchase of treasury shares	-1 041	-222
Cancellation of shares bought back	1 020	
Issuance of treasury shares, including share-based compensation to employees	92	37
Balance as of period end	-2 220	-2 405
Net unrealised investment gains/losses, net of tax		
Balance as of 1 January	1 905	5 152
Transactions with non-controlling interests ¹	-128	
Changes during the period	3 375	1 728
Balance as of period end	5 152	6 880
Other-than-temporary impairment, net of tax		
Balance as of 1 January	-3	-1
Changes during the period	2	
Balance as of period end	-1	-1
Cash flow hedges, net of tax		
Balance as of 1 January	6	-2
Transactions with non-controlling interests ¹	1	
Changes during the period	-9	2
Balance as of period end	-2	0

USD millions	2019	2020
Foreign currency translation, net of tax		
Balance as of 1 January	-5 904	-5 794
Transactions with non-controlling interests ¹	64	
Changes during the period	46	-34
Balance as of period end	-5 794	-5 828
Adjustment for pension and other post-retirement benefits, net of tax		
Balance as of 1 January	-828	-850
Transactions with non-controlling interests ¹	7	
Changes during the period	-29	29
Balance as of period end	-850	-821
Credit risk of financial liabilities at fair value option, net of tax		
Balance as of 1 January	5	3
Changes during the period	-2	3
Balance as of period end	3	6
Retained earnings		
Balance as of 1 January	34 512	32 676
Net income/loss after attribution of non-controlling interests	727	-1 135
Dividends on common shares	-1 659	-1 765
Cancellation of shares bought back	-996	
Impact of ASU 2016-02 ²	92	
Balance as of period end	32 676	29 776
Shareholders' equity	29 251	27 933
Non-controlling interests		
Balance as of 1 January	797	1 786
Transactions with non-controlling interests ¹	606	
Income/loss attributable to non-controlling interests	42	63
Other comprehensive income attributable to non-controlling interests		
Change in net unrealised investment gains/losses	380	137
Change in foreign currency translation	-25	-142
Other	-14	1
Balance as of period end	1 786	1 845
Total equity	31 037	29 778

¹ In 2019, MS&AD Insurance Group Holdings Inc (MS&AD) acquired a 10% stake in ReAssure, a subsidiary of the Group, increasing its total non-controlling interest to 25%. 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 Accounting Standards Update in 2019. Please refer to the Annual Report 2019 for more details.

Statement of cash flows

For the six months ended 30 June

USD millions	2019	2020
Cash flows from operating activities		
Net income/loss attributable to common shareholders	953	-1 135
Add income/loss attributable to non-controlling interests	9	63
Adjustments to reconcile net income to net cash provided/used by operating activities:		
Depreciation, amortisation and other non-cash items	267	298
Net realised investment gains/losses	-3 751	2 256
Income from equity-accounted investees, net of dividends received	62	256
Change in:		
Technical provisions and other reinsurance assets and liabilities, net	6 372	1 691
Funds held by ceding companies and under reinsurance treaties	-268	134
Reinsurance recoverable on unpaid claims and policy benefits	-27	140
Other assets and liabilities, net	101	-377
Income taxes payable/recoverable	-144	-647
Trading positions, net	-159	615
Net cash provided/used by operating activities	3 415	3 294
Cash flows from investing activities		
Fixed income securities:		
Sales	22 616	34 796
Maturities	3 224	3 862
Purchases	-27 661	-32 589
Net purchases/sales/maturities of short-term investments	-819	-3 012
Equity securities:		
Sales	1 634	1 402
Purchases	-1 094	-1 337
Securities purchased/sold under agreement to resell/repurchase, net	155	424
Net purchases/sales/maturities of other investments	-491	-1 253
Net purchases/sales/maturities of investments held for unit-linked and with-profit business	548	1 983
Net cash provided/used by investing activities	-1 888	4 276
Cash flows from financing activities		
Policyholder account balances, unit-linked and with-profit business:		
Deposits	262	215
Withdrawals	-1 334	-1 781
Issuance/repayment of long-term debt	2 439	842
Issuance/repayment of short-term debt	-878	
Purchase/sale of treasury shares	-418	-193
Dividends paid to shareholders	-1 659	-1 765
Transactions with non-controlling interests	634	
Net cash provided/used by financing activities	-954	-2 682

USD millions	2019	2020
Total net cash provided/used	573	4 888
Effect of foreign currency translation	-18	-338
Change in cash and cash equivalents	555	4 550
Cash and cash equivalents as of 1 January	5 985	7 562
Cash and cash equivalents as of 1 January classified as assets held for sale		2 729
Reclassified to assets held for sale		-3 994
Cash and cash equivalents as of 30 June	6 540	10 847

Interest paid was USD 173 million and USD 210 million (thereof USD 10 million and USD 3 million for letter of credit fees) for the six months ended 30 June 2019 and 2020, respectively. Tax paid was USD 330 million and USD 306 million for the six months ended 30 June 2019 and 2020, respectively.

Cash and cash equivalents include restricted cash and cash equivalents, for instance pledged cash and cash equivalents (please refer to Note 7 "Investments").

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 consisting 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). All significant intra-group transactions and balances have been eliminated on consolidation. The year-end balance sheet data presented was derived from audited financial statements. These interim financial statements do not include all disclosures that US GAAP requires on an annual basis and therefore they should be read in conjunction with the Swiss Re Group's audited financial statements for the year ended 31 December 2019.

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.

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 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.

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 with incorporation of 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 the manner consistent with the aforementioned approach, with consideration of 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 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 input 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 over 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 30 June 2020, the Group has not provided any collateral on financial instruments in excess of its own market value estimates.

Subsequent events

Subsequent events for the current reporting period have been evaluated up to 30 July 2020. This is the date on which the financial statements are available to be issued.

Adoption of new accounting standards

In August 2018, the FASB issued ASU 2018-13, "Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement", an update to topic 820, "Fair Value Measurement". The amendments in this ASU add, remove and modify some disclosure requirements on fair value measurement. The Group adopted the standard retrospectively on 1 January 2020 with the exception of the amendments which require prospective adoption. The applicable amendments of ASU 2018-13 are reflected in Note 8 Fair value disclosures.

In August 2018, the FASB issued ASU 2018-15, "Customer's Accounting for Implementation Cost Incurred in a Cloud Computing Arrangement That Is a Service Contract", a consensus of the FASB Emerging Issues Task Force (EITF) to Subtopic 350-40, "Internal-Use Software". The amendments in this ASU align the requirements for capitalising implementation costs incurred in a cloud computing arrangement (CCA) that is a service contract with the requirements for capitalising implementation costs incurred to develop or obtain internal use software. The update requires that implementation costs related to a CCA that is a service contract need to be capitalised based on the phase and nature of the costs. The Group adopted ASU 2018-15 prospectively on 1 January 2020. The adoption did not have a material impact on the Group's financial statements.

In October 2018, the FASB issued ASU 2018-17, "Targeted Improvements to Related Party Guidance for Variable Interest Entities", an update to Topic 810, "Consolidation". The standard requires that indirect interests held through related parties in common control arrangements should be considered on a proportional basis for determining whether fees paid to decision makers and service providers are variable interests. The Group adopted the ASU retrospectively on 1 January 2020. The adoption did not have an impact on the Group's financial statements.

In November 2018, the FASB issued ASU 2018-18, "Clarifying the Interaction between Topic 808 and Topic 606", an update to Topic 808, "Collaborative Arrangements". The amendments in this ASU provide guidance on whether certain transactions between collaborative arrangement participants should be accounted for with revenue under Topic 606 "Revenue from Contracts with Customers". In particular, the update requires that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, the presentation of the transaction together with revenue recognised under Topic 606 is precluded. The Group adopted ASU 2018-18 on 1 January 2020 retrospectively to the date of initial application of Topic 606. The adoption did not have an impact on the Group's financial statements.

In April 2019, the FASB issued ASU 2019-04, "Codification Improvements to Topic 326, Financial Instruments – Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments". The ASU provides selective clarifications and corrections of guidance on credit losses, hedging, and recognising and measuring financial instruments. The Group adopted the standard on 1 January 2020 with the exception of the guidance relating to ASU 2016-13 "Measurement of Credit Losses". The adoption did not have an impact on the Group's financial statements. The amendments related to credit losses will be adopted together with ASU 2016-13 as required by the standard.

In March 2020, the FASB issued ASU 2020-03, "Codification Improvements to Financial Instruments". The amendments in this ASU address seven specific issues identified related to financial instruments with the aim to improve and clarify the Codification, correct unintended application of current guidance and eliminate inconsistencies. The Group adopted issues 1, 2, 3, 4 and 5 on 9 March 2020, which is the issuance date of the ASU. The adoption did not have an impact on the Group's financial statements. Issues 6 and 7 will be adopted together with ASU 2016-13 "Measurement of Credit Losses" as required by the standard.

In March 2020, the FASB issued ASU 2020-04, "Facilitation of the Effects of Reference Rate Reform on Financial Reporting", an update to Topic 848, "Reference Rate Reform". In response to concerns about structural risks of interbank offered rates (IBORs) and, particularly, the risk of cessation of the London Interbank Offered Rate (LIBOR), regulators in several jurisdictions around the world have undertaken reference rate reform initiatives to identify alternative reference rates. The amendments in this update provide optional expedients and

Financial statements

Notes to the Group financial statements (unaudited)

exceptions for applying US GAAP accounting principles to contracts, hedging relationships and other transactions that reference LIBOR or another reference rate expected to be discontinued because of these reference rate reform initiatives. The Group adopted ASU 2020-04 on 12 March 2020, which is the issuance date of the standard. There is a choice to apply the guidance by Topic or industry Subtopic at any time prospectively during the effective period from 12 March 2020 through 31 December 2022. As of 30 June 2020, the Group did not apply the guidance to any Topic or Subtopic.

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, availablefor-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 six months ended 30 June

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Revenues							
Gross premiums written	12 405	6 954	2 201	1 875		-763	22 672
Net premiums written	12 014	6 145	1 831	1 366			21 356
Change in unearned premiums	-3 295	47	232	-512			-3 528
Premiums earned	8 719	6 192	2 063	854			17 828
Fee income from policyholders		92		240			332
Net investment income – non-participating business	693	577	117	622	113	-215	1 907
Net realised investment gains/losses –							
non-participating business	435	190	78	23	91		817
Net investment result –							
unit-linked and with-profit business		48		3 428			3 476
Other revenues	7		2		200	-198	11
Total revenues	9 854	7 099	2 260	5 167	404	-413	24 371
Evnonces							
Expenses Claims and claim adjustment expenses	-5 936		-2 031				-7 967
Life and health benefits	3 330	-4 986	2 00 1	-1 406			-6 392
Return credited to policyholders		-71		-3 166			-3 237
Acquisition costs	-2 237	-904	-313	-163			-3 617
Operating expenses	-587	-369	-395	-325	-254	198	-1 732
Total expenses before interest expenses	-8 760	-6 330	-2 739	-5 060	-254		-22 945
Income/loss before interest and income tax	1.004	700	470	107	150	045	4 400
expense/benefit	1 094	769	-479	107	150	-215	1 426
Interest expenses	-174	-221	-20	-22	-56	215	-278
Income/loss before income tax expense/benefit	920	548	-499	85	94	0	1 148
Income tax expense/benefit	-149	-89	92	-67	27		-186
Net income/loss before attribution of							
non-controlling interests	771	459	-407	18	121	0	962
Income/loss attributable to non-controlling interests			4	-13			-9
Net income/loss attributable to common shareholders	771	459	-403	5	121	0	953
Claima ratia in 0/	68.1		98.5				72.0
Claims ratio in %	32.4		34.3				73.8
Expense ratio in % Combined ratio in %	100.5		132.8				106.6
Management expense ratio ¹ in %	100.5	5.4	132.8				0.001
	11.1	10.9	-21.2	6.2			6.8
Net operating margin ² in %	11.1	10.9	-21.2	0.2			0.8

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".

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 six months ended 30 June

Revenues	2020 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Net premiums written	Revenues							
Change in unearned premiums	Gross premiums written	12 776	7 360	2 238	1 875		-691	23 558
Premiums earned	Net premiums written	12 270	6 667	1 661	1 263			21 861
Pee income from policyholders	Change in unearned premiums	-2 669	-70	343	-418			-2 814
Net investment income - non-participating business	Premiums earned	9 601	6 597	2 004	845			19 047
Net realised investment gains/losses	Fee income from policyholders		79		203			282
Not investment result	Net investment income – non-participating business	485	593	81	532	-58	-185	1 448
Net investment result -	Net realised investment gains/losses –							
unit-linked and with-profit business -113 -2 572 -2 685 Other revenues 13 3 3 219 -220 18 Total revenues 10 595 7 498 2 088 -878 80 -405 18 978 Expenses	non-participating business	496	339		114	-81		868
Total revenues 13 3 3 3 219 -220 18	Net investment result –							
Total revenues	unit-linked and with-profit business		-113		-2 572			-2 685
Expenses -8 027	Other revenues	13	3	3		219	-220	18
Claims and claim adjustment expenses	Total revenues	10 595	7 498	2 088	-878	80	-405	18 978
Claims and claim adjustment expenses -8 027 -1 812 -9 839 Life and health benefits -5 985 -773 -6 758 Return credited to policyholders 102 2 275 2 377 Acquisition costs -2 497 -967 -304 -403 -4 171 Operating expenses -597 -351 -340 -373 -261 220 -1702 Total expenses before interest expenses -11 121 -7 201 -2 456 726 -261 220 -20 093 Income/loss before interest and income tax -526 297 -368 -152 -181 -185 -1115 Interest expenses/benefit -526 297 -368 -152 -181 -185 -1115 Income/loss before interest and income tax expense/benefit -686 98 -387 -199 -239 0 -1 413 Income/loss before interest expenses/benefit 167 -24 90 41 67 341 Net income/loss before attribution of non-controlling interests -519								
Life and health benefits -5 985 -773 -6 758 Return credited to policyholders 102 2 275 2 377 Acquisition costs -2 497 -967 -304 -403 -4 171 Operating expenses -597 -351 -340 -373 -261 220 -1 702 Total expenses before interest expenses -11 121 -7 201 -2 456 726 -261 220 -20 093 Income/loss before interest and income tax expenses -11 121 -7 201 -2 456 726 -261 220 -20 093 Income/loss before interest and income tax expense/benefit -526 297 -368 -152 -181 -185 -1115 Interest expenses -160 -199 -19 -47 -58 185 -298 Income/loss before income tax expense/benefit -686 98 -387 -199 -239 0 -1 413 Income/loss before attribution of non-controlling interests -519 74 -297 -158 -172 0	Expenses							
Return credited to policyholders	Claims and claim adjustment expenses	-8 027		-1 812				-9 839
Acquisition costs	Life and health benefits		-5 985		-773			-6 758
Degrating expenses -597 -351 -340 -373 -261 220 -1702	Return credited to policyholders		102		2 275			2 377
Total expenses before interest expenses	Acquisition costs	-2 497	-967	-304	-403			-4 171
Income/loss before interest and income tax expense/benefit	Operating expenses	-597	-351	-340	-373	-261	220	-1 702
expense/benefit -526 297 -368 -152 -181 -185 -1115 Interest expenses -160 -199 -19 -47 -58 185 -298 Income/loss before income tax expense/benefit -686 98 -387 -199 -239 0 -1413 Income tax expense/benefit 167 -24 90 41 67 341 Net income/loss before attribution of non-controlling interests -519 74 -297 -158 -172 0 -1072 Income/loss attributable to non-controlling interests -4 -59 -63 Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio in % 4.8	Total expenses before interest expenses	-11 121	-7 201	-2 456	726	-261	220	-20 093
expense/benefit -526 297 -368 -152 -181 -185 -1115 Interest expenses -160 -199 -19 -47 -58 185 -298 Income/loss before income tax expense/benefit -686 98 -387 -199 -239 0 -1413 Income tax expense/benefit 167 -24 90 41 67 341 Net income/loss before attribution of non-controlling interests -519 74 -297 -158 -172 0 -1072 Income/loss attributable to non-controlling interests -4 -59 -63 Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio in % 4.8								
Interest expenses	Income/loss before interest and income tax							
Income/loss before income tax expense/benefit -686 98 -387 -199 -239 0 -1 413 Income tax expense/benefit 167 -24 90 41 67 341 Net income/loss before attribution of non-controlling interests -519 74 -297 -158 -172 0 -1 072 Income/loss attributable to non-controlling interests -4 -59 -63 Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1 135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio in % 4.8	expense/benefit	-526	297	-368	-152	-181	-185	-1 115
Income tax expense/benefit 167 -24 90 41 67 341 Net income/loss before attribution of non-controlling interests -519 74 -297 -158 -172 0 -1 072 Income/loss attributable to non-controlling interests -4 -59 -63 Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1 135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio in % 4.8	Interest expenses	-160	-199	-19	-47	-58	185	-298
Net income/loss before attribution of non-controlling interests -519 74 -297 -158 -172 0 -1 072 Income/loss attributable to non-controlling interests -4 -59 -63 Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1 135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio in % 4.8	Income/loss before income tax expense/benefit	-686	98	-387	-199	-239	0	-1 413
non-controlling interests -519 74 -297 -158 -172 0 -1072 Income/loss attributable to non-controlling interests -4 -59 -63 Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1 135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio¹ in % 4.8	Income tax expense/benefit	167	-24	90	41	67		341
Income/loss attributable to non-controlling interests -4 -59 -63 Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1 135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio¹ in % 4.8	Net income/loss before attribution of							
Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1 135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio in % 4.8	non-controlling interests	-519	74	-297	-158	-172	0	-1 072
Net income/loss attributable to common shareholders -519 74 -301 -217 -172 0 -1 135 Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio in % 4.8								
Claims ratio in % 83.6 90.5 84.8 Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio ' in % 4.8	Income/loss attributable to non-controlling interests			-4	-59			-63
Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio¹ in % 4.8	Net income/loss attributable to common shareholders	-519	74	-301	-217	-172	0	-1 135
Expense ratio in % 32.2 32.1 32.2 Combined ratio in % 115.8 122.6 117.0 Management expense ratio¹ in % 4.8								
Combined ratio in % 115.8 122.6 117.0 Management expense ratio¹ in % 4.8	Claims ratio in %	83.6		90.5				84.8
Management expense ratio ¹ in % 4.8	Expense ratio in %	32.2		32.1				32.2
	Combined ratio in %	115.8		122.6				117.0
Net operating margin ² in % -5.0 3.9 -17.6 -9.0 -5.1	Management expense ratio ¹ in %		4.8					
	Net operating margin ² in %	-5.0	3.9	-17.6	-9.0			-5.1

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".

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

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	49 903	20 679	728	4 250		-5 821	19 836
Policyholder account balances		1 401	720	4 004		-5 621	5 405
Other reinsurance liabilities	12 899	2 904	4 987	2 034	2	-5 051	17 775
Short-term debt	915	1 500	4 307	66	60	-2 356	185
Long-term debt	5 5 1 1	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	11002	7 0 7 0	1 000	68 624	1 000	-38	68 586
Total liabilities	80 950	58 773	20 487	83 320	2 456	-38 456	207 530
Total liabilities	00 000	00770	20 107	00 020	2 100	00 100	207 000
Shareholders' equity	8 3 1 8	8 253	2 005	5 289	5 386	0	29 251
Non-controlling interests	1		132	1 653			1 786
Total equity	8 3 1 9	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

 $^{^{\}rm 1}$ Please refer to Note 11 "Assets held for sale" for more details.

Business segments – balance sheet

As of 30 June

2020 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Assets							
Fixed income securities	37 321	31 357	6 937	3 351	95		79 061
Equity securities	1 178	536	171	83	779		2 747
Other investments	14 732	4 342	189	784	4 477	-11 801	12 723
Short-term investments	4712	2 838	1 000	458	5		9 013
Investments for unit-linked and with-profit business		369					369
Cash and cash equivalents	6 325	2 812	1 177	429	104		10 847
Deferred acquisition costs	2 791	4 627	435	262			8 115
Acquired present value of future profits		536		440			976
Reinsurance recoverable	2 074	1 940	6 859	229		-5 316	5 786
Other reinsurance assets	14 674	7 160	2 356	4 860	4	-1 130	27 924
Goodwill	1 895	1 798	185				3 878
Other	8 943	6 100	2 099	1 214	2 784	-10 467	10 673
Assets held for sale ¹				67 187		-400	66 787
Total assets	94 645	64 415	21 408	79 297	8 248	-29 114	238 899
Liabilities							
Unpaid claims and claim adjustment expenses	50 998	13 619	12 959	2 405	2	-5 305	74 678
Liabilities for life and health policy benefits		19 123	727	1 461		-379	20 932
Policyholder account balances		1 220		4 024			5 244
Other reinsurance liabilities	16 800	1 509	4 193	1 198	2	-1 503	22 199
Short-term debt	375	1 500		66	60	-1 815	186
Long-term debt	5 627	11 073	498	839	1 406	-8 528	10 915
Other	12 971	8 395	860	1 239	2 256	-11 546	14 175
Liabilities held for sale ¹				60 830		-38	60 792
Total liabilities	86 771	56 439	19 237	72 062	3 726	-29 114	209 121
Shareholders' equity	7 873	7 976	2 064	5 498	4 522	0	27 933
Non-controlling interests	1		107	1 737			1 845
Total equity	7 874	7 976	2 171	7 235	4 522	0	29 778
Total liabilities and equity	94 645	64 415	21 408	79 297	8 248	-29 114	238 899

 $^{^{\}rm 1}$ Please refer to Note 11 "Assets held for sale" for more details.

b) Property & Casualty Reinsurance business segment – by line of business

For the six months ended 30 June

USD million:
Revenue
Gross pre
Net premi

2019

USD millions	Property	Casualty	Specialty	Unallocated	Total
Revenues					
Gross premiums written	4 677	5 968	1 760		12 405
Net premiums written	4 3 3 2	5 946	1 736		12 014
Change in unearned premiums	-1 322	-1 498	-475		-3 295
Premiums earned	3 010	4 448	1 261		8 719
Net investment income				693	693
Net realised investment gains/losses				435	435
Other revenues				7	7
Total revenues	3 010	4 448	1 261	1 135	9 854
Expenses					
Claims and claim adjustment expenses	-2 125	-3 173	-638		-5 936
Acquisition costs	-599	-1 313	-325		-2 237
Operating expenses	-301	-206	-80		-587
Total expenses before interest expenses	-3 025	-4 692	-1 043	0	-8 760
Income/loss before interest and income tax expense	-15	-244	218	1 135	1 094
Interest expenses				-174	-174
Income/loss before income tax expense	-15	-244	218	961	920
Claims ratio in %	70.6	71.3	50.6		68.1
Expense ratio in %	29.9	34.2	32.1		32.4
Combined ratio in %	100.5	105.5	82.7		100.5

Property & Casualty Reinsurance business segment – by line of business For the six months ended 30 June

2020					
USD millions	Property	Casualty	Specialty	Unallocated	Total
Revenues					
Gross premiums written	5 827	5 155	1 794		12 776
Net premiums written	5 396	5 129	1 745		12 270
Change in unearned premiums	-1 853	-445	-371		-2 669
Premiums earned	3 543	4 684	1 374		9 601
Net investment income				485	485
Net realised investment gains/losses				496	496
Other revenues				13	13
Total revenues	3 543	4 684	1 374	994	10 595
Expenses					
Claims and claim adjustment expenses	-3 188	-3 953	-886		-8 027
Acquisition costs	-782	-1 356	-359		-2 497
Operating expenses	-295	-223	-79		-597
Total expenses before interest expenses	-4 265	-5 532	-1 324	0	-11 121
Income/loss before interest and income tax expense	-722	-848	50	994	-526
Interest expenses				-160	-160
Income/loss before income tax expense	-722	-848	50	834	-686
Claims ratio in %	90.0	84.4	64.5		83.6
Expense ratio in %	30.4	33.7	31.9		32.2
Combined ratio in %	120.4	118.1	96.4		115.8

c) Life & Health Reinsurance business segment - by line of business

USD millions	Life	Health	Unallocated	Total
Revenues				
Gross premiums written	4 933	2 021		6 954
Net premiums written	4 182	1 963		6 145
Change in unearned premiums	3	44		47
Premiums earned	4 185	2 007		6 192
Fee income from policyholders	92			92
Net investment income – non-participating business	442	135		577
Net realised investment gains/losses – non-participating business	-13		203	190
Net investment result – unit-linked and with-profit business	48			48
Other revenues				0
Total revenues	4 754	2 142	203	7 099
Expenses Life and health benefits	-3 380	-1 606		-4 986
Return credited to policyholders	-71	1 000		-71
Acquisition costs	-634	-270		-904
Operating expenses	-238	-131		-369
Total expenses before interest expenses	-4 323	-2 007	0	-6 330
Income before interest and income tax expense	431	135	203	769
Interest expenses			-221	-221
Income/loss before income tax expense	431	135	-18	548
Management expense ratio ¹ in %	5.0	6.1		5.4
Net operating margin ² in %	9.2	6.3	· · · · · · · · · · · · · · · · · · ·	10.9

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".

Life & Health Reinsurance business segment - by line of business

2020 USD millions	Life	Health	Unallocated	Total
Revenues	LIIC	Health	Orialiocated	Total
Gross premiums written	4 944	2 416		7 360
Net premiums written	4 389	2 278		6 667
Change in unearned premiums	12	-82		-70
Premiums earned	4 401	2 196		6 597
Fee income from policyholders	79			79
Net investment income – non-participating business	454	139		593
Net realised investment gains/losses – non-participating business	67	-1	273	339
Net investment result – unit-linked and with-profit business	-113			-113
Other revenues	2	1		3
Total revenues	4 890	2 335	273	7 498
Expenses				
Life and health benefits	-4 191	-1 794		-5 985
Return credited to policyholders	102			102
<u>Acquisition costs</u>	-669	-298		-967
Operating expenses	-235	-116		-351
Total expenses before interest expenses	-4 993	-2 208	0	-7 201
Income/loss before interest and income tax expense	-103	127	273	297
Interest expenses			-199	-199
Income/loss before income tax expense	-103	127	74	98
Management expense ratio ¹ in %	4.8	5.0		4.8
Net operating margin ² in %	-2.1	5.4		3.9

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".

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Notes to the Group financial statements (unaudited)

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3 Insurance information

Premiums earned and fees assessed against policyholders

2019	Property & Casualty	Life & Health	Corporate		
USD millions	Reinsurance	Reinsurance	Solutions	Life Capital	Total
Premiums earned, thereof:					
Direct		7	1 840	1 106	2 953
Reinsurance	8 7 5 1	6 648	440	51	15 890
Intra-group transactions (assumed and ceded)	88	102	-88	-102	0
Premiums earned before retrocession to external parties	8 839	6 757	2 192	1 055	18 843
Retrocession to external parties	-120	-565	-129	-201	-1 015
Net premiums earned	8 7 1 9	6 192	2 063	854	17 828
Fee income from policyholders, thereof:					
Direct				192	192
Reinsurance		92		48	140
Gross fee income before retrocession to external parties		92		240	332
Retrocession to external parties					0
Net fee income	0	92	0	240	332

2020 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Premiums earned, thereof:					
Direct			1 914	1 283	3 197
Reinsurance	9 599	7 066	457	33	17 155
Intra-group transactions (assumed and ceded)	182	223	-182	-223	0
Premiums earned before retrocession to external parties	9 781	7 289	2 189	1 093	20 352
Retrocession to external parties	-180	-692	-185	-248	-1 305
Net premiums earned	9 601	6 597	2 004	845	19 047
Fee income from policyholders, thereof:					
Direct				159	159
Reinsurance		79		44	123
Gross fee income before retrocession to external parties		79		203	282
Retrocession to external parties					0
Net fee income	0	79	0	203	282

Claims and claim adjustment expensesFor the six months ended 30 June

2019	Property & Casualty	Life & Health	Corporate		
USD millions	Reinsurance	Reinsurance	Solutions	Life Capital	Total
Claims paid, thereof:					
Gross claims paid to external parties	-5 987	-5 045	-1 624	-1 757	-14 413
Intra-group transactions (assumed and ceded)	-152	-84	152	84	0
Claims before receivables from					
retrocession to external parties	-6 139	-5 129	-1 472	-1 673	-14 413
Retrocession to external parties	176	514	128	239	1 057
Net claims paid	-5 963	-4 615	-1 344	-1 434	-13 356
Change in unpaid claims and claim adjustment expenses; life and health benefits, thereof: Gross – with external parties	-76 101	-360	-649	60	-1 025
Intra-group transactions (assumed and ceded)	181	-7	-181	7	0
Unpaid claims and claim adjustment expenses; life and health benefits before impact of					
retrocession to external parties	105	-367	-830	67	-1 025
Retrocession to external parties	-78	-4	143	-39	22
Net unpaid claims and claim adjustment					
expenses; life and health benefits	27	-371	-687	28	-1 003
Claims and claim adjustment expenses;					
life and health benefits	-5 936	-4 986	-2 031	-1 406	-14 359

Acquisition costs

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Acquisition costs, thereof:					
Gross acquisition costs with external parties	-2 242	-980	-352	-186	-3 760
Intra-group transactions (assumed and ceded)	-11		11		0
Acquisition costs before impact of					
retrocession to external parties	-2 253	-980	-341	-186	-3 760
Retrocession to external parties	16	76	28	23	143
Net acquisition costs	-2 237	-904	-313	-163	-3 617

Claims and claim adjustment expensesFor the six months ended 30 June

2020 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Claims paid, thereof:					
Gross claims paid to external parties	-6 346	-5 554	-1 733	-1 711	-15 344
Intra-group transactions (assumed and ceded)	-199	-127	199	127	0
Claims before receivables from					
retrocession to external parties	-6 545	-5 681	-1 534	-1 584	-15 344
Retrocession to external parties	191	639	118	243	1 191
Net claims paid	-6 354	-5 042	-1 416	-1 341	-14 153
Change in unpaid claims and claim adjustment expenses; life and health benefits, thereof: Gross – with external parties	-1 59 5		-309	566	-2 315
Intra-group transactions (assumed and ceded)	68	-75	-68	75	0
Unpaid claims and claim adjustment expenses; life and health benefits before impact of					
retrocession to external parties	-1 527	-1 052	-377	641	-2 315
Retrocession to external parties	-146	109	-19	-73	-129
Net unpaid claims and claim adjustment expenses; life and health benefits	-1 673	-943	-396	568	-2 444
Claims and claim adjustment expenses; life and health benefits	-8 027	-5 985	-1 812	-773	-16 597

Acquisition costs

2020	Property & Casualty	Life & Health	Corporate		
USD millions	Reinsurance	Reinsurance	Solutions	Life Capital	Total
Acquisition costs, thereof:					
Gross acquisition costs with external parties	-2 504	-1 088	-355	-440	-4 387
Intra-group transactions (assumed and ceded)	-26	-13	26	13	0
Acquisition costs before impact of					
retrocession to external parties	-2 530	-1 101	-329	-427	-4 387
Retrocession to external parties	33	134	25	24	216
Net acquisition costs	-2 497	-967	-304	-403	-4 171

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Notes to the Group financial statements (unaudited)

Reinsurance receivables

Reinsurance receivables as of 31 December 2019 and 30 June 2020 were as follows:

USD millions	2019	2020
Premium receivables invoiced	3 589	3 911
Receivables invoiced from ceded re/insurance business	444	584
Assets arising from the application of the deposit method of		
accounting and meeting the definition of financing receivables	249	496
Recognised allowance	-56	-59

Policyholder dividends

Policyholder dividends are recognised as an element of policyholder benefits. In the six months ended 30 June 2019 and 2020, the relative percentage of participating insurance of the life and health policy benefits was 9% and 8%, respectively. The amount of policyholder dividend expense for the six months ended 30 June 2019 and 2020 was USD 67 million and USD 40 million, respectively.

4 Premiums written

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Consolidation	Total
Gross premiums written, thereof:						
Direct		7	1 770	1 577		3 354
Reinsurance	12 198	6 664	405	51		19 318
Intra-group transactions (assumed)	207	283	26	247	-763	0
Gross premiums written	12 405	6 954	2 201	1 875	-763	22 672
Intra-group transactions (ceded)	-26	-247	-207	-283	763	0
Gross premiums written before						
retrocession to external parties	12 379	6 707	1 994	1 592		22 672
Retrocession to external parties	-365	-562	-163	-226		-1 316
Net premiums written	12 014	6 145	1 831	1 366	0	21 356

2020 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Consolidation	Total
Gross premiums written, thereof:						
Direct			1 859	1 842		3 701
Reinsurance	12 428	7 034	362	33		19 857
Intra-group transactions (assumed)	348	326	17		-691	0
Gross premiums written	12 776	7 360	2 238	1 875	-691	23 558
Intra-group transactions (ceded)	-17		-348	-326	691	0
Gross premiums written before						
retrocession to external parties	12 759	7 360	1 890	1 549		23 558
Retrocession to external parties	-489	-693	-229	-286		-1 697
Net premiums written	12 270	6 667	1 661	1 263	0	21 861

5 Unpaid claims and claim adjustment expenses

A reconciliation of the opening and closing reserve balances for unpaid claims and claim adjustment expenses as of 31 December 2019 and 30 June 2020 is presented as follows:

USD millions	2019	2020
Balance as of 1 January	67 446	72 373
Balance as of 1 January classified as held for sale	0	497
Reinsurance recoverable	-3 606	-3 732
Deferred expense on retroactive reinsurance	-169	-168
Net balance as of 1 January	63 671	68 970
Incurred related to:		
Current year	29 338	17 056
Prior year	2 231	181
Amortisation of deferred expense on retroactive reinsurance and impact of commutations	-23	-25
Total incurred	31 546	17 212
Paid related to:		
Current year	-9 702	-2 751
Prior year	-18 008	-11 402
Total paid	-27 710	-14 153
Foreign exchange	161	-810
Effect of acquisitions, disposals, new retroactive reinsurance and other items	1 302	172
Net balance as of period end	68 970	71 391
Reinsurance recoverable	3 732	3 612
Deferred expense on retroactive reinsurance	168	167
Reclassified to liabilities held for sale	-497	-492
Balance as of period end	72 373	74 678

Prior-year development

Non-life claims development in the first six months ended 30 June 2020 on prior years is mainly due to adverse development for casualty in North America, where the adverse experience in liability and motor is partially offset by favourable development in workers' compensation. The movement for property includes reserve releases for natural catastrophe mainly in Asia and North America. Favourable development for specialty mostly comes from marine related to natural catastrophe events in North America and man-made losses.

For life and health lines of business, the development on prior years' claims was unfavourable. For life business favourable development in the US driven by positive experience is partially offset by unfavourable development in Asia and the UK due to adverse experience. For health line of business, adverse experience in the disability portfolios in Australia and the US led to an unfavourable claims development. 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.

A summary of prior-year net claims and claim adjustment expenses development by lines of business for the year ended 31 December 2019 and for the six months ended 30 June 2020 is shown below¹:

USD millions	2019	2020
Line of business:		
Property	367	-246
Casualty	1 425	389
Specialty	105	-100
Life and health	334	138
Total	2 231	181

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

6 Deferred acquisition costs (DAC) and acquired present value of future profits (PVFP)

As of 31 December 2019 and 30 June 2020, the DAC were as follows:

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 2 1 7
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 held for sale				-657	-657
Closing balance	2 613	4 529	483	213	7 838

2020 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Opening balance as of 1 January	2 613	4 529	483	213	7 838
Opening balance as of 1 January classified as held for sale				657	657
Deferred	2 693	405	250	112	3 460
Effect of acquisitions/disposals and retrocessions		-2		2	0
Amortisation	-2 497	-206	-298	-106	-3 107
Effect of foreign currency translation and other changes	-18	-99		-46	-163
Reclassified to held for sale				-570	-570
Closing balance	2 791	4 627	435	262	8 115

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 2019 and 30 June 2020, the PVFP was as follows:

	Life & Health Reinsurance		Life Capital				
2019 USD millions		Positive PVFP	Negative PVFP	Total			
Opening balance as of 1 January	804	1 505	-491	1 014	1 818		
Effect of acquisitions/disposals and retrocessions	-161 ¹	203²		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 held for sale		-1 156	476	-680	-680		
Closing balance	577	465	0	465	1 042		

	Life & Health Reinsurance			Life Capital	Total
2020 USD millions		Positive PVFP	Negative PVFP	Total	
Opening balance as of 1 January	577	465	0	465	1 042
Opening balance as of 1 January classified as held for sale		1 156	-476	680	680
Amortisation	-46	-284	28	-256	-302
Interest accrued on unamortised PVFP	14	42	-7	35	49
Effect of change in unrealised gains/losses		-2		-2	-2
Effect of foreign currency translation	-9	-67	28	-39	-48
Reclassified to held for sale		-870	427	-443	-443
Closing balance	536	440	0	440	976

¹ Impact from termination of a reinsurance arrangement included.

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.

² Please refer to Note 10 "Acquisitions".

7 Investments

Investment income

Net investment income by source (excluding unit-linked and with-profit business) for the six months ended 30 June was as follows:

USD millions 2019	2020
Fixed income securities 1 462	1 279
Equity securities 33	21
Policy loans, mortgages and other loans 75	77
Investment real estate 112	120
Short-term investments 50	25
Other current investments 60	44
Share in earnings of equity-accounted investees 2	-192
Cash and cash equivalents 32	22
Net result from deposit-accounted contracts 72	55
Deposits with ceding companies 224	209
Gross investment income 2 122	1 660
Investment expenses -210	-206
Interest charged for funds held —5	-6
Net investment income – non-participating business 1 907	1 448
Of which from assets/liabilities held for sale	314

Dividends received from investments accounted for using the equity method were USD 64 million and USD 64 million for the six months ended 30 June 2019 and 2020, respectively.

Share in earnings of equity-accounted investees included impairments of the carrying amount of equity-accounted investees of USD 18 million and nil for the six months ended 30 June 2019 and 2020, respectively.

Realised gains and losses

Realised gains and losses for fixed income securities, equity securities and other investments (excluding unit-linked and with-profit business) for the six months ended 30 June were as follows:

USD millions 2019	2020
Fixed income securities available-for-sale:	
Gross realised gains 541	1 358
Gross realised losses -78	-177
Other-than-temporary impairments –3	-29
Net realised investment gains/losses on equity securities 138	-68
Change in net unrealised investment gains/losses on equity securities 355	-97
Net realised investment gains/losses on trading securities 39	71
Change in net unrealised investment gains/losses on trading securities 92	15
Net realised/unrealised gains/losses on other investments -181	178
Net realised/unrealised gains/losses on insurance-related activities 28	23
Foreign exchange gains/losses -114	-54
Loss related to agreed sale of ReAssure	-352
Net realised investment gains/losses – non-participating business 817	868
Of which from assets/liabilities held for sale	384

Net realised/unrealised gains/losses on insurance-related activities included impairments of USD 2 million and nil for the six months ended 30 June 2019 and 2020, 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 for the six months ended 30 June was as follows:

		2019		2020
<u>USD millions</u>	Unit-linked	With-profit	Unit-linked	With-profit
Investment income – fixed income securities	29	52	27	45
Investment income – equity securities	412	34	332	27
Investment income – other	9	6	6	2
Total investment income – unit-linked and with-profit business	450	92	365	74
Realised gains/losses – fixed income securities	77	111	87	56
Realised gains/losses – equity securities	2 5 1 6	220	-2 921	-320
Realised gains/losses – other	21	-11	-18	-8
Total realised gains/losses – unit-linked and with-profit business	2 614	320	-2 852	-272
Total net investment result – unit-linked and with-profit business	3 064	412	-2 487	-198
Of which from assets/liabilities held for sale			-2 373	-198

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 otherthan-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 creditimpaired 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 for the six months ended 30 June was as follows:

USD millions	2019	2020
Balance as of 1 January	80	61
Credit losses for which an other-than-temporary impairment was not previously recognised	2	18
Reductions for securities sold during the period	-7	-20
Impact of increase in cash flows expected to be collected	-2	-1
Impact of foreign exchange movements		-1
Balance as of 30 June	73	57

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 2019 and 30 June 2020 were as follows:

		Gross	Gross	Other-than-temporary impairments	
2019	Amortised cost	unrealised	unrealised	recognised in other	Estimated
USD millions	or cost	gains	losses	comprehensive income	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 2 1 9
Germany	2 870	298	-35		3 133
France	2 095	343	-13		2 425
Canada	2 256	139	-4		2 3 9 1
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

		Gross	Gross	Other-than-temporary impairments	
2020	Amortised cost	unrealised	unrealised	recognised in other	Estimated
USD millions	or cost	gains	losses	comprehensive income	fair value
Debt securities issued by governments					
and government agencies:					
US Treasury and other US government					
corporations and agencies	10 125	953	-3		11 075
US Agency securitised products	6 947	256	-6		7 197
States of the United States and political					
subdivisions of the states	1 590	239	-1		1 828
United Kingdom	6 690	1 876	-6		8 560
Germany	3 128	378	-7		3 499
France	2 452	455	-1		2 906
Canada	2 171	231	-7		2 3 9 5
Japan	2 045	43	-32		2 056
Other	10 144	710	-33		10 821
Total	45 292	5 141	-96		50 337
Corporate debt securities	37 258	4 503	-128		41 633
Mortgage- and asset-backed securities	3 585	209	-33	-2	3 759
Reclassified to assets held for sale	-15 556	-3 287	41		-18 802
Fixed income securities available-for-sale	70 579	6 566	-216	-2	76 927

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 2019 and 30 June 2020.

	Less that	12 months or more		Total		
2019		Unrealised		Unrealised		Unrealised
USD millions	Fair value	losses	Fair value	losses	Fair value	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
France	340	12	16	1	356	13
Canada	863	3	62	1	925	4
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

	Less th	an 12 months	12 r	months or more		Total
2020		Unrealised		Unrealised		Unrealised
USD millions	Fair value	losses	Fair value	losses	Fair value	losses
Debt securities issued by governments						
and government agencies:						
US Treasury and other US government						
corporations and agencies	190	3			190	3
US Agency securitised products	512	6	66	0	578	6
States of the United States and political						
subdivisions of the states	19	1	3	0	22	1
United Kingdom	111	2	65	4	176	6
Germany	290	6	17	1	307	7
France	25	0	16	1	41	1
Canada	122	5	44	2	166	7
Japan	810	31	2	1	812	32
Other	1 168	20	163	13	1 331	33
Total	3 247	74	376	22	3 623	96
Corporate debt securities	3 371	97	413	31	3 784	128
Mortgage- and asset-backed securities	806	23	273	12	1 079	35
Reclassified to assets held for sale	-441	-20	-205	-21	-646	-41
Total	6 983	174	857	44	7 840	218

Financial statements

Notes to the Group financial statements (unaudited)

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 2019 and 30 June 2020, USD 20 188 million and USD 20 856 million, respectively, of fixed income securities available-for-sale were callable.

		2019		2020
USD millions	Amortised cost or cost	Estimated fair value	Amortised cost or cost	Estimated fair value
Due in one year or less	7 294	7 324	7 261	7 307
Due after one year through five years	27 559	28 083	21 813	22 575
Due after five years through ten years	15 994	17 115	16 111	17 588
Due after ten years	37 865	43 144	38 137	45 254
Mortgage- and asset-backed securities with no fixed maturity	3 761	3 947	2 813	3 005
Reclassified to assets held for sale	-17 693	-20 450	-15 556	-18 802
Total fixed income securities available-for-sale	74 780	79 163	70 579	76 927

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 unitlinked and with-profit business) as of 31 December 2019 and 30 June 2020 were as follows:

USD millions	2019	2020
Debt securities issued by governments and government agencies	2 358	2 090
Mortgage- and asset-backed securities	52	44
Fixed income securities trading – non-participating business	2 410	2 134
Equity securities at fair value through earnings – non-participating business	2 993	2 747

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 2019 and 30 June 2020 were as follows:

USD millions	Unit-linked	2019	Unit-linked	2020
		With-profit		With-profit
Fixed income securities trading	1 963	2 717	1 548	2 449
Equity securities at fair value through earnings	35 528	2 078	29 502	1 734
Investment real estate	512	200	403	126
Other	692	3	336	21
Reclassified to assets held for sale	-38 175	-4 998	-31 420	-4 330
Total investments for unit-linked and with-profit business	520	0	369	0

Mortgage, policy and other loans, and investment real estate

As of 31 December 2019 and 30 June 2020, 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:

USD millions	Carrying value ¹	2019 Fair value	Carrying value ¹	2020 Fair value
Policy loans	50	50	49	49
Mortgage loans	2 104	2 144	2 139	2 183
Other loans	2 314	2 3 7 6	2 408	2 494
Investment real estate	2 674	4 706	2 647	4 694

As of 31 December 2019 and 30 June 2020, policy loans, mortgages and other loans include a total of USD 1 447 million and USD 1 618 million, respectively, which were reclassified to assets held for sale. As of 31 December 2019 and 30 June 2020, investment real estate of USD 146 million and USD 125 million, respectively, was reclassified to assets held for sale.

Depreciation expense related to investment real estate was USD 30 million and USD 32 million for the six months ended 30 June 2019 and 2020, respectively. Accumulated depreciation on investment real estate totalled USD 660 million and USD 701 million as of 31 December 2019 and 30 June 2020, respectively.

Substantially all mortgage, policy and other loan receivables are secured by buildings, land or the underlying policies.

Investment real estate held by the Group includes residential and commercial investment real estate.

Other financial assets and liabilities by measurement category

As of 31 December 2019 and 30 June 2020, "Other invested assets" and "Accrued expenses and other liabilities" by measurement category were as follows:

		Investments measured at net				
2019		asset value as	Amortised			
USD millions	Fair value	practical expedient	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

2020 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	588					588
Reverse repurchase agreements			1 611			1 611
Securities lending/borrowing	628		116			744
Equity-accounted investments	261			2 375		2 636
Other	67	929	1 314			2 310
Reclassified to assets held for sale	-139		-527			-666
Other invested assets	1 405	929	2 514	2 375	0	7 223
Accrued expenses and other liabilities						
Derivative financial instruments	837					837
Repurchase agreements			775			775
Securities lending	629		116			745
Securities lending Securities sold short	629 980		116			745 980
			116 3 887		2 500	
Securities sold short			· · · · · · · · · · · · · · · · · · ·		2 500 -393	980

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 2019 and 30 June 2020 was as follows:

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

	Gross amounts of		Net amounts of financial	Related financial	
2020	recognised	Amounts set-off	assets presented	instruments not set-off	
USD millions	financial assets	in the balance sheet	in the balance sheet	in the balance sheet	Net amount
Derivative financial instruments – assets	2 052	-1 453	599	-3	596
Reverse repurchase agreements	3 361	-1 750	1 611	-1 611	0
Securities borrowing	137	-21	116	-116	0
Total	5 550	-3 224	2 326	-1 730	596

Total	-5 341	2 984	-2 357	1 623	-734
Securities lending	-1 066	321	-745	682	-63
Repurchase agreements	-2 225	1 450	-775	775	0
Derivative financial instruments – liabilities	-2 050	1 213	-837	166	-671
2020 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

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 2019 and 30 June 2020, investments with a carrying value of USD 5 239 million and USD 5 421 million, respectively, were on deposit with regulatory agencies in accordance with local requirements, of which USD 223 million and USD 407 million, respectively, were cash and cash equivalents. As of 31 December 2019 and 30 June 2020, investments with a carrying value of USD 14 659 million and USD 16 225 million, respectively, were placed on deposit or pledged to secure certain reinsurance liabilities, including pledged investments in subsidiaries, of which USD 485 million and USD 492 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 2019 and 30 June 2020, securities of USD 18 686 million and USD 9 082 million, respectively, were transferred to third parties under securities lending transactions and repurchase agreements on a fully collateralised basis. Corresponding liabilities of USD 1 251 million and USD 1 520 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 2019 and 30 June 2020, a real estate portfolio with a carrying value of USD 188 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 2019 and 30 June 2020, the fair value of the equity securities, government and corporate debt securities received as collateral was USD 5 477 million and USD 3 178 million, respectively. Of this, the amount that was sold or repledged as of 31 December 2019 and 30 June 2020 was USD 2 025 million and USD 960 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 2019 and 30 June 2020, 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.

			Remaining contra	ectual maturity of th	e agreements
2019	Overnight and			Greater than	
USD millions	continuous	Up to 30 days	30-90 days	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					4 497

			Remaining contra	actual maturity of the	e agreements
2020	Overnight and			Greater than	
USD millions	continuous	Up to 30 days	30–90 days	90 days	Total
Repurchase agreements					
Debt securities issued by governments and government agencies	29	2 168			2 197
Corporate debt securities	10	18			28
Total repurchase agreements	39	2 186	0	0	2 225
Securities lending					
Debt securities issued by governments and government agencies	753		306		1 059
Corporate debt securities	7				7
Total securities lending	760	0	306	0	1 066
Gross amount of recognised liabilities for repurchase agreements					
and securities lending					3 291

The programme is structured in a conservative manner within 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 the six months ended 30 June 2020, 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 guotes 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 and 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 mortgagebacked 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 the 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. Longdated 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.

Assets and liabilities measured at fair value on a recurring basis

As of 31 December 2019 and 30 June 2020, the fair values of assets and liabilities measured on a recurring basis by level of input were as

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	Reclassified to 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
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			868
Funds held by ceding companies		174				174
Total assets at fair value	56 025	97 559	2 475	-1 184	-62 566	92 309
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	161	-2 844
TOTAL HADIILIES AT IAII VAIAC	-340	0 102	-550	1 000	101	2 044

¹The 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.

2020 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	Reclassified to held for sale	Total
Assets						
Fixed income securities held for proprietary						
investment purposes	10 475	85 636	1 752		-18 802	79 061
Debt securities issued by US government	40.475	0.450				
and government agencies	10 475	2 458			-117	12 816
US Agency securitised products		7 648				7 648
Debt securities issued by non-US						
governments and government agencies		31 843	3		-4 812	27 034
Corporate debt securities		39 884	1 749		-13 550	28 083
Mortgage- and asset-backed securities		3 803			-323	3 480
Fixed income securities backing unit-linked						
and with-profit business		3 997			-3 997	0
Equity securities held for proprietary						
investment purposes	2 740	7				2 747
Equity securities backing unit-linked						
and with-profit business	31 040	12	184		-30 866	370
Short-term investments held for proprietary						
investment purposes	3 099	5 959			-45	9 013
Derivative financial instruments	56	1 681	315	-1 453	-151	448
Interest rate contracts	24	808			-131	701
Foreign exchange contracts		263			-7	256
Equity contracts	27	557	267			851
Credit contracts		40				40
Other contracts	5		48			53
Contracts backing unit-linked						
and with-profit business		13			-13	0
Investment real estate			121		-121	0
Other invested assets	566	62	328			956
Funds held by ceding companies		171				171
Total assets at fair value	47 976	97 525	2 700	-1 453	-53 982	92 766
Liabilities						
Derivative financial instruments	-32	-1 435	-583	1 213	236	-601
Interest rate contracts	-13	-548	-1		56	-506
Foreign exchange contracts		-351			64	-287
Equity contracts	-17	-426	-28			-471
Credit contracts		-89				-89
Other contracts	-1	-1	-554		95	-461
Contracts backing unit-linked						
and with-profit business	-1	-20			21	0
Liabilities for life and health policy benefits			-118			-118
Accrued expenses and other liabilities	-624	-984				-1 608
Total liabilities at fair value	-656	-2 419	-701	1 213	236	-2 327

¹The 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 2019 and 30 June 2020, the reconciliations of the fair values of assets and liabilities measured on a recurring basis using significant unobservable inputs were as follows:

								Liabilities for life	
	Fixed				Other			and health	
2019	income	Equity	Derivative	Investment	invested	Total	Derivative	policy	Total
USD millions	securities	securities	assets	real estate	assets	assets	liabilities	benefits	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 ¹	4		-151	16	20	-111	120	32	152
Included in other comprehensive income ²	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					2	2			0
Transfers out of level 3	-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 Fair value changes are reported in "Net realised investment gains/losses – non-participating business".

² Fair value changes from fixed income securities are reported in "Net unrealised investment gains/losses". Fair value changes from liabilities for life and health policy benefits are reported in "Credit risk of financial liabilities at fair value option".

2020 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	1 696	0	225	143	411	2 475	-465	-91	-556
Realised/unrealised gains/losses:									
Included in net income ¹			87	1	-71	17	-189	-32	-221
Included in other comprehensive income ²	26					26		5	5
Purchases	109					109			0
Issuances						0	-53		-53
Sales	-3			-13		-16	6		6
Settlements	-10					-10	110		110
Transfers into level 3		184	3			187			0
Transfers out of level 3						0			0
Impact of foreign exchange movements	-66			-10	-12	-88	8		8
Closing balance as of 30 June	1 752	184	315	121	328	2 700	-583	-118	-701

¹ Fair value changes are reported in "Net realised investment gains/losses – non-participating business".

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 six months ended 30 June were as follows:

USD millions 2019	2020
Gains/losses included in net income for the period 26	-204
Whereof change in unrealised gains/losses relating to assets and liabilities still held at the reporting date -31	-162

² Fair value changes from fixed income securities are reported in "Net unrealised investment gains/losses". Fair value changes from liabilities for life and health policy benefits are reported in "Credit risk of financial liabilities at fair value option".

Quantitative information about level 3 fair value measurements

Unobservable inputs for major level 3 assets and liabilities as of 31 December 2019 and 30 June 2020 were as follows:

USD millions	2019 Fair value	2020 Fair value Valuation technique	Unobservable input	Range (weighted average ¹)
Assets	T all value	Tall value valuation technique	Onobservable input	hange (weighted average)
Corporate debt securities	1 693	1 749		
Infrastructure loans	1 147	1 136 Discounted cash flow model	Valuation spread	135-646 bps (238 bps)
Private placement corporate debt	504	571 Corporate spread matrix	Credit spread	70-499 bps (224 bps)
Private placement credit tenant leases	42	42 Discounted cash flow model	Illiquidity premium	125 – 150 bps (146 bps)
Derivative equity contracts	186	267		
OTC equity option referencing	186	267 Proprietary option model	Correlation	-38-55% (25%)
correlated equity indices				
Investment real estate	143	121 Discounted cash flow model	Discount rate	5% per annum
Liabilities				
Derivative equity contracts	-20	-28		
OTC equity option referencing	-20	-28 Proprietary option model	Correlation	-30-95% (42%)
correlated equity indices				
Other derivative contracts and liabilities for life	-534	-672		
and health policy benefits				
Variable annuity and fair valued	-311	-504 Discounted cash flow model	Risk margin	4% (n/a)
GMDB contracts			Volatility	13.9-72.1%
			Lapse	1.5-15%
			Mortality improvement	0-2%
			Withdrawal rate	0-90%
Swap liability referencing	-110	-94 Discounted cash flow model	Discount rate	5% per annum
real estate investments				
Weather contracts	-76	-41 Proprietary option model	Risk margin	5-11% (10%)
			Correlation	-36-60% (39%)
			Volatility (power/gas)	32-113% (94%)
			Volatility (temperature)	30-432 (189) HDD/CAT ²
			Index value (temperature)	670-10 736 (5 577)
				HDD/CAT ²

¹ Unobservable inputs were weighted by the relative fair value of the instruments. For Derivative equity contracts, the weighted average correlation is derived by computing an absolute piecewise correlation impact and is not weighted by the relative fair value.

² Heating Degree Days (HDD); Cumulative Average Temperature (CAT).

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Uncertainty of recurring level 3 measurements from the use of significant 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 have resulted 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 have resulted 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 have resulted 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 have resulted 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 have resulted 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 have resulted in a significantly lower (higher) fair value of the Group's obligation. A significant increase (decrease) in isolation in lapse rate would, in general, have resulted 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 have resulted 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 have resulted 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 have resulted 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 have resulted 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 have resulted 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 have resulted 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 have resulted 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 have resulted 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 2019 and 30 June 2020 were as follows:

USD millions	2019 Fair value	2020 Fair value	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Private equity funds	565	583	616	non-redeemable	n/a
Hedge funds	208	212		redeemable ¹	45-95 days ²
Private equity direct	128	123	53	non-redeemable	n/a
Real estate funds	12	11	15	non-redeemable	n/a
Total	913	929	684		

The redemption frequency varies by position.

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. The period of time over which the underlying assets are expected to be liquidated is indeterminate as investees provide liquidation notices.

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 is included under "Liabilities held for sale".

² Cash distribution can be delayed for an extended period depending on the sale of the underlyings.

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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 2019 and 30 June 2020 were as follows:

USD millions	2019	2020
Assets		
Other invested assets	7 343	7 223
of which at fair value pursuant to the fair value option	335	261
Funds held by ceding companies	9 472	10 285
of which at fair value pursuant to the fair value option	174	171
Liabilities		
Liabilities for life and health policy benefits	-19 836	-20 932
of which at fair value pursuant to the fair value option	-91	-118
Liabilities held for sale	-68 586	-60 792
of which at fair value pursuant to the fair value option	-110	-94

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 six months ended 30 June were as follows:

USD millions	2019	2020
Other invested assets	13	-62
Funds held by ceding companies	6	5
Liabilities for life and health policy benefits	18	-32
Accrued expenses and other liabilities	13	
Liabilities held for sale		
Total	50	-89

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 and liabilities held for sale 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 2019 and 30 June 2020 were as follows:

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

2020 USD millions	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Total
Assets			
Policy loans		49	49
Mortgage loans		2 183	2 183
Other loans		2 494	2 494
Investment real estate		4 573	4 573
Total assets	0	9 299	9 299
Liabilities			
Debt	-11 378	-3 607	-14 985
Total liabilities	-11 378	-3 607	-14 985

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 OTC 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 2019 and 30 June 2020, the fair values and notional amounts of the derivatives outstanding were as follows:

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
2020	Notional amount	Fair value	Fair value	Carrying value
USD millions	assets/liabilities	assets	liabilities	assets/liabilities
Derivatives not designated as hedging instruments				
Interest rate contracts	26 260	835	-572	263
Foreign exchange contracts	32 717	209	-165	44
Equity contracts	22 852	854	-471	383
Credit contracts	9 450	40	-89	-49
Other contracts	10 031	53	-555	-502
Total	101 310	1 991	-1 852	139
Derivatives designated as hedging instruments				
Interest rate contracts	2 829	7	-12	-5
Foreign exchange contracts	18 057	54	-186	-132
Total	20 886	61	-198	-137
Total derivative financial instruments	122 196	2 052	-2 050	2
Amount offset				
Where a right of set-off exists		-786	786	
Due to cash collateral		-667	427	

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 2019 and 30 June 2020.

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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 six months ended 30 June, the gains and losses of derivative financial instruments not designated as hedging instruments were as follows:

USD millions 2019	2020
Derivatives not designated as hedging instruments	
Interest rate contracts -110	143
Foreign exchange contracts 66	135
Equity contracts -56	277
Credit contracts -1	71
Other contracts 60	-176
Total gains/losses recognised in income -41	450

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 30 June 2019 and 2020, 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 six months ended 30 June, the gains and losses attributable to the hedged risks were as follows:

USD millions	Net realised investment gains/losses — non- participating business	Interest expenses	2019 Other comprehensive income - Net unrealised investment gains/losses¹	Net realised investment gains/losses — non- participating business	Interest expenses	2020 Other comprehensive income - Net unrealised investment gains/losses¹
Total amounts of income and						
expense line items	817	-278	3 224	868	-298	1 728
Foreign exchange contracts						
Gains/losses on derivatives	-14			86		
Gains/losses on hedged items	14			-86		
Amounts excluded from the						
effectiveness assessment				-2		-15
Interest rate contracts						
Gains/losses on derivatives					28	
Gains/losses on hedged items					-27	

¹ Represents the net change in accumulated other comprehensive income, reflecting the revised presentation of gains/losses recorded in AOCI.

As of 31 December 2019 and 30 June 2020, the carrying values of the hedged assets and liabilities, and the cumulative amounts of fair value hedging adjustments included therein, recognised in the balance sheet, were as follows:

USD millions	Carrying value	2019 Cumulative basis adjustment	Carrying value	2020 Cumulative basis adjustment
Assets				
Fixed income securities available-for-sale	9 555		11 850	
Liabilities				
Long-term debt	-1 355	20	-2 807	-8

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 were designated as cash flow hedging instruments, until the hedge was discontinued in the second quarter of 2020.

For the six months ended 30 June, the gains and losses recorded in accumulated other comprehensive income, and reclassified into income were as follows:

		2019		2020
	Net realised		Net realised	
	investment	Other comprehensive	investment	Other comprehensive
	gains/losses - non-	income -	gains/losses - non-	income -
USD millions	participating business	Cash flow hedges ¹	participating business	Cash flow hedges ¹
Total amounts of income and expense line items	817	1	868	2
Foreign exchange contracts				
Gains/losses on derivatives	-3	1	15 ²	2

Represents the net change in accumulated other comprehensive income, reflecting the revised presentation of gains/losses recorded in AOCI. Comparative information for 2019 has been adjusted accordingly

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.

As of 31 December 2019 and 30 June 2020, the Group recorded an accumulated net unrealised foreign currency remeasurement gain of USD 1 895 million and USD 2 372 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 2019 and 30 June 2020 was approximately USD 987 million and USD 1 266 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 75 million and USD 67 million as of 31 December 2019 and 30 June 2020, respectively. For derivative financial instruments containing credit risk-related contingent features, the Group posted collateral of nil and USD 47 million as of 31 December 2019 and 30 June 2020, respectively. In the event of a reduction of the Group's credit rating to below investment grade, a fair value of USD 20 million additional collateral would have had to be posted as of 30 June 2020. The total equals the amount needed to settle the instruments immediately as of 30 June 2020.

Includes a loss of USD 11 million that was reclassified into earnings, as a result of cash flow hedge discontinuance.

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 was consistent with ReAssure's strategy to grow its closed-book business and added 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. As the business was acquired by ReAssure, it was recognised as held for sale upon acquisition¹.

¹ For more details on the transaction, please refer to 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 closed on 22 July 2020 following the receipt of all required regulatory and anti-trust approvals.

Swiss Re has received a cash payment of USD 1.5 billion, shares in Phoenix representing a 13.3% stake and is entitled to a seat on the Board of Directors of Phoenix. ReAssure's minority shareholder, MS&AD Insurance Group Holdings Inc, has received shares in Phoenix representing a 14.5% stake.

An estimated loss of USD 582 million has been recognised on the net assets held for sale in the fourth quarter 2019 (USD 230 million) and in the first half of 2020 (USD 352 million).

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 in 2019, reducing its carrying amount to zero. For the remainder of USD 443 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 and the net assets of ReAssure to be determined as of the closing of the transaction.

For the period ended 31 December 2019 and for the period ended 30 June 2020, ReAssure reported a pre-tax income, including the estimated loss on sale, of USD 120 million and a pre-tax loss of USD 141 million, of which a net income of USD 32 million and a net loss of USD 194 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	2020
Assets	
Fixed income securities available-for-sale 20 450	18 802
Short-term and other investments 2 240	2 454
Investments for unit-linked and with-profit business 43 173	35 750
Cash and cash equivalents 2 729	3 994
Reinsurance recoverable 3 134	1 954
Deferred acquisition costs 657	570
Acquired present value of future profits 680	443
Other assets 1 376	2 820
Total assets held for sale 74 439	66 787
Liabilities	
Unpaid claims and claim adjustment expenses 497	492
Liabilities for life and health policy benefits 22 624	20 376
Policyholder account balances 41 459	34 160
Other reinsurance liabilities 309	285
Other liabilities 3 606	5 036
Loss accrual upon held for sale 91	443
Total liabilities held for sale 68 586	60 792

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 2019 and 30 June 2020 was as follows:

USD millions 2019	2020
Contingent capital instruments classified as financial debt 185	186
Short-term debt 185	186
Senior financial debt 2 809	2 814
Senior operational debt 244	245
Subordinated financial debt 5 993	6 831
Subordinated operational debt 1918	1 762
Contingent capital instruments classified as financial debt 494	495
Reclassified to liabilities held for sale -1 320	-1 232
Long-term debt 10 138	10 915
Total carrying value 10 323	11 101
Total fair value 14 204	14 985

As of 31 December 2019 and 30 June 2020, operational debt, ie debt related to operational leverage, amounted to USD 2.2 billion (thereof USD 1.9 billion limited- or non-recourse) and USD 2.0 billion (thereof USD 1.8 billion limited- or non-recourse), respectively. Operational leverage is subject to asset/liability matching and is excluded from rating agency financial leverage calculations.

Interest expense on long-term debt and contingent capital instruments

Interest expense on long-term debt for the periods ended 30 June was as follows:

USD millions	2019	2020
Senior financial debt	44	44
Senior operational debt	6	4
Subordinated financial debt	64	164
Subordinated operational debt	56	55
Contingent capital instruments classified as financial debt	12	9
Total	182	276

Swiss Re entered into interest rate swaps to hedge the interest rate risk on some of its external debt positions, resulting in the relevant debt positions now being fair valued. The change in fair value of the hedged interest-bearing liability attributable to the interest rate risk is recorded in net interest expense and shown in this note. The change in fair value of the interest rate swap is captured under derivative financial instruments and amounted to USD 28 million for the six months ended 30 June 2020, please also refer to Note 9 "Derivative Financial Instruments". The net impact of the liability and the interest rate swap fair value changes is reflected in the interest expense line item of the income statement.

Long-term debt issued in 2020

In June 2020, Swiss Re Finance (UK) Plc., a subsidiary of Swiss Re Ltd, issued 32-year guaranteed subordinated fixed rate reset step-up. callable notes, which are callable after 12 years. The notes have an aggregate face value of EUR 800 million, with a fixed coupon of 2.714% until the first optional redemption date (4 June 2032). The notes are guaranteed on a subordinated basis by Swiss Re Ltd.

13 Earnings per share

Earnings per share for the six months ended 30 June were as follows:

USD millions (except share data) 2019	2020
Basic earnings per share	
Net income/loss 962	-1 072
Non-controlling interests –9	-63
Net income/loss attributable to common shareholders 953	-1 135
Weighted average common shares outstanding 298 604 93	289 255 435
Net income/loss per share in USD 3.19	-3.92
Net income/loss per share in CHF ¹ 3.20	-3.79
Effect of dilutive securities	
Change in income available to common shares due to convertible debt	,
Change in average number of shares due to convertible debt 11 638 463	}
Change in average number of shares due to employee options 870 680)
Diluted earnings per share	
Net income assuming debt conversion and exercise of options 960)
Weighted average common shares outstanding 311 114 074	
Net income/loss per share in USD 3.09	-3.92
Net income/loss per share in CHF ¹ 3.09	-3.79

¹ 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 twelve months ended 31 December 2019 and the six months ended 30 June 2020, the parent company of the Group (Swiss Re Ltd) paid dividends per share of CHF 5.60 and CHF 5.90, respectively.

At the 2019 Annual General Meeting held on 17 April 2019, the 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 the 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 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 Board of Directors of Swiss Re Ltd decided not to launch the second tranche of the public share buyback programme approved by the 2019 Annual General Meeting.

On 17 April 2020, the 2020 Annual General Meeting resolved the cancellation of the 9.9 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 23 July 2020 and publication in the Swiss Commercial Gazette occurred on 28 July 2020.

Net of tax expense effects of debt conversion, totalling USD 6 million for the six months ended 30 June 2020, and the potential impact of this debt conversion as well as the issuance of employee options on the weighted average number of shares, of 13 948 247 shares, have not been included in the diluted earnings per share calculation because the impact of such an inclusion was antidilutive.

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Notes to the Group financial statements (unaudited)

14 Benefit plans

Net periodic benefit cost

Pension and post-retirement cost for the six months ended 30 June 2019 and 2020 were USD 26 million and USD 42 million, respectively. Pension and post-retirement cost is presented in "Operating expenses".

Employer's contribution for 2020

For the six months ended 30 June 2020, the Group contributed USD 64 million to its defined benefit pension plans and USD 8 million to other post-retirement plans, compared to USD 62 million and USD 8 million, respectively, in the same period of 2019.

The expected 2020 contributions to the defined benefit pension plans and to the post-retirement benefit plans, revised as of 30 June 2020 for the latest information, amount to USD 118 million and USD 17 million, respectively.

15 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.

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Notes to the Group financial statements (unaudited)

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 iurisdictions. 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.

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, 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 2020 that it was not previously contractually required to provide.

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Notes to the Group financial statements (unaudited)

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 2019 and 30 June 2020:

USD millions 2019	2020
Fixed income securities available-for-sale 3 423	3 302
Investment real estate 143	121
Short-term investments 260	137
Investments for unit-linked and with-profit business 654	542
Cash and cash equivalents 49	36
Accrued investment income 27	28
Premiums and other receivables 31	30
Funds held by ceding companies	1
Deferred acquisition costs 3	3
Deferred tax assets 182	217
Other assets 15	221
Reclassified to assets held for sale -812	-679
Total assets 3 976	3 959
Unpaid claims and claim adjustment expenses 55	56
Unearned premiums 12	11
Funds held under reinsurance treaties 4	4
Reinsurance balances payable 21	18
Deferred and other non-current tax liabilities 152	202
Accrued expenses and other liabilities 129	131
Long-term debt 1 918	1 762
Reclassified to liabilities held for sale -114	-97
Total liabilities 2 177	2 087

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 2019 and 30 June 2020:

USD millions 2019	2020
Fixed income securities available-for-sale 1 187	1 287
Equity securities at fair value through earnings	85
Policy loans, mortgages and other loans 1 735	1 818
Other invested assets 2 160	2 027
Investments for unit-linked and with-profit business 17 131	14 451
Reclassified to assets held for sale -17 590	-15 024
Total assets 4 736	4 644
Accrued expenses and other liabilities 43	52
Total liabilities 43	52

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 2019 and 30 June 2020:

USD millions	Total assets	Total liabilities	2019 Maximum exposure to loss ¹	Total assets	Total liabilities	2020 Maximum exposure to loss ¹
Insurance-linked securitisations	598		627	709		738
Life and health funding vehicles	22		2 300	21		2 472
Swaps in trusts	83	43	_2	79	52	_ ²
Investment vehicles	2 174		2 174	2 020		2 020
Investment vehicles for unit-linked business	17 131			14 451		
Senior commercial mortgage and infrastructure loans	2 318		2 318	2 388		2 388
Reclassified to held for sale	-17 590		-607	-15 024		-692
Total	4 736	43	_2	4 644	52	_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.

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.

 $^{^{2}}$ The maximum exposure to loss for swaps in trusts cannot be meaningfully quantified due to their derivative character.

16 Subsequent events

Sale of ReAssure Group Plc. to Phoenix Group

On 22 July 2020, the Group successfully completed the sale of ReAssure Group Plc. (ReAssure) to Phoenix Group Holdings Plc., following the receipt of all required regulatory and anti-trust approvals. The sale effectively leads to the deconsolidation of ReAssure from the Group financial statements in the third quarter of 2020.

The Group financial statements and related notes presented in this report are not impacted by the deconsolidation.

ReAssure was already classified as held for sale at the end of 2019. For more details on the transaction, please refer to Note 11 "Assets held for sale".

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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 manmade 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-thanexpected 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

The operations, investments and other activities of Swiss Re Ltd ("Swiss Re") and its subsidiaries (collectively, the "Group") are subject to a range of risks that could adversely impact the Group's business, financial condition, results of operations, liquidity and cash flows.

Coronavirus

The global spread of the novel coronavirus and the disease it causes ("COVID-19"), and the actions taken to mitigate their effects, have led to significant volatility in the financial markets, have had an adverse impact on global economic activity and have had adverse effects on the global economy, including recession. While many countries have reduced the level of COVID-19 infections, in others the level of infections continues to increase and, in the absence of a vaccine and/or alternative treatment solutions, the threat of new outbreaks still looms, raising the prospect of further mitigation efforts and the attendant consequences of such actions. As such, it remains difficult to predict the ultimate extent of the pandemic's impact going forward on the Group's business, operations, financial condition, results of operations, liquidity or SST ratio.

In Property & Casualty Reinsurance, Swiss Re expects the COVID-19 crisis (in particular the impact on businesses and business activity) to have the greatest impact on event cancellation, some affirmative non-damage business interruption covers and other lines, including credit and surety. Exposures in credit and surety include trade credit insurance, commodity trade finance, construction contract surety and political risk covers. Swiss Re expects most of its event cancellation losses to have been recorded in the first and second quarters of 2020, while credit and surety losses could be spread over a longer period as the impact of recession becomes more apparent. In Life & Health Reinsurance, Swiss Re expects the COVID-19 crisis may have the greatest impact on its mortality exposures, with large sums assured in the United States, the United Kingdom, Canada and Australia. In China, the Group's major exposure is critical illness business, the impact of the COVID-19 crisis relates to mortality and medical exposures, and losses will depend on specific contractual terms. Financial market volatility could adversely affect the Group's investment result or access to the capital markets. Swiss Re implemented a range of hedges in March 2020, which helped mitigate the negative impact of the heightened market volatility.

The COVID-19 crisis presents a series of potential coverage challenges for the industry. A number of state legislatures in the United States are considering legislation to retroactively change existing primary insurance coverage for business interruption and loss of use to cover coronavirus-related losses, and other jurisdictions may do the same. Court cases against businesses alleging liability in respect of responses to the COVID-19 crisis as well as cases in a number of jurisdictions, including class actions in the United States and a test case brought by the Financial Conduct Authority in the United Kingdom, brought by or on behalf of policyholders relating to insurance contract terms and interpretations thereof have already been filed, and both of these trends are likely to continue.

Swiss Re estimates that insurance demand will slow sharply in 2020 due to what is projected to be a deep, but short-lived recession, with an expectation of recovery of premium levels in 2021 alongside recovery of the global economy. Swiss Re notes that the upper end of the range of total property and casualty claims by third-party insurance analysts is in the range of USD 100 billion. The future impact of the COVID-19 crisis will depend on a range of factors, including the duration of mitigation efforts and the availability of vaccines and/or other alternative treatment solutions, the severity of the impact of mitigation efforts on businesses and business activity, the scope and efficacy of governmental stimulus and other relief efforts, the extent to which legislative or regulatory efforts or court cases succeed in shifting some of the burden of the pandemic to insurers (particularly for business interruption) on a retroactive basis, and the severity and duration

of, and the speed of recovery from, recessionary impacts. Swiss Re's disclosures and other public statements should be read in the context of the evolving COVID-19 crisis and the related uncertainties, whether or not specific reference is made thereto.

General impact of adverse market conditions

Swiss Re's operations as well as its investment returns are subject to conditions in the financial markets and macroeconomic factors, which are outside of its control. Financial, credit and foreign exchange markets are experiencing continued periods of volatility reflecting a range of political, geopolitical, economic and other uncertainties, some of the more significant of which are interrelated. 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. The most significant of these is the current impact of the COVID-19 crisis.

Regulatory changes

Swiss Re and its subsidiaries operate in a highly regulated environment, which continues to change over time. 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 European Economic Area, 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 extraterritorial 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, particularly if these efforts lead to national policies based on more protectionist philosophies.

On the international level, certain large insurance companies have been designated as global systemically important insurers ("G-SIIs") and reinsurance companies faced potential designation as G-SIIs. While further designations have been suspended until 2022, the determination to discontinue G-SII designations altogether will only be made in 2022, based on an assessment of progress made by the International Association of Insurance Supervisors ("IAIS"), in establishing a new holistic framework for systemic risk that was adopted in November 2019 and implemented as of the beginning of 2020. The new

General information

Note on risk factors

framework embraces an enhanced set of policy measures targeted at the exposures and activities that can lead to systemic risks from the insurance sector as a whole. As the systemic risk process is an evolving one, the implementation and implications of which are still evolving, both the direct consequences as well as the indirect consequences remain uncertain. The Group cannot predict what additional regulatory changes will be implemented as the IAIS systemic risk process evolves and what any such changes may mean for how the Group is structured in any particular jurisdiction and how aspects of its business may be affected. Moreover, the Group cannot predict whether the Financial Stability Board will endorse the new IAIS holistic framework or retain the existing G-SII approach, or what regulatory changes may apply in the future to ceding companies in the context of broader designations of reinsurers as systemically important.

In addition, large internationally active insurance groups ("IAIGs"), which include G-SIIs, may become subject to a risk-based group-wide global insurance capital standard ("ICS"). ICS Version 2.0 was adopted in November 2019, and is expected to take effect in 2025, following a five-year confidential reporting period during which no supervisory action will be taken on the basis of the monitoring. In November 2019, the IAIS also adopted the Common Framework for the Supervision of Internationally Active Insurance Groups ("ComFrame"), as well as some changes to a number of Insurance Core Principles ("ICPs") - guidance and standards on supervision of insurers and which apply to insurance companies regardless of size and international exposures. ComFrame strengthens ICP requirements for IAIGs and proposes that the group-wide supervisor, in consultation with the host supervisors, should exercise discretion in requiring IAIGs to submit resolution plans. Swiss Re expects that it will be classified as an IAIG.

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 (including the United Kingdom's solvency capital regime, which is currently drawn largely from EU directives and regulations), both in the United Kingdom and in the European Union.

Regulatory changes also could occur in areas of broader application, such as competition policy and tax laws. For example, changes in tax laws, or the interpretation of the tax laws or tax regulations in jurisdictions in which the Group does business, or withdrawals of tax rulings in jurisdictions such as Switzerland that have issued such rulings to Swiss Re, could increase the taxes the Group pays, or impact the attractiveness of products offered by the Group, the Group's investment activities or the value of deferred tax assets. 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 volatility is heightened by COVID-19-related concerns. 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, low interest rates continue to pose significant challenges to the insurance and reinsurance industries, with earnings capacity under stress unless lower investment returns can be offset by lower combined ratios or higher returns from other asset classes, which in a soft market cycle is a challenge. 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 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 contracts, are wholly or partially exposed, directly and/or indirectly, to market fluctuations, including equity prices. 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, certain risks cannot be hedged, including actuarial, basis and correlation risks. Exposure to foreign exchange risk arises from changes in spot prices, forward prices and volatilities of currency 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 a possible mismatch between investments and liability benchmarks – 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 to deteriorate, 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. 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, among other things, its 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 increase levels of indebtedness or to liquidate investments or other assets. Should the Group require liquidity at a time when access to bank funding and the capital markets is limited, it may be unable to secure new sources of funding. The Group's ability to meet liquidity needs through asset sales may be constrained by market conditions and the related stress on valuations. In addition, the Group's ability to meet liquidity needs through the incurrence of debt may be limited by constraints on the general availability of credit in the case of bank funding, and adverse market conditions, in the case of capital markets debt. Failure to meet covenants in lending arrangements could further constrain access to liquidity. 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 are otherwise not tradeable. Finally, any adverse ratings action against the Group could trigger a need for further liquidity (for example, by triggering termination provisions or margin calls/collateral delivery requirements in contracts to which Swiss Re is a party) at a time when the Group's ability to obtain liquidity from external sources is limited by such ratings action. See also "Risks relating to credit rating downgrades."

Counterparty risks

The Group is exposed to the risk of defaults, or concerns about defaults, by its counterparties. Issuers or borrowers whose securities or loans the Group holds, trading counterparties, counterparties under swaps and other derivative contracts, clearing agents, clearing houses and other financial intermediaries may default on their obligations to the Group due to bankruptcy, insolvency, lack of liquidity, adverse economic conditions, operations failure, fraud or other reasons, which could also 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, such as Swiss Re. 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 solicited or unsolicited and 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 the Group's ratings could be downgraded or withdrawn in the future. In addition, unsolicited ratings may also be downgraded or withdrawn, such as a downgrade in April 2020 of unsolicited insurer financial strength and long-term issuer default ratings assigned to various entities within the Group. 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, which it cannot predict. In addition, changes to the process or methodology of issuing ratings, or the occurrence of events or developments affecting the Group, could adversely affect the Group's existing ratings or 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 Swiss Re's ratings and/or the ratings of its key rated legal entities 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 and derivative contracts may contain terms that would allow the ceding companies or counterparties to terminate the contract if the Group's ratings or those of its subsidiaries are downgraded beyond a certain threshold. Furthermore, ratings directly impact the availability and terms of unsecured financing (potentially impacting the Group's ability to rollover existing facilities or obtain new facilities) and declines in the Group's ratings or the ratings of legal entities within the Group could also 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 the Group's rights and obligations under insurance, reinsurance or 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 could in the future be involved 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 remains high, and the scope of these investigations and proceedings over time has 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 litigation or enforcement actions arising from potential employee misconduct, including non-compliance with internal policies and procedures, negligence and malfeasance, such as undertaking or facilitating cyberattacks 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 catastrophes, such as hurricanes, cyclones, tornadoes, windstorms, hailstorms, wildfires, floods and earthquakes, as well as extreme space weather events such as solar storms and geomagnetic activity, and man-made disasters, such as acts of terrorism, cyberattacks and other disasters such as explosions, industrial accidents and fires, as well as pandemics) are inherently unpredictable in terms of both their frequency and severity and have exposed, and may continue to 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 (including social inflation), which trend may potentially be exacerbated by the COVID-19 crisis; 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 its management uses, for example, 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 (such as assumptions related to the Group's capital requirements and anticipated liabilities), 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 (and could be adversely affected if premiums turn out to be lower, while claims stay the same). 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 (in the case of accounting judgments), 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. 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 a substitute 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 others, assets and liabilities are measured on a market consistent basis, profit recognition on new contracts is recognised at inception rather than over the lifetime 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 has announced the disbanding of one of its three Business Units and that it continues to assess the further streamlining of the legal entity structure of the Group with the expectation that, over time, its structure will continue to evolve. In the future it may, for example, elect again 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.

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Corporate calendar

30 October 2020

Nine months 2020 key financial data

19 February 2021

2020 annual results

18 March 2021

Publication of Annual Report 2020

16 April 2021

157th Annual General Meeting

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Title: Swiss Re Group 2020 Half-Year Report

Production: Swiss Re Corporate Real Estate & Services/ Media Production, Zurich







The web version of the 2020 Half-Year Report is available at: www.swissre.com/investors

Order no: 1492019_20_EN

CCHCC, 07/20

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