Swiss Re

Swiss Reinsurance Company Consolidated
Annual Report 2019

Contents

Income statement

For the years ended 31 December

USD millions	Note	2018	2019
Revenues			
Gross premiums written	4	31 182	**36 164**
Net premiums written	4	28 746	**33 674**
Change in unearned premiums		32	**–1 507**
Premiums earned	3	28 778	**32 167**
Fee income from policyholders	3	154	**170**
Net investment income – non-participating business[1]	7	2 601	**2 366**
Net realised investment gains/losses – non-participating business[2]	7	367	**1 529**
Net investment result – unit-linked business	7	–33	**118**
Other revenues		75	**33**
Total revenues		31 942	**36 383**
Expenses			
Claims and claim adjustment expenses	3	–11 614	**–14 782**
Life and health benefits	3	–10 287	**–10 594**
Return credited to policyholders		–7	**–164**
Acquisition costs	3	–6 029	**–6 897**
Operating expenses		–2 180	**–2 287**
Total expenses before interest expenses		–30 117	**–34 724**
Income before interest and income tax expense		1 825	**1 659**
Interest expenses		–601	**–595**
Income before income tax expense		1 224	**1 064**
Income tax expense	12	–176	**–143**
Net income before attribution of non-controlling interests		1 048	**921**
Income/loss attributable to non-controlling interests		–37	**–67**
Net income after attribution of non-controlling interests		1 011	**854**
Interest on contingent capital instruments, net of tax		–41	
Net income attributable to common shareholder		970	**854**

[1] Total impairments for the years ended 31 December of USD nil million in 2018 and of USD 19 million in 2019, respectively, were fully recognised in earnings.
[2] Total impairments for the years ended 31 December of USD 11 million in 2018 and of USD 7 million in 2019, respectively, were fully recognised in earnings.

The accompanying notes are an integral part of the Group financial statements.

Statement of comprehensive income

For the years ended 31 December

USD millions	2018	2019
Net income before attribution of non-controlling interests	1 048	**921**
Other comprehensive income, net of tax:		
Change in net unrealised investment gains/losses	–1 483	**2 264**
Change in other-than-temporary impairment		**2**
Change in foreign currency translation	–267	**–89**
Change in adjustment for pension benefits	–14	**–11**
Change in credit risk of financial liabilities at fair value option		**–2**
Other comprehensive income attributable to non-controlling interests	–20	**44**
Total comprehensive income before attribution of non-controlling interests	–736	**3 129**
Interest on contingent capital instruments, net of tax	–41	
Comprehensive income attributable to non-controlling interests	–17	**–111**
Total comprehensive income attributable to common shareholder	–794	**3 018**

The accompanying notes are an integral part of the Group financial statements.

RECLASSIFICATION OUT OF ACCUMULATED OTHER COMPREHENSIVE INCOME

For the years ended 31 December

2018 USD millions	Net unrealised investment gains/losses[1]	Other-than-temporary impairment[1]	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	2 064	–3	–4 852	–737	0	–3 528
Impact of Accounting Standards Update[4]	111		–3	–17	5	96
Change during the period	–2 083		–172	–78		–2 333
Amounts reclassified out of accumulated other comprehensive income	182		15	61		258
Tax	418		–110	3		311
Balance as of period end	692	–3	–5 122	–768	5	–5 196

2019 USD millions	Net unrealised investment gains/losses[1]	Other-than-temporary impairment[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	692	–3	–5 122	–768	5	**–5 196**
Change during the period	4 037		–21	–70	–2	**3 944**
Amounts reclassified out of accumulated other comprehensive income	–1 198		–7	44		**–1 161**
Tax	–575	2	–61	15		**–619**
Balance as of period end	**2 956**	**–1**	**–5 211**	**–779**	**3**	**–3 032**

[1] Reclassification adjustment included in net income is presented in "Net realised investment gains/losses – non-participating business".
[2] Reclassification adjustment is limited to translation gains and losses realised upon sale or upon complete or substantially complete liquidation of an investment in a foreign entity.
[3] Reclassification adjustment included in net income is presented in "Operating expenses".
[4] Impact of ASU 2018-02 "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive income", ASU 2016-16 "Intra-Entity Transfers of Assets Other Than Inventory" and ASU 2016-01 "Recognition and Measurement of Financial Assets and Financial Liabilities". Please refer to the Annual Report 2018 for more details.

The accompanying notes are an integral part of the Group financial statements.

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Balance sheet

ASSETS

As of 31 December

USD millions	Note	2018	2019
Investments	7, 8, 9		
Fixed income securities:			
Available-for-sale (including 10 245 in 2018 and 12 842 in 2019 subject to securities lending and repurchase agreements) (amortised cost: 2018: 64 850; 2019: 67 680)		65 881	**71 613**
Trading (including 2 599 in 2018 and 1 911 in 2019 subject to securities lending and repurchase agreements)		3 414	**2 410**
Equity securities at fair value through earnings (including 407 in 2018 and 134 in 2019 subject to securities lending and repurchase agreements)		2 450	**2 373**
Policy loans, mortgages and other loans		2 883	**2 357**
Investment real estate		2 240	**2 526**
Short-term investments (including 456 in 2018 and 1 086 in 2019 subject to securities lending and repurchase agreements)		3 815	**5 032**
Other invested assets		4 550	**5 911**
Investments for unit-linked business (including equity securities at fair value through earnings: 424 in 2018 and 520 in 2019)		424	**520**
Total investments		85 657	**92 742**
Cash and cash equivalents (including 466 in 2018 and 1 051 in 2019 subject to securities lending)		3 695	**5 507**
Accrued investment income		632	**609**
Premiums and other receivables		11 983	**14 063**
Reinsurance recoverable on unpaid claims and policy benefits		12 740	**12 520**
Funds held by ceding companies		10 894	**10 901**
Deferred acquisition costs	6	6 940	**7 167**
Acquired present value of future profits	6	842	**619**
Goodwill		3 731	**3 741**
Income taxes recoverable		363	**296**
Deferred tax assets	12	4 152	**3 852**
Other assets		2 460	**2 378**
Total assets		144 089	**154 395**

The accompanying notes are an integral part of the Group financial statements.

LIABILITIES AND EQUITY

USD millions	Note	2018	2019
Liabilities			
Unpaid claims and claim adjustment expenses	5	58 652	**63 852**
Liabilities for life and health policy benefits	8	18 969	**21 266**
Policyholder account balances		5 574	**5 405**
Unearned premiums		8 248	**9 818**
Funds held under reinsurance treaties		10 262	**9 537**
Reinsurance balances payable		1 879	**1 765**
Income taxes payable		453	**279**
Deferred and other non-current tax liabilities	12	4 952	**4 975**
Short-term debt	10	4 955	**2 415**
Accrued expenses and other liabilities	7	6 941	**7 801**
Long-term debt	10	6 491	**8 737**
Total liabilities		127 376	**135 850**
Equity			
Common shares, CHF 0.10 par value			
2018: 344 052 565; 2019: 344 052 565 shares authorised and issued		32	**32**
Additional paid-in capital		8 701	**9 406**
Treasury shares, net of tax		–19	**–19**
Accumulated other comprehensive income:			
Net unrealised investment gains/losses, net of tax		692	**2 956**
Other-than-temporary impairment, net of tax		–3	**–1**
Foreign currency translation, net of tax		–5 122	**–5 211**
Adjustment for pension and other post-retirement benefits, net of tax		–768	**–779**
Credit risk of financial liabilities at fair value option, net of tax		5	**3**
Total accumulated other comprehensive income		–5 196	**–3 032**
Retained earnings		11 246	**10 644**
Shareholder's equity		14 764	**17 031**
Non-controlling interests		1 949	**1 514**
Total equity		16 713	**18 545**
Total liabilities and equity		144 089	**154 395**

The accompanying notes are an integral part of the Group financial statements.

Statement of shareholder's equity

For the years ended 31 December

USD millions	2018	2019
Contingent capital instruments		
Balance as of 1 January	750	**0**
Changes during the period	–750	
Balance as of period end	0	**0**
Common shares		
Balance as of 1 January	32	**32**
Issue of common shares		
Balance as of period end	32	**32**
Additional paid-in capital		
Balance as of 1 January	8 690	**8 701**
Capital contribution		**700**
Contingent capital instrument issuance costs	11	
Share-based compensation	–3	**–3**
Realised gains/losses on treasury shares	3	**8**
Balance as of period end	8 701	**9 406**
Shares in Swiss Re Ltd, net of tax		
Balance as of 1 January	–17	**–19**
Change in shares in Swiss Re Ltd	–2	
Balance as of period end	–19	**–19**
Net unrealised investment gains/losses, net of tax		
Balance as of 1 January	2 064	**692**
Impact of ASU 2018-02[1]	175	
Impact of ASU 2016-16[1]	4	
Impact of ASU 2016-01[1]	–68	
Changes during the period	–1 483	**2 264**
Balance as of period end	692	**2 956**
Other-than-temporary impairment, net of tax		
Balance as of 1 January	–3	**–3**
Changes during the period		**2**
Balance as of period end	–3	**–1**
Foreign currency translation, net of tax		
Balance as of 1 January	–4 852	**–5 122**
Impact of ASU 2018-02[1]	–3	
Changes during the period	–267	**–89**
Balance as of period end	–5 122	**–5 211**
Adjustment for pension and other post-retirement benefits, net of tax		
Balance as of 1 January	–737	**–768**
Impact of ASU 2018-02[1]	–17	
Changes during the period	–14	**–11**
Balance as of period end	–768	**–779**

The accompanying notes are an integral part of the Group financial statements.

USD millions	2018	2019
Credit risk of financial liabilities at fair value option, net of tax		
Balance as of 1 January	0	**5**
Impact of ASU 2016-01[1]	5	
Changes during the period		**–2**
Balance as of period end	5	**3**
Retained earnings		
Balance as of 1 January	12 335	**11 246**
Transactions under common control	–7	**122**
Net income after attribution of non-controlling interests	1 011	**854**
Interest on contingent capital instruments, net of tax	–41	
Dividends on common shares	–1 950	**–1 670**
Impact of ASU 2018-02[1]	–155	
Impact of ASU 2016-16[1]	–10	
Impact of ASU 2016-01[1]	63	
Impact of ASU 2016-02[2]		**92**
Balance as of period end	11 246	**10 644**
Shareholder's equity	14 764	**17 031**
Non-controlling interests		
Balance as of 1 January	1 932	**1 949**
Transactions with non-controlling interests		**–431**
Income/loss attributable to non-controlling interests	37	**67**
Other comprehensive income attributable to non-controlling interests	–20	**44**
Dividends to non-controlling interests		**–115**
Balance as of period end	1 949	**1 514**
Total equity	16 713	**18 545**

[1] Impact ASU 2018-02 "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive income ", ASU 2016- 16 "Intra-Entity Transfers of Assets Other Than Inventory" and ASU 2016-01 "Recognition and Measurement of Financial Assets and Financial Liabilities". Please refer to the Annual Report 2018 for more details.

[2] Impact of ASU 2016-02 "Leases". Please refer to Note 1 "Organisation and summary of significant accounting policies" for more details.

The accompanying notes are an integral part of the Group financial statements.

Statement of cash flows

For the years ended 31 December

USD millions	2018	2019
Cash flows from operating activities		
Net income attributable to common shareholder	970	**854**
Add income/loss attributable to non-controlling interests	37	**67**
Adjustments to reconcile net income to net cash provided/used by operating activities:		
Depreciation, amortisation and other non-cash items	140	**205**
Net realised investment gains/losses	–309	**–1 623**
Income from equity-accounted investees, net of dividends received	44	**12**
Change in:		
Technical provisions and other reinsurance assets and liabilities, net	1 487	**6 458**
Funds held by ceding companies and under reinsurance treaties	489	**–691**
Reinsurance recoverable on unpaid claims and policy benefits	186	**378**
Other assets and liabilities, net	–493	**–46**
Income taxes payable/recoverable	–274	**–276**
Trading positions, net	107	**–38**
Net cash provided/used by operating activities	2 384	**5 300**
Cash flows from investing activities		
Fixed income securities:		
Sales	39 402	**46 151**
Maturities	4 214	**5 561**
Purchases	–45 053	**–52 179**
Net purchases/sales/maturities of short-term investments	–1 176	**–1 164**
Equity securities:		
Sales	1 676	**1 882**
Purchases	–1 348	**–1 229**
Securities purchased/sold under agreement to resell/repurchase, net	3 386	**–862**
Net purchases/sales/maturities of other investments	–910	**247**
Net purchases/sales/maturities of investments held for unit-linked business	75	**14**
Net cash provided/used by investing activities	266	**–1 579**
Cash flows from financing activities		
Policyholder account balances for unit-linked business:		
Deposits		**22**
Withdrawals	–111	**–66**
Issuance/repayment of long-term debt	293	**2 386**
Issuance/repayment of short-term debt	496	**–2 719**
Issuance/repayment of contingent capital instrument	–750	
Purchase/sale of shares in Swiss Re Ltd.	–4	**3**
Dividends paid to parent	–1 950	**–1 670**
Capital contribution received from parent		**700**
Transactions with non-controlling interests		**–467**
Dividends paid to non-controlling interests		**–115**
Net cash provided/used by financing activities	–2 026	**–1 926**

The accompanying notes are an integral part of the Group financial statements.

USD millions	2018	2019
Total net cash provided/used	624	**1 795**
Effect of foreign currency translation	–147	**17**
Change in cash and cash equivalents	477	**1 812**
Cash and cash equivalents as of 1 January	3 218	**3 695**
Cash and cash equivalents as of 31 December	3 695	**5 507**

Interest paid was USD 653 million and USD 484 million (thereof USD 43 million and USD 24 million for letter of credit fees) for 2018 and 2019, respectively. Tax paid was USD 439 million and USD 419 million for 2018 and 2019, respectively.

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

The accompanying notes are an integral part of the Group financial statements.

Notes to the Group financial statements

1 Organisation and summary of significant accounting policies

Nature of operations
The Swiss Reinsurance Company Group, which is headquartered in Zurich, Switzerland, comprises Swiss Reinsurance Company Ltd (the parent company, referred to as "SRZ") and its subsidiaries (collectively, the "Group"). The Group is a wholesale provider of reinsurance, insurance and other insurance-based forms of risk transfer. Working through brokers and a network of offices around the globe, the Group serves a client base made up of insurance companies and public sector clients.

SRZ is a wholly owned subsidiary of Swiss Re Ltd. Swiss Re Ltd is the ultimate parent company of the Swiss Re Group, which consists of four business segments: Property & Casualty Reinsurance, Life & Health Reinsurance, Corporate Solutions and Life Capital. The presentation of each segment's balance sheet is closely aligned with the segment legal entity structure.

Basis of presentation
The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (US GAAP) and comply with Swiss law. All significant intra-group transactions and balances have been eliminated on consolidation.

The Board of Directors of SRZ has decided that as of 1 January 2024 the Group's consolidated financial statements will be prepared in accordance with International Financial Reporting Standards (IFRS). Financial statements for periods ending on or prior to 31 December 2023 will continue to be prepared in accordance with US GAAP.

Principles of consolidation
The Group's financial statements include the consolidated financial statements of SRZ and its subsidiaries. Voting entities which SRZ directly or indirectly controls through holding a majority of the voting rights are consolidated in the Group's accounts. Variable interest entities (VIEs) are consolidated when the Group is the primary beneficiary. The Group is the primary beneficiary when it has power over the activities that impact the VIE's economic performance and at the same time has the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE. Companies which the Group does not control, but over which it directly or indirectly exercises significant influence, are accounted for using the equity method or the fair value option and are included in other invested assets. The Group's share of net profit or loss in investments accounted for under the equity method is included in net investment income. Equity and net income of these companies are adjusted as necessary to be in line with the Group's accounting policies. The results of consolidated subsidiaries and investments accounted for using the equity method are included in the financial statements for the period commencing from the date of acquisition.

Use of estimates in the preparation of financial statements
The preparation of financial statements requires management to make significant estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses as well as the related disclosure, including contingent assets and liabilities. The Group's liabilities for unpaid claims and claim adjustment expenses and policy benefits for life and health include estimates for premium, claim and benefit data not received from ceding companies at the date of the financial statements. In addition, the Group uses certain financial instruments and invests in securities of certain entities for which exchange trading does not exist. The Group determines these estimates based on historical information, actuarial analyses, financial modelling and other analytical techniques. Actual results could differ significantly from the estimates described above.

Foreign currency remeasurement and translation
Transactions denominated in foreign currencies are remeasured to the respective subsidiary's functional currency at average exchange rates. Monetary assets and liabilities are remeasured to the functional currency at closing exchange rates, whereas non-monetary assets and liabilities are remeasured to the functional currency at historical rates. Remeasurement gains and losses on monetary assets and liabilities and trading securities are reported in earnings. Remeasurement gains and losses on available-for-sale securities, investments in consolidated subsidiaries and investments accounted for using the equity method are reported in shareholder's equity.

For consolidation purposes, assets and liabilities of subsidiaries with functional currencies other than US dollars are translated from the functional currency to US dollars at closing rates. Revenues and expenses are translated at average exchange rates. Translation adjustments are reported in shareholder's equity.

Valuation of financial assets

The fair value of the majority of the Group's financial instruments is based on quoted prices in active markets or observable inputs. These instruments include government and agency securities, commercial paper, most investment-grade corporate debt, most high-yield debt securities, exchange-traded derivative instruments, most mortgage- and asset-backed securities and listed equity securities. In markets with reduced or no liquidity, spreads between bid and offer prices are normally wider compared to spreads in highly liquid markets. Such market conditions affect the valuation of certain asset classes of the Group, such as some asset-backed securities as well as certain derivative structures referencing such asset classes.

The Group considers both the credit risk of its counterparties and own risk of non-performance in the valuation of derivative instruments and other over-the-counter financial assets. In determining the fair value of these financial instruments, the assessment of the Group's exposure to the credit risk of its counterparties incorporates consideration of existing collateral and netting arrangements entered into with each counterparty. The measure of the counterparty credit risk is estimated by incorporating the observable credit spreads, where available, or credit spread estimates derived based on the benchmarking techniques where market data is not available. The impact of the Group's own risk of non-performance is analysed in a manner consistent with the aforementioned approach, with consideration given to the Group's observable credit spreads. The value representing such risk is incorporated into the fair value of the financial instruments (primarily derivatives), in a liability position as of the measurement date. The change in this adjustment from period to period is reflected in realised investment gains and losses in the income statement.

For assets or derivative structures at fair value, the Group uses market prices or inputs derived from market prices. A separate internal price verification process, independent of the trading function, provides an additional control over the market prices or market inputs used to determine the fair values of such assets. Although management considers that appropriate values have been ascribed to such assets, there is always a level of uncertainty and judgement related to these valuations. Subsequent valuations could differ significantly from the results of the process described above. The Group may become aware of counterparty valuations, either directly through the exchange of information or indirectly, for example through collateral demands. Any implied differences are considered in the independent price verification process and may result in adjustments to initially indicated valuations. As of 31 December 2019, the Group had not provided any collateral on financial instruments in excess of its own market value estimates.

Investments

The Group's investments in fixed income securities are classified as available-for-sale (AFS) or trading. Fixed income securities AFS are carried at fair value, based on quoted market prices, with the difference between the applicable measure of cost and fair value being recognised in shareholder's equity. Trading fixed income securities are carried at fair value with unrealised gains and losses recognised in earnings. A trading classification is used for securities that are bought and held principally for the purpose of selling them in the near term.

For fixed income securities AFS that are other-than-temporary impaired and for which there is not an intention to sell, the impairment is separated into (i) the estimated amount relating to credit loss, and (ii) the amount relating to all other factors. The estimated credit loss amount is recognised in earnings, with the remainder of the loss amount recognised in other comprehensive income. In cases where there is an intention or requirement to sell and the fair value is lower than cost expressed in functional currency terms, the cost of fixed income securities AFS is reduced to fair value, with a corresponding charge to realised investment losses. Subsequent recoveries are not recognised in earnings.

Equity investments are carried at fair value with unrealised gains and losses recognised in earnings, with the exception of equity method investments and investments that result in consolidation.

Interest on fixed income securities is recorded in net investment income when earned and is adjusted for the amortisation of any purchase premium or discount. Dividends on equity securities are recognised as investment income on the ex-dividend date. Realised gains and losses on sales are included in earnings and are calculated using the specific identification method.

Policy loans, mortgages and other loans are carried at amortised cost. Interest income is recognised in accordance with the effective yield method.

Investment in real estate that the Group intends to hold for the production of income is carried at depreciated cost, net of any write-downs for impairment in value. Depreciation on buildings is recognised on a straight-line basis over the estimated useful life of the asset. Land is recognised at cost and not depreciated. Impairment in value is recognised if the sum of the estimated future undiscounted cash flows from the use of the real estate is lower than its carrying value. The impairment loss is measured as the amount by which the asset's carrying amount exceeds its fair value and is recognised in realised investment losses. Depreciation and other related charges or credits are included in net investment income. Investment in real estate held for sale is carried at the lower of cost or fair value, less estimated selling costs, and is not depreciated. Reductions in the carrying value of real estate held for sale are included in realised investment losses.

Short-term investments are measured at fair value with changes in fair value recognised in net income. The Group considers highly liquid investments with a remaining maturity at the date of acquisition of one year or less, but greater than three months, to be short-term investments.

Other invested assets include affiliated companies, equity accounted companies, derivative financial instruments, collateral receivables, securities purchased under agreement to resell, deposits and time deposits, and investments without readily determinable fair value (including limited partnership investments). Investments in limited partnerships where the Group's interest equals or exceeds 3% are accounted for using the equity method. Investments in limited partnerships where the Group's interest is below 3% and equity investments in corporate entities which are not publicly traded are accounted for at estimated fair value with changes in fair value recognised in earnings.

The Group enters into securities lending arrangements under which it loans certain securities in exchange for collateral and receives securities lending fees. The Group's policy is to require collateral, consisting of cash or securities, equal to at least 102% of the carrying value of the securities loaned. In certain arrangements, the Group may accept collateral of less than 102% if the structure of the overall transaction offers an equivalent level of security. Cash received as collateral is recognised along with an obligation to return the cash. Securities received as collateral that can be sold or repledged are also recognised along with an obligation to return those securities. Securities lending fees are recognised over the term of the related loans.

Derivative financial instruments and hedge accounting
The Group uses a variety of derivative financial instruments including swaps, options, forwards and exchange-traded financial futures for the Group's trading and hedging strategy in line with the overall risk management strategy. Derivative financial instruments are primarily used as a means of managing exposure to price, foreign currency and/or interest rate risk on planned or anticipated investment purchases, existing assets or existing liabilities and also to lock in attractive investment conditions for funds which become available in the future. The Group recognises all of its derivative instruments on the balance sheet at fair value. Changes in fair value on derivatives that are not designated as hedging instruments are recorded in income.

If the derivative is designated as a hedge of the fair value of assets or liabilities, changes in the fair value of the derivative are recognised in earnings, together with changes in the fair value of the related hedged item. If the derivative is designated as a hedge of the variability in expected future cash flows related to a particular risk, changes in the fair value of the derivative are reported in other comprehensive income until the hedged item is recognised in earnings. The ineffective portion of the hedge is recognised in earnings. When hedge accounting is discontinued on a cash flow hedge, the net gain or loss remains in accumulated other comprehensive income and is reclassified to earnings in the period in which the formerly hedged transaction is reported in earnings. When the Group discontinues hedge accounting because it is no longer probable that a forecasted transaction will occur within the required time period, the derivative continues to be carried on the balance sheet at fair value, and gains and losses that were previously recorded in accumulated other comprehensive income are recognised in earnings.

The Group recognises separately derivatives that are embedded within other host instruments if the economic characteristics and risks are not clearly and closely related to the economic characteristics and risks of the host contract and if it meets the definition of a derivative if it were a free-standing contract.

Derivative financial instrument assets are generally included in other invested assets and derivative financial instrument liabilities are generally included in accrued expenses and other liabilities.

The Group also designates non-derivative and derivative monetary financial instruments as hedges of the foreign currency exposure of its net investment in certain foreign operations. From the inception of the hedging relationship, remeasurement gains and losses on the designated non-derivative and derivative monetary financial instruments and translation gains and losses on the hedged net investment are reported as translation gains and losses in shareholder's equity.

Cash and cash equivalents
Cash and cash equivalents include cash on hand, short-term deposits, certain short-term investments in money market funds and highly liquid debt instruments with a remaining maturity at the date of acquisition of three months or less.

Deferred acquisition costs
The Group incurs costs in connection with acquiring new and renewal reinsurance and insurance business. Some of these costs, which consist primarily of commissions, are deferred as they are directly related to the successful acquisition of such business.

Deferred acquisition costs for short-duration contracts are amortised in proportion to premiums earned. Future investment income is considered in determining the recoverability of deferred acquisition costs for short-duration contracts. Deferred acquisition costs for long-duration contracts are amortised over the life of underlying contracts. Deferred acquisition costs for universal-life and similar products are amortised based on the present value of estimated gross profits. Estimated gross profits are updated quarterly.

Modifications of insurance and reinsurance contracts

The Group accounts for modifications of insurance and reinsurance contracts that result in a substantially unchanged contract as a continuation of the replaced contract. The associated deferred acquisition costs and present value of future profits (PVFP) will continue to be amortised. The Group accounts for modifications of insurance and reinsurance contracts that result in a substantially changed contract as an extinguishment of the replaced contract. The associated deferred acquisition costs or PVFP are written off immediately through income and any new deferrable costs associated with the replacement contract are deferred.

Business combinations

The Group applies the acquisition method of accounting for business combinations. This method allocates the cost of the acquired entity to the assets and liabilities assumed based on their estimated fair values at the date of acquisition.

The underlying assets and liabilities acquired are subsequently accounted for according to the relevant US GAAP guidance. This includes specific requirements applicable to subsequent accounting for assets and liabilities recognised as part of the acquisition method of accounting, including present value of future profits, goodwill and other intangible assets.

Acquired present value of future profits

The acquired present value of future profits (PVFP) of business in force is recorded in connection with the acquisition of life and health business. The initial value is calculated as the difference between established reserves, which are set up in line with US GAAP accounting policies and assumptions of the Group, and their fair value at the acquisition date. The resulting PVFP, which could be positive or negative, is amortised on a constant yield basis over the expected revenue recognition period of the business acquired, generally over periods ranging up to 30 years, with the accrual of interest added to the unamortised balance at the earned rate. Amortisation and accrual of interest are recognised in acquisition costs. The earned rate corresponds to either the current earned rate or the original earned rate depending on the business written. The rate is consistently applied for the entire life of the applicable business. For universal-life and similar products, PVFP is amortised in line with estimated gross profits, which are updated quarterly. The carrying value of PVFP is reviewed periodically for indicators of impairment in value. Adjustments to PVFP reflecting impairment in value are recognised in acquisition costs during the period in which the determination of impairment is made, or in other comprehensive income for shadow loss recognition.

Goodwill

The excess of the purchase price of acquired businesses over the estimated fair value of net assets acquired is recorded as goodwill, which is reviewed periodically for indicators of impairment in value. Adjustments to reflect impairment in value are recognised in earnings in the period in which the determination of impairment is made.

Other assets

Other assets include deferred expenses on retroactive reinsurance, prepaid reinsurance premiums, receivables related to investing activities, real estate for own use, other classes of property, plant and equipment, accrued income, certain intangible assets and prepaid assets.

The excess of estimated liabilities for claims and claim adjustment expenses payable over consideration received in respect of retroactive property and casualty reinsurance contracts is recorded as a deferred expense. The deferred expense on retroactive reinsurance contracts is amortised through earnings over the expected claims-paying period.

Real estate for own use as well as other classes of property, plant and equipment are carried at depreciated cost. Depreciation on buildings is recognised on a straight-line basis over the estimated useful life. Land is recognised at cost and not depreciated.

Capitalised software costs

External direct costs of materials and services incurred to develop or obtain software for internal use, payroll and payroll-related costs for employees directly associated with software development and interest cost incurred while developing software for internal use are capitalised and amortised on a straight-line basis through earnings over the estimated useful life.

Income taxes

Deferred income tax assets and liabilities are recognised based on the difference between financial statement carrying amounts and the corresponding income tax bases of assets and liabilities using enacted income tax rates and laws. A valuation allowance is recorded against deferred tax assets when it is deemed more likely than not that some or all of the deferred tax assets may not be realised.

The Group recognises the effect of income tax positions only if sustaining those positions is more likely than not. Changes in recognition or measurement are reflected in the period in which a change in judgement occurs.

The Group releases stranded tax effects for unrealised gains/losses on AFS securities to earnings on a straight-line basis over the average duration of the relevant AFS portfolio as an approximation of when the individual securities within the portfolio are sold or mature. For adjustment for pension and other post-retirement benefits, stranded tax effects are released to earnings when the relevant pension plan is terminated. For foreign currency translation, stranded tax effects are released to earnings in line with the recycling of the underlying foreign currency translation amounts.

Unpaid claims and claim adjustment expenses
Liabilities for unpaid claims and claim adjustment expenses for property and casualty and life and health insurance and reinsurance contracts are accrued when insured events occur and are based on the estimated ultimate cost of settling the claims, using reports and individual case estimates received from ceding companies. A provision is also included for claims incurred but not reported, which is developed on the basis of past experience adjusted for current trends and other factors that modify past experience. The establishment of the appropriate level of reserves is an inherently uncertain process involving estimates and judgements made by management, and therefore there can be no assurance that ultimate claims and claim adjustment expenses will not exceed the loss reserves currently established. These estimates are regularly reviewed, and adjustments for differences between estimates and actual payments for claims and for changes in estimates are reflected in income in the period in which the estimates are changed or payments are made.

The Group does not discount liabilities arising from prospective property and casualty insurance and reinsurance contracts, including liabilities which are discounted for US statutory reporting purposes. Liabilities arising from property and casualty insurance and reinsurance contracts acquired in a business combination are initially recognised at fair value in accordance with the acquisition method of accounting. The Group does not discount life and health claim reserves except for disability income claims in payment and mortality claims paid out in the form of an annuity. These claims are recognised at the estimated present value of the remaining ultimate net costs of the incurred claims.

Experience features which are directly linked to a reinsurance asset or liability are classified in a manner that is consistent with the presentation of that asset or liability.

Liabilities for life and health policy benefits
Liabilities for life and health policy benefits from reinsurance business are generally calculated using the net level premium method, based on assumptions as to investment yields, mortality, withdrawals, lapses and policyholder dividends. Assumptions are set at the time the contract is issued or, in the case of contracts acquired by purchase, at the purchase date. The assumptions are based on projections from past experience, making allowance for possible adverse deviation. Interest rate assumptions for life and health (re)insurance benefit liabilities are based on estimates of expected investment yields. Assumed mortality rates are generally based on experience multiples applied to the actuarial select and ultimate tables based on industry experience.

Liabilities for life and health policy benefits are increased with a charge to earnings if it is determined that future cash flows, including investment income, are insufficient to cover future benefits and expenses. Where assets backing liabilities for policy benefits are held as AFS, these liabilities for policyholder benefits are increased by a shadow adjustment, with a charge to other comprehensive income, where future cash flows at market rates are insufficient to cover future benefits and expenses.

Policyholder account balances
Policyholder account balances relate to universal-life-type contracts and investment contracts. Universal-life-type contracts are long-duration insurance contracts, providing either death or annuity benefits, with terms that are not fixed and guaranteed. Investment contracts are long-duration contracts that do not incorporate significant insurance risk, ie there is no mortality and morbidity risk, or the mortality and morbidity risk associated with the insurance benefit features offered in the contract is of insignificant amount or remote probability. Amounts received as payment for investment contracts are reported as policyholder account balances. Related assets are included in general account assets except for investments for unit-linked business, which are presented in a separate line item on the face of the balance sheet.

Amounts assessed against policyholders for mortality, administration and surrender are shown as fee income. Amounts credited to policyholders are shown as interest credited to policyholders. Investment income and realised investment gains and losses allocable to policyholders are included in net investment income and net realised investment gains/losses except for unit-linked business which is presented in a separate line item on the face of the income statement. For unit-linked contracts, the investment risk is borne by the policyholder. Additional disclosures are provided in Note 7 "Investments".

Funds held assets and liabilities
On the asset side, funds held by ceding companies consist mainly of amounts retained by the ceding company for business written on a funds withheld basis. In addition, the account also includes amounts arising from the application of the deposit method of accounting to ceded retrocession or reinsurance contracts.

On the liability side, funds held under reinsurance treaties consist mainly of amounts arising from the application of the deposit method of accounting to inward insurance and reinsurance contracts. In addition, the account also includes amounts retained from ceded business written on a funds withheld basis.

Funds withheld assets are assets that would normally be paid to the Group but are withheld by the cedent to reduce a potential credit risk or to retain control over investments. In case of funds withheld liabilities, it is the Group that withholds assets related to ceded business in order to reduce its credit risk or retain control over the investments.

The deposit method of accounting is applied to insurance and reinsurance contracts that do not indemnify the ceding company or the Group against loss or liability relating to insurance risk. Under the deposit method of accounting, the deposit asset or liability is initially measured based on the consideration paid or received. For contracts that transfer neither significant timing nor underwriting risk, and contracts that transfer only significant timing risk, changes in estimates of the timing or amounts of cash flows are accounted for by recalculating the effective yield. The deposit is then adjusted to the amount that would have existed had the new effective yield been applied since the inception of the contract. The revenue and expense recorded for such contracts is included in net investment income. For contracts that transfer only significant underwriting risk, once a loss is incurred, the deposit is adjusted by the present value of the incurred loss. At each subsequent balance sheet date, the portion of the deposit attributable to the incurred loss is recalculated by discounting the estimated future cash flows. The resulting changes in the carrying amount of the deposit are recognised in claims and claim adjustment expenses.

Funds withheld balances are presented together with assets and liabilities arising from the application of the deposit method because of their common deposit-type character.

Shadow adjustments

Shadow adjustments are recognised in other comprehensive income reflecting the offset of adjustments to deferred acquisition costs and PVFP, typically related to universal-life-type contracts, and policyholder liabilities. The purpose is to reflect the fact that certain amounts recorded as unrealised investment gains and losses within shareholder's equity will ultimately accrue to policyholders and not to the shareholder.

Shadow loss recognition testing becomes relevant in low interest rate environments. The test considers whether the hypothetical sale of AFS securities and the reinvestment of proceeds at lower yields would lead to negative operational earnings in future periods, thereby causing a loss recognition event. For shadow loss recognition testing, the Group uses current market yields to determine best estimate US GAAP reserves rather than using locked-in or current book yields. If the unlocked best estimate US GAAP reserves based on current market rates are in excess of reserves based on locked-in or current book yields, a shadow loss recognition reserve is set up. These reserves are recognised in other comprehensive income and do not impact net income. In addition, shadow loss recognition reserves can reverse up to the amount of losses recognised due to past loss events.

Premiums

Property and casualty reinsurance premiums are recorded when written and include an estimate for written premiums receivable at period end. Premiums earned are generally recognised in income over the contract period in proportion to the amount of reinsurance provided. Unearned premiums consist of the unexpired portion of reinsurance provided. Life reinsurance premiums are earned when due. Related policy benefits are recorded in relation to the associated premium or gross profits so that profits are recognised over the expected lives of the contracts.

Life and health reinsurance premiums for group coverages are generally earned over the term of the coverage. For group contracts that allow experience adjustments to premiums, such premiums are recognised as the related experience emerges.

Reinstatement premiums are due where coverage limits for the remaining life of the contract are reinstated under pre-defined contract terms. The recognition of reinstatement premiums as written depends on individual contract features. Reinstatement premiums are either recognised as written at the time a loss event occurs or in line with the recognition pattern of premiums written of the underlying contract. The accrual of reinstatement premiums is based on actuarial estimates of ultimate losses. Reinstatement premiums are generally earned in proportion to the amount of reinsurance provided.

Insurance and reinsurance ceded

The Group uses retrocession arrangements to increase its aggregate underwriting capacity, to diversify its risk and to reduce the risk of catastrophic loss on reinsurance assumed. The ceding of risks to retrocessionaires does not relieve the Group of its obligations to its ceding companies. The Group regularly evaluates the financial condition of its retrocessionaires and monitors the concentration of credit risk to minimise its exposure to financial loss from retrocessionaires' insolvency. Premiums and losses ceded under retrocession contracts are reported as reductions of premiums earned and claims and claim adjustment expenses. Amounts recoverable for ceded short- and long-duration contracts, including universal-life-type and investment contracts, are reported as assets in the accompanying consolidated balance sheet.

The Group provides reserves for uncollectible amounts on reinsurance balances ceded, based on management's assessment of the collectability of the outstanding balances.

Receivables
Premium and claims receivables which have been invoiced are accounted for at face value. Together with assets arising from the application of the deposit method of accounting that meet the definition of financing receivables they are regularly assessed for impairment. Evidence of impairment is the age of the receivable and/or any financial difficulties of the counterparty. Allowances are set up on the net balance, meaning all balances related to the same counterparty are considered. The amount of the allowance is set up in relation to the time a receivable has been due and any financial difficulties of the debtor and can be as high as the outstanding net balance.

Pensions and other post-retirement benefits
The Group accounts for its pension and other post-retirement benefit costs using the accrual method of accounting. Amounts charged to expense are based on periodic actuarial determinations.

Share-based payment transactions
As of 31 December 2019, the Group has a Leadership Performance Plan, restricted shares and a Global Share Participation Plan. The Group accounts for share-based payment transactions with employees using the fair value method. Under the fair value method, the fair value of the awards is recognised in earnings over the vesting period. Total compensation cost for share-based compensation plans recognised in net income was USD 11 million for the year ended 31 December 2019.

For share-based compensation plans which are settled in cash, compensation costs are recognised as liabilities, whereas for equity-settled plans, compensation costs are recognised as an accrual to additional paid-in capital within shareholder's equity. As of 31 December 2019, the accrual for share-based compensation plans in additional paid-in capital was USD 3 million.

Shares in Swiss Re Ltd
Shares in Swiss Re Ltd are reported at cost in shareholder's equity.

Subsequent events
Subsequent events for the current reporting period have been evaluated up to 18 March 2020. This is the date on which the financial statements are available to be issued.

Adoption of new accounting standards
In February 2016, the FASB issued ASU 2016-02 "Leases", which creates topic 842, "Leases". The core principle of topic 842 is that a lessee should recognise the assets and liabilities that arise from leases. A lessee should recognise in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing the right to use the underlying asset for the lease term. This accounting treatment applies to finance leases and operating leases. The accounting applied by a lessor is largely unchanged from that applied under the former lease guidance. The ASU also requires that for qualifying sale-leaseback transactions the seller recognises any gain or loss (based on the estimated fair value of the asset at the time of sale) when control of the asset is transferred instead of amortising it over the lease period. The Group adopted ASU 2016-02 on 1 January 2019 together with the following related ASUs on topic 842, "Leases": ASU 2018-01, ASU 2018-10, ASU 2018-11, ASU 2018-20 and ASU 2019-01. In line with the modified retrospective adoption approach provided by ASU 2018-11"Targeted Improvements", the Group applied the new leases standard to its leases on the adoption date and recognised at the same time a cumulative-effect adjustment to the opening balance of retained earnings. For operating leases, the adoption on 1 January 2019 led to the balance sheet recognition of a lease liability of USD 252 million and a right-of-use asset of USD 228 million, which equals the lease liability adjusted by existing straight-line rent reserve balances. The lease right-of-use asset is included in "other assets" and the lease liability is included in "accrued expensed and other liabilities" on the balance sheet. The Group elected a package of practical expedients under the transition guidance within the new standard, which among other things allowed it to carry forward the historical lease classification of existing leases. The cumulative-effect adjustment to the opening balance of retained earnings of USD 92 million resulted from the release of a deferred profit from past sale-leaseback transactions which was carried in accrued expenses and other liabilities. The deferred profit release can be found in the statement of shareholder's equity. The required new disclosures on leases are provided in Note 11 "Leases".

In March 2017, the FASB issued ASU 2017-08, "Premium Amortization on Purchased Callable Debt Securities'', an update to subtopic 310-20, "Receivables – Nonrefundable Fees and Other Costs''. The update applies to certain purchased callable debt securities held at a premium. The ASU requires that those premiums should be amortised to the earliest call date and not to the maturity date. The Group adopted ASU 2017-08 on a modified retrospective basis on 1 January 2019. The adoption did not have a material impact on the Group's financial statements.

In July 2017, the FASB issued ASU 2017-11, "Accounting for Certain Financial Instruments with Down Round Features'', an update to topic 260, "Earnings Per Share'', topic 480, "Distinguishing Liabilities from Equity'' and topic 815, "Derivatives and Hedging''. A down round feature is a provision in an equity-linked financial instrument (or embedded features) that reduces the exercise price if the entity later sells stock for a lower price or issues an equity-linked instrument with a lower exercise price than the instrument's original exercise price. The amendments in this update change the classification analysis of certain equity-linked financial instruments (or embedded features) with down round features and require that a down round feature no longer precludes equity classification when assessing whether the instrument is indexed to an entity's own stock. The Group adopted ASU 2017-11 on 1 January 2019. The adoption did not have an impact on the Group's financial statements.

In August 2017, the FASB issued ASU 2017-12, "Targeted Improvements to Accounting for Hedging Activities'', an update to topic 815, "Derivatives and Hedging''. The update expands and refines hedge accounting for both nonfinancial and financial risk components and aligns the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. The ASU eliminates the requirement to separately measure and report hedge ineffectiveness and requires the presentation of all items that affect earnings in the same income statement line as the hedged item. The new standard also provides alternatives for applying hedge accounting to additional hedging strategies and for measuring the hedged item in fair value hedges of interest rate risk. Further, the standard reduces the cost and complexity of applying hedge accounting by easing the requirements for effectiveness testing, hedge documentation and application of the critical terms match method. The Group adopted ASU 2017-12 on 1 January 2019. The adoption did not have a material impact on the Group's financial statements. The additional and extended disclosures required by ASU 2017-12 are presented in Note 9 "Derivative financial instruments".

In June 2018, the FASB issued ASU 2018-07, "Improvements to Nonemployee Share-Based Payment Accounting'', an update to topic 718, "Compensation – Stock Compensation''. The update expands the scope of topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. The Group adopted ASU 2018-07 on 1 January 2019. The adoption did not have an impact on the Group's financial statements.

In June 2018, the FASB issued ASU 2018-08, "Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made'', an update to topic 958, "Not-for-Profit Entities''. The amendments in this update clarify and improve the former guidance about whether a transfer of assets (or the reduction, settlement, or cancellation of liabilities) is a contribution or an exchange transaction. The Group adopted ASU 2018-08 on a modified prospective basis on 1 January 2019. The adoption did not have an impact on the Group's financial statements.

In October 2018, the FASB issued ASU 2018-16, "Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes'', an update to topic 815, "Derivatives and Hedging''. The amendments in this update permit the use of the OIS rate based on SOFR as a US benchmark interest rate in order to facilitate the LIBOR to SOFR transition. The Group adopted ASU 2018-16 on 1 January 2019. The adoption did not have an impact on the Group's financial statements.

Future adoption of new accounting standards

In June 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses", an update to topic 326, "Financial Instruments – Credit Losses". ASU 2016-13 replaces the incurred loss impairment methodology in current US GAAP with a methodology that reflects expected credit losses. The standard is applicable to all financial assets such as financial instruments that are measured at amortised cost, available-for-sale debt securities and reinsurance recoverables. The objective of the expected credit loss model is that a reporting entity recognises its estimate of expected credit losses incorporating forward-looking information in a valuation allowance for financial assets in scope. As amended by ASU 2019-10 "Effective Dates", ASU 2016-13 is effective for annual and interim periods beginning after 15 December 2022. For most affected financial assets, the ASU must be adopted using a modified retrospective approach, with a cumulative effect adjustment recorded to opening retained earnings on the adoption date. The Group is currently assessing the impact of the new requirements.

In January 2017, the FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment", an update to topic 350, "Intangibles – Goodwill and Other". This ASU simplifies the subsequent measurement of goodwill and eliminates Step 2 from the goodwill impairment test. In computing the implied fair value of goodwill under Step 2, an entity has to perform procedures to determine the fair value of its assets and liabilities (including unrecognised assets and liabilities) at the impairment testing date following the procedure that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Instead, under the amendments in this update, an entity should perform its regular goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognise an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognised should not exceed the total amount of goodwill allocated to that reporting unit. As amended by ASU 2019-10 "Effective Dates", ASU 2017-04 is effective for goodwill impairment tests in annual and interim periods beginning after 15 December 2022. Early application of the ASU is permitted. The Group is currently assessing the impact of the new requirements.

In August 2018, the FASB issued ASU 2018-12, "Targeted Improvements to the Accounting for Long-Duration Contracts", an update to topic 944, "Financial Services – Insurance". This ASU requires that the cash flows and net premium ratio will be updated for changes in insurance assumptions (eg mortality, morbidity, terminations) when measuring the liability for future policy benefits for nonparticipating traditional and limited-payment insurance and reinsurance contracts. There will no longer be a provision for adverse deviation. In addition, the discount rate used to reflect the time value of money in the calculation of the liability for future policy benefits will be standardised. Further, the ASU requires deferred acquisition costs (DAC) relating to most long-duration contracts to be amortised on a constant basis over the expected term of the contract. As amended by ASU 2019-09 "Effective Date", ASU 2018-12 is effective for annual periods beginning after 15 December 2023, and interim periods beginning after 15 December 2024. Due to the decision of the Board of Directors of SRZ 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 over 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.

Other
Items not allocated to the business segments are included in the "Other" column which encompasses non-core activities. The "Other" column includes mainly certain costs not allocated to the Reinsurance business segments, certain Treasury activities, as well as the remaining non-core activities which have been in run-off since November 2007.

Consolidation
Segment information is presented net of external and internal retrocession and other intra-group arrangements. The Group total is obtained after elimination of intra-group transactions in the "Consolidation" column. This includes significant intra-group reinsurance arrangements, recharge of trademark licence fees and intersegmental funding.

a) Business segments – income statement

For the year ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Consolidation	Total
Revenues					
Gross premiums written	16 545	14 527	110		31 182
Net premiums written	16 098	12 647	1		28 746
Change in unearned premiums	–3	36	–1		32
Premiums earned	16 095	12 683			28 778
Fee income from policyholders		152	2		154
Net investment income – non-participating business	1 380	1 305	48	–132	2 601
Net realised investment gains/losses – non-participating business	–16	347	36		367
Net investment result – unit-linked business		–33			–33
Other revenues	36	1	42	–4	75
Total revenues	17 495	14 455	128	–136	31 942
Expenses					
Claims and claim adjustment expenses	–11 614				–11 614
Life and health benefits		–10 280	–7		–10 287
Return credited to policyholders		–5	–2		–7
Acquisition costs	–4 012	–2 045	28		–6 029
Operating expenses	–1 114	–758	–312	4	–2 180
Total expenses before interest expenses	–16 740	–13 088	–293	4	–30 117
Income/loss before interest and income tax expense/benefit	755	1 367	–165	–132	1 825
Interest expenses	–313	–410	–10	132	–601
Income/loss before income tax expense/benefit	442	957	–175	0	1 224
Income tax expense/benefit	–72	–155	51		–176
Net income/loss before attribution of non-controlling interests	370	802	–124	0	1 048
Income/loss attributable to non-controlling interests			–37		–37
Net income/loss after attribution of non-controlling interests	370	802	–161	0	1 011
Interest on contingent capital instruments, net of tax		–41			–41
Net income/loss attributable to common shareholder	370	761	–161	0	970
Claims ratio in %	72.2				
Expense ratio in %	31.8				
Combined ratio in %	104.0				
Management expense ratio[1] in %		5.4			
Net operating margin[2] in %	4.3	9.4			5.7

[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 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 business".

Business segments – income statement
For the year ended 31 December

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Consolidation	Total
Revenues					
Gross premiums written	21 562	14 452	153	–3	36 164
Net premiums written	20 882	12 734	58		33 674
Change in unearned premiums	–1 607	101	–1		–1 507
Premiums earned	19 275	12 835	57		32 167
Fee income from policyholders		169	1		170
Net investment income – non-participating business	1 419	1 207	–48	–212	2 366
Net realised investment gains/losses – non-participating business	883	628	18		1 529
Net investment result – unit-linked business		118			118
Other revenues	18	4	11		33
Total revenues	**21 595**	**14 961**	**39**	**–212**	**36 383**
Expenses					
Claims and claim adjustment expenses	–14 783		1		–14 782
Life and health benefits		–10 587	–7		–10 594
Return credited to policyholders		–162	–2		–164
Acquisition costs	–4 810	–1 975	–112		–6 897
Operating expenses	–1 189	–746	–352		–2 287
Total expenses before interest expenses	**–20 782**	**–13 470**	**–472**	**0**	**–34 724**
Income/loss before interest and income tax expense/benefit	**813**	**1 491**	**–433**	**–212**	**1 659**
Interest expenses	–352	–445	–10	212	–595
Income/loss before income tax expense/benefit	**461**	**1 046**	**–443**	**0**	**1 064**
Income tax expense/benefit	–65	–147	69		–143
Net income/loss before attribution of non-controlling interests	**396**	**899**	**–374**	**0**	**921**
Income attributable to non-controlling interests			–67		–67
Net income/loss after attribution of non-controlling interests	**396**	**899**	**–441**	**0**	**854**
Interest on contingent capital instruments, net of tax					
Net income/loss attributable to common shareholder	**396**	**899**	**–441**	**0**	**854**
Claims ratio in %	76.7				
Expense ratio in %	31.1				
Combined ratio in %	107.8				
Management expense ratio[1] in %		5.2			
Net operating margin[2] in %	3.8	10.0			4.6

[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 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 business".

Business segments – balance sheet
As of 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Consolidation	Total
Total assets	80 162	61 574	15 850	–13 497	144 089

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Consolidation	Total
Total assets	**89 269**	**67 026**	**14 164**	**–16 064**	**154 395**

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b) Property & Casualty Reinsurance business segment – by line of business
For the year ended 31 December

2018 USD millions	Property	Casualty	Specialty	Unallocated	Total
Revenues					
Gross premiums written	6 403	7 595	2 547		16 545
Net premiums written	6 047	7 548	2 503		16 098
Change in unearned premiums	–18	116	–101		–3
Premiums earned	6 029	7 664	2 402		16 095
Net investment income				1 380	1 380
Net realised investment gains/losses				–16	–16
Other revenues				36	36
Total revenues	6 029	7 664	2 402	1 400	17 495
Expenses					
Claims and claim adjustment expenses	–4 284	–5 860	–1 470		–11 614
Acquisition costs	–1 189	–2 228	–595		–4 012
Operating expenses	–547	–388	–179		–1 114
Total expenses before interest expenses	–6 020	–8 476	–2 244	0	–16 740
Income/loss before interest and income tax expense	9	–812	158	1 400	755
Interest expenses				–313	–313
Income/loss before income tax expense	9	–812	158	1 087	442
Claims ratio in %	71.1	76.5	61.2		72.2
Expense ratio in %	28.8	34.1	32.2		31.8
Combined ratio in %	99.9	110.6	93.4		104.0

Property & Casualty Reinsurance business segment – by line of business

For the year ended 31 December

2019 USD millions	Property	Casualty	Specialty	Unallocated	Total
Revenues					
Gross premiums written	7 927	10 497	3 138		21 562
Net premiums written	7 329	10 452	3 101		20 882
Change in unearned premiums	–122	–1 166	–319		–1 607
Premiums earned	7 207	9 286	2 782		19 275
Net investment income				1 419	1 419
Net realised investment gains/losses				883	883
Other revenues				18	18
Total revenues	**7 207**	**9 286**	**2 782**	**2 320**	**21 595**
Expenses					
Claims and claim adjustment expenses	–5 328	–7 675	–1 780		–14 783
Acquisition costs	–1 365	–2 758	–687		–4 810
Operating expenses	–610	–395	–184		–1 189
Total expenses before interest expenses	**–7 303**	**–10 828**	**–2 651**	**0**	**–20 782**
Income/loss before interest and income tax expense	**–96**	**–1 542**	**131**	**2 320**	**813**
Interest expenses				–352	–352
Income/loss before income tax expense	**–96**	**–1 542**	**131**	**1 968**	**461**
Claims ratio in %	73.9	82.6	64.0		76.7
Expense ratio in %	27.4	34.0	31.3		31.1
Combined ratio in %	101.3	116.6	95.3		107.8

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

For the year ended 31 December

2018 USD millions	Life	Health	Unallocated	Total
Revenues				
Gross premiums written	10 356	4 171		14 527
Net premiums written	8 606	4 041		12 647
Change in unearned premiums	29	7		36
Premiums earned	8 635	4 048		12 683
Fee income from policyholders	152			152
Net investment income – non-participating business	1 001	304		1 305
Net realised investment gains/losses – non-participating business	59	–4	292	347
Net investment result – unit-linked business	–33			–33
Other revenues	1			1
Total revenues	9 815	4 348	292	14 455
Expenses				
Life and health benefits	–7 128	–3 152		–10 280
Return credited to policyholders	–5			–5
Acquisition costs	–1 449	–596		–2 045
Operating expenses	–513	–245		–758
Total expenses before interest expenses	–9 095	–3 993	0	–13 088
Income before interest and income tax expense	720	355	292	1 367
Interest expenses			–410	–410
Income/loss before income tax expense	720	355	–118	957
Management expense ratio[1] in %	5.2	5.6		5.4
Net operating margin[2] in %	7.3	8.2		9.4

[1] Management expense ratio is calculated as "Operating expenses" divided by "Total revenues" excluding "Net realised investment gains/losses – non-participating business" and "Net investment result – unit-linked 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 business".

Life & Health Reinsurance business segment – by line of business

For the year ended 31 December

2019 USD millions	Life	Health	Unallocated	Total
Revenues				
Gross premiums written	10 123	4 329		14 452
Net premiums written	8 522	4 212		12 734
Change in unearned premiums	126	–25		101
Premiums earned	8 648	4 187		12 835
Fee income from policyholders	169			169
Net investment income – non-participating business	912	295		1 207
Net realised investment gains/losses – non-participating business	–24		652	628
Net investment result – unit-linked business	118			118
Other revenues	3	1		4
Total revenues	**9 826**	**4 483**	**652**	**14 961**
Expenses				
Life and health benefits	–7 316	–3 271		–10 587
Return credited to policyholders	–162			–162
Acquisition costs	–1 295	–680		–1 975
Operating expenses	–472	–274		–746
Total expenses before interest expenses	**–9 245**	**–4 225**	**0**	**–13 470**
Income before interest and income tax expense	**581**	**258**	**652**	**1 491**
Interest expenses			–445	–445
Income before income tax expense	**581**	**258**	**207**	**1 046**
Management expense ratio[1] in %	4.8	6.1		5.2
Net operating margin[2] in %	6.0	5.8		10.0

[1] Management expense ratio is calculated as "Operating expenses" divided by "Total revenues" excluding "Net realised investment gains/losses – non-participating business" and "Net investment result – unit-linked 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 business".

d) Gross premiums earned and fee income from policyholders by geography

Gross premiums earned and fee income from policyholders by region for the years ended 31 December

USD millions	2018	2019
Americas	15 033	17 105
Europe (including Middle East and Africa)	9 472	9 749
Asia-Pacific	7 031	8 051
Total	31 536	**34 905**

Gross premiums earned and fee income from policyholders by country for the years ended 31 December

USD millions	2018	2019
United States	12 698	14 813
United Kingdom	2 804	2 886
China	1 611	2 107
Australia	1 920	1 863
Japan	1 423	1 610
Switzerland	1 753	1 392
Germany	1 053	1 113
Canada	1 091	1 064
France	690	819
Republic of Korea	537	705
Israel	396	468
Other	5 560	6 065
Total	31 536	**34 905**

Gross premiums earned and fee income from policyholders are allocated by country, based on the underlying contract.

3 Insurance information

Premiums earned and fees assessed against policyholders

For the years ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Total
Premiums earned, thereof:				
Direct		67		67
Reinsurance	16 601	14 509	108	31 218
Intra-group transactions (assumed and ceded)				0
Premiums earned before retrocession to external parties	16 601	14 576	108	31 285
Retrocession to external parties	–506	–1 893	–108	–2 507
Net premiums earned	16 095	12 683	0	28 778
Fee income from policyholders, thereof:				
Direct				0
Reinsurance		153	98	251
Gross fee income before retrocession to external parties		153	98	251
Retrocession to external parties		–1	–96	–97
Net fee income	0	152	2	154

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Total
Premiums earned, thereof:				
Direct		14	57	71
Reinsurance	19 930	14 548	95	34 573
Intra-group transactions (assumed and ceded)				0
Premiums earned before retrocession to external parties	19 930	14 562	152	34 644
Retrocession to external parties	–655	–1 727	–95	–2 477
Net premiums earned	**19 275**	**12 835**	**57**	**32 167**
Fee income from policyholders, thereof:				
Direct				0
Reinsurance		170	91	261
Gross fee income before retrocession to external parties		170	91	261
Retrocession to external parties		–1	–90	–91
Net fee income	**0**	**169**	**1**	**170**

Claims and claim adjustment expenses
For the year ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Total
Claims paid, thereof:				
Gross claims paid to external parties	–11 122	–11 198	–302	–22 622
Intra-group transactions (assumed and ceded)				0
Claims before receivables from retrocession to external parties	–11 122	–11 198	–302	–22 622
Retrocession to external parties	859	1 658	298	2 815
Net claims paid	–10 263	–9 540	–4	–19 807
Change in unpaid claims and claim adjustment expenses; life and health benefits, thereof:				
Gross – with external parties	–1 202	–758	70	–1 890
Intra-group transactions (assumed and ceded)				0
Unpaid claims and claim adjustment expenses; life and health benefits before impact of retrocession to external parties	–1 202	–758	70	–1 890
Retrocession to external parties	–149	18	–73	–204
Net unpaid claims and claim adjustment expenses; life and health benefits	–1 351	–740	–3	–2 094
Claims and claim adjustment expenses; life and health benefits	–11 614	–10 280	–7	–21 901

Acquisition costs
For the year ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Total
Acquisition costs, thereof:				
Gross acquisition costs with external parties	–4 127	–2 332	–34	–6 493
Intra-group transactions (assumed and ceded)				0
Acquisition costs before impact of retrocession to external parties	–4 127	–2 332	–34	–6 493
Retrocession to external parties	115	287	62	464
Net acquisition costs	–4 012	–2 045	28	–6 029

Claims and claim adjustment expenses

For the year ended 31 December

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Total
Claims paid, thereof:				
Gross claims paid to external parties	–13 224	–10 626	–251	–24 101
Intra-group transactions (assumed and ceded)		–1	1	0
Claims before receivables from retrocession to external parties	–13 224	–10 627	–250	–24 101
Retrocession to external parties	538	1 434	232	2 204
Net claims paid	**–12 686**	**–9 193**	**–18**	**–21 897**
Change in unpaid claims and claim adjustment expenses; life and health benefits, thereof:				
Gross – with external parties	–2 078	–1 418	55	–3 441
Intra-group transactions (assumed and ceded)				0
Unpaid claims and claim adjustment expenses; life and health benefits before impact of retrocession to external parties	–2 078	–1 418	55	–3 441
Retrocession to external parties	–19	24	–43	–38
Net unpaid claims and claim adjustment expenses; life and health benefits	**–2 097**	**–1 394**	**12**	**–3 479**
Claims and claim adjustment expenses; life and health benefits	**–14 783**	**–10 587**	**–6**	**–25 376**

Acquisition costs

For the year ended 31 December

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Total
Acquisition costs, thereof:				
Gross acquisition costs with external parties	–4 934	–2 204	–78	–7 216
Intra-group transactions (assumed and ceded)		–2	2	0
Acquisition costs before impact of retrocession to external parties	–4 934	–2 206	–76	–7 216
Retrocession to external parties	124	231	–36	319
Net acquisition costs	**–4 810**	**–1 975**	**–112**	**–6 897**

Reinsurance assets and liabilities

The reinsurance assets and liabilities as of 31 December were as follows:

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Consolidation	Total
Assets					
Reinsurance recoverable on unpaid claims and policy benefits	2 345	4 359	6 046	–10	12 740
Deferred acquisition costs	2 156	4 784			6 940
Liabilities					
Unpaid claims and claim adjustment expenses	45 659	12 192	811	–10	58 652
Liabilities for life and health policy benefits		17 888	1 081		18 969
Policyholder account balances		1 356	4 218		5 574

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Consolidation	Total
Assets					
Reinsurance recoverable on unpaid claims and policy benefits	2 325	4 887	5 322	–14	12 520
Deferred acquisition costs	2 613	4 529	25		7 167
Liabilities					
Unpaid claims and claim adjustment expenses	49 963	13 094	808	–13	63 852
Liabilities for life and health policy benefits		20 679	587		21 266
Policyholder account balances		1 401	4 004		5 405

Reinsurance recoverable on unpaid claims and policy benefits

As of 31 December 2018 and 2019, the Group had a reinsurance recoverable of USD 12 740 million and USD 12 520 million, respectively. The concentration of credit risk is regularly monitored and evaluated. The reinsurance programme with Berkshire Hathaway and subsidiaries accounted for 23% and 7% of the Group's reinsurance recoverable as of year-end 2018 and 2019, respectively.

The Group cedes certain re/insurance contracts to affiliated companies within the Swiss Re Group, but outside of the Group (please refer to Note 14).

Reinsurance receivables

Reinsurance receivables as of 31 December were as follows:

USD millions	2018	**2019**
Premium receivables invoiced	2 275	3 187
Receivables invoiced from ceded re/insurance business	466	536
Assets arising from the application of the deposit method of accounting and meeting the definition of financing receivables	120	246
Recognised allowance	–23	–29

4 Premiums written

For the years ended 31 December

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Consolidation	Total
Gross premiums written, thereof:					
Direct		67			67
Reinsurance	16 545	14 460	110		31 115
Intra-group transactions (assumed)					0
Gross premiums written	16 545	14 527	110		31 182
Intra-group transactions (ceded)					0
Gross premiums written before retrocession to external parties	16 545	14 527	110		31 182
Retrocession to external parties	–447	–1 880	–109		–2 436
Net premiums written	16 098	12 647	1	0	28 746

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Consolidation	Total
Gross premiums written, thereof:					
Direct		14	57		71
Reinsurance	21 562	14 438	96	–3	36 093
Intra-group transactions (assumed)					0
Gross premiums written	21 562	14 452	153	–3	36 164
Intra-group transactions (ceded)					0
Gross premiums written before retrocession to external parties	21 562	14 452	153	–3	36 164
Retrocession to external parties	–680	–1 718	–95	3	–2 490
Net premiums written	**20 882**	**12 734**	**58**	**0**	**33 674**

5 Unpaid claims and claim adjustment expenses

A reconciliation of the opening and closing reserve balances for unpaid claims and claim adjustment expenses for the years ended 31 December is presented as follows:

USD millions	2018	2019
Balance as of 1 January	58 221	58 652
Reinsurance recoverable	–4 017	–3 773
Deferred expense on retroactive reinsurance	–240	–169
Net balance as of 1 January	53 964	**54 710**
Incurred related to:		
Current year	21 809	23 652
Prior year	–341	1 065
Amortisation of deferred expense on retroactive reinsurance and impact of commutations	–41	–123
Total incurred	21 427	**24 594**
Paid related to:		
Current year	–6 421	–6 886
Prior year	–13 386	–15 011
Total paid	–19 807	**–21 897**
Foreign exchange	–1 598	141
Effect of acquisitions, disposals, new retroactive reinsurance and other items	724	2 361
Net balance as of period end	54 710	**59 909**
Reinsurance recoverable	3 773	3 775
Deferred expense on retroactive reinsurance	169	168
Balance as of period end	58 652	**63 852**

Prior-year development

Non-life claims development in the year ended 31 December 2019 on prior years is mainly due to adverse development for Casualty impacted by large man-made losses predominantly in the US. Property was also impacted by adverse development on 2018 natural catastrophe events in Asia and on large man-made losses, offset by favourable development on natural catastrophe events in North America. Specialty was impacted by favourable development from natural catastrophe events in the US for the marine line of business.

For life and health lines of business, claims development on prior year business was mainly driven by adverse development for the disability portfolio in Australia, Continental Europe and the US. This was partly offset by positive experience in other regions and lines of business including Canada, Asia, and the UK. Claims development related to prior years for the disability portfolio also includes an element of interest accretion for unpaid claims reported at an estimated present value. Unfavourable claims development for the Australia group disability portfolio is offset by a reduction in profit share reserve.

A summary of prior-year net claims and claim adjustment expenses development by lines of business for the years ended 31 December is shown below[1]:

USD millions	2018	**2019**
Line of business:		
Property	–437	76
Casualty	241	621
Specialty	–288	–89
Life and health	143	457
Total	–341	**1 065**

[1] Adverse development is shown as positive numbers, and represents a charge to the income statement. Favourable development is shown as negative, and represents a credit to the income statement.

US asbestos and environmental claims exposure

The Group's obligation for claims payments and claims settlement charges also includes obligations for long-latent injury claims arising out of policies written prior to 1986 as well as out of such business acquired subsequently through reinsurance arrangements to other Swiss Re Group Companies, in particular in the area of US asbestos and environmental liability.

At the end of 2019, the Group carried net reserves for US asbestos and environmental liabilities equal to USD 1 418 million. During 2019, the Group incurred net losses of USD 35 million and net paid of USD 251 million in relation to these liabilities.

The net paid losses include a settlement of USD 152 million for late asbestos and environmental reported claims presented by one cedent in Q2 2019.

Estimating ultimate asbestos and environmental liabilities is particularly complex for a number of reasons, relating in part to the long period between exposure and manifestation of claims and in part to other factors, which include risks and lack of predictability inherent in complex litigation, changes in projected costs to resolve and in the projected number of asbestos and environmental claims, the effect of bankruptcy protection, insolvencies and changes in the legal, legislative and regulatory environment. As a result, the Group believes that projection of exposures for asbestos and environmental claims is subject to far less predictability relative to non-environmental and non-asbestos exposures. Management believes that its reserves for asbestos and environmental claims are appropriately established based upon known facts and the current state of the law. However, reserves are subject to revision as new information becomes available and as claims develop. Additional liabilities may arise for amounts in excess of reserves, and the Group's estimate of claims and claim adjustment expenses may change. Any such additional liabilities or increases in estimates cannot be reasonably estimated in advance but could result in charges that could be material to operating results.

Short duration contract unpaid claims and claim adjustment expenses

Basis of presentation for claims development information

This section of the note provides claims development information on an accident year basis.

Claims development information and information on reserves for claims relating to insured events that have occurred but have not yet been reported or not enough reported ("IBNR") are generally presented by line of business for individually significant categories. Starting from a line of business split, additional aggregation or disaggregation is provided where appropriate, necessary and practicable ("disaggregation categories"). For instance, Reinsurance liability and motor lines of business are further disaggregated into proportional and non-proportional treaty types to provide more specific information on claims development, whereas specialty is shown as one distinct category.

In the Property & Casualty Reinsurance segment, all contracts that transfer significant insurance risk are included in scope to the extent they can be allocated to a disaggregation category. For many reinsurance contracts, proportional contracts in particular, ceding companies do not report losses by accident year. In these cases, the Group has allocated reported losses by underwriting year to accident year to produce the accident year tables. Similarly, IBNR is calculated on an underwriting year basis and then the liabilities are allocated to accident year.

In the Life & Health Reinsurance segment, contracts classified as short duration include group life business, certain types of disability and long-term care contracts, group accident, health coverage including critical illness and medical expenses. The Group provides claims development information for Life & Health Reinsurance where reported accident year information is available and there is potential for claims development. This primarily applies to the Group's disability lines classified as short duration. This business is generally considered to have relatively higher claims estimation uncertainty than other life and health lines such as group life, due to longer claims development periods.

Amounts shown in the claims development tables are net of external retrocession and retrocession between business segments to the extent a retrocession program can be allocated to a disaggregation category. Ceded retroactive reinsurance is not included in the claims development table if it cannot be allocated on a reasonable basis to the disaggregation categories used to present claims development information.

Claims development information and information on IBNR reserves are shown on a nominal basis, also for cases where the Group discounts claims liabilities for measurement under US GAAP. Information is shown per accident year and by reporting period.

For Property & Casualty Reinsurance and for Life & Health Reinsurance long-tail, the Group discloses data for ten accident years and reporting periods.

The current reporting period estimate of net claims liabilities for accident years older than the number of years shown in the claims development tables is presented as a total after disclosure of cumulative paid claims.

The information presented in claims development tables is presented at current balance sheet foreign exchange rates as of the date of these financial statements to permit an analysis of claims development excluding the impact of foreign exchange movements.

Some of the information provided in the following tables, is Required Supplementary Information (RSI) under US GAAP. Therefore it does not form part of these consolidated audited financial statements. Claims development information for all periods except the current reporting period and any information derived from it – including average annual percentage payout of claims incurred – is considered RSI and is identified as RSI in the tables presented.

Methodology for determining the presented amounts of liabilities for IBNR claims
The liability for unpaid claims and claim adjustment expenses is based on an estimate of the ultimate cost of settling the claims based on both information reported to us by ceding companies and internal estimates.

Non-life re/insurance contracts
For reinsurance business, cedents report their case reserves and their estimated IBNR to the Group. The Group develops and recognises its own estimate of IBNR claims, which includes circumstances in which the cedent has not reported any claims to the Group or where the Group's estimate of reserves needed to cover reported claims differs from the amounts reported by cedents. For reinsurance business, case reserves and estimated IBNR reported by cedents to the Group have been accounted for as case reserves in previous years. IBNR reported by cedents are presented together with the Group's own estimate of IBNR as IBNR in the claims development tables. Reserving for insurance business is performed similarly, except that the Group estimates case reserves as well. Reserving is done on portfolio or contract level depending on the features of the contract:

For business reviewed on a portfolio level, the expected ultimate losses are set for most lines and types of business based on analysis performed using standard actuarial techniques. In general, contracts are aggregated into portfolios by combining contracts with similar features.

In most cases, these standard actuarial techniques encompass a number of loss development factor techniques applied to claim tables of paid and reported losses. Other actuarial techniques may be applicable to specific categories. For instance, the analysis of frequency and severity could be applied in all disaggregation categories. Life contingency techniques for projecting regular payments related to bodily injury claims are applied to motor proportional, motor non-proportional, liability proportional, liability non-proportional and accident and health. In some cases, techniques specific to the projection of future payments for specific risks such as asbestos or pollution claims are applied to both proportional and non-proportional liability claims (see also separate section "US asbestos and environmental claims exposure" on page 38).

Contract-level reserving is based on standard actuarial techniques but requires more detailed contract, pricing, claim and exposure information than required for the business reviewed on a portfolio level.

In addition, the following applies to all non-life re/insurance business:

- For the most recent underwriting years, reliance may be made on the Group's costing and underwriting functions for the initial estimates of claims, although the initial reserving estimates may differ from these pricing estimates if there is good reason to believe losses are likely to emerge higher or lower, and in light of the limited claims experience to date. Reviews of those initial estimates are performed regularly, forming a basis for adjustments on both the current and prior underwriting years.

- The reserving process considers any information available in respect of either a specific case or a large loss event and the impact of any unusual features in the technical accounting of information provided by cedents.

Life and health re/insurance contracts
For the Life & Health Reinsurance long tail business, the liability for IBNR claims includes provision for "not yet reported claims" expected to have been incurred in respect of both already processed and not yet processed reinsurance accounts and generally includes provisions for the cost of claims on disability contracts that currently are within their deferred period. The IBNR reserving calculations have been made using appropriate techniques, such as chain ladder and/or Bornhuetter-Ferguson approaches, depending upon the level of detail available and the assumed level of development of the claim. For certain lines of business, IBNR claims reserves include reported but not admitted claims, allowing for expected rates of decline for these claims.

Claims frequency information
Claims frequency information is not available for the disaggregation categories of Property & Casualty Reinsurance, as cedents do not report claims frequency information to the Group for most of the assumed reinsurance contract types. These contracts are to be found in all disaggregation categories presented.

Life & Health Reinsurance reports claims frequency information based on individual incidence. The number of reported claims is the actual number of claims booked. For Group income protection business, claims with multiple payments in a year are counted as one claim with the corresponding amount annualised. Claims that are reported but not admitted are included in the claim count.

Property & Casualty Reinsurance – Property

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	*2 494*	*2 447*	*2 317*	*2 337*	*2 422*	*2 464*	*2 572*	*2 544*	*2 504*	2 482	9
2011		*4 311*	*4 372*	*4 187*	*4 242*	*4 195*	*4 190*	*4 208*	*4 245*	4 247	12
2012			*2 683*	*2 512*	*2 311*	*2 269*	*2 240*	*2 225*	*2 225*	2 219	4
2013				*3 111*	*3 128*	*2 954*	*2 870*	*2 846*	*2 831*	2 826	0
2014					*2 719*	*2 562*	*2 383*	*2 351*	*2 348*	2 335	4
2015						*2 817*	*2 753*	*2 579*	*2 548*	2 508	31
2016							*3 901*	*3 632*	*3 333*	3 327	47
2017								*6 024*	*5 929*	5 692	66
2018	*RSI*								*4 648*	5 110	392
2019										5 166	2 553
Total										**35 912**	**3 118**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	*381*	*1 494*	*1 785*	*1 895*	*2 090*	*2 242*	*2 385*	*2 428*	*2 442*	2 450
2011		*673*	*2 407*	*3 215*	*3 654*	*3 938*	*4 039*	*4 159*	*4 182*	4 196
2012			*236*	*1 584*	*1 971*	*2 090*	*2 133*	*2 152*	*2 164*	2 172
2013				*537*	*1 988*	*2 489*	*2 682*	*2 741*	*2 762*	2 778
2014					*462*	*1 702*	*2 081*	*2 208*	*2 253*	2 269
2015						*465*	*1 646*	*2 160*	*2 325*	2 401
2016							*637*	*2 211*	*2 840*	3 051
2017								*978*	*3 666*	4 754
2018	*RSI*								*631*	3 443
2019										915
Total										**28 429**
All liabilities before 2010										170
Liabilities for claims and claim adjustment expenses, net of reinsurance										**7 653**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Property (RSI)	*16.6%*	*49.7%*	*17.6%*	*6.5%*	*3.9%*	*2.2%*	*2.4%*	*0.9%*	*0.4%*	*0.3%*

The liability for unpaid claims and claim adjustment expenses for Property in Property & Casualty Reinsurance shows positive development on most recent accident years. Claims in accident year 2011 were at a high level due to several large natural catastrophes including the earthquake and tsunami in Japan, the earthquakes in Christchurch, New Zealand, and floods in Thailand. The 2017 accident year claims incurred are higher due to natural catastrophes, mainly stemming from cyclone Debbie, hurricanes Harvey, Irma and Maria in the Americas, the two earthquakes in Mexico and the wildfires in California. The 2018 to 2019 accident year claims incurred are lower than 2017 but include a higher level of natural catastrophes than 2012 to 2016.

Property & Casualty Reinsurance – Liability, proportional

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	thereof IBNR
2010	836	982	922	902	898	901	890	856	832	837	69
2011		640	697	721	668	626	622	596	590	589	62
2012			518	602	558	530	502	511	502	516	61
2013				727	749	757	752	756	746	745	108
2014					993	984	997	986	975	1 010	223
2015						1 260	1 309	1 400	1 473	1 546	390
2016							1 705	1 714	1 712	1 815	750
2017								1 960	2 069	2 210	1 177
2018	RSI								1 894	2 071	1 459
2019										2 703	2 331
Total										**14 042**	**6 630**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2010	29	159	318	409	517	612	662	693	713	732
2011		3	108	181	250	336	382	416	439	461
2012			13	115	181	240	294	352	387	423
2013				14	126	232	347	429	504	558
2014					23	157	291	429	565	660
2015						34	209	423	652	902
2016							46	101	396	662
2017								50	251	542
2018	RSI								52	309
2019										83
Total										**5 332**
All liabilities before 2010										1 117
Liabilities for claims and claim adjustment expenses, net of reinsurance										**9 827**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Liability, proportional (RSI)	2.3%	13.0%	14.4%	13.2%	13.1%	10.0%	6.5%	4.9%	3.1%	2.2%

The increase in the incurred losses for accident years 2013 to 2019 is driven by volume increases of business being written. The increases in the incurred losses in reporting year 2019 for accident years 2015 to 2018 are driven by US business.

In line with the Group's policy, cash flows under loss portfolio transfers are reported through claims paid. For longer-tailed lines and depending on the business volume written, timing of cash flows can lead to net inward payments across the whole portfolio in the first development year of the contract for some accident years.

Property & Casualty Reinsurance – Liability, non-proportional

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	*526*	*440*	*405*	*380*	*359*	*338*	*329*	*314*	*318*	312	31
2011		*403*	*432*	*469*	*428*	*384*	*351*	*344*	*329*	331	42
2012			*329*	*347*	*307*	*279*	*258*	*248*	*225*	220	49
2013				*409*	*390*	*354*	*299*	*274*	*252*	253	67
2014					*434*	*439*	*407*	*364*	*336*	355	118
2015						*1 806*	*1 846*	*1 815*	*1 832*	1 857	154
2016							*585*	*568*	*594*	641	175
2017								*491*	*508*	591	219
2018	*RSI*								*449*	452	298
2019										2 412	580
Total										**7 424**	**1 733**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	*1*	*12*	*36*	*53*	*88*	*106*	*125*	*149*	*157*	166
2011		*1*	*10*	*65*	*111*	*138*	*145*	*158*	*172*	189
2012			*–4*	*11*	*35*	*53*	*84*	*99*	*113*	128
2013				*–2*	*11*	*37*	*59*	*83*	*108*	132
2014					*–2*	*8*	*40*	*71*	*99*	141
2015						*0*	*92*	*199*	*329*	480
2016							*13*	*208*	*233*	285
2017								*–2*	*18*	47
2018	*RSI*								*–1*	21
2019										209
Total										**1 798**
All liabilities before 2010										4 063
Liabilities for claims and claim adjustment expenses, net of reinsurance										**9 689**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Liability, non-proportional (RSI)	*0.8%*	*7.1%*	*8.7%*	*8.6%*	*9.8%*	*7.3%*	*6.5%*	*6.2%*	*3.9%*	*3.0%*

The increase in incurred losses for accident year 2015 compared to other years is due to an increase in volume of business written in that year. Accident year 2019 includes an Adverse Development Cover and a Loss Portfolio Transfer written with Swiss Re Corporate Solutions Ltd. Liabilities before 2010 include reserves for historic US asbestos and environmental losses.

In line with the Group's policy, cash flows under loss portfolio transfers are reported through claims paid. For longer-tailed lines and depending on the business volume written, timing of cash flows can lead to net inward payments across the whole portfolio in the first development year of the contract for some accident years.

Property & Casualty Reinsurance – Accident & Health

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	*273*	*225*	*231*	*219*	*216*	*218*	*211*	*206*	*201*	200	22
2011		*228*	*248*	*244*	*236*	*239*	*233*	*233*	*229*	228	26
2012			*321*	*331*	*316*	*306*	*303*	*297*	*295*	290	29
2013				*342*	*349*	*336*	*326*	*318*	*316*	311	44
2014					*300*	*334*	*326*	*314*	*304*	302	56
2015						*432*	*430*	*408*	*398*	389	64
2016							*590*	*625*	*620*	584	141
2017								*731*	*765*	726	238
2018	*RSI*								*722*	810	249
2019										799	476
Total										**4 639**	**1 345**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	*25*	*84*	*115*	*130*	*138*	*145*	*148*	*156*	*158*	160
2011		*48*	*120*	*141*	*152*	*161*	*165*	*174*	*177*	180
2012			*76*	*174*	*200*	*216*	*226*	*235*	*239*	243
2013				*53*	*137*	*177*	*200*	*214*	*221*	228
2014					*30*	*102*	*144*	*171*	*189*	205
2015						*61*	*136*	*189*	*221*	240
2016							*73*	*177*	*269*	325
2017								*95*	*232*	331
2018	*RSI*								*97*	311
2019										111
Total										**2 334**
All liabilities before 2010										3 164
Liabilities for claims and claim adjustment expenses, net of reinsurance										**5 469**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Accident & Health (RSI)	*15.4%*	*25.3%*	*13.0%*	*7.4%*	*4.4%*	*3.2%*	*2.3%*	*2.0%*	*1.2%*	*1.4%*

The increase in incurred losses from accident year 2015 onwards is due to an increase in the volume of workers' compensation written on a proportional basis. The 2010 and prior accident years include the run-off of business written by entities acquired as part of the acquisition of General Electric Insurance Solutions during 2006. This business which generally had a longer payment pattern was not renewed.

Property & Casualty Reinsurance – Motor, proportional

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	585	646	686	692	690	692	691	690	690	690	0
2011		989	983	954	911	913	912	911	902	905	–18
2012			1 467	1 457	1 440	1 429	1 420	1 418	1 415	1 415	22
2013				1 536	1 511	1 517	1 491	1 485	1 480	1 480	10
2014					1 975	1 939	1 938	1 922	1 912	1 910	–4
2015						1 902	1 902	1 906	1 910	1 910	10
2016							2 475	2 592	2 642	2 644	63
2017								2 366	2 385	2 371	216
2018	RSI								2 026	2 061	393
2019										2 024	1 088
Total										**17 410**	**1 780**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	197	449	533	569	646	655	664	669	671	673
2011		263	662	842	875	893	903	910	913	916
2012			468	1 089	1 247	1 296	1 327	1 347	1 360	1 369
2013				566	1 156	1 336	1 382	1 412	1 427	1 436
2014					731	1 453	1 696	1 773	1 808	1 828
2015						788	1 428	1 669	1 770	1 814
2016							818	1 811	2 158	2 338
2017								753	1 515	1 847
2018	RSI								619	1 326
2019										651
Total										**14 198**
All liabilities before 2010										311
Liabilities for claims and claim adjustment expenses, net of reinsurance										**3 523**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Motor, proportional (RSI)	33.3%	37.7%	13.5%	4.5%	3.6%	1.2%	0.9%	0.5%	0.3%	0.2%

The increase in the incurred losses from accident years 2010 to 2016 is driven by new business volume across all regions. Proportional motor business includes both longer-tailed liability business and shorter-tailed hull business.

The negative IBNRs are due to overstated case reserves, mainly on the German business, and accident year 2011 includes the effects of an outwards proportional contract on inwards non-proportional business.

Property & Casualty Reinsurance – Motor, non-proportional

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	*324*	*288*	*283*	*269*	*262*	*254*	*246*	*242*	*244*	244	31
2011		*406*	*444*	*429*	*427*	*412*	*405*	*393*	*420*	412	105
2012			*335*	*352*	*331*	*316*	*317*	*300*	*309*	304	58
2013				*433*	*455*	*458*	*441*	*427*	*432*	432	62
2014					*408*	*441*	*437*	*435*	*429*	408	72
2015						*388*	*411*	*446*	*442*	455	96
2016							*471*	*588*	*551*	545	154
2017								*580*	*611*	599	210
2018	*RSI*								*492*	532	260
2019										1 190	434
Total										**5 121**	**1 482**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	*5*	*22*	*48*	*67*	*83*	*100*	*113*	*120*	*130*	138
2011		*-10*	*20*	*56*	*80*	*104*	*118*	*134*	*144*	151
2012			*2*	*25*	*50*	*85*	*111*	*137*	*158*	170
2013				*7*	*84*	*148*	*193*	*219*	*246*	261
2014					*4*	*60*	*104*	*143*	*187*	217
2015						*–1*	*33*	*92*	*157*	203
2016							*8*	*65*	*126*	181
2017								*9*	*59*	126
2018	*RSI*								*4*	36
2019										91
Total										**1 574**
All liabilities before 2010										2 802
Liabilities for claims and claim adjustment expenses, net of reinsurance										**6 349**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Motor, non-proportional (RSI)	*1.4%*	*9.5%*	*11.1%*	*9.9%*	*8.0%*	*6.5%*	*4.9%*	*3.1%*	*2.9%*	*3.4%*

Claims development in non-proportional motor business is considered long-tailed as it is dominated by liability exposures leading to bodily injury claims which pay out for the lifetime of the claimant.

For accident year 2011, negative claims paid in the first year are due to the commutation of an external retrocession on acquired retroactive business and the increase in incurred losses for accident year 2019 compared to other years is due to an increase in volume of business written.

In line with the Group's policy, cash flows under loss portfolio transfers are reported through claims paid. For longer-tailed lines and depending on the business volume written, timing of cash flows can lead to net inward payments across the whole portfolio in the first development year of the contract for some accident years.

Property & Casualty Reinsurance – Specialty

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	**thereof IBNR**
2010	*1 219*	*1 231*	*1 176*	*1 151*	*1 131*	*1 100*	*1 079*	*1 080*	*1 071*	1 081	27
2011		*1 285*	*1 276*	*1 190*	*1 107*	*1 152*	*1 148*	*1 164*	*1 146*	1 144	4
2012			*940*	*1 000*	*1 021*	*1 002*	*1 002*	*990*	*987*	982	11
2013				*1 086*	*1 013*	*973*	*938*	*928*	*906*	894	21
2014					*1 098*	*1 090*	*990*	*964*	*950*	954	36
2015						*1 232*	*1 212*	*1 197*	*1 189*	1 187	61
2016							*1 280*	*1 268*	*1 222*	1 226	148
2017								*1 608*	*1 531*	1 400	229
2018	*RSI*								*1 641*	1 730	707
2019										1 745	1 084
Total										**12 343**	**2 328**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year									
Accident year	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
2010	*195*	*462*	*653*	*752*	*829*	*944*	*965*	*983*	*995*	1 006
2011		*165*	*559*	*775*	*877*	*927*	*963*	*1 027*	*1 049*	1 065
2012			*125*	*441*	*675*	*765*	*821*	*863*	*897*	916
2013				*147*	*415*	*597*	*706*	*760*	*796*	819
2014					*172*	*406*	*586*	*683*	*739*	778
2015						*134*	*385*	*688*	*848*	951
2016							*142*	*475*	*718*	886
2017								*181*	*579*	859
2018	*RSI*								*184*	646
2019										276
Total										**8 202**
All liabilities before 2010										635
Liabilities for claims and claim adjustment expenses, net of reinsurance										**4 776**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Specialty (RSI)	*14.2%*	*27.7%*	*20.6%*	*11.0%*	*6.3%*	*5.2%*	*3.4%*	*1.8%*	*1.3%*	*1.0%*

This category contains several individual large losses on marine, aviation and space lines, including the Costa Concordia event in accident year 2012. The 2017 accident year claims incurred is higher due to natural catastrophes mainly stemming from hurricanes Harvey, Irma and Maria in the Americas which have reduced in reporting year 2019.

Life & Health Reinsurance, long tail

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions / Accident year	Reporting year 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	thereof IBNR	Cumulative number of reported claims (in nominals)
2010	*184*	*186*	*181*	*204*	*205*	*216*	*191*	*188*	*190*	195	24	4 827
2011		*210*	*219*	*277*	*289*	*302*	*281*	*275*	*276*	282	31	6 801
2012			*260*	*347*	*350*	*374*	*339*	*341*	*338*	352	30	9 300
2013				*468*	*461*	*458*	*424*	*422*	*424*	447	36	11 881
2014					*458*	*418*	*398*	*400*	*422*	445	44	13 736
2015						*392*	*425*	*411*	*412*	441	51	16 395
2016							*412*	*428*	*414*	443	101	13 571
2017								*420*	*426*	447	149	15 348
2018	*RSI*								*391*	422	182	13 060
2019										363	248	4 914
Total										**3 837**	**896**	**109 833**

Cumulative claims paid and allocated claim adjustment expenses, net of reinsurance

USD millions / Accident year	Reporting year 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2010	*8*	*39*	*61*	*78*	*91*	*102*	*111*	*120*	*125*	131
2011		*18*	*59*	*96*	*120*	*140*	*160*	*175*	*188*	198
2012			*26*	*84*	*134*	*171*	*203*	*224*	*242*	258
2013				*36*	*117*	*178*	*236*	*276*	*301*	323
2014					*31*	*104*	*190*	*250*	*285*	312
2015						*34*	*102*	*181*	*229*	266
2016							*13*	*83*	*152*	204
2017								*11*	*72*	156
2018	*RSI*								*11*	71
2019										12
Total										**1 931**
All liabilities before 2010										263
Liabilities for claims and claim adjustment expenses, net of reinsurance										**2 169**

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	1	2	3	4	5	6	7	8	9	10
Life & Health Reinsurance, long tail (RSI)	*5.2%*	*15.6%*	*15.5%*	*11.0%*	*7.9%*	*6.1%*	*5.0%*	*4.5%*	*3.3%*	*3.0%*

In the reporting year 2013, the Group significantly strengthened IBNR claims liabilities in Australia for some lines of business. In addition, for 2013 and 2014 the effect of business volume increases is discernible as well. The decrease in incurred losses for accident year 2019 is due to the lower volume of business being written in Australia.

Reconciliation of gross liability for unpaid claims and claim adjustment expenses
The following table reconciles the Group's net outstanding liabilities to the gross liabilities for unpaid claims and claim adjustment expenses.

The net outstanding liabilities correspond to the total liabilities for unpaid claims and claim adjustment expenses, net of reinsurance for each disaggregation category.

Other short duration contract lines includes reserves for business that is not material to the Group and where accident year information is not available. For Life & Health Reinsurance, in certain markets, cedents do not provide sufficient information to reinsurers to split claims incurred and claims paid by accident year. This is based on existing market practice. For these markets, an assessment of available information from other sources was made along with investigating approximations that could be used to provide claims development information by accident year. However, these alternate sources and estimates, based on currently available data and methods, could not be used to generate meaningful and representative accident year information and therefore have been excluded from disclosure. Other short duration contract lines also contain other treaties from Property & Casualty Reinsurance which could not be allocated on a consistent basis to disaggregation categories or specific accident years.

For details on consolidation please refer to Note 2.

For the year ended 31 December

USD millions	2019
Net outstanding liabilities	
Property & Casualty Reinsurance	
Property	7 653
Liability, proportional	9 827
Liability, non-proportional	9 689
Accident & Health	5 469
Motor, proportional	3 523
Motor, non-proportional	6 349
Specialty	4 776
Life & Health Reinsurance, long tail	2 169
Total net undiscounted outstanding liabilities excluding other short duration contract lines and before unallocated reinsurance recoverable	49 455
Discounting impact on (Life & Health Reinsurance) short duration contracts	–305
Impact of acquisition accounting	–398
Total net discounted outstanding liabilities excluding other short duration contract lines and before unallocated reinsurance recoverable	48 752
Other short duration contract lines	1 714
Total net discounted outstanding short duration liabilities	**50 466**
Allocated reinsurance recoverables on unpaid claims:	
Property & Casualty Reinsurance	
Property	674
Liability, proportional	289
Liability, non-proportional	235
Accident & Health	216
Motor, proportional	65
Motor, non-proportional	224
Specialty	551
Impact of acquisition accounting	–82
Other short duration contract lines	179
Total short duration reinsurance recoverable on outstanding liabilities	**2 351**
Exclusions:	
Unallocated claim adjustment expenses	663
Long duration contracts	10 372
Total other reconciling items	**11 035**
Total unpaid claims and claim adjustment expenses	**63 852**

Discounting information

The following disclosure covers the discounting impact for the disaggregation categories included in the claims development information. Discounting information for Life & Health Reinsurance long tail as of 31 December was as follows:

USD millions	2018	**2019**
Carrying amount of discounted claims	1 223	1 318
Aggregate amount of the discount	–291	–305
Interest accretion[1]	35	28
Range of interest rates	3.0–3.6%	3.0–3.4%

[1] Interest accretion is shown as part of "Life and health benefits" in the income statement.

Please refer to Note 1 for more details about the Group's discounting approach for unpaid claims and claim adjustment expenses.

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

As of 31 December, the DAC were as follows:

2018 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Total
Opening balance as of 1 January	2 146	4 234	0	6 380
Deferred	4 048	1 235		5 283
Amortisation	–4 012	–496		–4 508
Effect of foreign currency translation and other changes	–26	–189		–215
Closing balance	2 156	4 784	0	6 940

2019 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Other	Total
Opening balance as of 1 January	2 156	4 784	0	6 940
Deferred	5 269	434	7	5 710
Effect of acquisitions/disposals and retrocessions		–256	38	–218
Amortisation	–4 809	–445	–19	–5 273
Effect of foreign currency translation and other changes	–3	12	–1	8
Closing balance	**2 613**	**4 529**	**25**	**7 167**

Retroceded DAC may arise on retrocession of reinsurance portfolios, including reinsurance undertaken as part of a securitisation. The associated potential retrocession recoveries are determined by the nature of the retrocession agreements and by the terms of the securitisation.

As of 31 December, the PVFP was as follows:

			2018			**2019**
USD millions	Life & Health Reinsurance	Other	Total	Life & Health Reinsurance	Other	Total
Opening balance as of 1 January	921	16	937	804	38	842
Effect of acquisitions/disposals and retrocessions[1]			0	–161	15	–146
Amortisation	–140	5	–135	–108	3	–105
Interest accrued on unamortised PVFP	45	–1	44	32	–1	31
Effect of change in unrealised gains/losses		18	18		–13	–13
Effect of foreign currency translation	–22		–22	10		10
Closing balance	804	38	842	**577**	**42**	**619**

[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.

The percentage of PVFP which is expected to be amortised in each of the next five years is 16%, 15%, 13%, 12% and 11%.

7 Investments

Investment income

Net investment income by source (excluding unit-linked business) was as follows:

USD millions	2018	2019
Fixed income securities	2 017	2 044
Equity securities	61	53
Policy loans, mortgages and other loans	144	84
Investment real estate	220	226
Short-term investments	47	75
Other current investments	104	119
Share in earnings of equity-accounted investees	89	51
Cash and cash equivalents	35	59
Net result from deposit-accounted contracts	111	39
Deposits with ceding companies	542	605
Gross investment income	3 370	**3 355**
Investment expenses	–357	–316
Interest charged for funds held	–412	–673
Net investment income – non-participating business	2 601	**2 366**

Dividends received from investments accounted for using the equity method were USD 133 million and USD 63 million for 2018 and 2019, respectively.

Share in earnings of equity-accounted investees included impairments of the carrying amount of equity-accounted investees of USD 19 million for 2019.

Realised gains and losses

Realised gains and losses for fixed income securities, equity securities and other investments (excluding unit-linked business) were as follows:

USD millions	2018	2019
Fixed income securities available-for-sale:		
Gross realised gains	445	1 280
Gross realised losses	–194	–139
Other-than-temporary impairments	–4	–2
Net realised investment gains/losses on equity securities	15	171
Change in net unrealised investment gains/losses on equity securities	–228	397
Net realised investment gains/losses on trading securities	–68	153
Change in net unrealised investment gains/losses on trading securities	39	–26
Net realised/unrealised gains/losses on other investments	113	–194
Net realised/unrealised gains/losses on insurance-related activities	64	89
Foreign exchange gains/losses	185	–200
Net realised investment gains/losses – non-participating business	367	**1 529**

Net realised/unrealised gains/losses on insurance-related activities included impairments of USD 7 million and USD 5 million for 2018 and 2019, respectively.

Investment result – unit-linked business

The net investment result on unit-linked business credited to policyholders amounted to losses of USD 33 million and to gains of USD 118 million for 2018 and 2019, respectively, originating from equity securities.

Impairment on fixed income securities related to credit losses

Other-than-temporary impairments for debt securities are bifurcated between credit and non-credit components, with the credit component recognised through earnings and the non-credit component recognised in other comprehensive income. The credit component of other-than-temporary impairments is defined as the difference between a security's amortised cost basis and the present value of expected cash flows. Methodologies for measuring the credit component of impairment are aligned to market observer forecasts of credit performance drivers. Management believes that these forecasts are representative of median market expectations.

For securitised products, cash flow projection analysis is conducted by integrating forward-looking evaluation of collateral performance drivers, including default rates, prepayment rates and loss severities and deal-level features, such as credit enhancement and prioritisation among tranches for payments of principal and interest. Analytics are differentiated by asset class, product type and security-level differences in historical and expected performance. For corporate bonds and hybrid debt instruments, an expected loss approach based on default probabilities and loss severities expected in the current and forecasted economic environment is used for securities identified as credit-impaired to project probability-weighted cash flows. Expected cash flows resulting from these analyses are discounted, and the present value is compared to the amortised cost basis to determine the credit component of other-than-temporary impairments.

A reconciliation of other-than-temporary impairments related to credit losses recognised in earnings was as follows:

USD millions	2018	**2019**
Balance as of 1 January	87	77
Credit losses for which an other-than-temporary impairment was not previously recognised	5	5
Reductions for securities sold during the period	–12	–23
Increase of credit losses for which an other-than-temporary impairment has been recognised previously, when the Group does not intend to sell, or more likely than not will not be required to sell before recovery	2	2
Impact of increase in cash flows expected to be collected	–3	–3
Impact of foreign exchange movements	–2	1
Balance as of 31 December	77	**59**

Investments available-for-sale

Amortised cost or cost, estimated fair values and other-than-temporary impairments of fixed income securities classified as available-for-sale as of 31 December were as follows:

2018 USD millions	Amortised cost or cost	Gross unrealised gains	Gross unrealised losses	Other-than-temporary impairments recognised in other comprehensive income	Estimated fair value
Debt securities issued by governments and government agencies:					
US Treasury and other US government corporations and agencies	9 416	131	–148		9 399
US Agency securitised products	6 192	17	–130		6 079
States of the United States and political subdivisions of the states	1 186	45	–16		1 215
United Kingdom	3 795	575	–57		4 313
Germany	2 523	211	–6		2 728
Japan	869	74	–8		935
Canada	2 294	191	–24		2 461
France	1 495	159	–6		1 648
Other	8 900	142	–127		8 915
Total	36 670	1 545	–522		37 693
Corporate debt securities	24 751	445	–434		24 762
Mortgage- and asset-backed securities	3 429	52	–54	–1	3 426
Fixed income securities available-for-sale	64 850	2 042	–1 010	–1	65 881

2019 USD millions	Amortised cost or cost	Gross unrealised gains	Gross unrealised losses	Other-than-temporary impairments recognised in other comprehensive income	Estimated fair value
Debt securities issued by governments and government agencies:					
US Treasury and other US government corporations and agencies	11 590	247	–35		11 802
US Agency securitised products	6 693	96	–13		6 776
States of the United States and political subdivisions of the states	1 395	146	–3		1 538
United Kingdom	4 114	576	–26		4 664
Germany	2 650	269	–34		2 885
Japan	2 025	98	–1		2 122
Canada	1 786	137	–3		1 920
France	1 759	276	–9		2 026
Other	9 473	490	–31		9 932
Total	41 485	2 335	–155		43 665
Corporate debt securities	22 431	1 682	–19		24 094
Mortgage- and asset-backed securities	3 764	107	–15	–2	3 854
Fixed income securities available-for-sale	**67 680**	**4 124**	**–189**	**–2**	**71 613**

The "Other-than-temporary impairments recognised in other comprehensive income" column includes only securities with a credit-related loss recognised in earnings. Subsequent recovery in fair value of securities previously impaired in other comprehensive income is also presented in the "Other-than-temporary impairments recognised in other comprehensive income" column.

Unrealised losses on securities available-for-sale

The following table shows the fair value and unrealised losses of the Group's fixed income securities, aggregated by investment category and length of time that individual securities were in a continuous unrealised loss position as of 31 December 2018 and 2019.

2018 USD millions	Less than 12 months Fair value	 Unrealised losses	12 months or more Fair value	 Unrealised losses	Total Fair value	 Unrealised losses
Debt securities issued by governments and government agencies:						
US Treasury and other US government corporations and agencies	913	42	4 367	106	5 280	148
US Agency securitised products	993	11	3 689	119	4 682	130
States of the United States and political subdivisions of the states	111	2	392	14	503	16
United Kingdom	991	42	247	15	1 238	57
Germany	104	3	137	3	241	6
Japan	160	0	71	8	231	8
Canada	278	3	855	21	1 133	24
France	381	5	15	1	396	6
Other	2 602	70	1 084	57	3 686	127
Total	6 533	178	10 857	344	17 390	522
Corporate debt securities	10 008	227	5 231	207	15 239	434
Mortgage- and asset-backed securities	1 104	15	1 566	40	2 670	55
Total	17 645	420	17 654	591	35 299	1 011

2019 USD millions	Less than 12 months Fair value	 Unrealised losses	12 months or more Fair value	 Unrealised losses	Total Fair value	 Unrealised losses
Debt securities issued by governments and government agencies:						
US Treasury and other US government corporations and agencies	1 898	35	86	0	1 984	35
US Agency securitised products	1 790	7	651	6	2 441	13
States of the United States and political subdivisions of the states	39	1	23	2	62	3
United Kingdom	1 297	22	83	4	1 380	26
Germany	663	33	10	1	673	34
Japan	443	1			443	1
Canada	653	2	62	1	715	3
France	280	8	16	1	296	9
Other	1 313	16	276	15	1 589	31
Total	8 376	125	1 207	30	9 583	155
Corporate debt securities	1 361	10	221	9	1 582	19
Mortgage- and asset-backed securities	675	5	447	12	1 122	17
Total	**10 412**	**140**	**1 875**	**51**	**12 287**	**191**

Maturity of fixed income securities available-for-sale

The amortised cost or cost and estimated fair values of investments in fixed income securities available-for-sale by remaining maturity are shown below. Fixed maturity investments are assumed not to be called for redemption prior to the stated maturity date. As of 31 December 2018 and 2019, USD 15 888 million and USD 17 021 million, respectively, of fixed income securities available-for-sale were callable.

USD millions	Amortised cost or cost	2018 Estimated fair value	Amortised cost or cost	2019 Estimated fair value
Due in one year or less	7 753	7 691	5 423	5 445
Due after one year through five years	19 119	19 098	22 166	22 516
Due after five years through ten years	11 646	11 644	10 422	11 035
Due after ten years	23 368	24 480	26 541	29 391
Mortgage- and asset-backed securities with no fixed maturity	2 964	2 968	3 128	3 226
Total fixed income securities available-for-sale	64 850	65 881	**67 680**	**71 613**

Investments trading and at fair value through earnings

The carrying amounts of fixed income securities classified as trading and equity securities at fair value through earnings (excluding unit-linked business) as of 31 December were as follows:

USD millions	2018	2019
Debt securities issued by governments and government agencies	3 314	2 358
Corporate debt securities	37	
Mortgage- and asset-backed securities	63	52
Fixed income securities trading – non-participating business	3 414	**2 410**
Equity securities at fair value through earnings – non-participating business	2 450	**2 373**

Investments held for unit-linked business

As of 31 December 2018 and 2019, the carrying amounts of investments held for unit-linked business consist of equity securities at fair value through earnings of USD 424 million and of USD 520 million.

Mortgage, policy and other loans and investment real estate

As of 31 December, the carrying and respective fair values of investments in mortgage, policy and other loans, and investment real estate (excluding unit-linked) were as follows:

USD millions	Carrying value	2018 Fair value	Carrying value	2019 Fair value
Policy loans	78	78	45	45
Mortgage loans	1 817	1 806	1 014	1 045
Other loans	988	998	1 298	1 329
Investment real estate	2 240	4 136	2 526	4 557

Depreciation expense related to investment real estate was USD 57 million and USD 61 million for 2018 and 2019, respectively. Accumulated depreciation on investment real estate totalled USD 609 million and USD 660 million as of 31 December 2018 and 2019, respectively.

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.

Maturity of lessor cash flows

As of 31 December 2019, the total undiscounted cash flows to be received from operating leases of investment real estate for the next five years and thereafter were as follows:

USD millions	Operating leases
2020	191
2021	174
2022	157
2023	136
2024	107
After 2024	420
Total cash flows	1 185

The Group manages risk associated with the residual value of its leased properties through careful property selection as well as diversification by geographical region and property type. Lease contracts for residential real estate in Switzerland and Germany are usually open-ended. Cash flows for such contracts have been projected taking into consideration the average turnover rate in the region. Lease contracts for residential real estate in the US with a lease term of one year or less have been excluded from the projected cash flows in the table above. Rental income for those leases for the year ended 31 December 2019 was USD 28 million.

Other financial assets and liabilities by measurement category

As of 31 December 2018 and 2019, "Other invested assets" and "Accrued expenses and other liabilities" by measurement category were as follows:

2018 USD millions	Fair value	Investments measured at net asset value as practical expedient	Amortised cost or cost	Equity-accounted	Not in scope[1]	Total
Other invested assets						
Derivative financial instruments	656					656
Reverse repurchase agreements			1 031			1 031
Securities lending/borrowing	302		11			313
Equity-accounted investments	18			1 444		1 462
Other	47	631	410			1 088
Other invested assets	1 023	631	1 452	1 444	0	4 550
Accrued expenses and other liabilities						
Derivative financial instruments	569					569
Repurchase agreements			581			581
Securities lending	302		58			360
Securities sold short	1 538					1 538
Other			798		3 095	3 893
Accrued expenses and other liabilities	2 409	0	1 437	0	3 095	6 941

2019 USD millions	Fair value	Investments measured at net asset value as practical expedient	Amortised cost or cost	Equity-accounted	Not in scope[1]	Total
Other invested assets						
Derivative financial instruments	556					556
Reverse repurchase agreements			2 062			2 062
Securities lending/borrowing	457		21			478
Equity-accounted investments	20			1 495		1 515
Other	51	699	550			1 300
Other invested assets	**1 084**	**699**	**2 633**	**1 495**	**0**	**5 911**
Accrued expenses and other liabilities						
Derivative financial instruments	645					645
Repurchase agreements			678			678
Securities lending	458		115			573
Securities sold short	1 764					1 764
Other			1 202		2 939	4 141
Accrued expenses and other liabilities	**2 867**	**0**	**1 995**	**0**	**2 939**	**7 801**

[1] Amounts do not relate to financial assets or liabilities.

Offsetting of derivatives, financial assets and financial liabilities

Offsetting of derivatives, financial assets and financial liabilities as of 31 December was as follows:

2018 USD millions	Gross amounts of recognised financial assets	Amounts set-off in the balance sheet	Net amounts of financial assets presented in the balance sheet	Related financial instruments not set-off in the balance sheet	Net amount
Derivative financial instruments – assets	1 708	–1 052	656	–23	633
Reverse repurchase agreements	4 265	–3 234	1 031	–1 031	0
Securities borrowing	110	–99	11	–11	0
Total	6 083	–4 385	1 698	–1 065	633

2018 USD millions	Gross amounts of recognised financial liabilities	Amounts set-off in the balance sheet	Net amounts of financial liabilities presented in the balance sheet	Related financial instruments not set-off in the balance sheet	Net amount
Derivative financial instruments – liabilities	–1 492	923	–569	21	–548
Repurchase agreements	–3 334	2 753	–581	581	0
Securities lending	–940	580	–360	339	–21
Total	–5 766	4 256	–1 510	941	–569

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	1 740	–1 184	556	–32	**524**
Reverse repurchase agreements	5 158	–3 096	2 062	–2 035	**27**
Securities borrowing	171	–150	21	–20	**1**
Total	**7 069**	**–4 430**	**2 639**	**–2 087**	**552**

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	–1 703	1 058	–645	75	**–570**
Repurchase agreements	–3 352	2 674	–678	653	**–25**
Securities lending	–1 145	572	–573	524	**–49**
Total	**–6 200**	**4 304**	**–1 896**	**1 252**	**–644**

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" and "Accrued expenses and other liabilities".

Assets pledged

As of 31 December 2018 and 2019, investments with a carrying value of USD 4 840 million and USD 4 182 million, respectively, were on deposit with regulatory agencies in accordance with local requirements, of which USD 216 million and USD 190 million, respectively, were cash and cash equivalents. As of 31 December 2018 and 2019, investments with a carrying value of USD 11 748 million and USD 13 348 million, respectively, were placed on deposit or pledged to secure certain reinsurance liabilities, including pledged investments in subsidiaries, of which USD 382 million and USD 192 million, respectively, were cash and cash equivalents. Cash and cash equivalents pledged include some instances where cash is legally restricted from usage or withdrawal.

As of 31 December 2018 and 2019, securities of USD 14 173 million and USD 17 024 million, respectively, were transferred to third parties under securities lending transactions and repurchase agreements on a fully collateralised basis. Corresponding liabilities of USD 941 million and USD 1 251 million, respectively, were recognised in accrued expenses and other liabilities for the obligation to return collateral that the Group has the right to sell or reuse.

As of 31 December 2018 and 2019, a real estate portfolio with a carrying value of USD 191 million and USD 188 million, respectively, served as collateral for a credit facility, allowing the Group to withdraw funds up to CHF 500 million.

Collateral accepted which the Group has the right to sell or repledge

As of 31 December 2018 and 2019, the fair value of the equity securities, government and corporate debt securities received as collateral was USD 5 914 million and USD 7 036 million, respectively. Of this, the amount that was sold or repledged as of 31 December 2018 and 2019 was USD 3 396 million and USD 3 584 million, respectively. The sources of the collateral are securities borrowing, reverse repurchase agreements and derivative transactions.

Recognised gross liability for the obligation to return collateral (from repurchase agreements and securities lending)

As of 31 December 2018 and 2019, the gross amounts of liabilities related to repurchase agreements and securities lending by the class of securities transferred to third parties and by the remaining maturity are shown below.

	Remaining contractual maturity of the agreements				
2018 USD millions	Overnight and continuous	Up to 30 days	30–90 days	Greater than 90 days	Total
Repurchase agreements					
Debt securities issued by governments and government agencies	149	2 894	100	141	3 284
Corporate debt securities	9	41			50
Total repurchase agreements	158	2 935	100	141	3 334
Securities lending					
Debt securities issued by governments and government agencies	110	146	242	431	929
Corporate debt securities	7	4			11
Total securities lending	117	150	242	431	940
Gross amount of recognised liabilities for repurchase agreements and securities lending					4 274

	Remaining contractual maturity of the agreements				
2019 USD millions	Overnight and continuous	Up to 30 days	30–90 days	Greater than 90 days	Total
Repurchase agreements					
Debt securities issued by governments and government agencies	30	3 312			3 342
Corporate debt securities	3	7			10
Total repurchase agreements	**33**	**3 319**	**0**	**0**	**3 352**
Securities lending					
Debt securities issued by governments and government agencies	295		493	299	1 087
Corporate debt securities	58				58
Total securities lending	**353**	**0**	**493**	**299**	**1 145**
Gross amount of recognised liabilities for repurchase agreements and securities lending					**4 497**

The programme is structured in a conservative manner 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 2019, these adjustments were not material. Whenever the underlying assets or liabilities are reported in a specific business segment, the valuation adjustment is allocated accordingly. Valuation adjustments not attributable to any business segment are reported in Other.

In certain situations, the Group uses inputs to measure the fair value of asset or liability positions that fall into different levels of the fair value hierarchy. In these situations, the Group will determine the appropriate level based on the lowest level input that is significant to the determination of the fair value.

Valuation techniques

US government securities typically have quoted market prices in active markets and are categorised as level 1 instruments in the fair value hierarchy. Non-US government holdings are generally classified as level 2 instruments and are valued on the basis of the quotes provided by pricing services, which are subject to the Group's pricing validation reviews and pricing vendor challenge process. Valuations provided by pricing vendors are generally based on the actual trade information as substantially all of the Group's non-US government holdings are traded in a transparent and liquid market.

Corporate debt securities mainly include US and European investment-grade positions, which are priced on the basis of quotes provided by third party pricing vendors and first utilise valuation inputs from actively traded securities, such as bid prices, bid spreads to Treasury securities, Treasury curves and same or comparable issuer curves and spreads. Issuer spreads are determined from actual quotes and traded prices and incorporate considerations of credit/default, sector composition, and liquidity and call features. Where market data is not available, valuations are developed based on the modelling techniques that utilise observable inputs and option-adjusted spreads and incorporate considerations of the security's seniority 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 mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), cash flows are derived based on the transaction-specific information, which incorporates priority in the capital structure, and are generally adjusted to reflect benchmark yields, market prepayment data, collateral performance (default rates and loss severity) for specific vintage and geography, credit enhancements and ratings. For certain RMBS and CMBS with low levels of market liquidity, judgements may be required to determine comparable securities based on the loan type and deal-specific performance. CMBS terms may also incorporate lock-out periods that restrict borrowers from prepaying the loans or provide disincentives to prepay and therefore reduce prepayment risk of these securities, compared to RMBS. The factors specifically considered in valuation of CMBS include borrower-specific statistics in a specific region, such as debt service coverage and loan-to-value ratios, as well as the type of commercial property. Mortgage- and asset-backed securities also includes debt securitised by credit card, student loan and auto loan receivables. Pricing inputs for these securities also focus on capturing, where relevant, collateral quality and performance, payment patterns and delinquencies.

The Group uses third party pricing vendor data to value agency securitised products, which mainly include collateralised mortgage obligations (CMO) and mortgage-backed government agency securities. The valuations generally utilise observable inputs consistent with those noted above for RMBS and CMBS.

Equity securities held by the Group for proprietary investment purposes are mainly classified in level 1. Securities classified in level 1 are traded on public stock exchanges for which quoted prices are readily available.

The category "Other invested assets" includes the Group's private equity and hedge fund investments which are made directly or via ownership of funds. Valuation of direct private equity investments requires significant management judgement due to the absence of quoted market prices and the lack of liquidity. Initial valuation is based on the acquisition cost, and is further refined based on the available market information for the public companies that are considered comparable to the Group's holdings in the private companies being valued, and the private company-specific performance indicators, both historic and projected. Subsequent valuations also reflect business or asset appraisals, as well as market transaction data for private and public benchmark companies and the actual companies being valued, such as financing rounds and mergers and acquisitions activity. The Group's holdings in private equity and hedge funds are generally valued utilising net asset values (NAV), subject to adjustments, as deemed necessary, for restrictions on redemption (lock-up periods and amount limitations on redemptions). These investments are included under investments measured at net asset value as a practical expedient.

The Group holds both exchange-traded and OTC interest rate, foreign exchange, credit and equity derivative contracts for hedging and trading purposes. The fair values of exchange-traded derivatives measured using observable exchange prices are classified in level 1. Long-dated contracts may require adjustments to the exchange-traded prices which would trigger reclassification to level 2 in the fair value hierarchy. OTC derivatives are generally valued by the Group based on the internal models, which are consistent with industry standards and practices, and use both observable (dealer, broker or market consensus prices, spot and forward rates, interest rate and credit curves and volatility indices) and unobservable inputs (adjustments for liquidity, inputs derived from the observable data based on the Group's judgements and assumptions).

The Group's OTC interest rate derivatives primarily include interest rate swaps, futures, options, caps and floors and are valued based on the cash flow discounting models which generally utilise as inputs observable market yield curves and volatility assumptions.

The Group's OTC foreign exchange derivatives primarily include forward, spot and option contracts and are generally valued based on the cash flow discounting models, utilising as main inputs observable foreign exchange forward curves.

The Group's investments in equity derivatives primarily include OTC equity option contracts on single or baskets of market indices and equity options on individual or baskets of equity securities, which are valued using internally developed models (such as the Black-Scholes type option pricing model and various simulation models) calibrated with the inputs, which include underlying spot prices, dividend curves, volatility surfaces, yield curves and correlations between underlying assets.

The Group's OTC credit derivatives can include index and single-name credit default swaps. Plain vanilla credit derivatives, such as index and single-name credit default swaps, are valued by the Group based on the models consistent with the industry valuation standards for these credit contracts, and primarily utilise observable inputs published by market data sources, such as credit spreads and recovery rates. These valuation techniques warrant classification of plain vanilla OTC derivatives as level 2 financial instruments in the fair value hierarchy.

Governance around level 3 fair valuation

The Asset Valuation Committee, endorsed by the Swiss Re Group Executive Committee, has a primary responsibility for governing and overseeing all of the Group's asset and derivative valuation policies and operating parameters (including level 3 measurements). The Asset Valuation Committee delegates the responsibility for implementation and oversight of consistent application of the Group's pricing and valuation policies to the Pricing and Valuation Committee.

The Pricing and Valuation Committee, which is a joint Risk Management & Finance management control committee, is responsible for the implementation and consistent application of the pricing and valuation policies. Key functions of the Pricing and Valuation Committee include: oversight over the entire valuation process, approval of internal valuation methodologies, approval of external pricing vendors, monitoring of the independent price verification (IPV) process and resolution of significant or complex valuation issues.

A formal IPV process is undertaken monthly by members of the Valuation Risk Management team within a Financial Risk Management function. The process includes monitoring and in-depth analyses of approved pricing methodologies and valuations of the Group's financial instruments aimed at identifying and resolving pricing discrepancies.

The Risk Management function is responsible for independent validation and ongoing review of the Group's valuation models. The Product Control group within Finance is tasked with reporting of fair values through the vendor- and model-based valuations, the results of which are also subject to the IPV process.

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Assets and liabilities measured at fair value on a recurring basis

As of 31 December, the fair values of assets and liabilities measured on a recurring basis by level of input were as follows:

2018 USD millions	Quoted prices in active markets for identical assets and liabilities (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Impact of netting[1]	Investments measured at net asset value as practical expedient	Total
Assets						
Fixed income securities held for proprietary investment purposes	8 974	59 858	463			69 295
Debt securities issued by US government and government agencies	8 974	1 668				10 642
US Agency securitised products		6 327				6 327
Debt securities issued by non-US governments and government agencies		24 038				24 038
Corporate debt securities		24 342	457			24 799
Mortgage- and asset-backed securities		3 483	6			3 489
Equity securities held for proprietary investment purposes	2 450					2 450
Equity securities backing unit-linked business	424					424
Short-term investments held for proprietary investment purposes	951	2 864				3 815
Derivative financial instruments	7	1 276	425	–1 052		656
Interest rate contracts	6	440	6			452
Foreign exchange contracts		410				410
Equity contracts	1	425	338			764
Credit contracts		1				1
Other contracts			81			81
Other invested assets	286	16	65		631	998
Funds held by ceding companies		206				206
Total assets at fair value	13 092	64 220	953	–1 052	631	77 844
Liabilities						
Derivative financial instruments	–11	–1 184	–297	923		–569
Interest rate contracts	–3	–325	–3			–331
Foreign exchange contracts		–325				–325
Equity contracts	–8	–533	–43			–584
Credit contracts		–1				–1
Other contracts			–251			–251
Liabilities for life and health policy benefits			–120			–120
Funds held under reinsurance treaties	–102	–1 377				–1 479
Accrued expenses and other liabilities	–302	–1 538				–1 840
Total liabilities at fair value	–415	–4 099	–417	923	0	–4 008

[1] The netting of derivative receivables and derivative payables is permitted when a legally enforceable master netting agreement exists between two counterparties. A master netting agreement provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default or on the termination of any one contract.

2019 USD millions	Quoted prices in active markets for identical assets and liabilities (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Impact of netting[1]	Investments measured at net asset value as practical expedient	Total
Assets						
Fixed income securities held for proprietary investment purposes	11 443	61 785	795			74 023
Debt securities issued by US government and government agencies	11 443	1 978				13 421
US Agency securitised products		6 827				6 827
Debt securities issued by non-US governments and government agencies		25 775				25 775
Corporate debt securities		23 299	795			24 094
Mortgage- and asset-backed securities		3 906				3 906
Equity securities held for proprietary investment purposes	2 373					2 373
Equity securities backing unit-linked business	520					520
Short-term investments held for proprietary investment purposes	955	4 077				5 032
Derivative financial instruments	2	1 492	246	–1 184		556
Interest rate contracts		484				484
Foreign exchange contracts		373				373
Equity contracts	2	609	186			797
Credit contracts		23				23
Other contracts		3	60			63
Other invested assets	317	140	71		699	1 227
Funds held by ceding companies		174				174
Total assets at fair value	**15 610**	**67 668**	**1 112**	**–1 184**	**699**	**83 905**
Liabilities						
Derivative financial instruments	–4	–1 413	–286	1 058		–645
Interest rate contracts		–363	–2			–365
Foreign exchange contracts		–399				–399
Equity contracts	–4	–586	–20			–610
Credit contracts		–65				–65
Other contracts			–264			–264
Liabilities for life and health policy benefits			–91			–91
Funds held under reinsurance treaties	–135	–1 424				–1 559
Accrued expenses and other liabilities	–340	–1 882				–2 222
Total liabilities at fair value	**–479**	**–4 719**	**–377**	**1 058**	**0**	**–4 517**

[1] The netting of derivative receivables and derivative payables is permitted when a legally enforceable master netting agreement exists between two counterparties. A master netting agreement provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default or on the termination of any one contract.

Assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (level 3)

As of 31 December, the reconciliations of the fair values of assets and liabilities measured on a recurring basis using significant unobservable inputs were as follows:

2018 USD millions	Fixed income securities	Derivative assets	Other invested assets	Total assets	Derivative liabilities	Liabilities for life and health policy benefits	Total liabilities
Assets and liabilities							
Balance as of 1 January	361	387	171	919	–269	–126	–395
Realised/unrealised gains/losses:							
Included in net income		47	–18	29	45	6	51
Included in other comprehensive income	–11			–11			0
Purchases	165	38		203			0
Issuances				0	–49		–49
Sales	–6	–6	–81	–93	–1		–1
Settlements	–35	–41		–76	–19		–19
Transfers into level 3[1]				0	–3		–3
Transfers out of level 3[1]			–3	–3			0
Impact of foreign exchange movements	–11		–4	–15	–1		–1
Closing balance as of 31 December	463	425	65	953	–297	–120	–417

[1] Transfers are recognised at the date of the event or change in circumstances that caused the transfer.

2019 USD millions	Fixed income securities	Derivative assets	Other invested assets	**Total assets**	Derivative liabilities	Liabilities for life and health policy benefits	**Total liabilities**
Assets and liabilities							
Balance as of 1 January	463	425	65	**953**	–297	–120	**–417**
Realised/unrealised gains/losses:							
Included in net income		–144	5	**–139**	45	32	**77**
Included in other comprehensive income	32			**32**		–3	**–3**
Purchases	379	34		**413**			**0**
Issuances				**0**	–65		**–65**
Sales	–55	–32		**–87**	26		**26**
Settlements	–20	–37		**–57**	5		**5**
Transfers into level 3[1]			1	**1**			**0**
Transfers out of level 3[1]	–6			**–6**			**0**
Impact of foreign exchange movements	2			**2**			**0**
Closing balance as of 31 December	**795**	**246**	**71**	**1 112**	**–286**	**–91**	**–377**

[1] Transfers are recognised at the date of the event or change in circumstances that caused the transfer.

Gains and losses on assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (level 3)

The gains and losses relating to the assets and liabilities measured at fair value using significant unobservable inputs (level 3) for the years ended 31 December were as follows:

USD millions	2018	**2019**
Gains/losses included in net income for the period	80	–62
Whereof change in unrealised gains/losses relating to assets and liabilities still held at the reporting date	37	–87

Quantitative information about level 3 fair value measurements

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

USD millions	2018 Fair value	2019 Fair value	Valuation technique	Unobservable input	Range (weighted average)
Assets					
Corporate debt securities	457	**795**			
Infrastructure loans	359	566	Discounted cash flow model	Valuation spread	75–526 bps (175 bps)
Private placement corporate debt	56	186	Corporate spread matrix	Credit spread	48–248 bps (122 bps)
Private placement credit tenant leases	42	42	Discounted cash flow model	Illiquidity premium	125–150 bps (146 bps)
Derivative equity contracts	338	**186**			
OTC equity option referencing correlated equity indices	338	186	Proprietary option model	Correlation	–50–55% (20%)[1]
Liabilities					
Derivative equity contracts	–43	**–20**			
OTC equity option referencing correlated equity indices	–43	–20	Proprietary option model	Correlation	–30–95% (42%)[1]
Other derivative contracts and liabilities for life and health policy benefits	–371	**–355**			
Variable annuity and fair valued GMDB contracts	–329	–311	Discounted cash flow model	Risk margin	4% (n/a)
				Volatility	9.5–46.5%
				Lapse	1.5–15%
				Mortality improvement	0–2%
				Withdrawal rate	0–90%

[1] Represents average input value for the reporting period.

Sensitivity of recurring level 3 measurements to changes in unobservable inputs

The significant unobservable input used in the fair value measurement of the Group's infrastructure loans is valuation spread. A significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement. The significant unobservable input used in the fair value measurement of the Group's private placement corporate debt securities is credit spread. A significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement. The significant unobservable input used in the fair value measurement of the Group's private placement credit tenant leases is illiquidity premium. A significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement.

The significant unobservable input used in the fair value measurement of the Group's OTC equity option referencing correlated equity indices is correlation. Where the Group is long correlation risk, a significant increase (decrease) in this input in isolation would result in a significantly higher (lower) fair value measurement. Where the Group is short correlation risk, a significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement.

The significant unobservable inputs used in the fair value measurement of the Group's variable annuity and fair valued guaranteed minimum death benefit (GMDB) contracts are: risk margin, volatility, lapse, mortality improvement rate and withdrawal rate. A significant increase (decrease) in isolation in each of the following inputs: risk margin, volatility and withdrawal rate would result in a significantly lower (higher) fair value of the Group's obligation. A significant increase (decrease) in isolation in lapse rate would, in general, result in a significantly higher (lower) fair value of the Group's obligation due to the maturity of the contracts. Changes in the mortality improvement rate impact the fair value of the Group's obligation differently for living-benefit products, compared to death-benefit products. For the former, a significant increase (decrease) in the mortality improvement rate (ie decrease (increase) in mortality) in isolation would result in a decrease (increase) in fair value of the Group's liability. For the latter, a significant increase (decrease) in the mortality improvement rate in isolation would result in an increase (decrease) in fair value of the Group's liability.

Other invested assets measured at net asset value

Other invested assets measured at net asset value as of 31 December were as follows:

USD millions	2018 Fair value	2019 Fair value	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Private equity funds	391	471	587	non-redeemable	n/a
Hedge funds	196	208		redeemable[1]	45–95 days[2]
Private equity direct	1	8	42	non-redeemable	n/a
Real estate funds	43	12	15	non-redeemable	n/a
Total	631	**699**	**644**		

[1] The redemption frequency varies by position.
[2] Cash distribution can be delayed for an extended period depending on the sale of the underlyings.

The hedge fund investments employ a variety of strategies, including relative value and event-driven across various asset classes.

The private equity direct portfolio consists of equity and equity-like investments directly in other companies. These investments have no contractual term and are generally held based on financial or strategic intent.

Private equity and real estate funds generally have limitations imposed on the amount of redemptions from the fund during the redemption period due to illiquidity of the underlying investments. Fees may apply for redemptions or transferring of interest to other parties. Distributions are expected to be received from these funds as the underlying assets are liquidated over the life of the fund, which is generally from 10 to 12 years.

The redemption frequency of hedge funds varies depending on the manager as well as the nature of the underlying product. Additionally, certain funds may impose lock-up periods and redemption gates as defined in the terms of the individual investment agreement.

Fair value option

The fair value option under the Financial Instruments Topic permits the choice to measure specified financial assets and liabilities at fair value on an instrument-by-instrument basis. The Group elected the fair value option for positions in the following line items:

Other invested assets

The Group elected the fair value option for certain investments classified as equity method investees within other invested assets in the balance sheet. The Group applied the fair value option, as the investments are managed on a fair value basis. The changes in fair value of these elected investments are recorded in earnings.

Funds held by ceding companies

For operational efficiencies, the Group elected the fair value option for funds held by the cedent under three of its reinsurance agreements. The assets are carried at fair value and changes in fair value are reported as a component of earnings.

Liabilities for life and health policy benefits

The Group elected the fair value option for existing GMDB reserves related to certain variable annuity contracts which are classified as universal-life-type contracts. The Group has applied the fair value option, as the equity risk associated with those contracts is managed on a fair value basis and it is economically hedged with derivative options in the market. The liability is carried at fair value and changes in fair value attributable to instrument-specific credit risk are reported in other comprehensive income and all other changes in fair value are reported as a component of earnings.

Funds held under reinsurance treaties

For operational efficiencies, the Group elected the fair value option for funds held under reinsurance treaties under some of its reinsurance agreements. The liabilities are carried at fair value and changes in fair value are reported as a component of earnings.

Assets and liabilities measured at fair value pursuant to election of the fair value option

Pursuant to the election of the fair value option for the items described, the balances as of 31 December were as follows:

USD millions	2018	2019
Assets		
Other invested assets	4 550	5 911
of which at fair value pursuant to the fair value option	18	20
Funds held by ceding companies	10 894	10 901
of which at fair value pursuant to the fair value option	206	174
Liabilities		
Liabilities for life and health policy benefits	–18 969	–21 266
of which at fair value pursuant to the fair value option	–120	–91
Funds held under reinsurance treaties	–10 262	–9 537
of which at fair value pursuant to the fair value option	–1 479	–1 559

Changes in fair values for items measured at fair value pursuant to election of the fair value option

Gains/losses included in earnings for items measured at fair value pursuant to election of the fair value option including foreign exchange impact for the years ended 31 December were as follows:

USD millions	2018	2019
Other invested assets	–9	2
Funds held by ceding companies		11
Liabilities for life and health policy benefits	6	32
Funds held under reinsurance treaties	67	–142
Total	64	**–97**

Fair value changes from other invested assets, funds held by ceding companies and funds held under reinsurance treaties are reported in “Net investment income – non-participating business”. Fair value changes from the GMDB reserves are shown in “Life and health benefits”.

Assets and liabilities not measured at fair value but for which the fair value is disclosed

Assets and liabilities not measured at fair value but for which the fair value is disclosed as of 31 December were as follows:

2018 USD millions	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Total
Assets			
Policy loans		78	78
Mortgage loans		1 806	1 806
Other loans		998	998
Investment real estate		4 136	4 136
Total assets	0	7 018	7 018
Liabilities			
Debt	–5 750	–7 264	–13 014
Total liabilities	–5 750	–7 264	–13 014

2019 USD millions	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Total
Assets			
Policy loans		45	45
Mortgage loans		1 045	1 045
Other loans		1 329	1 329
Investment real estate		4 557	4 557
Total assets	**0**	**6 976**	**6 976**
Liabilities			
Debt	–7 238	–6 225	–13 463
Total liabilities	**–7 238**	**–6 225**	**–13 463**

Policy loans, other loans and certain mortgage loans are classified as level 3 measurements, as they do not have an active exit market. Some of these positions need to be assessed in conjunction with the corresponding insurance business, whilst the fair value of some other positions does not differ materially from the carrying amount. Considering these circumstances for these positions, the Group presents the carrying amount as an approximation for the fair value. For certain commercial mortgage loans and infrastructure loans, which are included in mortgage loans and other loans respectively, the fair value can be estimated using discounted cash flow models which are based on discount curves and spread inputs that require management's judgement.

Investments in real estate are fair valued primarily by external appraisers based on proprietary discounted cash flow models that incorporate applicable risk premium adjustments to discount yields and projected market rental income streams based on market-specific data. These fair value measurements are classified in level 3 in the fair value hierarchy.

Debt positions, which are fair valued based on executable broker quotes or the discounted cash flow method using observable inputs, are classified as level 2 measurements. Fair value of the majority of the Group's level 3 debt positions is judged to approximate carrying value due to the highly tailored nature of the obligation and short-notice termination provisions.

9 Derivative financial instruments

The Group uses a variety of derivative financial instruments including swaps, options, forwards, credit derivatives and exchange-traded financial futures in its trading and hedging strategies, in line with the Group's overall risk management strategy. The objectives include managing exposure to price, foreign currency and/or interest rate risk on planned or anticipated investment purchases, existing assets or liabilities, as well as locking in attractive investment conditions for future available funds.

The fair values represent the gross carrying value amounts at the reporting date for each class of derivative contract held or issued by the Group. The gross fair values are not an indication of credit risk, as many over-the-counter transactions are contracted and documented under ISDA master agreements or their equivalent. Management believes that such agreements provide for legally enforceable set-off in the event of default, which substantially reduces credit exposure.

Fair values and notional amounts of derivative financial instruments

As of 31 December, the fair values and notional amounts of the derivatives outstanding were as follows:

2018 USD millions	Notional amount assets/liabilities	Fair value assets	Fair value liabilities	Carrying value assets/liabilities
Derivatives not designated as hedging instruments				
Interest rate contracts	52 540	452	–331	121
Foreign exchange contracts	23 213	195	–176	19
Equity contracts	13 451	764	–584	180
Credit contracts	584	1	–1	0
Other contracts	10 220	81	–251	–170
Total	100 008	1 493	–1 343	150
Derivatives designated as hedging instruments				
Foreign exchange contracts	15 503	215	–149	66
Total	15 503	215	–149	66
Total derivative financial instruments	115 511	1 708	–1 492	216
Amount offset				
Where a right of set-off exists		–623	623	
Due to cash collateral		–429	300	
Total net amount of derivative financial instruments		656	–569	87

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	23 087	483	–343	140
Foreign exchange contracts	31 751	286	–143	143
Equity contracts	15 672	797	–610	187
Credit contracts	3 593	23	–65	–42
Other contracts	9 191	63	–264	–201
Total	**83 294**	**1 652**	**–1 425**	**227**
Derivatives designated as hedging instruments				
Interest rate contracts	1403	1	-22	–21
Foreign exchange contracts	16 425	87	–256	–169
Total	**17 828**	**88**	**–278**	**–190**
Total derivative financial instruments	**101 122**	**1 740**	**–1 703**	**37**
Amount offset				
Where a right of set-off exists		–675	675	
Due to cash collateral		–509	383	
Total net amount of derivative financial instruments		**556**	**–645**	**–89**

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", and the fair value liabilities are included in "Accrued expenses and other liabilities". The fair value amounts that were not offset were nil as of 31 December 2018 and 2019.

Non-hedging activities

The Group primarily uses derivative financial instruments for risk management and trading strategies. Gains and losses of derivative financial instruments not designated as hedging instruments are recorded in "Net realised investment gains/losses — non-participating business" in the income statement.

For the years ended 31 December, the gains and losses of derivative financial instruments not designated as hedging instruments were as follows:

USD millions	2018	2019
Derivatives not designated as hedging instruments		
Interest rate contracts	–167	–87
Foreign exchange contracts	–5	7
Equity contracts	20	–125
Credit contracts	–7	–45
Other contracts	54	35
Total gains/losses recognised in income	–105	**–215**

Hedging activities

The Group designates certain derivative financial instruments as hedging instruments. The designation of derivative financial instruments is primarily used for overall portfolio and risk management strategies. As of 31 December 2018 and 2019, the following hedging relationships were outstanding:

Fair value hedges

The Group enters into foreign exchange and interest rate swaps to reduce the exposure to foreign exchange and interest rate volatility for certain fixed income securities and its issued long-term debt positions. These derivative instruments are designated as hedging instruments in qualifying fair value hedges.

For the years ended 31 December, the gains and losses attributable to the hedged risks were as follows:

	2018		2019	
USD millions	Net realised investment gains/losses — non-participating business	Interest expenses	Net realised investment gains/losses — non-participating business	Interest expenses
Total amounts of income and expense line items	367	–601	1 529	–595
Foreign exchange contracts				
Gains/losses on derivatives	412		28	
Gains/losses on hedged items	–412		–28	
Interest rate contracts				
Gains/losses on derivatives				–18
Gains/losses on hedged items				20

As of 31 December, the carrying values of the hedged assets and liabilities, and the cumulative amounts of fair value hedging adjustments included there within, recognised in the balance sheet, were as follows:

	2019	
USD millions	Carrying value	Cumulative basis adjustment
Assets		
Fixed income securities available-for-sale	8 436	
Liabilities		
Long-term debt	–1 355	20

Hedges of the net investment in foreign operations

The Group designates derivative and non-derivative monetary financial instruments as hedging the foreign currency exposure of its net investment in certain foreign operations.

For the years ended 31 December 2018 and 2019, the Group recorded an accumulated net unrealised foreign currency remeasurement gain of USD 1 166 million and USD 1 039 million, respectively, in "Other comprehensive income - Foreign currency translation". These offset translation gains and losses on the hedged net investment.

Maximum potential loss

In consideration of the rights of set-off and the qualifying master netting arrangements with various counterparties, the maximum potential loss as of 31 December 2018 and 2019 was approximately USD 1 085 million and USD 1 065 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 60 million and USD 45 million as of 31 December 2018 and 2019, respectively. For derivative financial instruments containing credit risk-related contingent features, the Group posted collateral of nil as of 31 December 2018 and 2019, respectively. In the event of a reduction of the Group's credit rating to below investment grade, a fair value of USD 45 million additional collateral would have had to be posted as of 31 December 2019. The total equals the amount needed to settle the instruments immediately as of 31 December 2019.

10 Debt and contingent capital instruments

The Group enters into long- and short-term debt arrangements to obtain funds for general corporate use and specific transaction financing. The Group defines short-term debt as debt having a maturity at the balance sheet date of not greater than one year and long-term debt as having a maturity of greater than one year. For subordinated debt positions, maturity is defined as the first optional redemption date (notwithstanding that optional redemption could be subject to regulatory consent). Interest expense is classified accordingly.

The Group's debt as of 31 December was as follows:

USD millions	2018	2019
Senior financial debt	3 557	2 230
Subordinated financial debt	637	
Contingent capital instruments classified as financial debt	761	185
Short-term debt	4 955	**2 415**
Senior financial debt	1 979	1 971
Senior operational debt	388	244
Subordinated financial debt	1 824	4 604
Subordinated operational debt	2 112	1 918
Contingent capital instruments classified as financial debt	188	
Long-term debt	6 491	**8 737**
Total carrying value	11 446	**11 152**
Total fair value	13 014	**13 463**

Maturity of long-term debt

As of 31 December, long-term debt as reported above had the following maturities:

USD millions	2018	2019
Due in 2020	188	0
Due in 2021	219	152
Due in 2022	817	804
Due in 2023	432	432
Due in 2024	255	1 250
Due after 2024	4 580	6 099
Total carrying value	6 491	**8 737**

Senior long-term debt

Maturity	Instrument	Issued in	Currency	Nominal in millions	Interest rate	Book value in USD millions
2022	Senior notes	2012	USD	250	2.88%	249
2024	EMTN	2014	CHF	250	1.00%	257
2026	Senior notes[1]	1996	USD	397	7.00%	465
2027	EMTN	2015	CHF	250	0.75%	259
2030	Senior notes[1]	2000	USD	193	7.75%	251
2042	Senior notes	2012	USD	500	4.25%	490
Various	Payment undertaking agreements	various	USD	226	various	244
Total senior long-term debt as of 31 December 2019						**2 215**
Total senior long-term debt as of 31 December 2018						2 367

[1] Assumed in the acquisition of GE Insurance Solutions.

Subordinated long-term debt

Maturity	Instrument	Issued in	Currency	Nominal in millions	Interest rate	First call in	Book value in USD millions
2042	Subordinated fixed-to-floating rate loan note	2012	EUR	500	6.63%	2022	555
2043	Subordinated fixed-to-floating rate loan	2018	USD	430	5.75%	2023	429
2049	Subordinated fixed rate reset step-up callable loan note	2019	USD	1 000	5.00%	2029	991
2050	Subordinated fixed rate reset step-up callable loan note	2019	EUR	750	2.53%	2030	838
2057	Subordinated private placement (amortising, limited recourse)	2007	GBP	1 448	6.04%		1 918
	Perpetual subordinated fixed spread callable note	2019	USD	1 000	4.25%	2024	991
	Perpetual subordinated fixed-to-floating rate callable loan note	2015	EUR	750	2.60%	2025	800
Total subordinated long-term debt as of 31 December 2019							**6 522**
Total subordinated long-term debt as of 31 December 2018							3 936

Interest expense on long-term debt and contingent capital instruments classified as equity

Interest expense on long-term debt for the years ended 31 December was as follows:

USD millions	2018	2019
Senior financial debt	77	74
Senior operational debt	11	10
Subordinated financial debt	99	138
Subordinated operational debt	118	111
Contingent capital instruments classified as financial debt	28	5
Total	333	**338**

In addition to the above, interest expense on contingent capital instruments classified as equity was USD 41 million and nil for the years ended 31 December 2018 and 2019, respectively.

Long-term debt issued in 2019

In March 2019, Swiss Re Finance (Luxembourg) S.A., a subsidiary of Swiss Reinsurance Company Ltd, issued 31-year guaranteed subordinated fixed rate reset step-up callable notes, which are callable after 11 years. The instruments have an aggregate face value of EUR 750 million, with a fixed coupon of 2.534% per annum until the first optional redemption date (30 April 2030). The notes are guaranteed on a subordinated basis by Swiss Reinsurance Company Ltd.

In April 2019, Swiss Re Finance (Luxembourg) S.A., a subsidiary of Swiss Reinsurance Company Ltd, issued 30-year guaranteed subordinated fixed rate reset step-up callable notes, which are callable after ten years. The instruments have an aggregate face value of USD 1 billion, with a fixed coupon of 5% per annum until the first optional redemption date (2 April 2029). The notes are guaranteed on a subordinated basis by Swiss Reinsurance Company Ltd.

In September 2019, Swiss Re Finance (Luxembourg) S.A., a subsidiary of Swiss Reinsurance Company Ltd, issued perpetual guaranteed subordinated fixed spread callable notes, which are callable every five years. The instruments have an aggregate face value of USD 1 billion, with a fixed coupon of 4.25% per annum until the first optional redemption date (4 September 2024). The coupon is reset every five years to the then prevailing US Treasury rate plus the initial credit spread. The notes are guaranteed on a subordinated basis by Swiss Reinsurance Company Ltd.

11 Leases

As part of its normal business operations, the Group as a lessee enters into a number of lease agreements mainly for office space. Certain lease agreements include rental payments adjusted periodically for inflation. Renewal or termination options that are reasonably certain of exercise by the lessee are included in the lease term. The lease agreements do not contain any material residual value guarantees or material restrictive covenants.

In line with the elected transition method provided by ASU 2018-11 "Targeted Improvements", the comparative lease information was not restated and continues to be reported in line with the requirements in ASC 840 Leases.

Lease liabilities and right-of-use assets

Lease liabilities and right-of-use assets for operating leases as of 31 December were as follows:

USD millions	2019
Operating lease right-of-use assets	250
Operating lease liabilities	275

Operating lease right-of-use assets are included in "Other assets" and operating lease liabilities are included in "Accrued expenses and other liabilities" on the balance sheet.

Maturity of lease liabilities

As of 31 December 2019, the total undiscounted cash flows due to operating leases for the next five years and thereafter were as follows:

USD millions	2019
2020	37
2021	37
2022	34
2023	31
2024	26
After 2024	138
Total undiscounted cash flows	**303**
Less imputed interest	–28
Total lease liability	**275**

Undiscounted sublease cash flows over the next four years are USD 12 million.

The discount rates used to determine the lease liability reflect the collateralised borrowing rates for the Group, where the underlying collateral is assumed to be real estate.

The weighted average discount rate for operating leases as of 31 December 2019 was 2.0%. The weighted average remaining lease term for operating leases as of 31 December 2019 was 9.8 years.

As of 31 December 2018, future minimum lease commitments as determined prior to the adoption of ASU 2016-02 were as follows:

USD millions	2018
2019	34
2020	31
2021	27
2022	26
2023	23
After 2023	135
Total operating lease commitments	**276**
Less minimum non-cancellable sublease rentals	–4
Total net future minimum lease commitments	**272**

Lease cost

The composition of total lease cost for all operating leases for the year ended 31 December was as follows:

USD millions	2018	2019
Fixed operating lease cost		36
Other lease cost[1]		2
Total operating lease cost[2]	35	**38**
Less sublease income from operating leases	–2	**–4**
Total lease cost	33	**34**

[1] "Other lease cost" includes variable lease cost.
[2] A distinction between "Fixed operating lease cost" and "Other lease cost" is not available for 2018 comparative information.

Other information

For the year ended 31 December 2019, cash paid for amounts included in the measurement of operating lease liabilities was USD 36 million and right-of-use assets obtained in exchange for new operating lease liabilities were USD 47 million.

12 Income taxes

The Group is generally subject to corporate income taxes based on the taxable net income in various jurisdictions in which it operates. The components of the income tax expense were:

USD millions	2018	2019
Current taxes	361	309
Deferred taxes	–185	–166
Income tax expense	176	**143**

Tax rate reconciliation

The following table reconciles the expected tax expense at the Swiss statutory tax rate to the actual tax expense in the accompanying income statement:

USD millions	2018	2019
Income tax at the Swiss statutory tax rate of 21.0%	257	223
Increase (decrease) in the income tax charge resulting from:		
Foreign income taxed at different rates	141	78
Impact of foreign exchange movements	–79	21
Tax exempt income/dividends received deduction	–56	–93
Non-deductible expenses	56	41
Change in valuation allowance	–128	–35
Change in statutory rate		–22
Intra-entity transfers	–67	25
Change in liability for unrecognised tax benefits including interest and penalties	64	–55
Other, net[1]	–12	–40
Total	176	**143**

[1] Other, net includes tax return to tax provision adjustments from various jurisdictions.

For the year ended 31 December 2019, the Group reported a tax charge of USD 143 million on a pre-tax income of USD 1 064 million, compared to a charge of USD 176 million on a pre-tax income of USD 1 224 million for 2018. This translates into an effective tax rate in the current and prior-year reporting periods of 13.4% and 14.4%, respectively.

For the year ended 31 December 2019, the tax rate was largely driven by tax benefits from tax-exempt income, effective settlement of tax audits and tax rate changes, partially offset by the impact of different rates in various jurisdictions. The higher rate in the year ended 31 December 2018 was largely driven by tax benefits from foreign currency translation differences between statutory and US GAAP accounts, the releases of valuation allowances on net operating losses and tax benefits from intra-entity transfers, partially offset by the impact of different rates in various jurisdictions and tax charges from unrecognised tax benefits.

As of 31 December 2019, the tax rate includes a tax benefit of USD 36 million from the Swiss tax reform impact. The impact is included within the change in statutory rate component of the tax rate reconciliation. The benefit arises from revaluing the Swiss deferred tax assets and liabilities to the new Swiss statutory tax rate (combined federal and cantonal) of 19.7% (from 21% for ordinary companies and 7.8% for holding companies).

Deferred and other non-current taxes

The components of deferred and other non-current taxes were as follows:

USD millions	2018	2019
Deferred tax assets		
Income accrued/deferred	105	161
Technical provisions	474	465
Unearned premium reserve	168	243
Pension provisions	274	280
Benefit on loss carryforwards	2 025	1 663
Currency translation adjustments	350	275
Other	933	881
Gross deferred tax asset	4 329	3 968
Valuation allowance	–156	–118
Unrecognised tax benefits offsetting benefits on loss carryforwards	–21	2
Total deferred tax assets	4 152	**3 852**
Deferred tax liabilities		
Present value of future profits	–61	–20
Income accrued/deferred	–171	–160
Investment valuation in income	–317	–219
Deferred acquisition costs	–990	–933
Technical provisions	–1 805	–1 624
Unrealised gains on investments	–269	–855
Foreign exchange provisions	–517	–440
Other	–577	–532
Total deferred tax liabilities	–4 707	**–4 783**
Liability for unrecognised tax benefits including interest and penalties	–245	–192
Total deferred and other non-current tax liabilities	–4 952	**–4 975**

As of 31 December 2019, a tax benefit of USD 36 million arises from revaluing the Swiss deferred assets and liabilities to the new Swiss statutory tax rate of 19.7% (from 21% for ordinary companies and 7.8% for holding companies), under the Swiss tax reform. Accordingly, the revaluing reduced the Swiss deferred tax assets by USD 45 million and the Swiss deferred tax liabilities by USD 81 million (net USD 36 million).

As of 31 December 2019, the aggregate amount of temporary differences associated with investment in subsidiaries, branches and associates and interests in joint ventures, for which deferred tax liabilities have not been recognised amount to approximately USD 2.8 billion. In the remote scenario in which these temporary differences were to reverse simultaneously, the resulting tax liabilities would be very limited due to participation exemption rules.

As of 31 December 2019, the Group had USD 7 588 million net operating tax loss carryforwards, expiring as follows: USD 11 million in 2020, USD 4 million in 2021, USD 2 million in 2022, nil in 2023, USD 4 093 million in 2024 and beyond, and USD 3 478 million never expire.

As of 31 December 2019, the Group had no capital loss carryforwards.

For the year ended 31 December 2019, net operating tax losses of USD 3 843 million and net capital tax losses of USD 30 million were utilised.

Income taxes paid in 2018 and 2019 were USD 439 million and USD 419 million, respectively.

As of 31 December 2019, the Group had an income tax receivable balance from affiliates of USD 86 million. This receivable arises from serving as the tax paying agent to tax authorities on behalf of Swiss Re entities in the same tax jurisdiction.

Unrecognised tax benefits

A reconciliation of the opening and closing amount of gross unrecognised tax benefits (excluding interest and penalties) is as follows:

USD millions	2018	2019
Balance as of 1 January	170	215
Additions based on tax positions related to current year	36	27
Additions based on tax positions related to prior years	56	1
Reductions for tax positions of current year	–5	–6
Reductions for tax positions of prior years	–13	–77
Statute expiration	–17	–2
Settlements	–6	–12
Other (including foreign currency translation)	–6	–1
Balance as of 31 December	215	**145**

As of 31 December 2018 and 2019, the amount of gross unrecognised tax benefits within the tabular reconciliation that, if recognised, would affect the effective tax rate were approximately USD 215 million and USD 145 million, respectively.

Interest and penalties related to unrecognised tax benefits are recorded in income tax expense. For the years ended 31 December 2018 and 2019, such expenses were USD 7 million and USD 1 million, respectively. For the years ended 31 December 2018 and 2019, USD 51 million and USD 45 million, respectively, were accrued for the payment of interest (net of tax benefits) and penalties. The accrued interest balance as of 31 December 2019 is included within the deferred and other non-current taxes section reflected above and in the balance sheet.

The balance of gross unrecognised tax benefits as of 31 December 2019 presented in the table above excludes accrued interest and penalties (USD 45 million).

During the year, certain tax positions and audits in Switzerland, the United States, France, the United Kingdom, Brazil, Germany, Japan and Malaysia were effectively settled.

The Group continually evaluates proposed adjustments by taxing authorities. The Group believes that it is reasonably possible (more than remote and less than likely) that the balance of unrecognised tax benefits could increase or decrease over the next 12 months due to settlements or expiration of statutes. However, quantification of an estimated range cannot be made at this time.

The following table summarises jurisdictions and tax years that remain subject to examination:

Australia	2014–2019
Brazil	2014–2019
Canada	2012–2019
China	2009–2019
Colombia	2014; 2016
Denmark	2014–2019
France	2017–2019
Germany	2017–2019
Hong Kong	2013–2019
India	2007–2019
Ireland	2015–2019
Israel	2014–2019
Italy	2015–2019
Japan	2019
Korea	2013–2019
Luxembourg	2015–2019
Malaysia	2012–2019
Mexico	2014–2019
Netherlands	2015–2019
New Zealand	2014–2019
Singapore	2014–2019
Slovakia	2014–2019
South Africa	2015–2019
Spain	2015–2019
Switzerland	2016–2019
United Kingdom	2018–2019
United States	2014–2019

13 Benefit plans

Defined benefit pension plans and post-retirement benefits

SRZ is a wholly owned subsidiary of Swiss Re Ltd. Swiss Re Ltd is the ultimate parent company of the Swiss Re Group. SRZ and its subsidiaries sponsor various pension plans, in which the Group and affiliated companies participate. Employers contributions to the plans are charged to income on a basis which recognises the costs of pensions over the expected service lives of employees covered by the plans. The Group's funding policy for these plans is to contribute annually at a rate that is intended to maintain a level percentage of compensation for the employees covered. A full valuation is prepared at least every three years.

The Swiss Re Group also provides certain healthcare and life insurance benefits for retired employees and their dependants. Employees become eligible for these benefits when they become eligible for pension benefits.

The measurement date of these plans is 31 December for each year presented.

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Benefit obligation as of 1 January	3 948	1 924	413	6 285
Service cost	120	7	5	132
Interest cost	23	53	9	85
Amendments	0	1	–61	–60
Actuarial gains/losses	–43	–45	–25	–113
Benefits paid	–202	–72	–18	–292
Employee contribution	25			25
Effect of settlement, curtailment and termination	4			4
Effect of foreign currency translation	–43	–71	–4	–118
Benefit obligation as of 31 December	3 832	1 797	319	5 948
Fair value of plan assets as of 1 January	3 887	2 012	0	5 899
Actual return on plan assets	–73	–29		–102
Company contribution	162	14	18	194
Benefits paid	–202	–72	–18	–292
Employee contribution	25			25
Effect of settlement, curtailment and termination	4			4
Effect of foreign currency translation	–43	–79		–122
Fair value of plan assets as of 31 December	3 760	1 846	0	5 606
Funded status	–72	49	–319	–342

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Benefit obligation as of 1 January	3 832	1 797	319	5 948
Service cost	99	6	3	108
Interest cost	29	54	7	90
Amendments			–1	–1
Actuarial gains/losses	307	230	24	561
Benefits paid	–59	–80	–16	–155
Employee contribution	32			32
Effect of settlement, curtailment and termination	–150			–150
Effect of foreign currency translation	75	22	4	101
Benefit obligation as of 31 December	**4 165**	**2 029**	**340**	**6 534**
Fair value of plan assets as of 1 January	3 760	1 846	0	5 606
Actual return on plan assets	391	263		654
Company contribution	97	13	16	126
Benefits paid	–59	–80	–16	–155
Employee contribution	32			32
Effect of settlement, curtailment and termination	–150			–150
Effect of foreign currency translation	74	32		106
Fair value of plan assets as of 31 December	**4 145**	**2 074**	**0**	**6 219**
Funded status	**–20**	**45**	**–340**	**–315**

Amounts recognised in "Other assets" and "Accrued expenses and other liabilities" in the Group's balance sheet as of 31 December were as follows:

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Non-current assets		218		218
Current liabilities		–2	–17	–19
Non-current liabilities	–72	–167	–302	–541
Net amount recognised	–72	49	–319	–342

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Non-current assets		240		240
Current liabilities		–3	–17	–20
Non-current liabilities	–20	–192	–323	–535
Net amount recognised	**–20**	**45**	**–340**	**–315**

Amounts recognised in accumulated other comprehensive income, gross of tax, as of 31 December were as follows:

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	864	299	–12	1 151
Prior service cost/credit	–100	2	–61	–159
Total	764	301	–73	992

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	818	321	13	1 152
Prior service cost/credit	–85	2	–50	–133
Total	**733**	**323**	**–37**	**1 019**

Components of net periodic benefit cost

The components of pension and post-retirement cost for the years ended 31 December were as follows:

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Service cost (net of participant contributions)	120	7	5	132
Interest cost	23	53	9	85
Expected return on assets	–93	–65		–158
Amortisation of:				
Net gain/loss	64	12		76
Prior service cost	–15			–15
Effect of settlement, curtailment and termination	4			4
Net periodic benefit cost	103	7	14	124

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Service cost (net of participant contributions)	99	6	3	108
Interest cost	29	54	7	90
Expected return on assets	–93	–67		–160
Amortisation of:				
Net gain/loss	35	11	–2	44
Prior service cost	–15		–15	–30
Effect of settlement, curtailment and termination	28			28
Net periodic benefit cost	**83**	**4**	**–7**	**80**

Other changes in plan assets and benefit obligations recognised in other comprehensive income for the years ended 31 December were as follows:

2018 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	123	49	–25	147
Prior service cost/credit		1	–61	–60
Amortisation of:				
Net gain/loss	–64	–12		–76
Prior service cost	15			15
Effect of settlement, curtailment and termination				0
Exchange rate gain/loss recognised during the year		–9		–9
Total recognised in other comprehensive income, gross of tax	74	29	–86	17
Total recognised in net periodic benefit cost and other comprehensive income, gross of tax	177	36	–72	141

2019 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	10	34	24	68
Prior service cost/credit			–1	–1
Amortisation of:				
Net gain/loss	–35	–11	2	–44
Prior service cost	15		15	30
Effect of settlement, curtailment and termination	–26			–26
Exchange rate gain/loss recognised during the year		–1		–1
Total recognised in other comprehensive income, gross of tax	**–36**	**22**	**40**	**26**
Total recognised in net periodic benefit cost and other comprehensive income, gross of tax	**47**	**26**	**33**	**106**

The Group and affiliated companies' estimated net loss and prior service credit for the defined benefit pension plans that will be amortised from accumulated other comprehensive income into net periodic benefit cost in 2020 are USD 71 million and USD 15 million, respectively. The estimated net gain and prior service credit for the other defined post-retirement benefits that will be amortised from accumulated other comprehensive income into net periodic benefit cost in 2020 are nil and USD 15 million, respectively.

The Group and affiliated companies' accumulated benefit obligation (the current value of accrued benefits excluding future salary increases) for pension benefits was USD 5 570 million and USD 6 126 million as of 31 December 2018 and 2019, respectively.

Pension plans with an accumulated benefit obligation in excess of plan assets as of 31 December were as follows:

USD millions	2018	**2019**
Projected benefit obligation	4 895	625
Accumulated benefit obligation	4 854	616
Fair value of plan assets	4 654	430

Principal actuarial assumptions

	Swiss plan		Foreign plans weighted average		Other benefits weighted average	
	2018	**2019**	2018	**2019**	2018	**2019**
Assumptions used to determine obligations at the end of the year						
Discount rate	0.8%	0.1%	3.0%	2.1%	2.2%	1.5%
Rate of compensation increase	1.8%	1.8%	2.8%	2.8%	2.1%	2.1%
Assumptions used to determine net periodic pension costs for the year ended						
Discount rate	0.6%	0.8%	2.8%	3.0%	2.1%	2.2%
Expected long-term return on plan assets	2.5%	2.5%	3.5%	3.6%		
Rate of compensation increase	1.8%	1.8%	2.8%	2.8%	2.1%	2.1%
Assumed medical trend rates at year end						
Medical trend – initial rate					4.7%	4.4%
Medical trend – ultimate rate					3.6%	3.6%
Year that the rate reaches the ultimate trend rate					2021	2023

The expected long-term rates of return on plan assets are based on long-term expected inflation, interest rates, risk premiums and targeted asset category allocations. The estimates take into consideration historical asset category returns.

Assumed healthcare cost trend rates have a significant effect on the amounts reported for the healthcare plans. A one percentage point change in assumed healthcare cost trend rates would have had the following effects for 2019:

USD millions	1 percentage point increase	1 percentage point decrease
Effect on total of service and interest cost components	0	0
Effect on post-retirement benefit obligation	18	–16

Plan asset allocation by asset category

The actual asset allocation by major asset category for defined benefit pension plans as of the respective measurement dates in 2018 and 2019 was as follows:

	Swiss plan allocation			Foreign plans allocation		
	2018	**2019**	**Target allocation**	2018	**2019**	**Target allocation**
Asset category						
Equity securities	23%	26%	23%	14%	7%	7%
Debt securities	46%	41%	46%	80%	82%	88%
Real estate	24%	18%	23%	0%	0%	0%
Other	7%	15%	8%	6%	11%	5%
Total	100%	**100%**	**100%**	100%	**100%**	**100%**

Actual asset allocation is determined by a variety of current economic and market conditions and considers specific asset class risks.

Equity securities include Swiss Re shares of USD 4 million (0.1% of total plan assets) and USD 3 million (0.05% of total plan assets) as of 31 December 2018 and 2019, respectively.

The Group's pension plan investment strategy is to match the maturity profiles of the assets and liabilities in order to reduce the future volatility of pension expense and funding status of the plans. This involves balancing investment portfolios between equity and fixed income securities. Tactical allocation decisions that reflect this strategy are made on a quarterly basis.

Assets measured at fair value

For a description of the different fair value levels and valuation techniques see Note 8 "Fair value disclosures".

Certain items reported as pension plan assets at fair value in the following table are not within the scope of Note 8, namely two positions: real estate and an insurance contract.

Real estate positions classified as level 1 and level 2 are exchange-traded real estate funds where a market valuation is readily available. Real estate reported on level 3 is property-owned by the pension funds. These positions are accounted for at the capitalised income value. The capitalisation based on sustainable recoverable earnings is conducted at interest rates that are determined individually for each property, based on the property's location, age and condition. If properties are intended for disposal, the estimated selling costs and taxes are recognised in provisions. Sales gains or losses are allocated to income from real estate when the contract is concluded.

The fair value of the insurance contract is based on the fair value of the assets backing the contract.

As of 31 December, the fair values of pension plan assets by level of input were as follows:

2018 USD millions	Quoted prices in active markets for identical assets (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Investments measured at net asset value as practical expedient	Total
Assets					
Fixed income securities:					
Debt securities issued by the US government and government agencies	32	201			233
Debt securities issued by non-US governments and government agencies		1 147			1 147
Corporate debt securities		1 625	10		1 635
Residential mortgage-backed securities		16			16
Commercial mortgage-backed securities		1			1
Agency securitised products		7			7
Other asset-backed securities		3			3
Equity securities at fair value through earnings	901	257			1 158
Short-term investments		5			5
Derivative financial instruments		–13			–13
Real estate			721		721
Other assets		78		545	623
Total assets at fair value	933	3 327	731	545	5 536
Cash	70				70
Total plan assets	1 003	3 327	731	545	5 606

2019 USD millions	Quoted prices in active markets for identical assets (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Investments measured at net asset value as practical expedient	Total
Assets					
Fixed income securities:					
Debt securities issued by the US government and government agencies	41	211			252
Debt securities issued by non-US governments and government agencies		1 266			1 266
Corporate debt securities		1 829	11		1 840
Residential mortgage-backed securities		9			9
Commercial mortgage-backed securities		1			1
Agency securitised products					0
Other asset-backed securities		3			3
Equity securities at fair value through earnings	1 082	140			1 222
Short-term investments		6			6
Derivative financial instruments		23			23
Real estate	4		756		760
Other assets		75		578	653
Total assets at fair value	**1 127**	**3 563**	**767**	**578**	**6 035**
Cash	184				184
Total plan assets	**1 311**	**3 563**	**767**	**578**	**6 219**

Assets measured at fair value using significant unobservable inputs (level 3)

For the years ended 31 December, the reconciliation of fair value of pension plan assets using significant unobservable inputs were as follows:

2018 USD millions	Real estate	Other assets	Total
Balance as of 1 January	692	113	805
Realised/unrealised gains/losses:			
Relating to assets still held at the reporting date	27	–14	13
Relating to assets sold during the period		27	27
Purchases, issuances and settlements	10	–11	–1
Transfers in and/or out of level 3		–103	–103
Impact of foreign exchange movements	–8	–2	–10
Closing balance as of 31 December	721	10	731

2019 USD millions	Real estate	Other assets	Total
Balance as of 1 January	721	10	731
Realised/unrealised gains/losses:			
Relating to assets still held at the reporting date	20	1	21
Relating to assets sold during the period			0
Purchases, issuances and settlements	2		2
Transfers in and/or out of level 3			0
Impact of foreign exchange movements	13		13
Closing balance as of 31 December	**756**	**11**	**767**

Expected contributions and estimated future benefit payments

The employer contributions expected to be made in 2020 to the defined benefit pension plans are USD 114 million and to the post-retirement benefit plan are USD 17 million.

As of 31 December 2019, the projected benefit payments, which reflect expected future service, not adjusted for transfers in and for employees' voluntary contributions, are as follows:

USD millions	Swiss plan	Foreign plans	Other benefits	Total
2020	216	84	17	317
2021	212	88	17	317
2022	203	90	18	311
2023	198	93	18	309
2024	201	95	18	314
Years 2025–2029	966	502	90	1 558

Defined contribution pension plans

The Group sponsors a number of defined contribution plans to which employees and the Group make contributions. The accumulated balances are paid as a lump sum at the earlier of retirement, termination, disability or death. The amount expensed in 2018 and 2019 was USD 63 million and USD 63 million, respectively.

14 Related parties

The Group assumes and cedes certain re/insurance contracts from/to affiliated companies within the Swiss Re Group, but outside the Group. The Group also conducts various investing activities, including loans, funding agreements and derivatives, with affiliated companies in the Swiss Re Group. The Group enters into various financing activities where it borrows funds from affiliated companies in the Swiss Re Group. In addition, the Group enters into various arrangements with affiliated companies in the Swiss Re Group for the provision of services. These activities result in the following related party transactions on the income statement and balance sheet:

2018 USD millions	Corporate Solutions	Life Capital	Other	Total
Revenues				
Gross premiums written	276	1 151		1 427
Net premiums written	177	469		646
Change in unearned premiums	–17			–17
Premiums earned	160	469		629
Fee income from policyholders		–96		–96
Net investment income – non-participating business	10	–313	–8	–311
Net realised investment gains/losses – non-participating business	–37	–26	38	–25
Other revenues	11	33		44
Total revenues	144	67	30	241
Expenses				
Claims and claim adjustment expenses	86			86
Life and health benefits		–270		–270
Return credited to policyholders		310		310
Acquisition costs	–4	4		0
Operating expenses	77	9	–1 368	–1 282
Interest expenses	–1		–197	–198
Total expenses	158	53	–1 565	–1 354

2019 USD millions	Corporate Solutions	Life Capital	Other	Total
Revenues				
Gross premiums written	373	642		1 015
Net premiums written	305	44		349
Change in unearned premiums	–41	67		26
Premiums earned	264	111		375
Fee income from policyholders		–91		–91
Net investment income/loss – non-participating business	–3	–504	–1	–508
Net realised investment gains/losses – non-participating business	29	–16	–25	–12
Other revenues	3	7	1	11
Total revenues	**293**	**–493**	**–25**	**–225**
Expenses				
Claims and claim adjustment expenses	–609			–609
Life and health benefits		17		17
Return credited to policyholders		314		314
Acquisition costs	–28	–38		–66
Operating expenses	76	10	–1 422	–1 336
Interest expenses	–5	–7	–187	–199
Total expenses	**–566**	**296**	**–1 609**	**–1 879**

2018 USD millions	Corporate Solutions	Life Capital	Other	Total
Assets				
Policy loans, mortgages and other loans		66	60	126
Other invested assets	30	143	84	257
Accrued investment income			1	1
Premiums and other receivables	96	860		956
Reinsurance recoverable on unpaid claims and policy benefits	527	8 917		9 444
Funds held by ceding companies	298	1 643		1 941
Deferred acquisition costs	9	24		33
Acquired present value of future profits		–528		–528
Other assets	336	30	126	492
Total assets	1 296	11 155	271	12 722
Liabilities				
Unpaid claims and claim adjustment expenses	3 674	422		4 096
Liabilities for life and health policy benefits		2 530		2 530
Unearned premiums	106	78		184
Funds held under reinsurance treaties	83	7 424		7 507
Reinsurance balances payable	92	855		947
Short-term debt			3 322	3 322
Long-term debt			430	430
Accrued expenses and other liabilities	328	483	895	1 706
Total liabilities	4 283	11 792	4 647	20 722

2019 USD millions	Corporate Solutions	Life Capital	Other	Total
Assets				
Policy loans, mortgages and other loans		66	60	126
Other invested assets	31	78	121	230
Accrued investment income				0
Premiums and other receivables	912	509		1 421
Reinsurance recoverable on unpaid claims and policy benefits	429	8 368		8 797
Funds held by ceding companies	393	1 098		1 491
Deferred acquisition costs	16	–5		11
Acquired present value of future profits		–478		–478
Other assets	3	23	111	137
Total assets	**1 784**	**9 659**	**292**	**11 735**
Liabilities				
Unpaid claims and claim adjustment expenses	5 011	300		5 311
Liabilities for life and health policy benefits		3 070		3 070
Unearned premiums	125	10		135
Funds held under reinsurance treaties	67	6 287		6 354
Reinsurance balances payable	256	601		857
Short-term debt			2 230	2 230
Long-term debt			429	429
Accrued expenses and other liabilities	592	398	1 189	2 179
Total liabilities	**6 051**	**10 666**	**3 848**	**20 565**

Share in earnings and dividends received from equity-accounted investees for the years ended 31 December, were as follows:

USD millions	2018	2019
Share in earnings of equity-accounted investees	89	51
Dividends received from equity-accounted investees	133	63

An overview of the financing activities between the Group and affiliated companies is shown below:

Maturity	Instrument	Issued in	Currency	Nominal in millions	Interest rate	Book value in USD millions
2020	Senior Loan	2019	USD	1 500	3mLIBOR + 0.35%	1 500
2020	Senior Loan	2019	USD	230	1.88%	230
2020	Senior Loan	2019	USD	500	3mLIBOR + 0.53%	500
2043	Subordinated Loan	2018	USD	430	5.75%	429
Total debt as of 31 December 2019						**2 659**

As of 31 December 2018 and 2019, the Group's investment in mortgages and other loans included USD 373 million and USD 3 million, respectively, of loans due from employees, and USD 212 million and nil, respectively, due from officers. These loans generally consist of mortgages offered at variable and fixed interest rates.

The Company has entered into subordinated funding facilities with its parent company Swiss Re Ltd under which the Company has the right, among others, to issue subordinated notes to Swiss Re Ltd at any time. For its various rights, the Company owes Swiss Re Ltd an unconditional fixed commitment fee on the total facility amount, payable in annual instalments. Annually, the Company receives a partial reimbursement of the commitment fee on the undrawn facility amount. As of 31 December 2019, the facilities were undrawn.

An overview of the subordinated funding facilities is provided in the following table:

Instrument	Lender	Issued in	Maturity	Currency	Nominal value in millions	Commitment fee (on total facility amount)	Partial reimbursement of commitment fee (on undrawn amount)
Subordinated funding facility	Swiss Re Ltd	2015	2030	USD	700	5.80%	2.22%
Subordinated funding facility	Swiss Re Ltd	2016	2036	USD	400	6.10%	2.13%
Subordinated funding facility	Swiss Re Ltd	2016	2032	USD	800	5.68%	1.95%

None of the members of BoD and the Group EC has any significant business connection with the Group or any of its Group companies.

15 Commitments and contingent liabilities

As a participant in limited and other investment partnerships, the Group commits itself to making available certain amounts of investment funding, callable by the partnerships for periods of up to ten years. The total commitments remaining uncalled as of 31 December 2019 were USD 2 050 million.

The Group enters into a number of contracts in the ordinary course of reinsurance and financial services business which, if the Group's credit rating and/or defined statutory measures decline to certain levels, would require the Group to post collateral or obtain guarantees. The contracts typically provide alternatives for recapture of the associated business.

Legal proceedings
In the normal course of business operations, the Group is involved in various claims, lawsuits and regulatory matters. In the opinion of management, the resolution of these matters is not expected to have a material adverse effect on the Group's business, consolidated financial position, results of operations or cash flows.

16 Variable interest entities

The Group enters into arrangements with variable interest entities (VIEs) in the normal course of business. The involvement ranges from being a passive investor to designing, structuring and managing the VIEs. The variable interests held by the Group arise primarily as a result of the Group's involvement in certain insurance-linked securitisations, life and health funding transactions, swaps in trusts, debt financing, investment, senior commercial mortgage and infrastructure loans as well as other entities, which meet the definition of a VIE.

When analysing whether the entity is a VIE, the Group mainly assesses if (1) the equity is sufficient to finance the entity's activities without additional subordinated financial support, (2) the equity holders have the right to make significant decisions affecting the entity's operations and (3) the holders of the voting rights substantively participate in the gains and losses of the entity.

When one of these criteria is not met, the entity is considered a VIE and is assessed for consolidation under the VIE section of the Consolidation Topic.

The party that has a controlling financial interest is called a primary beneficiary and consolidates the VIE. The party is deemed to have a controlling financial interest if it has both:

- the power to direct the activities of the VIE that most significantly impact the entity's economic performance; and
- the obligation to absorb the entity's losses that could potentially be significant to the VIE or the right to receive benefits from the entity that could potentially be significant to the VIE.

For all its variable interests in VIEs, the Group assesses whether it has a controlling financial interest in these entities and, thus, is the primary beneficiary. The Group identifies the activities that most significantly impact the entity's performance and determines whether the Group has the power to direct those activities. In conducting the analysis, the Group considers the purpose, the design and the risks that the entity was designed to create and pass through to its variable interest holders. Additionally, the Group assesses if it has the obligation to absorb losses or if it has the right to receive benefits of the VIE that could potentially be significant to the entity. If both criteria are met, the Group has a controlling financial interest in the VIE and consolidates the entity.

The Group monitors changes to the facts and circumstances of the existing involvement with legal entities to determine whether they require reconsideration of the entity's designation as a VIE or voting interest entity. For VIEs, the Group regularly reassesses the primary beneficiary determination.

Insurance-linked securitisations

The insurance-linked securitisations transfer pre-existing insurance risk to investors through the issuance of insurance-linked securities. In insurance-linked securitisations, the securitisation vehicle assumes the insurance risk from a sponsor through insurance or derivative contracts. The securitisation vehicle generally retains the issuance proceeds as collateral, which consists of investment-grade securities. The Group does not have potentially significant variable interest in these vehicles and therefore is not a primary beneficiary.

Typically, the variable interests held by the Group arise through ownership of insurance-linked securities, in which case the Group's maximum loss equals the principal amount of the securities held by the Group.

Life and health funding vehicles

The Group participates in certain structured transactions that retrocede longevity and mortality risks to captive reinsurers with an aim to provide regulatory capital credit to a transaction sponsor through the creation of funding notes by a separate funding vehicle which is generally considered a VIE. The Group's participation in these transactions is generally limited to providing contingent funding support via a financial contract with a funding vehicle, which represents a potentially significant variable interest in the funding vehicle. The Group does not have power to direct activities of the funding vehicles and therefore is not a primary beneficiary of the funding vehicles in these transactions. The Group's maximum exposure in these transactions equals either the total contract notional or outstanding balance of the funding notes issued by the vehicle, depending on the specific contractual arrangements.

Swaps in trusts
The Group provides interest rate and foreign exchange risk hedges to certain asset securitisation trusts which qualify as VIEs. As the Group's involvement is limited to interest rate and foreign exchange derivatives, it does not have the power to direct any activities of the trusts and therefore does not qualify as primary beneficiary of any of these trusts. These activities are in run-off.

Debt financing vehicles
The Group consolidates a debt-financing vehicle created to collateralise reinsurance coverage provided by the Group. The Group manages the asset portfolio in the vehicle and absorbs the variability of the investment return of the vehicle's portfolio, thereby satisfying both criteria for a controlling financial interest: power over activities most significant to the vehicle's economic performance and significant economic interest.

Investment vehicles
The Group's variable interests in investment partnerships arise through ownership of the limited partner interests. Many investment partnerships are VIEs because the limited partners as a group lack kick-out or participating rights. The Group does not hold the general partner interest in the limited partnerships and therefore does not direct investment activities of the entity. Therefore, the Group lacks power over the relevant activities of the vehicles and, consequently, does not qualify as the primary beneficiary. The Group is exposed to losses when the values of the investments held by the investment vehicles decrease. The Group's maximum exposure to loss equals the Group's share of the investment.

The Group is a passive investor in structured securitisation vehicles issuing residential and commercial mortgage-backed securities (RMBS and CMBS, respectively) and other asset-backed securities (ABS). The Group's investments in RMBS, CMBS and other ABS are passive in nature and do not obligate the Group to provide any financial or other support to the issuer entities. By design, RMBS, CMBS and ABS securitisation entities are not adequately capitalised and therefore considered VIEs. The Group is not the primary beneficiary, because it does not have power to direct most significant activities. These investments are accounted for as available-for-sale as described in the investment note and not included in the tables on the following pages.

The Group consolidates an investment vehicle, because the Group holds the entire interest in the entity and makes investment decisions related to the entity. The investment vehicle is a VIE because it is structured as an umbrella company comprised of multiple sub-funds. The majority of the investments held in this vehicle are accounted for as available-for-sale and are disclosed in the investment note and not included in the tables on the following pages.

Investment vehicles for unit-linked business
Additionally, the Group invests on behalf of the policyholders as a passive investor in a variety of investment funds across various jurisdictions. By design, many of these funds meet a VIE definition. While the Group may have a potentially significant variable interest in some of these entities due to its share of the fund's total net assets, it never has power over the fund's investment decisions or unilateral kick-out rights relative to the decision maker.

The Group is not exposed to losses in the aforementioned investment vehicles, as the investment risk is borne by the policyholder.

Senior commercial mortgage and infrastructure loans
The Group also invests in structured commercial mortgage and infrastructure loans, which are held for investment.

The commercial mortgage loans are made to non-recourse special purpose entities collateralised with commercial real estate. The entities are adequately capitalised and generally structured as voting interest entities. Occasionally, the borrower entities can be structured as limited partnerships where the limited partners do not have kick-out or participating rights, which results in the VIE designation.

The infrastructure loans are made to non-recourse special purpose entities collateralised with infrastructure project assets. Some borrower entities may have insufficient equity investment at risk, which results in the VIE designation.

The Group does not have power over the activities most significant to the aforementioned borrower entities designated as VIEs and therefore does not consolidate them.

The Group's maximum exposure to loss from its investments equals the loan outstanding amount.

Other

The Group consolidates a vehicle providing reinsurance to its members, because it serves as a decision maker over the entity's investment and underwriting activities, 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 the event of a deficit. The vehicle is a VIE, primarily because its total equity investment at risk is insufficient and the members lack decision-making rights.

The Group did not provide financial or other support to any VIEs during 2019 that it was not previously contractually required to provide.

Consolidated VIEs

The following table shows the total assets and liabilities in the Group's balance sheet related to VIEs of which the Group is the primary beneficiary as of 31 December:

USD millions	2018	2019
Fixed income securities available-for-sale	3 444	3 423
Short-term investments	79	260
Cash and cash equivalents	18	34
Accrued investment income	30	27
Premiums and other receivables	26	31
Funds held by ceding companies		1
Deferred acquisition costs	3	3
Deferred tax assets	206	167
Other assets	16	15
Total assets	3 822	**3 961**
Unpaid claims and claim adjustment expenses	66	55
Unearned premiums	8	12
Funds held under reinsurance treaties		4
Reinsurance balances payable	15	21
Deferred and other non-current tax liabilities	174	137
Accrued expenses and other liabilities	15	15
Long-term debt	2 112	1 918
Total liabilities	2 390	**2 162**

The assets of the consolidated VIEs may only be used to settle obligations of these VIEs and to settle any investors' ownership liquidation requests. There is no recourse to the Group for the consolidated VIEs' liabilities. The assets of the consolidated VIEs are not available to the Group's creditors.

Non-consolidated VIEs

The following table shows the total assets and liabilities on the Group's balance sheet related to VIEs in which the Group held a variable interest but was not the primary beneficiary as of 31 December:

USD millions	2018	2019
Fixed income securities available-for-sale	749	1 046
Equity securities at fair value through earnings	205	59
Policy loans, mortgages and other loans	1 056	1 264
Other invested assets	1 413	1 585
Investments for unit-linked business	141	148
Total assets	3 564	**4 102**
Accrued expenses and other liabilities	58	43
Total liabilities	58	**43**

The following table shows the Group's assets, liabilities and maximum exposure to loss related to VIEs in which the Group held a variable interest but was not the primary beneficiary as of 31 December:

USD millions	2018 Total assets	2018 Total liabilities	2018 Maximum exposure to loss[1]	2019 Total assets	2019 Total liabilities	2019 Maximum exposure to loss[1]
Insurance-linked securitisations	447		462	598		627
Life and health funding vehicles	25		2 174	22		2 300
Swaps in trusts	76	58	–[2]	83	43	–[2]
Investment vehicles	1 517		1 517	1 540		1 540
Investment vehicles for unit-linked business	141			148		
Senior commercial mortgage and infrastructure loans	1 358		1 358	1 711		1 711
Total	3 564	58	–[2]	**4 102**	**43**	**–[2]**

[1] Maximum exposure to loss is the loss the Group would absorb from a variable interest in a VIE in the event that all of the assets of the VIE are deemed worthless.
[2] The maximum exposure to loss for swaps in trusts cannot be meaningfully quantified due to their derivative character.

The assets and liabilities for the swaps in trusts represent the positive and negative fair values of the derivatives the Group has entered into with the trusts.

17 Subsequent events

The rapid spread of the coronavirus, which has been declared a pandemic, and the actions being taken to contain it on an increasingly global basis have led to significant volatility in the financial markets and are having an adverse impact on global business and economic activity. There is an increasing likelihood that the coronavirus and containment efforts could have adverse effects on the global economy and could possibly lead to a global recession. The Group is closely monitoring developments and the potential impact of the spread of infection and global responses on, for example, asset prices and insurance exposures, as well as on its operations.

Report of the statutory auditor

to the General Meeting of Swiss Reinsurance Company Ltd

Zurich

Report of the statutory auditor on the consolidated financial statements

As statutory auditor, we have audited the accompanying consolidated financial statements of Swiss Reinsurance Company Ltd and its subsidiaries (the 'Company'), which comprise the income statement and statement of comprehensive income for the year ended 31 December 2019, the balance sheet as at 31 December 2019 and the statement of shareholder's equity and the statement of cash flows for the year then ended, and notes to the Group financial statements, including the note organisation and summary of significant accounting policies (pages 2 to 99).

Board of Directors' responsibility

The Board of Directors is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America (US GAAP) and the requirements of Swiss law. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Swiss law, Swiss Auditing Standards and auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying consolidated financial statements for the year ended 31 December 2019 present fairly, in all material respects, the financial position, the results of operations and the cash flows in accordance with accounting principles generally accepted in the United States of America (US GAAP) and comply with Swiss law.

Other Matter

Accounting principles generally accepted in the United States of America (US GAAP) requires that the supplementary information based on the requirements of ASU 2015-09, Disclosures about Short-Duration Contracts, on pages 41 to 48 be presented to supplement the consolidated financial statements. Such information, although not part of the consolidated financial statements, is required by the Financial Accounting Standards Board, which considers it an essential part of financial reporting for placing the consolidated financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of the Company about the methods of preparing the information and comparing the information for consistency with the Company's responses to our inquiries, the consolidated financial statements and other knowledge we obtained during our audit of the consolidated financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

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Report on key audit matters based on the circular 1/2015 of the Federal Audit Oversight Authority

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Unobservable or interpolated inputs used for the valuation of certain level 2 and 3 investments

Key audit matter	How our audit addressed the key audit matter
Investment valuation continues to be an area with inherent risk for certain level 2 and 3 investments that have unobservable or interpolated inputs. The risk is not the same for all investment types and is greatest for those listed below. These investments are more difficult to value because quoted prices are not always available, and valuation requires unobservable or interpolated inputs and complex valuation models: • Fixed income securitised products • Fixed income mortgage and asset-backed securities • Private placements and infrastructure loans • Private equities • Derivatives • Insurance-related financial products	We assessed and tested the design and operating effectiveness of selected key controls around the valuation models for level 2 and 3 investments, including the Company's independent price verification process. We also tested the Company's data integrity and change management controls relating to the valuation models. In relation to the matters set out opposite, our substantive testing procedures included the following: • Challenging the Company's methodology and assumptions, in particular, the yield curves, discounted cash flows, perpetual growth rates and liquidity premiums used in the valuation models. • Comparing the assumptions used against appropriate benchmarks and investigating significant differences. • Engaging our own valuation specialists to perform independent valuations of selected level 2 and 3 investments. Based on the work performed, we consider the methodology and assumptions used by the Company in determining the valuation to be appropriate.

Valuation of actuarially determined Property & Casualty ('P&C') loss reserves

Key audit matter	How our audit addressed the key audit matter
Valuation of actuarially determined P&C loss reserves involves a high degree of subjectivity and complexity. Reserves for losses and loss adjustment expenses represent estimates of future payments of reported and unreported claims for losses and related expenses at a given date. Furthermore, on a regular basis, the Company enters into large and/or structured transactions which often have material or complex financial reporting and reserving consequences. The reserving for such transactions is subject to increased risk of error due to the non-routine nature of transactions and the judgmental nature of reserving. The Company uses a range of actuarial methodologies and methods to estimate these reserves. Actuarially determined P&C loss reserves require significant judgment relating to certain factors and assumptions. Among the most significant reserving assumptions are the A-priori loss ratios, which typically drive the estimates of P&C loss reserves for the most recent contract years. Other key factors and assumptions include, but are not limited to changes in interest rates, exposures and mix as well as inflation trends, claims trends and regulatory decisions. In particular, loss reserves for 'long tail' lines of business (for example, the Liability, US Asbestos and Environmental, Motor Liability and Workers' Compensation portfolios) generally require more judgment to estimate. This is due to the protracted period over which claims may be reported and/or settled as well as the fact that claim settlements are often less frequent but of higher magnitude. Moreover, not all natural catastrophe events and significant man-made losses can be modelled using traditional actuarial methodologies, which increases the degree of judgment needed in establishing reserves for these events.	We assessed and tested the design and operating effectiveness of selected key controls relating to the application of the actuarial methodology, data collection and analysis, as well as the processes for determining the assumptions used by the Company in the valuation of actuarially determined P&C loss reserves. In relation to the matters set out opposite, our substantive testing procedures included the following, which are applicable for both the standard reserving and large and/or structured transactions: • Testing the completeness and accuracy of underlying data utilised by the Company's actuaries in estimating P&C loss reserves. • Applying IT audit techniques to analyse claims through the recalculation of claims triangles. • Involving PwC's internal actuarial specialists to independently test the Company's estimates of P&C loss reserves and evaluate the reasonableness of the methodology and assumptions used by comparing them with recognised actuarial practices and by applying our industry knowledge and experience. • Performing independent projections of selected portfolios. For these portfolios, we compared our calculations of projected reserves with those of the Company taking into account the available corroborating and contrary evidence and challenging the Company's assumptions as appropriate. • Assessing the process and related judgments of the Company in relation to natural catastrophes and other large losses, including using our industry knowledge to assess the reasonableness of market loss estimates and other significant assumptions. • Performing sensitivity tests to determine the impact of selected key assumptions. • Evaluating the appropriateness of any significant adjustments made by the Company to P&C loss reserve estimates. • Evaluating the appropriateness of the recognition, accounting and disclosures for large and/or structured transactions. Based on the work performed, we consider the methodologies and assumptions used by the Company in the valuation of actuarially determined P&C loss reserves to be appropriate.

Valuation of actuarially determined Life & Health (‘L&H’) reserves

Key audit matter	How our audit addressed the key audit matter
The Company’s valuation of liabilities for L&H policy benefits and policyholder account balances involves complex judgments about future events affecting the business. Actuarial assumptions selected by the Company with respect to interest rates, inflation trends, investment returns, mortality, morbidity, lapse in coverage, longevity, persistency, expenses, stock market volatility and future policyholder behaviour may result in material impacts on the valuation of L&H reserves. The methodology and methods used can also have a material impact on the valuation of actuarially determined L&H reserves. Furthermore, on a regular basis, the Company enters into large and/or structured transactions which often have material or complex financial reporting and reserving consequences. The reserving for such transactions is subject to increased risk of error due to the non-routine nature of transactions and the judgmental nature of reserving. The valuation of actuarially determined L&H reserves depends on the use of complex models. The Company continues to migrate actuarial data and models from legacy systems and/or spreadsheets to new actuarial modelling systems. At the same time, the Company is validating models to ensure that new models are fit for use. Moving from one modelling platform to another is a complex and time-consuming process, frequently taking several years. Any resulting adjustments to reserves need to be assessed in terms of appropriateness and classified as a change in estimate or as an out-of-period adjustment.	We assessed and tested the design and operating effectiveness of selected key controls relating to the application of actuarial methodology, data collection and analysis, as well as the processes for determining the assumptions used by the Company in the valuation of actuarially determined L&H reserves. In relation to the matters set out opposite, our substantive testing procedures included the following, which are applicable for both the standard reserving and large and/or structured transactions: • Testing the completeness and accuracy of the underlying data by vouching against the source documentation. • Testing the migration of actuarial data from legacy systems and/or spreadsheets to the new actuarial systems for completeness and accuracy. • Involving our life insurance actuarial specialists to perform independent model validation procedures, including detailed testing of models, independent recalculations and back testing. • Challenging the Company’s methodology and methods, focusing on changes to L&H actuarial methodology and methods during the year, by applying our industry knowledge and experience to check whether the methodology and methods are consistent with recognised actuarial practices and reporting requirements. • Evaluating the appropriateness of the recognition, accounting, and disclosures for large and/or structured transactions. Based on the work performed, we consider the methodologies and assumptions used by the Company in the valuation of actuarially determined L&H reserves to be appropriate.

Completeness and valuation of uncertain tax positions

Key audit matter	How our audit addressed the key audit matter
The Company operates in various countries and is subject to income taxes in those jurisdictions. The assessment of the valuation of deferred tax assets, resulting from net operating losses and temporary differences, and provisions for uncertain tax positions is based on complex calculations and depends on sensitive and judgmental assumptions made by the Company. These include, amongst others, future profitability and local fiscal regulations and developments. Changes in those estimates may have a material impact (through income tax expense) on the Company`s results.	We assessed and tested the design and operating effectiveness of selected key controls in place to determine the completeness of the uncertain tax items and the Company's assessment of the items for recognition and valuation. In relation to the matters set out opposite, our substantive testing procedures included the following: • Involving our own tax specialists to critically review the Company's 'more likely than not' tax assessments and to evaluate the Company's judgments and estimates of the probabilities and the amounts. • Assessing how the Company considered new information or changes in tax law or case law and assessing the Company's judgment of how these impact the Company's position or measurement of the required provision. • Examining tax audit documentation to validate the appropriateness of releases of uncertain tax provisions. • Evaluating the appropriateness of the Company's assessment of completeness of uncertain tax provisions. • Examining material movements within uncertain tax positions in each jurisdiction. Based on the work performed, we determined the Company's assessment of the completeness and valuation of uncertain tax positions to be appropriate.

Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

PricewaterhouseCoopers AG

Roy Clark	Frank Trauschke
Audit expert Auditor in charge	Audit expert

Zurich, 18 March 2020

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Annual Report Swiss Reinsurance Company Ltd

The management report follows the regulations as outlined in article 961c of the Swiss Code of Obligations.

Reinsurance and sub-holding company
Swiss Reinsurance Company Ltd (the Company), domiciled in Zurich, Switzerland, performs a dual role within the Swiss Re Group as both a reinsurance company and a sub-holding company for the Reinsurance Business Unit. The Company is a wholly-owned subsidiary of Swiss Re Ltd, the ultimate parent company, domiciled in Zurich, Switzerland. In 2019, the Company employed a worldwide staff at an average of 1 712 full time equivalents.

Financial year 2019

Net income for 2019 amounted to CHF 2 704 million, driven by a strong investment result of CHF 4 916 million, partly offset by several property and casualty large natural catastrophe losses, namely the typhoons Hagibis and Faxai in Japan, and the weather-related events in Australia. Life & Health Reinsurance result closed negatively, due to the changes of assumptions and discount rates, more than offsetting the one-off gain from the inception of a new outward external retrocession agreement in Asia.

The financial year 2019 was characterised by large intercompany transactions impacting both the Company's income statement and balance sheet.

As a consequence of the tax regime change in the US in 2017, the Company continued to restructure its assumed intragroup retrocession agreements with affiliated companies in the US. In the prior year, as an immediate measure to the new tax regime, Swiss Re Life & Health America Inc. recaptured part of the life and health business from the Company and Swiss Reinsurance America Corporation reduced its share of the retrocession to the Company for the property and casualty business. In 2019, the US-business by both companies was partly retroceded again to a newly established taxable presence of the Company in the US.

To further align the legal entity structure with the management view in Asia, the Company sold the assets and liabilities of its Korea branch to Swiss Re Asia Pte. Ltd. With this sale the Company transferred related rights and obligations of the branch, including the entire reinsurance business as well as the employees, employed by the branch.

With CHF 11 234 million the total shareholder's equity of the Company remained strong as at 31 December 2019.

Reinsurance result

Reinsurance result amounted to a loss of CHF 842 million in 2019, compared to a gain of CHF 411 million in 2018. Property & Casualty Reinsurance result decreased from a gain of CHF 642 million in 2018 to a loss of CHF 685 million in 2019. The year experienced several large natural catastrophe losses, namely the typhoons Hagibis and Faxai in Japan, and the weather-related events in Australia, as well as the negative developments of prior year's large natural catastrophe losses and of a new adverse development cover for prior years' business of Swiss Re Corporate Solutions Ltd. This was only partly absorbed by the subsequent release of the equalisation provision. Life & Health Reinsurance result improved from a loss of CHF 231 million in 2018 to a loss of CHF 157 million in 2019, due to the one-off gain from the inception of a new outward external retrocession agreement in Asia, the losses from prior years, originating from several large transactions predominantly in Australia, and from a new intragroup retrocession agreement with Swiss Re Asia Pte. Ltd. This was partly offset by the ongoing restructuring of intragroup retrocession agreements with affiliated companies in the US, following the change of the tax regime in the US, generating losses in the current year, compared to the gains in the prior year. Life & Health Reinsurance result was further affected by unfavourable reserve developments, mainly related to the updates of discount rates and the reserve strengthening in the Americas.

Premiums earned increased from CHF 15 798 million in 2018 to CHF 20 872 million in 2019. The increase for both, property and casualty as well as life and health business, was a result of the restructuring of several intragroup retrocession agreements with affiliated companies in the US. The volume growth, predominantly of casualty business, was supported by large transactions in the Americas and Europe, partly offset by the non-renewal of a large quota share treaty with an external US-client in property and casualty and the run-off of the entered intragroup agreement with Swiss Re Asia Pte. Ltd. in 2017. Premiums earned for life and health business increased further in Asia, due to a new intragroup retrocession agreement and following the new business written late last year, partly offset by less business volume after the recapture by Swiss Re Life Capital Reinsurance Ltd of some of its business.

Other reinsurance revenues increased from CHF 1 933 million in 2018 to CHF 2 446 million in 2019, due to the one-off gain from the inception of a new external retrocession in Asia for life and health business and the restructuring of several intragroup retrocession agreements with affiliated companies in the US for property and casualty business.

Claims incurred increased from CHF 11 789 million in 2018 to CHF 16 479 million in 2019, mostly reflecting the large natural catastrophe losses in 2019. The comparison of the individual claims line items is affected by the restructuring of several intragroup retrocession agreements as well as new large life and health transactions, creating substantial changes year-over-year. In aggregate, these various movements fully offset each other.

Property and casualty claims paid and claim adjustment expenses net decreased from CHF 7 318 million in 2018 to CHF 6 481 million in 2019, reflecting the restructuring of intragroup retrocession agreements with affiliated companies in the US, with an offset in change in unpaid claims net. Property and casualty change in unpaid claims net increased from a gain of CHF 793 million in 2018 to a loss of CHF 4 173 million in 2019, additionally due to the increased quota share of the intragroup retrocession agreement with Swiss Reinsurance America Corporation, the large natural catastrophe losses in Japan as well as the weather-related events in Australia.

Following the property and casualty losses in 2019, driven by the large natural catastrophe events, the equalisation provision was fully released by CHF 221 million.

Life and health claims paid and claim adjustment expenses net and change in unpaid claims net decreased from CHF 6 818 million in 2018 to CHF 2 910 million in 2019, driven by the intragroup retrocession restructuring with Swiss Re Life & Health America Inc. in both years as well as by large transactions. These restructuring and large transaction impacts were fully offset in life and health benefits net. Furthermore, claims paid and claim adjustment expenses net and change in unpaid claims net movements were mainly driven by the inception of the new business in Japan and the recapture of business by Swiss Re Europe S.A.

Life and health benefits net decreased from a gain of CHF 1 554 million in 2018 to a loss of CHF 3 136 million in 2019, mainly driven by the intragroup retrocession restructuring with Swiss Re Life & Health America Inc. in both years as well as by large transactions. These restructuring and large transaction impacts were fully offset in life and health claims paid and claim adjustment expenses net and change in unpaid claims net. In addition, the year was negatively impacted by the inception of the new business in Japan, the updates of discount rates and the reserve strengthening in the Americas. The increase was partially offset by the new external retrocession in Asia.

Acquisition costs net increased from CHF 3 664 million in 2018 to CHF 5 167 million in 2019 in line with the premium development, mainly in property and casualty. This was driven by the increase in business volume, following the restructuring of intragroup retrocession agreements with affiliated companies in the US in 2019 as well as from the Swiss Re Asia Pte. Ltd.'s intragroup retrocession related to casualty business.

Other reinsurance expenses increased from CHF 1 545 million in 2018 to CHF 2 055 million in 2019, mainly due to the losses from the restructuring of intragroup retrocession agreements with affiliated companies in the US, related to property and casualty business.

Investment result
Investment income increased from CHF 2 777 million in 2018 to CHF 5 660 million in 2019. The increase was mainly driven by the dividend from Swiss Re Reinsurance Holding Company Ltd of CHF 2 615 million and the distribution of retained income from shares in investment funds of CHF 1 474 million.

Investment expenses decreased from CHF 466 million in 2018 to CHF 270 million in 2019. The decrease was mainly related to higher value adjustments in 2018, on equity securities and shares in investment funds, driven by market deteriorations.

Other income and expenses
The increase in other net expenses from CHF 334 million in 2018 to CHF 370 million in 2019 was mainly related to higher realised foreign exchange losses, mostly driven by the strengthening of the Swiss franc against the Euro.

Assets
Total assets increased from CHF 106 285 million as of 31 December 2018 to CHF 120 322 million as of 31 December 2019.

Total investments increased from CHF 57 431 million to CHF 62 561 million in 2019. This was driven by increased business volume, mainly following the restructuring of intragroup retrocession agreements with affiliated companies in the US, resulting in an increase in fixed income securities of CHF 3 820 million. In addition, shares in investment funds increased by CHF 1 142 million, which was mostly related to the reinvested proceeds from the distribution of retained income of CHF 1 442 million.

The increase in short-term investments of CHF 830 million was mainly related to the reinvested proceeds from fixed income securities in connection with the restructuring of the Company’s life and health Canadian business.

The decrease in mortgages was driven by the sale of the Company’s employees’ mortgages portfolio to a Swiss bank.

Funds held by ceding companies increased from CHF 15 684 million to CHF 16 273 million in 2019. The increase in life and health funds held by ceding companies was mostly related to the restructuring of intragroup retrocession agreements with Swiss Re Life & Health America Inc., partly offset by the intragroup retrocession agreements with Swiss Re Life Capital Reinsurance Ltd, reflecting the movements of the Canadian statutory reserves of the underlying block of business. The decrease in property and casualty funds held by ceding companies was mainly driven by the restructuring of intragroup retrocession agreements with affiliated companies in the US.

Deferred acquisition costs increased from CHF 2 055 million to CHF 2 459 million in 2019, mostly driven by property and casualty business in connection with the restructuring of intragroup retrocession agreements with affiliated companies in the US.

Reinsurance recoverable on technical provisions retroceded increased from CHF 13 860 million to CHF 14 741 million in 2019. The increase was mainly driven by the property and casualty external and intragroup retrocession recoverable from large natural catastrophe losses in Japan and Australia as well as by the life and health new external retrocession in Asia. This was partly offset by the sale of the Company’s Korea branch to Swiss Re Asia Pte. Ltd.

Premiums and other receivables from reinsurance increased from CHF 10 785 million to CHF 14 117 million in 2019. The increase was primarily driven by the restructuring of intragroup retrocession agreements with affiliated companies in the US. In addition, the increase in property and casualty was driven by the adverse development cover for Corporate Solutions’ entities as well as by the growth in business retroceded by Swiss Re Europe S.A.

Accrued income increased from CHF 225 million to CHF 2 894 million in 2019, mainly related to the dividend from Swiss Re Reinsurance Holding Company Ltd, to be paid by the subsidiary in 2020.

Liabilities
Total liabilities increased from CHF 96 093 million as of 31 December 2018 to CHF 109 088 million as of 31 December 2019.

Technical provisions gross increased from CHF 65 826 million to CHF 76 337 million in 2019. The increase in property and casualty was mainly due to large natural catastrophe losses and the restructuring of several intragroup retrocession agreements with affiliated companies in the US. This was partly offset by the settlement of outstanding claims from Swiss Re Asia Pte. Ltd. and the sale of the Company's Korea branch to Swiss Re Asia Pte. Ltd. The increase in life and health was primarily driven by the restructuring of several intragroup retrocession agreements with affiliated companies in the US, the inception of the new business in Japan as well as the reserve strengthening in the Americas and Europe, Middle East and Africa.

Funds held under reinsurance treaties decreased from CHF 6 866 million to CHF 6 187 million in 2019, mostly from life and health business, reflecting the restructure of the funds withheld in the intragroup retrocession agreement with Swiss Re Life Capital Reinsurance Ltd for the Canadian business.

Reinsurance balance payable increased from CHF 6 278 million to CHF 7 191 million in 2019, mostly from property and casualty business, due to the adverse development cover for Corporate Solutions' entities, the intragroup retrocession restructuring with Swiss Reinsurance America Corporation as well as the retrocession of natural catastrophe losses in Japan and Australia to Swiss Re Asia Pte. Ltd.

Other liabilities increased from CHF 6 394 million to CHF 6 955 million in 2019, mainly reflecting higher intragroup current account payables.

The increase in subordinated liabilities of CHF 1 328 million to CHF 4 702 million in 2019 was mainly driven by the issuance of intragroup subordinated debts with Swiss Re Finance (Luxembourg) S.A., partly offset by the maturity of external subordinated debts.

Shareholder's equity
Shareholder's equity increased from CHF 10 192 million as of 31 December 2018 to CHF 11 234 million as of 31 December 2019.

The increase reflected the net income for the financial year 2019 of CHF 2 704 million, partly offset by the dividend payment in cash of CHF 1 662 million.

Future prospects and business development

Large transactions
In order to further align the legal entity structure with the management view, the Company is going to sell the assets and liabilities of its Australia, Hong Kong, Japan and Malaysia branches to Swiss Re Asia Pte. Ltd., effective 1 January 2020. With this sale the Company will transfer related rights and obligations of the branches to Swiss Re Asia Pte. Ltd. including the entire reinsurance business as well as the employees, employed by the branches of the Company.

Property & Casualty Reinsurance business
Market environment
Global premiums in non-life reinsurance grew moderately by around 2% in real terms in 2019, with moderate expansion and stable reinsurance demand in both emerging and advanced markets. The reinsurance industry currently faces mixed trends. The sector's capital base remains very strong, with a strengthening of the capital position of the large reinsurers. At the same time, the industry experienced a third consecutive year of elevated insurance losses, including natural catastrophes and man-made events.

Reinsurance prices, which improved slightly at the 2018 renewals, following the 2017 hurricane losses, were broadly stable at the 2019 renewals. There were rate increases in loss-affected lines and regions, but little spill-over into non-loss affected lines.

Strategy and priorities
The reinsurance industry has experienced long-term changes driven by continued low interest rates, increased capital, growing protection gap and technology advancements. In order to outperform in this environment, the Company is aiming to increase scale and efficiency, leverage on technologies and push the edge of innovation, and it has developed a clear strategy based on the contribution of its three main pillars (core, transactions and solutions).

The Company is applying an active portfolio steering based on pricing outlook and market trends to ensure disciplined growth. In Property and Casualty, the Company seeks to improve its underwriting margins through multiple levers including scale and increased efficiency.

Life & Health Reinsurance business

Market environment

The global life reinsurance industry registered a 3% increase in 2019. This growth was mostly driven by the expansion in emerging markets and in US medical expense market, compared to a lower growth in mortality and health-related reinsurance. Against this background, life reinsurers have sought to increase revenues through large, individual risk transfer transactions that help primary insurers stabilise income and/or bolster their balance sheets. The introduction of risk-based capital regimes has prompted much of this activity. Another area of growth for reinsurers has been the longevity risk transfer.

Continued recovery in primary insurance should support growth in life reinsurance revenues, including a recovery in traditional renewable business. Premium growth will nonetheless likely remain modest, especially in the large advanced markets. In real terms, global life reinsurance premiums are forecast to increase by around 2% in 2020 and 2021, while health reinsurance is expected to develop by around 3% annually.

Strategy and priorities

In Life and Health, the Company continues to gain scale and applies a growth strategy on multiple dimensions, which results in a diversified and balanced portfolio in terms of products and markets.

The Company is diversifying its access to various risk pools through the contribution of its three main pillars (core, transactions and solutions). With this differentiation strategy, the Company is aiming to deliver sustainable profitability.

Investments

Strategy and priorities

Financial investments are managed in accordance with Swiss Re's Targeted Standard on Asset Management and the Company's investment guidelines, which are intended to ensure compliance with regulatory requirements. The general principle governing investment management in the Company is the creation of economic value on the basis of returns relative to the liability benchmark, while adhering to the investment guidelines and the general prudence principle. The liability benchmark is determined by approximating an investable benchmark from projected liability cash flows. A cash benchmark is used for the economic surplus.

Outlook

Global economic growth is expected to slow significantly in 2020 due to the currently ongoing spread of the SARS-CoV-2 coronavirus, and the illness associated with it, COVID-19, with several G7 countries at risk for a recession during the year. Central banks are set to cut policy rates further and stay very accommodative in this environment of elevated uncertainty. The US Federal Reserve has already enacted a surprise 50bp interest rate cut in early March. On the policy front, the attention is also on the fiscal policy responses that are currently being discussed.

Besides the rapidly evolving COVID-19 situation, other important themes for 2020 include the continued trade policy uncertainty, and the US presidential elections.

Risk assessment

The Company's Board of Directors has issued a mandate to establish a Risk Management function to provide independent risk taking oversight for the Company and its subsidiaries. In executing this task, the Risk Management function is supported by the Swiss Re Group Risk Management organisation. Significant parts of risk exposure identification, assessment, control and reporting for Swiss Reinsurance Company Ltd on a stand-alone basis are integrated in Group Risk Management processes.

The Board of Directors of Swiss Reinsurance Company Ltd sets the Company's risk tolerance. In this role, it is advised by the Board of Directors of the Swiss Re Group, which defines the Group's basic risk management principles and risk appetite framework including the Group risk tolerance. The Board of Directors of the Swiss Re Group mainly performs risk oversight and governance through three committees:

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

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

The Group CRO is appointed as the principal independent risk controller of Swiss Re. The Group CRO is a member of the Group EC and reports directly to the Group CEO as well as to the Board's Finance and Risk Committee. The Group CRO also advises the Group EC, the Chairman or the respective Group Board Committees, in particular the Finance and Risk Committee, on significant matters arising in his area of responsibility. The Group CRO leads the independent Risk Management function, which is responsible for risk oversight and control across Swiss Re. It thus forms an integral part of Swiss Re's business model and risk management framework. The Risk Management function comprises risk teams for legal entities and regions as well as central teams that provide specialised risk expertise and oversight.

Legal entity risk teams of the Company and its subsidiaries are led by dedicated CROs who report directly or indirectly to their top-level CRO (Company CRO), who reports to the Group CRO, with a secondary reporting line to the Company CEO. These legal entity CROs are responsible for risk oversight in their respective entities, as well as for establishing the proper risk governance to ensure efficient risk identification, assessment and control.

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

The central teams support the dedicated CROs at Group and legal entity level in discharging their oversight responsibilities. They do so by providing services, such as:

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

The central departments also oversee Group liquidity and capital adequacy and maintain the Group frameworks for controlling these risks throughout Swiss Re.

For the Company and its subsidiaries, the setting of the reserves is performed by valuation actuaries within the P&C and L&H Business Management units. Risk Management activities are complemented by Swiss Re's Group Internal Audit and Compliance units:

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

Income statement Swiss Reinsurance Company Ltd

For the years ended 31 December

Income statement

CHF millions	Note	2018	2019
Reinsurance			
Premiums written gross		*18 277*	*27 666*
Premiums written retroceded		*–4 041*	*–4 823*
Premiums written net		14 236	**22 843**
Change in unearned premiums gross		*1 602*	*–2 075*
Change in unearned premiums retroceded		*–40*	*104*
Change in unearned premiums net		1 562	**–1 971**
Premiums earned		15 798	**20 872**
Other reinsurance revenues		1 933	**2 446**
Allocated investment return		397	**474**
Total revenues from reinsurance business		18 128	**23 792**
Claims paid and claim adjustment expenses gross		*–18 010*	*–11 782*
Claims paid and claim adjustment expenses retroceded		*3 350*	*3 966*
Claims paid and claim adjustment expenses net		–14 660	**–7 816**
Change in unpaid claims gross		*631*	*–6 217*
Change in unpaid claims retroceded		*686*	*469*
Change in unpaid claims net		1 317	**–5 748**
Life and health benefits gross		*1 562*	*–3 647*
Life and health benefits retroceded		*–8*	*511*
Life and health benefits net		1 554	**–3 136**
Claims and claim adjustment expenses and life and health benefits		–11 789	**–16 700**
Change in equalisation provision		–	**221**
Claims incurred		–11 789	**–16 479**
Acquisition costs gross		*–4 659*	*–6 318*
Acquisition costs retroceded		*995*	*1 151*
Acquisition costs net		–3 664	**–5 167**
Operating costs		–719	**–933**
Acquisition and operating costs		–4 383	**–6 100**
Other reinsurance expenses		–1 545	**–2 055**
Total expenses from reinsurance business		–17 717	**–24 634**
Reinsurance result		411	**–842**

CHF millions	Note	2018	2019
Investments	2		
Investment income		2 777	**5 660**
Investment expenses		–466	**–270**
Allocated investment return		–397	**–474**
Investment result		1 914	**4 916**
Other financial income and expenses			
Other financial income		1 356	**1 580**
Other financial expenses		–1 539	**–2 063**
Operating result		2 142	**3 591**
Interest expenses on debt and subordinated liabilities		–421	**–419**
Other income and expenses			
Other income		82	**20**
Other expenses		–416	**–390**
Income before income tax expense		1 387	**2 802**
Income tax expense		–156	**–98**
Net income		1 231	**2 704**

The accompanying notes are an integral part of Swiss Reinsurance Company Ltd's financial statements.

Balance sheet Swiss Reinsurance Company Ltd

As of 31 December

Assets

CHF millions	Note	2018	2019
Investments			
Investments in subsidiaries and affiliated companies		15 321	**15 347**
Fixed income securities		16 387	**20 207**
Loans		8 631	**8 418**
Mortgages		813	**2**
Equity securities		927	**1 099**
Shares in investment funds		*11 569*	*12 711*
Short-term investments		*3 100*	*3 930*
Alternative investments		*683*	*847*
Other investments		*15 352*	**17 488**
Total investments		57 431	**62 561**
Financial and reinsurance assets			
Assets in derivative financial instruments	19	896	**946**
Funds held by ceding companies		15 684	**16 273**
Cash and cash equivalents		866	**979**
Reinsurance recoverable from unpaid claims	3	*6 450*	*6 822*
Reinsurance recoverable from liabilities for life and health policy benefits	3	*5 554*	*6 012*
Reinsurance recoverable from unearned premiums	3	*1 813*	*1 873*
Reinsurance recoverable from provisions for profit commissions	3	*43*	*34*
Reinsurance recoverable on technical provisions retroceded		13 860	**14 741**
Tangible assets		10	**11**
Deferred acquisition costs	3	2 055	**2 459**
Intangible assets		110	**125**
Premiums and other receivables from reinsurance	3	10 785	**14 117**
Other receivables		277	**426**
Other assets		4 086	**4 790**
Accrued income	17	225	**2 894**
Total financial and reinsurance assets		48 854	**57 761**
Total assets		106 285	**120 322**

The accompanying notes are an integral part of Swiss Reinsurance Company Ltd's financial statements.

Liabilities and shareholder's equity

CHF millions	Note	2018	2019
Liabilities			
Technical provisions gross			
Unpaid claims	3	44 569	49 994
Liabilities for life and health policy benefits	3	14 131	17 643
Unearned premiums	3	6 366	8 257
Provisions for profit commissions	3	539	443
Equalisation provision	3	221	–
Total technical provisions gross		65 826	**76 337**
Non-technical provisions			
Tax provisions		292	155
Provision for currency fluctuation		870	1 000
Other provisions		153	145
Total non-technical provisions		1 315	**1 300**
Debt	11	4 817	**5 033**
Liabilities from derivative financial instruments		1 080	**1 243**
Funds held under reinsurance treaties		6 866	**6 187**
Reinsurance balances payable	3	6 278	**7 191**
Other liabilities		6 394	**6 955**
Accrued expenses		143	**140**
Subordinated liabilities	11	3 374	**4 702**
Total liabilities		96 093	**109 088**
Shareholder's equity	4		
Share capital		34	34
Legal reserves from capital contributions		*6 778*	*6 778*
Legal capital reserves		6 778	6 778
Legal profit reserves		650	650
Voluntary profit reserves		1 439	1 027
Retained earnings brought forward		60	41
Net income for the financial year		1 231	2 704
Total shareholder's equity		10 192	**11 234**
Total liabilities and shareholder's equity		106 285	**120 322**

The accompanying notes are an integral part of Swiss Reinsurance Company Ltd's financial statements.

Notes Swiss Reinsurance Company Ltd

Reinsurance and sub-holding company
Swiss Reinsurance Company Ltd (the Company), domiciled in Zurich, Switzerland, performs a dual role within the Swiss Re Group as both a reinsurance company and a sub-holding company for the Reinsurance Business Unit. The Company is a wholly-owned subsidiary of Swiss Re Ltd, the ultimate parent company domiciled in Zurich, Switzerland.

1 Significant accounting principles

Basis of presentation
In general, the financial statements are prepared in accordance with Swiss Company Law. As a reinsurance company and based on Art. 111b of the Ordinance on the supervision of private insurance companies (ISO), the Company is also required to follow the Insurance Supervisory Ordinance-FINMA (ISO-FINMA). The ISO-FINMA contains specific guidance for presentation of the balance sheet, the income statement and the notes of insurance companies and overrides the general guidance of the Swiss Code of Obligations (SCO).

Time period
The 2019 financial year comprises the accounting period from 1 January 2019 to 31 December 2019.

Use of estimates in the preparation of annual accounts
The preparation of the annual accounts requires management to make significant estimates and assumptions that affect the reported amounts of assets, liabilities, income and expenses as well as the related disclosures. Actual results could differ significantly from these estimates.

Foreign currency translation
Assets and liabilities denominated in foreign currencies are converted into Swiss francs at year-end exchange rates with the exception of participations and tangible assets, which are maintained in Swiss francs at historical exchange rates. Income and expenses in foreign currencies are converted into Swiss francs at average exchange rates for the reporting year.

Investments
Investments in subsidiaries and affiliated companies are carried at cost, less necessary and legally permissible depreciation.

The Company's investments in subsidiaries and affiliated companies are summarised as a group for valuation purposes, when a close business link exists and a similarity in nature is given.

Fixed income securities are carried at their amortised cost, less necessary depreciation to address other than temporary market value decreases.

The following assets are carried at cost or lower market value:

- Equity securities
- Shares in investment funds
- Alternative investments

Loans and mortgages are carried at nominal value. Value adjustments are recorded where the expected recovery value is lower than the nominal value. Infrastructure loans are carried at their amortised cost, less necessary depreciation to address other than temporary market value decreases.

Short-term investments contain investments with an original duration between three months and one year. Such investments are generally held until maturity and are measured at their amortised cost.

Subsequent recoveries of previously recorded downward value adjustments may be recognised up to the lower of cost or market value at the balance sheet date. The valuation rules prescribed by the Swiss Financial Market Supervisory Authority FINMA are observed.

Assets in derivative financial instruments
Assets in derivative financial instruments include reinsurance contract or features embedded in reinsurance contracts that fulfil the characteristics of derivative financial instruments and are generally accounted based on the lower of cost or market principle under Swiss Company Law. Derivative deals where the Company enters into two identical, but opposite directed derivatives are recorded at market value. In addition, and for the first time in 2019, assets in derivative financial instruments which have an observable market price and are traded in an active and liquid market are recorded at market value.

Funds held by ceding companies
Funds held by ceding companies consist mainly of assets that belong to the Company but are withheld by the cedent due to regulatory or legal requirements, or to retain control over investments and reduce a potential credit risk. Assets are initially measured based on the consideration received. Subsequently the funds held by ceding companies are measured at the consideration received or market value of the underlying assets.

Cash and cash equivalents
Cash and cash equivalents include cash at bank, short-term deposits and certain investments in money-market funds with an original maturity of three months or less. Such current assets are held at nominal value.

Reinsurance recoverable on technical provisions retroceded
Reinsurance recoverable on technical provisions represents the retroceded part of the technical provisions. The respective accounting principle per technical provision category is described further under "Technical provisions gross".

Reinsurance business written by branches of the Company that is retroceded to affiliated companies, which is then retroceded back to the Company is presented on a gross basis.

Tangible assets
Tangible assets are carried at cost, less individually scheduled straight-line depreciation over their useful lives. Items of minor value are not capitalised.

Deferred acquisition costs
Deferred acquisition costs consist principally of commissions and are related to the generation of new reinsurance business. Property and casualty deferred acquisition costs are generally amortised in proportion to premiums earned. Life and health deferred acquisition costs will run-off on a prudent basis, typically linearly in a shorter term than the liabilities. The amortisation schedule can also be determined to be in line with the expected profits of the business, so no statutory profits are shown until the deferred acquisition costs are fully amortised.

Intangible assets
Intangible assets, consisting of capitalised development costs for software for internal use, are measured at cost less straight-line amortisation over the estimated useful life of software.

Premiums and other receivables from reinsurance
Premiums and other receivables from reinsurance are carried at nominal value after deduction of known credit risks if applicable. The position mainly consists of receivables from insurance companies and brokers.

Other assets
Other assets include deferred expenses on retroactive reinsurance policies, which are amortised through earnings over the expected claims-paying period, as well as rights in connection with securities lending collateral and reverse repurchase transactions, which are carried at nominal value.

Until the year-end 2018, only the financial leases were recorded on-balance-sheet. Since 1 January 2019, also the operational leases are recorded on-balance-sheet. The lease assets and the lease liabilities for both, financial and operational leases, are carried at cost less corresponding amortisation of the assets and release of the liabilities over the useful life of the lease or rental goods.

Technical provisions gross

Unpaid claims are recognised based on information provided by clients and own estimates of expected claims experience, which are drawn from empirical statistics. These include provisions for claims incurred but not reported. Unpaid insurance obligations are set aside at the full expected amount of future payment.

Liabilities for life and health policy benefits are determined on the basis of actuarially calculated present values taking experience into account. Generally a prospective gross premium valuation is applied. The method is prospective as it takes into account expected future cash flows inherent in the reinsurance contract from the valuation date until expiry of the contract obligations. The assumptions used in the valuation are based on estimates drawn from experience studies. Cash flows include primarily premiums, claims, commissions, profit commissions and expenses, with provisions for adverse deviations added for prudence to reflect the uncertainties of the underlying best estimates. The gross premium valuation approach may result in a negative liability provision, which is typically set to zero, in accordance with the Company's reserving policy. Under certain circumstances, a prudent allowance for deferred acquisition costs on financing treaties can be established. A loss ratio approach can be taken, mainly for Group business, and for individual risk premium lump sum business, where either information is limited or a gross premium valuation is not possible due to practical constraints.

Modified coinsurance arrangements are treated on a gross basis with the separate recognition of the funds withheld, as well as the liabilities for life and health policy benefits.

Premiums written relating to future periods are stated as unearned premiums and are normally calculated by statistical methods. The accrual of commissions is determined proportionally and is reported under "Deferred acquisition costs".

Provisions for profit commissions are based on contractual agreements with clients and depend on the results of reinsurance treaties.

The equalisation provision for property and casualty business is established to achieve a protection of the balance sheet and to break peaks of incurred claims in individual financial years with an exceptionally high claims burden by releasing appropriate amounts from the provision.

The shares of technical provisions pertaining to retroceded business are determined or estimated according to the contractual agreement and the underlying gross business data per treaty.

Liabilities and consideration in connection with portfolio transfers are established through the respective lines in the income statement. Outstanding claims and liabilities are recorded as change in unpaid claims and life and health benefits, with the consideration being recognised as claims paid. The impact on unearned premiums is established through the change in unearned premiums, with the respective consideration accounted as premiums written. Any profit or loss on the portfolio transfer is reflected in other reinsurance revenues or other reinsurance expenses, respectively.

For property and casualty transfers of retroactive treaties, the initial set up of assets and liabilities is accounted as a balance sheet transaction.

Reinsurance business written by branches of the Company that is retroceded to affiliated companies, which is then retroceded back to the Company is presented on a gross basis.

Non-technical provisions

The provision for currency fluctuation comprises the net effect of foreign exchange gains and losses arising from the yearly revaluation of the opening balance sheet and the translation adjustment of the income statement from average to closing exchange rates at year-end. These net impacts are recognised in the income statement over a time period of up to nine years, based on the average duration of the technical provisions. Where the provision for currency fluctuation is insufficient to absorb net foreign exchange losses for the financial year, the provision for currency fluctuation is reduced to zero and the excess foreign exchange loss is recognised in the income statement.

Since 1 January 2019, the net effect of foreign exchange gains and losses is calculated on a branch level, whereas until year-end 2018 this calculation was performed on a legal entity view. This change results in a negative net impact of CHF 65 million in 2019, whilst under the previously applied accounting principle such a negative net impact would have been absorbed through the provision for currency fluctuation.

Other provisions are determined according to business principles and are based on estimated needs and the tax provision in accordance with tax regulations.

Debt
Debt is held at redemption value.

Liabilities from derivative financial instruments
Derivative deals where the Company enters into two identical, but opposite directed derivatives are recorded at market value. In addition, and for the first time in 2019, liabilities in derivative financial instruments which have an observable market price and are traded in an active and liquid market are recorded at market value. All other liabilities from derivative financial instruments are generally maintained at the highest commitment amount per a balance sheet date during the life of the underlying contract. For such derivatives premiums received are generally not realised until expiration or settlement and deferred respectively.

Included in this position are reinsurance contracts or features embedded in reinsurance contracts that fulfil the characteristics of derivative financial instruments. For such contracts, premiums received may be recognised as income prior to contract expiration or settlement, in cases where the recorded commitment has already reached the maximum liability amount potentially payable under the terms of the respective contracts. Decreases in the liability amounts prior to expiration or settlement are only recognised as income for contracts for which hedging instruments are in place.

Funds held under reinsurance treaties
Funds held under reinsurance treaties mainly contain cash deposits withheld from retrocessionaires, which are stated at redemption value.

Reinsurance balances payable
Reinsurance balances payable are held at redemption value. The position mainly consists of payables to insurance companies and brokers.

Other liabilities
Other liabilities include rights in connection with repurchase agreements and securities lending transactions, which are held at redemption value.

Subordinated liabilities
Subordinated liabilities are held at redemption value.

Deposit arrangements
Contracts which do not meet risk transfer requirements, defined as transferring a reasonable probability of a significant loss to the reinsurer, are accounted as deposit arrangements. Deposit amounts are adjusted for payments received and made, as well as for amortisation or accretion of interest.

Allocated investment return
The allocated investment return contains the calculated interest generated on the investments covering the technical provisions. The interest rate reflects the currency-weighted, five-year average yield on five-year government bonds.

Management expenses
Overall management expenses are allocated to the reinsurance business, the investment business and to other expenses on an imputed basis.

Foreign exchange transaction gains and losses
Foreign exchange gains and losses arising from foreign exchange transactions are recognised in the income statement and reported net in other expenses or other income, respectively.

Capital and indirect taxes
Capital and indirect taxes related to the financial year are included in other expenses. Value-added taxes are included in the respective expense lines in the income statement.

Income tax expense
The income tax expense relates to the financial year under report.

2 Investment result

CHF millions	Income	Value readjustments	Realised gains	2019 Total
Investment income				
Investments in subsidiaries and affiliated companies	2 657	–	0	2 657
Fixed income securities	568	–	211	779
Loans	303	–	–	303
Mortgages	–	3	–	3
Equity securities	30	32	118	180
Shares in investment funds	*1 524*	*12*	*25*	*1 561*
Short-term investments	*51*	*–*	*1*	*52*
Alternative investments	*41*	*6*	*18*	*65*
Other investments	1 616	18	44	1 678
Income from investment services	60	–	–	60
Investment income	**5 234**	**53**	**373**	**5 660**
CHF millions	Expenses	Value adjustments	Realised losses	
Investment expenses				
Investments in subsidiaries and affiliated companies	–	–83	–	–83
Fixed income securities	–	0	–34	–34
Mortgages	–	0	–	0
Equity securities	–	–16	–4	–20
Shares in investment funds	*–*	*–9*	*–1*	*–10*
Short-term investments	*–*	*–*	*–1*	*–1*
Alternative investments	*–*	*–14*	*0*	*–14*
Other investments	–	–23	–2	–25
Investment management expenses	–108	–	–	–108
Investment expenses	**–108**	**–122**	**–40**	**–270**
Allocated investment return				**–474**
Investment result				**4 916**

CHF millions	Income	Value readjustments	Realised gains	2018 Total
Investment income				
Investments in subsidiaries and affiliated companies	441	–	563	1 004
Fixed income securities	521	–	208	729
Loans	278	–	0	278
Mortgages	5	–	–	5
Equity securities	28	4	53	85
Shares in investment funds	*420*	–	*42*	*462*
Short-term investments	*20*	–	*0*	*20*
Alternative investments	*51*	*10*	*2*	*63*
Other investments	491	10	44	545
Income from investment services	131	–	–	131
Investment income	1 895	14	868	2 777

CHF millions	Expenses	Value adjustments	Realised losses	
Investment expenses				
Investments in subsidiaries and affiliated companies	–	–41	0	–41
Fixed income securities	–	–6	–50	–56
Loans	–	0	–	0
Equity securities	–	–110	–12	–122
Shares in investment funds	–	*–36*	*–14*	*–50*
Short-term investments	–	–	*–1*	*–1*
Alternative investments	–	*–22*	*0*	*–22*
Other investments	–	–58	–15	–73
Investment management expenses	–174	–	–	–174
Investment expenses	–174	–215	–77	–466
Allocated investment return				–397
Investment result				1 914

3 Assets and liabilities from reinsurance

CHF millions	Gross	Retro	2018 Net	Gross	Retro	2019 Net
Deferred acquisition costs	2673	–618	2055	**3100**	**–641**	**2459**
Premiums and other receivables from reinsurance	9412	1373	10785	**12984**	**1133**	**14117**
Deferred expenses on retroactive reinsurance policies[2]	165	–19	146	**166**	**–17**	**149**
Unpaid claims	44569	–6450[1]	38119	**49994**	**–6822[1]**	**43172**
Liabilities for life and health policy benefits	14131	–5554[1]	8577	**17643**	**–6012[1]**	**11631**
Unearned premiums	6366	–1813[1]	4553	**8257**	**–1873[1]**	**6384**
Provisions for profit commissions	539	–43[1]	496	**443**	**–34[1]**	**409**
Equalisation provision	221	–	221	**–**	**–**	**–**
Reinsurance balances payable	3472	2806	6278	**4854**	**2337**	**7191**

[1] Reported under "Reinsurance recoverable on technical provisions retroceded" on page 114.
[2] Reported under "Other assets" on page 114.

4 Change in shareholder's equity

CHF millions	Share capital	Legal capital reserves	Legal profit reserves	Voluntary profit reserves	Retained earnings brought forward	Net income for the financial year	Total shareholder's equity
Shareholder's equity 1.1.2018	34	6778	650	2099	51	1209	10821
Allocations relating to the dividend paid				1200	9	–1209	–
Dividend for the financial year 2018				–1860			–1860
Net income for the financial year						1231	1231
Shareholder's equity 31.12.2018	34	6778	650	1439	60	1231	10192
Shareholder's equity 1.1.2019	34	6778	650	1439	60	1231	10192
Allocations relating to the dividend paid				1250	–19	–1231	–
Dividend for the financial year 2019				–1662			–1662
Net income for the financial year						2704	2704
Shareholder's equity 31.12.2019	**34**	**6778**	**650**	**1027**	**41**	**2704**	**11234**

5 Share capital and major shareholder

The share capital of the Company amounted to CHF 34 million. It is divided into 344 052 565 registered shares, each with a nominal value of CHF 0.10. The shares were fully paid-in and held directly by Swiss Re Ltd. As of 31 December 2019 and 2018, the Company was a fully owned subsidiary of Swiss Re Ltd.

6 Contingent liabilities

Swiss Reinsurance Company Ltd has issued a number of guarantees to several of its subsidiaries and affiliated companies in support of their business activities by securing either their overall capital positions or specific transactions. These guarantees are generally not limited by a nominal amount but rather by the exposure of the underlying business.

The Company is part of the Swiss Re value added tax (VAT) group and is therefore jointly liable for existing and future VAT claims from the Swiss Federal Tax Administration.

In addition, as a component of the Swiss Re Group's financing structure, the Company has guaranteed CHF 3 721 million (2018: CHF 1 921 million) of debt issued by certain affiliated companies and letter of credit facilities benefiting various subsidiaries and affiliated companies of which no amount was utilised as of 31 December 2019 and 2018, respectively.

7 Securities lending and repurchase agreements

To enhance the performance of its investment portfolio, the Company enters into securities lending and repurchase transactions. In the context of such transactions, securities are transferred to the counterparty.

Further, the Company performs the role of the collateral clearer for the Swiss Re Group, centrally managing collateral for the Swiss Re Group, providing funding diversification, enabling secured cash investment and yield enhancement. As such the Company acts as principal in collateral transactions, borrowing securities from its affiliated companies and entering into lending and borrowing as well as repurchase and reverse repurchase agreements with third parties. As a matter of policy, the Company requires that collateral, consisting of cash or securities, is provided to cover the assumed counterparty risk associated with such transactions.

An overview of the fair value of securities transferred under securities lending and repurchase agreements is provided in the following table as of 31 December:

CHF millions	2018	**2019**
Fair value of securities transferred to third parties	16 066	**18 571**
Fair value of securities transferred to affiliated companies	16 960	**18 843**
Total	33 026	**37 414**

8 Security deposits

To secure the technical provisions at the 2019 balance sheet date, securities with a book value of CHF 13 416 million (2018: CHF 12 863 million) were deposited in favour of ceding companies, of which CHF 4 183 million (2018: CHF 3 726 million) referred to affiliated companies.

9 Commitments

As a participant in limited investment partnerships, the Company commits itself to making available certain amounts of investment funding, callable by the partnerships in general for periods of up to 10 years. As of 31 December 2019, total commitments remaining uncalled were CHF 588 million (2018: CHF 987 million).

The Company has entered into subordinated funding facilities with its parent company Swiss Re Ltd under which the Company has the right, among others, to issue subordinated notes to Swiss Re Ltd at any time. For its various rights, the Company owes Swiss Re Ltd an unconditional fixed commitment fee on the total facility amount, payable in annual instalments. Annually, the Company receives a partial reimbursement of the commitment fee on the undrawn facility amount. As of 31 December 2019 and 2018, the facilities were undrawn.

An overview of the subordinated funding facilities is provided in the following table:

Instrument	Lender	Issued in	Maturity	Currency	Nominal value in millions	Commitment fee (on total facility amount)	Partial reimbursement of commitment fee (on undrawn amount)
Subordinated funding facility	Swiss Re Ltd	2015	2030	USD	700	5.80%	2.22%
Subordinated funding facility	Swiss Re Ltd	2016	2036	USD	400	6.10%	2.13%
Subordinated funding facility	Swiss Re Ltd	2016	2032	USD	800	5.68%	1.95%

10 Investments in subsidiaries and affiliated companies

As of 31 December 2019 and 2018, Swiss Reinsurance Company Ltd held the following direct and material indirect investments in subsidiaries and affiliated companies:

As of 31 December 2019	Country	City	% Equity interest	% Voting interest
European Finance Reinsurance Company Ltd	Barbados	Bridgetown	100%	100%
Swiss Brokers México, Intermediario de Reaseguro, S.A. de C.V.	Mexico	Mexico City	100%	100%
Swiss Re Brasil Resseguros S.A.	Brazil	São Paulo	99%	99%
Swiss Re Investments Ltd	Switzerland	Zurich	100%	100%
Swiss Re Africa Limited	South Africa	Cape Town	100%	100%
Swiss Re Mexico Servicios, S. de R.L. de C.V.	Mexico	Mexico City	98%	98%
Swiss Re Reinsurance Holding Company Ltd	Switzerland	Zurich	100%	100%
Swiss Pillar Investments Ltd	Switzerland	Zurich	100%	100%
Swiss Re America Holding Corporation	United States (USA)	Wilmington	100%	100%
Swiss Re Capital Markets Corporation	United States (USA)	New York	77%	77%
Swiss Re Financial Markets Corporation	United States (USA)	Wilmington	100%	100%
Swiss Re Financial Products Corporation	United States (USA)	Wilmington	100%	100%
Swiss Re Life & Health America Holding Company	United States (USA)	Wilmington	100%	100%
Swiss Re Treasury (US) Corporation	United States (USA)	Wilmington	100%	100%
Swiss Reinsurance America Corporation	United States (USA)	Armonk	100%	100%
Swiss Re Asia Holding Pte. Ltd.	Singapore	Singapore	100%	100%
Swiss Re Asia Pte. Ltd.	Singapore	Singapore	100%	100%
Swiss Re Australia Ltd	Australia	Sydney	100%	100%
Swiss Re Life & Health Australia Limited	Australia	Sydney	100%	100%
Swiss Re Capital Markets Corporation	United States (USA)	New York	23%	23%
Swiss Re Europe Holdings S.A.	Luxembourg	Luxembourg	100%	100%
Swiss Re Europe S.A.	Luxembourg	Luxembourg	100%	100%
Swiss Re Germany GmbH	Germany	Munich	6%	6%
Swiss Re Finance (Luxembourg) S.A.	Luxembourg	Luxembourg	100%	100%
Swiss Re Services Limited	United Kingdom (UK)	London	100%	100%
Swiss Re Services India Private Ltd	India	Mumbai	100%	100%
Swiss Reinsurance America Corporation - Escritório de Representação no Brasil Ltda	Brazil	São Paulo	20%	20%
Swiss Reinsurance Company Ltd - Escritório de Representação no Brasil Ltda	Brazil	São Paulo	93%	93%
Swiss Re Finance Limited	Cayman Islands	George Town	100%	100%
Vietnam National Reinsurance Corporation	Vietnam	Hanoi	25%	25%

As of 31 December 2018	Country	City	% Equity interest	% Voting interest
European Finance Reinsurance Company Ltd	Barbados	Bridgetown	100%	100%
Gasper Funding Corporation	Barbados	Bridgetown	100%	100%
Swiss Brokers México, Intermediario de Reaseguro, S.A. de C.V.	Mexico	Mexico City	100%	100%
Swiss Re Brasil Resseguros S.A.	Brazil	São Paulo	99%	99%
Swiss Re Investments Ltd	Switzerland	Zurich	100%	100%
Swiss Re Africa Limited	South Africa	Cape Town	100%	100%
Swiss Re Mexico Servicios, S. de R.L. de C.V.	Mexico	Mexico City	98%	98%
Swiss Re Reinsurance Holding Company Ltd	Switzerland	Zurich	100%	100%
Swiss Pillar Investments Ltd	Switzerland	Zurich	100%	100%
Swiss Re America Holding Corporation	United States (USA)	Wilmington	100%	100%
Swiss Re Capital Markets Corporation	United States (USA)	New York	77%	77%
Swiss Re Financial Markets Corporation	United States (USA)	Wilmington	100%	100%
Swiss Re Financial Products Corporation	United States (USA)	Wilmington	100%	100%
Swiss Re Life & Health America Holding Company	United States (USA)	Wilmington	100%	100%
Swiss Re Treasury (US) Corporation	United States (USA)	Wilmington	100%	100%
Swiss Reinsurance America Corporation	United States (USA)	Armonk	100%	100%
Swiss Re Asia Holding Pte. Ltd.	Singapore	Singapore	100%	100%
Swiss Re Asia Pte. Ltd.	Singapore	Singapore	100%	100%
Swiss Re Australia Ltd	Australia	Sydney	100%	100%
Swiss Re Life & Health Australia Limited	Australia	Sydney	100%	100%
Swiss Re Capital Markets Corporation	United States (USA)	New York	23%	23%
Swiss Re Europe Holdings S.A.	Luxembourg	Luxembourg	100%	100%
Swiss Re Europe S.A.	Luxembourg	Luxembourg	100%	100%
Swiss Re Germany GmbH	Germany	Munich	6%	6%
Swiss Re Services Limited	United Kingdom (UK)	London	100%	100%
Swiss Re Services India Private Ltd	India	Mumbai	100%	100%
Swiss Re Treasury (UK) Plc	United Kingdom (UK)	London	100%	100%
Swiss Reinsurance America Corporation - Escritório de Representação no Brasil Ltda	Brazil	São Paulo	20%	20%
Swiss Reinsurance Company Ltd - Escritório de Representação no Brasil Ltda	Brazil	São Paulo	93%	93%
Swiss Re Finance Limited	Cayman Islands	George Town	100%	100%
Vietnam National Reinsurance Corporation	Vietnam	Hanoi	25%	25%

11 Debt and subordinated liabilities

The Company had outstanding debt and subordinated liabilities at the 2019 balance sheet date of CHF 9 735 million (2018: CHF 8 191 million). Thereof CHF 6 886 million (2018: CHF 6 846 million) were due within one to five years and CHF 2 849 million (2018: CHF 1 345 million) were due after five years.

As of 31 December 2019, the following public placed debentures were outstanding:

Instrument	Issued in	Currency	Nominal in millions	Interest rate	Maturity/ First call in	Book value CHF millions
Subordinated bond	2013	CHF	175	7.500%	2020	175
Subordinated bond	2012	EUR	500	6.625%	2022	544
Senior bond	2014	CHF	250	1.000%	2024	250
Subordinated bond	2015	EUR	750	2.600%	2025	815
Senior bond	2015	CHF	250	0.750%	2027	250

12 Deposit arrangements

The following balances were related to deposit accounted reinsurance contracts:

CHF millions	2018	**2019**
Other reinsurance revenues	87	**21**
Claims paid and claim adjustment expenses gross	12	**11**
Claims paid and claim adjustment expenses retroceded	–1	**2**
Operating costs	–2	**–1**
Other reinsurance expenses	–60	**–8**
Funds held by ceding companies	26	**30**
Premiums and other receivables from reinsurance	634	**874**
Reinsurance balances payable	1 556	**2 455**

13 Claims on and obligations towards affiliated companies

CHF millions	2018	**2019**
Loans	8 321	**7 874**
Funds held by ceding companies	8 126	**8 939**
Premiums and other receivables from reinsurance	5 606	**8 080**
Other receivables	36	**201**
Other assets	2 807[1]	**2 375[1]**
Debt	4 317[2]	**4 533[2]**
Liabilities from derivative financial instruments	109	**93**
Funds held under reinsurance treaties	6 757	**6 017**
Reinsurance balances payable	5 578	**6 070**
Other liabilities	4 911[3]	**5 453[3]**
Subordinated liabilities	424[4]	**3 169[4]**

[1] Thereof at the 2019 balance sheet date CHF 84 million (2018: CHF 75 million) were towards the parent company Swiss Re Ltd.
[2] Thereof at the 2019 balance sheet date CHF 2 160 million (2018: CHF 3 273 million) were towards the parent company Swiss Re Ltd.
[3] Thereof at the 2019 balance sheet date CHF 538 million (2018: CHF 323 million) were towards the parent company Swiss Re Ltd.
[4] Thereof at the 2019 balance sheet date CHF 416 million (2018: CHF 424 million) were towards the parent company Swiss Re Ltd.

14 Release of undisclosed reserves

In 2019, no net release of undisclosed reserves (2018: no net release).

15 Obligations towards employee pension fund

As of 31 December 2019, other liabilities included CHF 0 million (2018: CHF 1 million) payable to the employee pension fund.

16 Personnel information

As of 31 December 2019, the Company employed a worldwide staff at an average of 1 712 (2018: 1 842) full time equivalents. Personnel expenses for the 2019 financial year amounted to CHF 391 million (2018: CHF 447 million).

17 Accrued income from subsidiaries and affiliated companies

The 2019 accrued income mainly consists of the dividend income of CHF 2 615 million from Swiss Re Reinsurance Holding Company Ltd in accordance with the resolution of the shareholder's Annual General Meeting of 9 March 2020. Based on the economic view this dividend, to be paid by the subsidiary in 2020, was already recorded in the 2019 Company's financial statements.

18 Auditor's fees

In 2019, the Swiss Re Group incurred total auditor's fees of CHF 31 million (2018: CHF 31 million) and additional fees of CHF 12 million (2018: CHF 7 million), of which CHF 3 million (2018: CHF 2 million) and CHF 0 million (2018: CHF 0 million), respectively, incurred for the Company.

19 Market value of assets in derivative financial instruments

As of 31 December 2019, the Company's book value of assets in derivative financial instruments, which are measured at market value, was CHF 946 million (2018: CHF 738 million).

20 Subsequent event

The rapid spread of the coronavirus, which has been declared a pandemic, and the actions being taken to contain it on an increasingly global basis have led to significant volatility in the financial markets and are having an adverse impact on global business and economic activity. There is an increasing likelihood that the coronavirus and containment efforts could have adverse effects on the global economy and could possibly lead to a global recession. The Group is closely monitoring developments and the potential impact of the spread of infection and global responses on, for example, asset prices and insurance exposures, as well as on its operations.

Proposal for allocation of disposable profit

The Board of Directors proposes to the Annual General Meeting of the Company, to be held on 25 March 2020, to approve the following allocations and payment of a cash dividend of USD 1 670 million, which must not exceed CHF 1 780 million, translated into CHF at spot rate on the settlement date. The cash dividend is paid to its sole shareholder, Swiss Re Ltd, out of voluntary profit reserves on 26 March 2020.

In order to comply with the Swiss Code of Obligations, dividends paid in foreign currencies must meet the capital protection requirements in CHF. In addition, maximum amounts in CHF must be approved by the Annual General Meeting. The Board of Directors proposes to set this maximum amount to CHF 1 780 million, which shall be fully funded from the legal reserves from capital contributions as presented in the tables below.

As such the effective allocation from the legal reserves from capital contributions to the voluntary profit reserves and the effective cash dividend amount, translated into CHF at spot rate on the settlement date, must not exceed CHF 1 780 million. This threshold of CHF 1 780 million is presented in the below tables and reflects the maximum amount in CHF to be allocated and paid.

Retained earnings

CHF millions	2018	2019
Retained earnings brought forward	60	41
Net income for the financial year	1 231	2 704
Disposable profit	1 291	2 745
Proposed allocation to voluntary profit reserves	–1 250	–2 700
Retained earnings after proposed allocation	41	45

Legal reserves from capital contributions

CHF millions	2018	2019
Legal reserves from capital contributions brought forward	6 778	6 778
Legal reserves from capital contributions before proposed allocation to voluntary profit reserves	6 778	6 778
Proposed allocation to voluntary profit reserves in connection with the cash dividend	–	–1 780[1]
Legal reserves from capital contributions after proposed allocation to voluntary profit reserves	6 778	4 998

[1] The translation into CHF at spot rate on the settlement date may result in a lower allocation to voluntary profit reserves by a respective amount on the settlement date.

Voluntary profit reserves

CHF millions	2018	2019
Voluntary profit reserves brought forward	1 439	1 027
Proposed allocation from retained earnings	1 250	2 700
Voluntary profit reserves before proposed allocation from legal reserves from capital contributions and cash dividend	2 689	3 727
Proposed allocation from legal reserves from capital contributions	–	1 780[2]
Proposed cash dividend (maximal amount in CHF of the proposed dividend in USD translated into CHF)	–1 800[1]	–1 780[2]
Voluntary profit reserves after proposed allocation from legal reserves from capital contributions and cash dividend	889	3 727

[1] The 2018 figure was recalculated based on the final cash dividend converted into CHF at spot rate on the settlement date.
[2] The translation into CHF at spot rate on the settlement date may result in a lower allocation from legal reserves from capital contributions and a lower cash dividend by a respective amount on the settlement date.

Zurich, 18 March 2020

Report of the statutory auditor

to the General Meeting of Swiss Reinsurance Company Ltd

Zurich

Report of the statutory auditor on the financial statements

As statutory auditor, we have audited the accompanying financial statements of Swiss Reinsurance Company Ltd (the 'Company'), which comprise the income statement, balance sheet and notes (pages 112 to 127), for the year ended 31 December 2019.

Board of Directors' responsibility

The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss law and the Company's Articles of Association. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the Company's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements for the year ended 31 December 2019 comply with Swiss law and the Company's Articles of Association.

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Report on key audit matters based on the circular 1/2015 of the Federal Audit Oversight Authority

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Unobservable or interpolated inputs used for the valuation of certain investments

Key audit matter	How our audit addressed the key audit matter
Investments are generally valued at lower of cost or market value (prudence principle). In addition to the lower of cost or market value, amortised cost must also be considered for fixed income securities, which is in accordance with the Insurance Supervision Ordinance. Accordingly, market values have to be observed to assess the appropriate application of the prudence principle. Investment valuation continues to be an area with inherent risk for certain investments that have unobservable or interpolated inputs. The risk is not the same for all investment types and is greatest for those listed below. These investments are more difficult to value because quoted prices are not always available, and valuation requires complex valuation models: • Fixed income securitised products • Fixed income mortgage and asset-backed securities • Private placements • Private equities • Derivatives • Insurance-related financial products	We assessed and tested the design and operating effectiveness of selected key controls around the valuation models for investments, including the Company's independent price verification process. We also tested the Company's data integrity and change management controls relating to the valuation models. In relation to the matters set out opposite, our substantive testing procedures included the following: • Challenging the Company's methodology and assumptions, in particular, the yield curves, discounted cash flows, perpetual growth rates and liquidity premiums used in the valuation models. • Comparing the assumptions used against appropriate benchmarks and investigating significant differences. • Engaging our own valuation specialists to perform independent valuations of selected investments. Based on the work performed, we consider the methodologies and assumptions used by the Company in the determination of the valuation to be appropriate.

Valuation of actuarially determined Property & Casualty ('P&C') loss reserves

Key audit matter	How our audit addressed the key audit matter
Valuation of actuarially determined P&C loss reserves involves a high degree of subjectivity and complexity. Reserves for losses and loss adjustment expenses represent estimates of future payments of reported and unreported claims for losses and related expenses at a given date. Furthermore, on a regular basis, the Company enters into large and/or structured transactions which often have material or complex financial reporting and reserving consequences. The reserving for such transactions is subject to increased risk of error due to the non-routine nature of transactions and the judgmental nature of reserving. The Company uses a range of actuarial methodologies and methods to estimate these reserves. Actuarially determined P&C loss reserves require significant judgment relating to certain factors and assumptions. Among the most significant reserving assumptions are the A-priori loss ratios, which typically drive the estimates of P&C loss reserves for the most recent contract years. Other key factors and assumptions include, but are not limited to changes in interest rates, exposures and mix as well as inflation trends, claims trends and regulatory decisions. In particular, loss reserves for 'long tail' lines of business (for example, the Liability, US Asbestos and Environmental, Motor Liability and Workers' Compensation portfolios) generally require more judgment to estimate. This is due to the protracted period over which claims may be reported and/or settled as well as the fact that claim settlements are often less frequent but of higher magnitude. Moreover, not all natural catastrophe events and significant man-made losses can be modelled using traditional actuarial methodologies, which increases the degree of judgment needed in establishing reserves for these events.	We assessed and tested the design and operating effectiveness of selected key controls relating to the application of the actuarial methodology, data collection and analysis, as well as the processes for determining the assumptions used by the Company in the valuation of actuarially determined P&C loss reserves. In relation to the matters set out opposite, our substantive testing procedures included the following, which are applicable for both the standard reserving and large and/or structured transactions: • Testing the completeness and accuracy of underlying data utilised by the Company's actuaries in estimating P&C loss reserves. • Applying IT audit techniques to analyse claims through the recalculation of claims triangles. • Involving PwC's internal actuarial specialists to independently test the Company's estimates of P&C loss reserves and evaluate the reasonableness of the methodology and assumptions used by comparing them with recognised actuarial practices and by applying our industry knowledge and experience. • Performing independent projections of selected portfolios. For these portfolios, we compared our calculations of projected reserves with those of the Company taking into account the available corroborating and contrary evidence and challenging the Company's assumptions as appropriate. • Assessing the process and related judgments of the Company in relation to natural catastrophes and other large losses, including using our industry knowledge to assess the reasonableness of market loss estimates and other significant assumptions. • Performing sensitivity tests to determine the impact of selected key assumptions. • Evaluating the appropriateness of any significant adjustments made by the Company to P&C loss reserve estimates. • Evaluating the appropriateness of the recognition, accounting and disclosures for large and/or structured transactions. Based on the work performed, we consider the methodologies and assumptions used by the Company in the valuation of actuarially determined P&C loss reserves to be appropriate.

Valuation of actuarially determined Life & Health ('L&H') reserves

Key audit matter	How our audit addressed the key audit matter
The Company's valuation of liabilities for L&H policy benefits and policyholder account balances involves complex judgments about future events affecting the business. Actuarial assumptions selected by the Company with respect to interest rates, inflation trends, investment returns, mortality, morbidity, lapse in coverage, longevity, persistency, expenses, stock market volatility and future policyholder behaviour may result in material impacts on the valuation of L&H reserves. The methodology and methods used can also have a material impact on the valuation of actuarially determined L&H reserves. Furthermore, on a regular basis, the Company enters into large and/or structured transactions which often have material or complex financial reporting and reserving consequences. The reserving for such transactions is subject to increased risk of error due to the non-routine nature of transactions and the judgmental nature of reserving. The valuation of actuarially determined L&H reserves depends on the use of complex models. The Company continues to migrate actuarial data and models from legacy systems and/or spreadsheets to new actuarial modelling systems. At the same time, the Company is validating models to ensure that new models are fit for use. Moving from one modelling platform to another is a complex and time-consuming process, frequently taking several years. Any resulting adjustments to reserves need to be assessed in terms of appropriateness and classified as a change in estimate or as an out-of-period adjustment.	We assessed and tested the design and operating effectiveness of selected key controls relating to the application of actuarial methodology, data collection and analysis, as well as the processes for determining the assumptions used by the Company in the valuation of actuarially determined L&H reserves. In relation to the matters set out opposite, our substantive testing procedures included the following, which are applicable for both the standard reserving and large and/or structured transactions: • Testing the completeness and accuracy of the underlying data by vouching against the source documentation. • Testing the migration of actuarial data from legacy systems and/or spreadsheets to the new actuarial systems for completeness and accuracy. • Involving our life insurance actuarial specialists to perform independent model validation procedures, including detailed testing of models, independent recalculations and back testing. • Challenging the Company's methodology and methods, focusing on changes to L&H actuarial methodology and methods during the year, by applying our industry knowledge and experience to check whether the methodology and methods are consistent with recognised actuarial practices and reporting requirements. • Evaluating the appropriateness of the recognition, accounting, and disclosures for large and/or structured transactions. Based on the work performed, we consider the methodologies and assumptions used by the Company in the valuation of actuarially determined L&H reserves to be appropriate.

Impairment assessment of investments in subsidiaries and affiliated companies

Key audit matter	How our audit addressed the key audit matter
The Company applies group valuation method when a close business link exists and a similarity in nature is given in accordance with Swiss Accounting Law. The impairment assessment of investments in subsidiaries and affiliated companies is based on the selected valuation model that reflects specific characteristics of investment and corresponding assumptions as model inputs. The impairment assessment is considered a key audit matter due to the considerable judgment in the assumptions and adjustments applied to the in the valuation model.	In relation to the matter set out opposite, our substantive testing procedures included the following: • Assessing whether the group valuation method is still appropriate. • Evaluating the model used by the Company to determine a market value. • Assessing whether the assumptions used are reasonable. • Understanding changes in the approach and discussing these with the Company to ensure they are in accordance with our own expectation based on our knowledge of the business and industry. Based on the work performed, we consider the methods and assumptions used by the Company to assess recoverability of investments in subsidiaries and affiliated companies to be appropriate.

Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposal for allocation of disposable profit complies with Swiss law and the Company's Articles of Association. We recommend that the financial statements submitted to you be approved.

PricewaterhouseCoopers AG

Roy Clark

Audit expert
Auditor in charge

Frank Trauschke

Audit expert

Zurich, 18 March 2020

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" and "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. 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 realize amounts on sales of securities on the Group's balance sheet equivalent to their values recorded for accounting purposes;
- the Group's inability to generate sufficient investment income from its investment portfolio, including as a result of fluctuations in the equity and fixed income markets, the composition of the investment portfolio or otherwise;
- changes in legislation and regulation, or the interpretations thereof by regulators and courts, affecting the Group or its ceding companies, including as a result of comprehensive reform or shifts away from multilateral approaches to regulation of global operations;
- the lowering or loss of one of the financial strength or other ratings of one or more companies in the Group, and developments adversely affecting its ability to achieve improved ratings;
- uncertainties in estimating reserves, including differences between actual claims experience and underwriting and reserving assumptions;
- policy renewal and lapse rates;
- uncertainties in estimating future claims for purposes of financial reporting, particularly with respect to large natural catastrophes and certain large man-made losses, as significant uncertainties may be involved in estimating losses from such events and preliminary estimates may be subject to change as new information becomes available;
- legal actions or regulatory investigations or actions, including in respect of industry requirements or business conduct rules of general applicability;
- the outcome of tax audits, the ability to realize tax loss carryforwards and the ability to realize deferred tax assets (including by reason of the mix of earnings in a

jurisdiction or deemed change of control), which could negatively impact future earnings, and the overall impact of changes in tax regimes on the Group's business model;
- changes in accounting estimates or assumptions that affect reported amounts of assets, liabilities, revenues or expenses, including contingent assets and liabilities;
- changes in accounting standards, practices or policies;
- strengthening or weakening of foreign currencies;
- reforms of, or other potential changes to, benchmark reference rates;
- failure of the Group's hedging arrangements to be effective;
- significant investments, acquisitions or dispositions, and any delays, unforeseen liabilities or other costs, lower-than-expected benefits, impairments, ratings action or other issues experienced in connection with any such transactions;
- extraordinary events affecting the Group's clients and other counterparties, such as bankruptcies, liquidations and other credit-related events;
- changing levels of competition;
- the effects of business disruption due to terrorist attacks, cyberattacks, natural catastrophes, public health emergencies, hostilities or other events;
- limitations on the ability of the Group's subsidiaries to pay dividends or make other distributions; and
- operational factors, including the efficacy of risk management and other internal procedures in anticipating and managing the foregoing risks.

These factors are not exhaustive. The Group operates in a continually changing environment and new risks emerge continually. Readers are cautioned not to place undue reliance on forward-looking statements. The Group undertakes no obligation to publicly revise or update any forward-looking statements, whether as a result of new information, future events or otherwise.

This communication is not intended to be a recommendation to buy, sell or hold securities and does not constitute an offer for the sale of, or the solicitation of an offer to buy, securities in any jurisdiction, including the United States. Any such offer will only be made by means of a prospectus or offering memorandum, and in compliance with applicable securities laws.

Note on risk factors

General impact of adverse market conditions

The operations of Swiss Reinsurance Company Ltd ("Swiss Re") and its subsidiaries (collectively, the "Group") as well as its investment returns are subject to market volatility and macro-economic factors, which are outside of the Group's control.

Financial, credit and foreign exchange markets are experiencing continued periods of volatility reflecting a range of political, economic and other uncertainties, some of the more significant of which are inter-related. These include the withdrawal of the United Kingdom from the European Union and significant uncertainty regarding the future relationship between the United Kingdom and the European Union; the possible emergence of trade barriers and other protection policies across a range of economies, including a sustained trade war between the United States and China; geopolitical tensions more broadly; a prolonged slowdown in one or more of the principal global economies, particularly in China, and possible recession; continued challenges faced by the Eurozone; the tightening of monetary policy; sustained challenges to multilateral institutions and frameworks; the domestic political situation in the United States, various member states of the European Union and potentially other countries; and heightened scrutiny of technology companies.

Further adverse developments or the continuation of adverse trends that, in turn, have a negative impact on financial markets and economic conditions could limit the Group's ability to access the capital markets and bank funding markets, could adversely affect the ability of counterparties to meet their obligations to the Group and could adversely affect the confidence of the ultimate buyers of 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 and soft insurance cycle could have a material adverse effect on the Group's overall results, make it difficult to determine the value of certain assets in the Group's portfolio, make it more difficult to acquire suitable investments to meet its risk and return criteria and otherwise have a material adverse effect on its business and operations.

Coronavirus

The rapid spread of the coronavirus and the evolving actions being taken to contain it on a growing scale have led to significant volatility in the financial markets, have had an adverse impact on global economic activity and have led to heightened concerns of potentially significant adverse effects on the global economy, and possibly recession. Even countries that experience less severe direct effects of the coronavirus could be adversely affected by disruptions in the global supply chain and significantly curtailed international travel. Swiss Re is closely monitoring the spread of the coronavirus and the actions being taken to contain it, and continues to evaluate the potential impact on the Group. Contingency covers could be affected depending on the scope and severity of the spread of the virus as well as of the actions taken to contain it, and coronavirus-related financial market volatility could adversely affect the Group's investment result or access to the capital markets. The Group's operations and control processes could also be adversely affected by widening containment efforts (undertaken on a voluntary or mandatory basis). The coronavirus outbreak, the impact on business and economic activity of containment efforts and the related equity market volatility, together with the recent interest rate cuts, are likely to have an adverse effect on our SST ratio, as long as these factors remain operative.

Regulatory changes

Swiss Re and its subsidiaries operate in a highly regulated environment. The regulatory regimes to which members of the Group are subject have changed significantly in recent years and are expected to continue to evolve.

While some regulation is national in scope, the global nature of the Group's business means that its operations are subject in effect to a patchwork of global, national and regional standards. Swiss Re and its subsidiaries are subject to applicable regulation in each of the jurisdictions in which they conduct business, particularly Switzerland, the United States, the United Kingdom, Luxembourg and Germany. The Group is subject to the Swiss Solvency Test and, through its legal entities organised in the EEA, Solvency II. The Group could be affected by regulatory changes or developments affecting the overall Swiss Re group, comprising Swiss Re Ltd ("SRL") and its consolidated subsidiaries, of which the Group is a part (the "Swiss Re Group").

While certain regulatory processes are designed in part to foster convergence and achieve recognition of group supervisory schemes, the Group continues to face risks of extra-territorial application of regulations, particularly as to group supervision and group solvency requirements. In addition, regulators in jurisdictions beyond those where the Group has core operations increasingly are playing a far greater oversight role, requiring more localised resources and, despite a predominantly local focus, also raise issues of a cross-border nature. Furthermore, evolving regulatory schemes and requirements may be inconsistent or may conflict with each other, thereby subjecting the Group, particularly in light of the increasing focus on legal entities in isolation, to higher compliance and legal costs, as well as the possibility of higher operational, capital and liquidity costs. The effect of these trends could be exacerbated to the extent that the current political environment results in a return to more bilateral, and less harmonised, cross-border regulatory efforts.

While in recent years there has been an evolving focus on classifying certain insurance companies as systemically important, it is unclear whether and, if so, in what form reforms will be enacted. The Group could be designated as a global systemically important financial institution ("SIFI") under the framework for SIFIs developed by the Financial Stability Board, or as a systemically important insurer by the Financial Stability Oversight Council ("FSOC") in the United States. The International Association of Insurance Supervisors, an international body that represents insurance regulators and supervisors, has published and since refined its methodology for identifying global systemically important insurers ("G-SIIs"). Were the Group to be designated as a G-SII, it could be subject to one or both of the resulting regimes, including capital standards (the basic capital requirement for G-SIIs), which would have various implications for the Group, including additional compliance costs, reporting obligations, capital costs (in the form of capital charges or high loss absorption capacity) as well as heightened regulatory scrutiny in various jurisdictions. In addition, the Group ultimately will be subject to oversight of its Swiss regulator in respect of recovery and resolution planning.

The Group cannot predict which legislative and/or regulatory initiatives will be enacted or promulgated, what the scope and content of these initiatives ultimately will be, when they will be effective and what the implications will be for the industry, in general, and for the Group, in particular. The Group may be subject to changes in views of its regulators in respect of the models that the Group uses for capital and solvency purposes, and could be adversely affected if, for example, it is required to use standard models rather than internal models. Generally, legal and regulatory changes could have a material impact on the Group's business. Uncertainty regarding the future relationship between the United Kingdom and the European Union could also impact the legislative and/or regulatory regimes to which the Group is subject, both in the United Kingdom and in the European Union.

In addition, regulatory changes could occur in areas of broader application, such as competition policy and tax laws. Changes in tax laws, for example, could increase the taxes the Group pays, the attractiveness of products offered by the Group, the Group's investment activities and the value of deferred tax assets. Any number of these changes could apply to the Group and its operations. These changes, or inconsistencies between the various regimes that apply to the Group, could increase the costs of doing business (including due to increased capital requirements), reduce access to liquidity, limit the scope of current or future business or affect the competitive balance, or could make reinsurance less attractive to primary insurers.

Market risk

Volatility and disruption in the global financial markets could expose the Group to significant financial and capital markets risk, including changes in interest rates, credit spreads, equity prices and foreign currency exchange rates, which may adversely impact the Group's financial condition, results of operations, liquidity and capital position. The Group's exposure to interest rate risk is primarily related to the market price and cash flow variability associated with changes in interest rates. In general, a low interest rate environment, such as the one experienced in recent years, poses significant challenges to the insurance and reinsurance industries, with earnings capacity under stress unless lower investment returns from fixed income assets can be offset by lower combined ratios or higher returns from other asset classes. Exposure to credit spreads primarily relates to market price and cash flow variability associated with changes in credit spreads. When credit spreads widen, the net unrealised loss position of the Group's investment portfolio can increase, as could other-than-temporary impairments.

The Group is exposed to changes in the level and volatility of equity prices, as they affect the value of equity securities themselves as well as the value of securities or instruments that derive their value from a particular equity security, a basket of equity securities or a stock index. The Group is also subject to equity price risk to the extent that the values of life-related benefits under certain products and life contracts, most notably variable annuity business, are tied to financial market values; to the extent market values fall, the financial exposure on guarantees related to these contracts would increase to the extent this exposure is not hedged. While the Group has an extensive hedging programme covering its existing variable annuity business that it believes is sufficient, certain risks cannot be hedged, including actuarial, basis and correlation risks. Exposure to foreign exchange risk arises from exposures to changes in spot prices and forward prices as well as to volatile movements in exchange rates.

These risks can have a significant effect on investment returns and market values of securities positions, which in turn may affect both the Group's results of operations and financial condition. The Group continues to focus on asset-liability management for its investment portfolio, but pursuing even this strategy has its risks – including possible mismatch – that in turn can lead to reinvestment risk. The Group seeks to manage the risks inherent in its investment portfolio by repositioning the portfolio from time to time, as needed, and to reduce risk and fluctuations through the use of hedges and other risk management tools.

Credit risk

If the credit markets were again to deteriorate and further asset classes were to be impacted, the Group could experience losses. Changes in the market value of the underlying securities and other factors impacting their price could give rise to market value losses. If the credit markets were to deteriorate again, the Group could also face write-downs in other areas of its portfolio, including other structured instruments, and the Group and its counterparties could face difficulties in valuing credit-related instruments. Differences in opinion with respect to valuations of credit-related instruments could result in legal disputes among the Group and its counterparties as to their respective obligations, the outcomes of which are difficult to predict and could be material.

Liquidity risks

The Group's business requires, and its clients expect, that it has sufficient capital and sufficient liquidity to meet its re/insurance obligations, and that this would continue to be the case following the occurrence of any foreseeable event or series of events, including extreme catastrophes, that would trigger insurance or reinsurance coverage obligations. The Group's uses of funds include obligations arising in its reinsurance business (including claims and other payments as well as insurance provision repayments due to portfolio transfers, securitisations and commutations), which may include large and unpredictable claims (including catastrophe claims), funding of capital requirements and operating costs, payment of principal and interest on outstanding indebtedness and funding of acquisitions. The Group also has unfunded capital commitments in its private equity and hedge fund investments, which could result in funding obligations at a time when it is subject to liquidity constraints. In addition, the Group has potential collateral requirements in connection with a number of reinsurance arrangements, the amounts of which may be material and the meeting of which could require the Group to liquidate cash equivalents or other securities.

The Group manages liquidity and funding risks by focusing on the liquidity stress that is likely to result from extreme capital markets scenarios or from extreme loss events or combinations of the two. Generally, the ability to meet liquidity needs could be adversely impacted by factors that the Group cannot control, such as market dislocations or interruptions, adverse economic conditions, severe disruption in the financial and worldwide credit markets and the related increased constraints on the availability of credit; changes in interest rates, foreign exchange rates and credit spreads; or by perceptions among market participants of the extent of the Group's liquidity needs.

Unexpected liquidity needs (including to meet collateral calls) could require the Group to incur indebtedness or liquidate investments or other assets. The Group may not be able to secure new sources of liquidity or funding, should projected or actual liquidity fall below levels it requires. The ability to meet liquidity needs through asset sales may be constrained by market conditions and the related stress on valuations, and through third-party funding may be limited by constraints on the general availability of credit and willingness of lenders to lend. In addition, the Group's ability to meet liquidity needs may also be constrained by regulatory requirements that require regulated entities to maintain or increase regulatory capital, or that restrict intra-group transactions, the timing of dividend payments from subsidiaries or the fact that certain assets may be encumbered or otherwise non-tradable. Failure to meet covenants in lending arrangements could give rise to collateral-posting or defaults, and further constrain access to liquidity. Finally, any adverse ratings action could trigger a need for further liquidity (for example, by triggering termination provisions or collateral delivery requirements in contracts to which the Group is a party) at a time when the Group's ability to obtain liquidity from external sources is limited by such ratings action.

Counterparty risks

The Group is exposed to the risk of defaults, or concerns about defaults, by its counterparties. Securities trading counterparties, counterparties under swaps and other derivative contracts, and financial intermediaries may default on their obligations due to bankruptcy, insolvency, lack of liquidity, adverse economic conditions, operational failure, fraud or other reasons, which could have a material adverse effect on the Group. The Group has increased its allocation to higher return-generating strategies, including high-quality corporate debt and some alternative assets, which tend to also be subject to potentially greater counterparty risk.

The Group could also be adversely affected by the insolvency of, or other credit constraints affecting, counterparties in its reinsurance operations. Moreover, the Group could be adversely affected by liquidity issues at ceding companies or at third parties to whom the Group has retroceded risk, and such risk could be exacerbated to the extent any such exposures are concentrated.

Risks relating to credit rating downgrades

Ratings are an important factor in establishing the competitive position of reinsurance companies. Third-party rating agencies assess and rate the financial strength of reinsurers and insurers. These ratings are intended to measure a company's ability to repay its obligations and are based upon criteria established by the rating agencies. Ratings may be revised downward or revoked at the sole discretion of the rating agencies.

The Group's ratings reflect the current opinion of the relevant rating agencies. One or more of its ratings could be downgraded or withdrawn in the future, and market conditions could increase the risk of downgrade. Rating agencies may increase the frequency and scope of ratings reviews, revise their criteria or take other actions that may negatively impact the Group's ratings and/or the ratings of its legal entities. In addition, changes to the process or methodology of issuing ratings, or the occurrence of events or developments affecting the Group, could make it more difficult for the Group to achieve improved ratings which it would otherwise have expected.

As claims paying and financial strength ratings are key factors in establishing the competitive position of reinsurers, a decline in ratings alone could make reinsurance provided by the Group less attractive to clients relative to reinsurance from competitors with similar or stronger ratings. A decline in ratings could also cause the loss of clients who are required by policy or regulation to purchase reinsurance only from reinsurers with certain ratings. Certain larger reinsurance contracts contain terms that would allow the ceding companies to cancel the contract if the Group's ratings or those of its subsidiaries are downgraded beyond a certain threshold.

Moreover, a decline in ratings could impact the availability and terms of unsecured financing (potentially impacting the Group's ability to rollover existing facilities or obtain new facilities) and obligate the Group to provide collateral or other guarantees in the course of its business or trigger early termination of funding arrangements, potentially resulting in a need for additional liquidity. As a ratings decline could also have a material adverse impact on the Group's costs of borrowing or ability to access the capital markets, the adverse implications of a downgrade could be more severe.

Legal and regulatory risks

In the ordinary course of business, the Group is involved in lawsuits, arbitrations and other formal and informal dispute resolution procedures, the outcomes of which determine rights and obligations under the Group's insurance, reinsurance and other contractual agreements. From time to time, the Group may institute, or be named as a defendant in, legal proceedings, and the Group may be a claimant or respondent in arbitration proceedings. These proceedings could involve coverage or other disputes with ceding companies, disputes with parties to which the Group transfers risk under reinsurance arrangements, disputes with other counterparties or other matters. The Group cannot predict the outcome of any of the foregoing, which could be material for the Group.

The Group is also involved, from time to time, in investigations and regulatory proceedings, which could result in adverse judgments, settlements, fines and other outcomes. The number of these investigations and proceedings involving the financial services industry has increased in recent years, and the potential scope of these investigations and proceedings has also increased, not only in respect of matters covered by the Group's direct regulators, but also in respect of compliance with broader business conduct rules, including those in respect of market abuse, bribery, money laundering, trade sanctions and data protection and privacy. The Group also is subject to audits and challenges from time to time by tax authorities (for whom aggressive tax enforcement is becoming a higher priority), which could result in increases in tax costs, changes to internal structures and interest and penalties. Tax authorities may also actively pursue additional taxes based on retroactive changes to tax laws. The Group could be subject to risks arising from alleged, or actual, violations of any of the foregoing, and could also be subject to risks arising from potential employee misconduct, including non-compliance with internal policies and procedures and malfeasance, such as undertaking or facilitating cyber attacks on internal systems. Substantial legal liability could materially adversely affect the Group's business, financial condition or results of operations or could cause significant reputational harm, which could seriously affect its business.

Insurance, operational and other risks

As part of the Group's ordinary course operations, the Group is subject to a variety of risks, including risks that reserves may not adequately cover future claims and benefits; risks that catastrophic events (including natural disasters, such as hurricanes, windstorms, floods, earthquakes, and man-made disasters, such as acts of terrorism and other disasters such as industrial accidents, explosions and fires, and pandemics) are inherently unpredictable in terms of both their frequency and severity and have exposed, and may expose, the Group to unexpected large losses (and related uncertainties in estimating future claims in respect of such events); changes in the insurance industry that affect ceding companies, particularly those that further increase their sensitivity to counterparty risk; competitive conditions (including as a result of consolidation and the availability of significant levels of alternative capacity); cyclicality of the industry; risks related to emerging claims and coverage issues; macro developments giving rise to emerging risks, such as climate change and technological developments (including greater exposure to cyber risks (where accumulation risk is yet to be fully understood), which could have a range of consequences from operational disruption, to loss of proprietary or customer data, to greater regulatory burdens and potential liability); risks arising from the Group's dependence on policies, procedures and expertise of ceding companies; risks related to investments in emerging markets; and risks related to the failure of, or attacks directed at, the Group's operational systems and infrastructure, including its information technology networks and systems. Any of the foregoing, as well as the occurrence of future risks that the Group's risk management procedures fail to identify or anticipate, could have a material adverse effect on the Group, and could also give rise to reputational risk.

Use of models; accounting matters

The Group is subject to risks relating to the preparation of estimates and assumptions that management uses, including as part of its risk models as well as those that affect the reported amounts of assets, liabilities, revenues and expenses in the Group's financial statements, including assumed and ceded business. For example, the Group estimates premiums pending receipt of actual data from ceding companies, which actual data could deviate from the estimates. In addition, particularly with respect to large natural catastrophes, it may be difficult to estimate losses, and preliminary estimates may be subject to a high degree of uncertainty and change as new information becomes available. Deterioration in market conditions could have an adverse impact on assumptions used for financial reporting purposes, which could affect possible impairment of present value of future profits, fair value of assets and liabilities, deferred acquisition costs or goodwill. Moreover, regulators could require the use of standard models instead of permitting the use of internal models. To the extent that management's estimates or assumptions prove to be incorrect, it could have a material impact on underwriting results (in the case of risk models) or on reported financial condition or results of operations, and such impact could be material.

The Group's results may be impacted by changes in accounting standards, or changes in the interpretation of accounting standards. Changes in accounting standards could impact future reported results or require restatement of past reported results. The Group's results may also be impacted if regulatory authorities take issue with any conclusions the Group may reach in respect of accounting matters.

The Group uses non-GAAP financial measures in its external financial reporting. These measures are not prepared in accordance with US GAAP or any other comprehensive set of accounting rules or principles, and should not be viewed as substitutes for measures prepared in accordance with US GAAP. Moreover, these may be different from, or otherwise inconsistent with, non-GAAP financial measures used by other companies. These measures have inherent limitations, are not required to be uniformly applied and are not audited.

Risks related to the Swiss Re corporate structure
Swiss Re is a wholly owned subsidiary of SRL, and the Group represents two of the four principal operating segments of the Swiss Re Group. Capital, funding, reserve and cost allocations are made at the Swiss Re Group level across the four operating segments based principally on business plans as measured against US GAAP and economic value management metrics. Decisions at the Swiss Re Group level in respect of the broader Swiss Re Group could have an adverse impact on the Group's financial condition, including its capital and liquidity levels, as well as on its SST ratio. As part of the Swiss Re Group's focus on efficient capital allocation, the Group expects to be paying dividends to SRL. Decisions on dividends payable by each of the operating segments, including the Group, are made at the Swiss Re Group level based on legal entity, regulatory, capital and liquidity considerations. While to date the Group remains wholly owned by SRL, in the future, the Swiss Re Group may partner (for purposes of acquisitions or otherwise) with other investors in, or within, one or more of its business units or sub-groups within its business units (including the Group), which, subject to applicable regulatory requirements, have the potential to alter its 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 and board composition at the relevant corporate level. The Group's structure could also change in connection with acquisitions or dispositions. To the extent it undertakes acquisitions, it is subject to the risks inherent in acquiring and integrating new operations.

While further changes to the overall Swiss Re Group structure may not have a financial statement impact on a Swiss Re Group consolidated basis, they would impact the Group to the extent that operations are transferred into or from the Group, or as a result of intra-group transactions (from the perspective of the Swiss Re Group) to the extent the Group is a counterparty to any such transactions.

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