CONTENTS

Income statement

For the years ended 31 December

USD millions	Note	2015	2016
Revenues			
Gross premiums written	4	32 249	**35 622**
Net premiums written	4	30 442	**33 570**
Change in unearned premiums		–691	**–879**
Premiums earned	3	29 751	**32 691**
Fee income from policyholders	3	463	**540**
Net investment income – non-participating business[1]	7	3 436	**3 661**
Net realised investment gains/losses – non-participating business[2]	7	1 206	**1 484**
Net investment result – unit-linked and with-profit business	7	814	**5 382**
Other revenues		44	**28**
Total revenues		35 714	**43 786**
Expenses			
Claims and claim adjustment expenses	3	–9 848	**–12 564**
Life and health benefits	3	–9 080	**–10 859**
Return credited to policyholders		–1 166	**–5 099**
Acquisition costs	3	–6 419	**–6 928**
Operating expenses[3]		–3 248	**–3 358**
Total expenses before interest expenses		–29 761	**–38 808**
Income before interest and income tax expense		5 953	**4 978**
Interest expenses[3]		–634	**–606**
Income before income tax expense		5 319	**4 372**
Income tax expense	13	–651	**–749**
Net income before attribution of non-controlling interests		4 668	**3 623**
Income/loss attributable to non-controlling interests		–3	**3**
Net income after attribution of non-controlling interests		4 665	**3 626**
Interest on contingent capital instruments		–68	**–68**
Net income attributable to common shareholders		4 597	**3 558**
Earnings per share in USD			
Basic	12	13.44	**10.72**
Diluted	12	12.28	**9.82**
Earnings per share in CHF[4]			
Basic	12	12.93	**10.55**
Diluted	12	11.81	**9.66**

[1] Total impairments for the years ended 31 December of USD 83 million in 2015 and USD 66 million in 2016, respectively, were fully recognised in earnings.
[2] Total impairments for the years ended 31 December of USD 57 million in 2015 and USD 88 million in 2016, respectively, were fully recognised in earnings.
[3] Letter of credit fees of USD 55 million for the year ended 31 December 2015 have been reclassified from "Operating expenses" to "Interest expenses".
[4] The translation from USD to CHF is shown for informational purposes only and has been calculated using the Group's average exchange rates.

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

Statement of comprehensive income

For the years ended 31 December

USD millions	2015	2016
Net income before attribution of non-controlling interests	4 668	**3 623**
Other comprehensive income, net of tax:		
Change in unrealised investment gains/losses	–2 670	**1 711**
Change in other-than-temporary impairment	–8	**6**
Change in cash flow hedges		**–7**
Change in foreign currency translation	–1 012	**–387**
Change in adjustment for pension benefits	–191	**–119**
Total comprehensive income before attribution of non-controlling interests	787	**4 827**
Interest on contingent capital instruments	–68	**–68**
Comprehensive income attributable to non-controlling interests	–3	**3**
Total comprehensive income attributable to common shareholders	716	**4 762**

Reclassification out of accumulated other comprehensive income

For the years ended 31 December

2015 USD millions	Unrealised investment gains/losses[1]	Other-than-temporary impairment[1]	Cash flow hedges[1]	Foreign currency translation	Adjustment from pension benefits[2]	Accumulated other comprehensive income
Balance as of 1 January	5 418	–3	0	–4 675	–825	–85
Change during the period	–2 166	–10		–870	–310	–3 356
Amounts reclassified out of accumulated other comprehensive income	–1 523				74	–1 449
Tax	1 019	2		–142	45	924
Balance as of period end	2 748	–11	0	–5 687	–1 016	–3 966

2016 USD millions	Unrealised investment gains/losses[1]	Other-than-temporary impairment[1]	Cash flow hedges[1]	Foreign currency translation	Adjustment from pension benefits[2]	**Accumulated other comprehensive income**
Balance as of 1 January	2 748	–11	0	–5 687	–1 016	**–3 966**
Change during the period	2 856	6	32	–267	–201	**2 426**
Amounts reclassified out of accumulated other comprehensive income	–704	2	–39		61	**–680**
Tax	–441	–2		–120	21	**–542**
Balance as of period end	**4 459**	**–5**	**–7**	**–6 074**	**–1 135**	**–2 762**

[1] Reclassification adjustment included in net income is presented in "Net realised investment gains/losses – non-participating business".
[2] Reclassification adjustment included in net income is presented in "Operating expenses".

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

Balance sheet

As of 31 December

Assets

USD millions	Note	2015	2016
Investments	7, 8, 9		
Fixed income securities:			
Available-for-sale (including 11 897 in 2015 and 10 036 in 2016 subject to securities lending and repurchase agreements) (amortised cost: 2015: 76 155; 2016: 85 171)		79 435	**90 581**
Trading (including 1 729 in 2015 and 1 871 in 2016 subject to securities lending and repurchase agreements)		2 896	**2 695**
Equity securities:			
Available-for-sale (including 605 in 2015 and 23 in 2016 subject to securities lending and repurchase agreements) (cost: 2015: 4 294; 2016: 2 897)		4 719	**3 375**
Trading		68	**60**
Policy loans, mortgages and other loans		3 123	**3 682**
Investment real estate		1 556	**1 925**
Short-term investments (including 1 278 in 2015 and 2 960 in 2016 subject to securities lending and repurchase agreements)		7 405	**10 909**
Other invested assets		10 367	**9 611**
Investments for unit-linked and with-profit business (including fixed income securities trading: 4 069 in 2015 and 5 153 in 2016, equity securities trading: 22 783 in 2015 and 25 807 in 2016)		28 241	**32 178**
Total investments		137 810	**155 016**
Cash and cash equivalents (including 319 in 2015 and 1 169 in 2016 subject to securities lending)		8 204	**9 011**
Accrued investment income		983	**1 108**
Premiums and other receivables		11 709	**13 270**
Reinsurance recoverable on unpaid claims and policy benefits		6 578	**7 461**
Funds held by ceding companies		9 870	**8 184**
Deferred acquisition costs	6	5 471	**6 200**
Acquired present value of future profits	6	2 964	**2 003**
Goodwill		3 862	**3 965**
Income taxes recoverable		191	**291**
Deferred tax assets		5 970	**5 902**
Other assets		2 523	**2 654**
Total assets		196 135	**215 065**

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

Liabilities and equity

USD millions	Note	2015	2016
Liabilities			
Unpaid claims and claim adjustment expenses	5	55 518	**57 355**
Liabilities for life and health policy benefits	8	30 131	**41 176**
Policyholder account balances		31 422	**34 354**
Unearned premiums		10 869	**11 629**
Funds held under reinsurance treaties		3 320	**2 544**
Reinsurance balances payable		1 928	**1 913**
Income taxes payable		488	**633**
Deferred and other non-current tax liabilities		8 093	**8 583**
Short-term debt	11	1 834	**1 564**
Accrued expenses and other liabilities		7 948	**9 811**
Long-term debt	11	10 978	**9 787**
Total liabilities		162 529	**179 349**
Equity			
Contingent capital instruments		1 102	**1 102**
Common shares, CHF 0.10 par value 2015: 370 706 931; 2016: 360 072 561 shares authorised and issued		35	**34**
Additional paid-in capital		482	**341**
Treasury shares, net of tax		–1 662	**–1 763**
Accumulated other comprehensive income:			
Net unrealised investment gains/losses, net of tax		2 748	**4 459**
Other-than-temporary impairment, net of tax		–11	**–5**
Cash flow hedges, net of tax			**–7**
Foreign currency translation, net of tax		–5 687	**–6 074**
Adjustment for pension and post-retirement benefits, net of tax		–1 016	**–1 135**
Total accumulated other comprehensive income		–3 966	**–2 762**
Retained earnings		37 526	**38 682**
Shareholders' equity		33 517	**35 634**
Non-controlling interests		89	**82**
Total equity		33 606	**35 716**
Total liabilities and equity		196 135	**215 065**

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

Statement of shareholders' equity

For the years ended 31 December

USD millions	2015	2016
Contingent capital instruments		
Balance as of 1 January	1 102	**1 102**
Issued		
Balance as of period end	1 102	**1 102**
Common shares		
Balance as of 1 January	35	**35**
Issue of common shares		
Cancellation of shares bought back		**–1**
Balance as of period end	35	**34**
Additional paid-in capital		
Balance as of 1 January	1 806	**482**
Cancellation of shares bought back		**–176**
Share-based compensation	17	**2**
Realised gains/losses on treasury shares	–61	**33**
Dividends on common shares[1]	–1 280	
Balance as of period end	482	**341**
Treasury shares, net of tax		
Balance as of 1 January	–1 185	**–1 662**
Purchase of treasury shares	–584	**–1 190**
Cancellation of shares bought back		**1 018**
Issuance of treasury shares, including share-based compensation to employees	107	**71**
Balance as of period end	–1 662	**–1 763**
Net unrealised investment gains/losses, net of tax		
Balance as of 1 January	5 418	**2 748**
Changes during the period	–2 670	**1 711**
Balance as of period end	2 748	**4 459**
Other-than-temporary impairment, net of tax		
Balance as of 1 January	–3	**–11**
Changes during the period	–8	**6**
Balance as of period end	–11	**–5**
Cash flow hedges, net of tax		
Balance as of 1 January	0	**0**
Changes during the period		**–7**
Balance as of period end	0	**–7**
Foreign currency translation, net of tax		
Balance as of 1 January	–4 675	**–5 687**
Changes during the period	–1 012	**–387**
Balance as of period end	–5 687	**–6 074**
Adjustment for pension and other post-retirement benefits, net of tax		
Balance as of 1 January	–825	**–1 016**
Changes during the period	–191	**–119**
Balance as of period end	–1 016	**–1 135**
Retained earnings		
Balance as of 1 January	34 257	**37 526**
Net income after attribution of non-controlling interests	4 665	**3 626**
Interest on contingent capital instruments, net of tax	–68	**–68**
Dividends on common shares[1]	–1 328	**–1 561**
Cancellation of shares bought back		**–841**
Balance as of period end	37 526	**38 682**
Shareholders' equity	33 517	**35 634**

USD millions	2015	2016
Non-controlling interests		
Balance as of 1 January	111	**89**
Changes during the period	–25	**–4**
Income attributable to non-controlling interests	3	**–3**
Balance as of period end	89	**82**
Total equity	33 606	**35 716**

[1] The distributions to shareholders in 2015 were paid in the form of a withholding tax exempt repayment of legal reserves from capital contributions.

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

Statement of cash flow

For the years ended 31 December

USD millions	2015	2016
Cash flows from operating activities		
Net income attributable to common shareholders	4 597	**3 558**
Add net income attributable to non-controlling interests	3	**–3**
Adjustments to reconcile net income to net cash provided/used by operating activities:		
Depreciation, amortisation and other non-cash items	594	**643**
Net realised investment gains/losses	–1 221	**–5 787**
Income from equity-accounted investees, net of dividends received	202	**135**
Change in:		
Technical provisions and other reinsurance assets and liabilities, net	–121	**5 845**
Funds held by ceding companies and under reinsurance treaties	764	**862**
Reinsurance recoverable on unpaid claims and policy benefits	670	**434**
Other assets and liabilities, net	87	**–37**
Income taxes payable/recoverable	–567	**–24**
Trading positions, net	404	**489**
Net cash provided/used by operating activities	5 412	**6 115**
Cash flows from investing activities		
Fixed income securities:		
Sales	45 552	**38 700**
Maturities	4 529	**4 218**
Purchases	–55 360	**–44 389**
Net purchases/sales/maturities of short-term investments	6 103	**–3 675**
Equity securities:		
Sales	1 790	**3 283**
Purchases	–2 717	**–1 702**
Securities purchased/sold under agreement to resell/repurchase, net	–2 089	**789**
Cash paid/received for acquisitions/disposal and reinsurance transactions, net	404	**318**
Net purchases/sales/maturities of other investments	2 264	**1 293**
Net purchases/sales/maturities of investments held for unit-linked and with-profit business	1 218	**2 762**
Net cash provided/used by investing activities	1 694	**1 597**
Cash flows from financing activities		
Policyholder account balances, unit-linked and with-profit business:		
Deposits	518	**658**
Withdrawals	–2 383	**–3 755**
Issuance/repayment of long-term debt	199	**762**
Issuance/repayment of short-term debt	–1 155	**–1 331**
Purchase/sale of treasury shares	–579	**–1 170**
Dividends paid to shareholders	–2 608	**–1 561**
Net cash provided/used by financing activities	–6 008	**–6 397**
Total net cash provided/used	1 098	**1 315**
Effect of foreign currency translation	–365	**–508**
Change in cash and cash equivalents	733	**807**
Cash and cash equivalents as of 1 January	7 471	**8 204**
Cash and cash equivalents as of 31 December	8 204	**9 011**

Interest paid was USD 729 million and USD 674 million (thereof USD 57 million and USD 51 million for letter of credit fees) for the years ended 31 December 2015 and 2016, respectively. Tax paid was USD 1 190 million and USD 755 million for the years ended 31 December 2015 and 2016, respectively.

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

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Notes to the Group financial statements

1 Organisation and summary of significant accounting policies

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

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

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

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

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

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

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

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

For assets or derivative structures at fair value, the Group uses market prices or inputs derived from market prices. A separate internal price verification process, independent of the trading function, provides an additional control over the market prices or market input used to determine the fair values of such assets. Although management considers that appropriate values have been ascribed to such assets, there is always a level of uncertainty and judgement over these valuations. Subsequent valuations could differ significantly from the results of the process described above. The Group may become aware of counterparty valuations, either directly through the exchange of information or indirectly, for example, through collateral demands. Any implied differences are considered in the independent price verification process and may result in adjustments to initially indicated valuations. As of 31 December 2016, the Group has not provided any collateral on financial instruments in excess of its own market value estimates.

Investments

The Group's investments in fixed income and equity securities are classified as available-for-sale (AFS) or trading. Fixed income securities AFS and equity securities AFS are carried at fair value, based on quoted market prices, with the difference between the applicable measure of cost and fair value being recognised in shareholders' equity. Trading fixed income and equity 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 or for securities where the Group has decided to apply the fair value option.

The cost of equity securities AFS is reduced to fair value, with a corresponding charge to realised investment losses if the decline in value, expressed in functional currency terms, is other-than-temporary. Subsequent recoveries of previously recognised impairments are not recognised in earnings.

For fixed income securities AFS that are other-than-temporary impaired and 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, the accounting of the other-than-temporary impairment is the same as for equity securities AFS described above.

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. Impairment in value, 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 as unrealised gains/losses in shareholders' equity.

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

Derivative financial instruments and hedge accounting

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

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

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

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

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

Cash and cash equivalents

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

Deferred acquisition costs

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

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

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

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

Life Capital closed blocks of business can be acquired in different legal forms, either through an acquisition of an entity's share capital or through a reinsurance transaction. The Group's policy is to treat these transactions consistently regardless of the legal form of the acquisition. Accordingly, the Group records the acquired assets and liabilities directly to the balance sheet. Premiums, life and health benefits and other income statement items are not recorded in the income statement on the date of the acquisition.

The underlying assets and liabilities acquired are subsequently accounted for according to the relevant 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 asset may not be realised.

The Group recognizes 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.

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 which 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, i. e. there is no mortality and morbidity risk, or the mortality and morbidity risk associated with the insurance benefit features offered in the contract is of insignificant amount or remote probability. Amounts received as payment for investment contracts are reported as policyholder account balances. Related assets are included in general account assets except for investments for unit-linked and with-profit business, which are presented in a separate line item on the face of the balance sheet.

Amounts assessed against policyholders for mortality, administration and surrender are shown as fee income. Amounts credited to policyholders are shown as interest credited to policyholders. Investment income and realised investment gains and losses allocable to policyholders are included in net investment income and net realised investment gains/losses except for unit-linked and with-profit business, which is presented in a separate line item on the face of the income statement.

Unit-linked and with-profit business are presented together as they are similar in nature. For unit-linked contracts, the investment risk is borne by the policyholder. For with-profit contracts, the majority of the investment risk is also borne by the policyholder, although there are certain guarantees that limit the down-side risk for the policyholder, and a certain proportion of the returns may be retained by Swiss Re Group (typically 10%). Additional disclosures are provided in Note 7.

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

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

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

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

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

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

Shadow loss recognition testing becomes relevant in low interest rate environments. The test considers whether the hypothetical sale of AFS securities and the reinvestment of proceeds at lower yields would lead to negative operational earnings in future periods, thereby causing a loss recognition event. For shadow loss recognition testing, the Group uses current market yields to determine best estimate GAAP reserves rather than using locked in or current book yields. If the unlocked best estimate 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 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 2016, the Group has a Leadership Performance Plan, stock option plans, restricted shares, and a Global Share Participation Plan. These plans are described in more detail in Note 15. The Group accounts for share-based payment transactions with employees using the fair value method. Under the fair value method, the fair value of the awards is recognised in earnings over the vesting period.

For share-based compensation plans which are settled in cash, compensation costs are recognised as liabilities, whereas for equity-settled plans, compensation costs are recognised as an accrual to additional paid-in capital within shareholders' equity.

Treasury shares

Treasury shares are reported at cost in shareholders' equity.

Earnings per common share

Basic earnings per common share are determined by dividing net income available to shareholders by the weighted average number of common shares entitled to dividends during the year. Diluted earnings per common share reflect the effect on earnings and average common shares outstanding associated with dilutive securities.

Subsequent events

Subsequent events for the current reporting period have been evaluated up to 15 March 2017. This is the date on which the financial statements are available to be issued.

Recent accounting guidance

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, "Revenue from Contracts with Customers", which creates topic 606, "Revenue from Contracts with Customers". ASU 2014-09 outlines the principles that an entity should follow to provide useful information about the amount, timing and uncertainty of revenue and cash flows arising from contracts with its customers. The standard requires an entity to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Insurance contracts and financial instruments are not in the scope of the new standard. The new requirements are effective for annual and interim periods beginning after 15 December 2017, and may be applied retrospectively to each prior period presented or with a cumulative effect adjustment to retained earnings as of the date of initial application. The Group is currently assessing the impact of the new requirements.

In August 2014, the FASB issued ASU 2014-13, "Measuring the Financial Assets and the Financial Liabilities of a Consolidated Collateralized Financing Entity — a consensus of the FASB Emerging Issues Task Force", an update to topic 810, "Consolidation". The ASU applies to entities that are required to consolidate a collateralised financing entity (CFE) under the variable interest entity (VIE) consolidation guidance when the entity measures all financial assets and financial liabilities of the CFE at fair value, with changes in fair value recorded in earnings. Before the ASU became effective, if an entity would measure the fair value of assets and liabilities separately following applicable US GAAP rules, the aggregate fair value might have differed. The new guidance allows the use of the more observable of the fair value of the financial assets or the fair value of the financial liabilities of the CFE to measure both. The Group adopted ASU 2014-13 on 1 January 2016. The adoption did not have a material effect on the Group's financial statements.

In August 2014, the FASB issued ASU 2014-15, "Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern", an update to subtopic 205-40, "Presentation of Financial Statements — Going Concern". The ASU requires an entity's management to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date the financial statements are available to be issued. When management identifies such conditions or events, footnote disclosures need to be provided on the relevant conditions and events identified and on whether management's plans to mitigate those conditions or events will alleviate the substantial doubt. The Group adopted ASU 2014-15 as of year-end 2016. The adoption did not have an impact on the Group's financial statements.

In November 2014, the FASB issued ASU 2014-16, "Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share Is More Akin to Debt or to Equity — a consensus of the FASB Emerging Issues Task Force", an update to topic 815, "Derivatives and Hedging". The ASU provides guidance on how to assess whether or not a derivative embedded in an instrument in the legal form of a share must be bifurcated and accounted for separately from its host contract. Entities are required to use "the whole instrument approach" to determine whether the nature of the host contract in a hybrid instrument issued in the form of a share is more akin to debt or to equity. Under this approach, an issuer or investor considers all stated and implied substantive terms and features of a hybrid instrument when determining the nature of the host contract. No single term or feature will necessarily determine the nature of the host contract. The Group adopted ASU 2014-16 on 1 January 2016. The adoption did not have a material effect on the Group's financial statements.

In January 2015, the FASB issued ASU 2015-01, "Simplifying Income Statement Presentation by Eliminating the Concept of Extraordinary Items", an update to subtopic 225-20, "Income Statement – Extraordinary and Unusual Items". The ASU eliminates the separate presentation of extraordinary items, net of tax and the related earnings per share. Extraordinary items were events and transactions that were distinguished by their unusual nature and by the infrequency of their occurrence. The ASU does not affect the requirement to disclose material items that are unusual in nature or infrequently occurring. The Group adopted ASU 2015-01 on 1 January 2016 on a prospective basis. The adoption did not have a material effect on the Group's financial statements.

In February 2015, the FASB issued ASU 2015-02, "Consolidation: Amendments to the Consolidation Analysis", an amendment to topic 810, "Consolidation". ASU 2015-02 (i) eliminates the indefinite deferral of the consolidation requirements for certain investment companies and similar entities, (ii) modifies how to evaluate partnerships and other entities under the VIE framework, (iii) eliminates the presumption that a general partner should consolidate a limited partnership, (iv) modifies consolidation analysis, particularly for decision-maker fee arrangements and related party relationships, (v) excludes from the scope of consolidation assessment the entities that are, or operate similar to, money market funds registered under the US Investment Company Act of 1940. The Group adopted ASU 2015-02 on 1 January 2016 following the modified retrospective method. The modified retrospective method does not require the restatement of prior periods. The adoption did not have a material effect on the Group's financial statements; however, it led to an increase in VIEs disclosed in Note 20 Variable interest entities.

In April 2015, the FASB issued ASU 2015-03, "Simplifying the Presentation of Debt Issuance Costs", an update to subtopic 835-30, "Interest — Imputation of Interest". The ASU changes the presentation of debt issuance costs in financial statements by requiring that an entity presents such costs in the balance sheet as a direct deduction from the related debt liability rather than as an asset. Amortisation of the costs is reported as interest expense. The Group adopted ASU 2015-03 on 1 January 2016 on a prospective basis. The adoption did not have an impact on the Group's financial statements.

In May 2015, the FASB issued ASU 2015-07, "Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)", an amendment to topic 820, "Fair Value Measurement". ASU 2015-07 removes the requirement to categorise within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. The amendments also remove the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. Rather, those disclosures are limited to investments for which the entity has elected to measure the fair value using that practical expedient. The Group adopted

ASU 2015-07 on 1 January 2016 and removed investments for which fair values are measured using the net asset value per share practical expedient from the fair value hierarchy as of the adoption date. The amended disclosures are provided in Note 8 Fair value disclosures.

In May 2015, the FASB issued ASU 2015-09, "Disclosures about Short-Duration Contracts", an update to topic 944, "Financial Services — Insurance". ASU 2015-09 requires an insurance entity to provide additional information about insurance liabilities, including information on the nature, amount, timing, and uncertainty of future cash flows related to insurance liabilities and the effect of those cash flows on the statement of comprehensive income. Requirements include disaggregated incurred and paid claims development information by accident year, on a net basis after risk mitigation, for at least the most recent 10 years with the periods preceding the current period considered required supplementary information. In addition, for each accident year presented in the claims development tables, an insurer has to provide disaggregated information about claim frequency (unless impracticable) and the amounts of incurred but not reported (IBNR) liabilities plus the expected development on reported claims. Required disclosures also include a description of the methods for determining both IBNR and expected development on reported claims as well as information about any significant changes in methods and assumptions used in the computation of the liability for unpaid claims and claim adjustment expenses, including reasons for the changes and the impact of the changes on the most recent reporting period in the financial statements. All aforementioned disclosures have to be provided on an annual basis. In addition, insurance entities must disclose the roll-forward of the liability for unpaid claims and claim adjustment expenses in both interim and annual periods. The Group adopted the annual disclosure requirements as of year-end 2016 which are provided in Note 5. The Group will adopt the interim disclosure requirements for the half-year ending on 30 June 2017.

In September 2015, the FASB issued ASU 2015-16, "Simplifying the Accounting for Measurement-Period Adjustments", an amendment to topic 805, "Business Combinations". ASU 2015-16 is on adjustments to provisional amounts from business combinations during the measurement periods. It requires that an acquirer recognises such adjustments in the reporting period in which the adjustment amounts are determined. Further, the ASU requires that the acquirer records, in the same period's financial statements, the effect on earnings of changes in depreciation, amortisation, or other income effects, if any, as a result of the change to the provisional amounts, calculated as if the accounting had been completed at the acquisition date. The Group adopted this guidance on 1 January 2016. The adoption did not have an effect on the Group's financial statements.

In January 2016, the FASB issued ASU 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities", an update to subtopic 825-10, "Financial Instruments — Overall". The ASU requires an entity to carry investments in equity securities, including other ownership interests and limited liability companies at fair value through net income, with the exception of equity method investments, investments that result in consolidation or investments for which the entity has elected the practicability exception to fair value measurement. The practicability exception can only be applied by certain entities and only to equity investments without a readily determinable fair value. Investments under the practicability exception will be subject to an indicator-based impairment test. For financial liabilities to which the fair value option has been applied, the ASU also requires an entity to separately present the change in fair value attributable to instrument-specific credit risk in other comprehensive income rather than in net income. Specific exceptions apply to this requirement. In addition, the ASU requires an entity to assess whether a valuation allowance is needed on a deferred tax asset (DTA) related to fixed income securities AFS in combination with the entity's other DTAs rather than separately from other DTAs. The ASU also introduces changes to disclosure requirements for financial instruments not measured at fair value and introduces new requirements for equity instruments where the practicability exception to fair value measurement is applied. The new requirements are effective for annual and interim periods beginning after 15 December 2017 with early adoption permitted for requirements relating to the presentation of the impact of instrument-specific credit risk on qualifying financial liabilities in other comprehensive income. The Group is currently assessing the impact of the new requirements.

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 current guidance. The new requirements are effective for the Group for annual and interim periods beginning after 15 December 2018. Early application of the ASU is permitted. The Group is currently assessing the impact of the new requirements.

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 requires for financial instruments that are measured at amortised cost and available-for-sale debt securities that an entity recognises as an allowance its estimate of expected credit losses. This standard is effective for the Group for annual and interim periods beginning after 15 December 2020. Early adoption for interim and annual periods after 15 December 2018 is permitted. The Group is currently assessing the impact of the new requirements.

In October 2016, the FASB issued ASU 2016-16, "Intra-Entity Transfers of Assets Other Than Inventory", an update to topic 740, "Income Taxes". This ASU amends the current guidance which prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. This new standard requires that an entity should recognise the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The new requirements are effective for the Group for annual and interim periods beginning after 15 December 2017. The Group is currently assessing the impact of the new requirements.

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 (which includes the former Business Unit Admin Re®). The presentation of each segment's balance sheet is closely aligned to the segment legal entity structure. The assignment of assets and liabilities for entities that span more than one segment is determined by considering local statutory requirements, legal and other constraints, the economic view of duration and currency requirements of the reinsurance business written, and the capacity of the segments to absorb risks. Interest expense is based on the segment's capital funding position. The tax impact of a segment is derived from the legal entity tax obligations and the segmentation of the pre-tax result. While most of the tax items can be directly attributed to individual segments, the tax which impacts two or more segments is allocated to the segments on a reasonable basis. Property & Casualty Reinsurance and Life & Health Reinsurance share the same year-to-date effective tax rate as both business segments belong to the Reinsurance Business Unit.

As of 1 January 2016, the primary life and health insurance business (individual and group) is reported in the Life Capital segment instead of the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.

Accounting policies applied by the business segments are in line with those described in the summary of significant accounting policies (please refer to Note 1).

The Group operating segments are outlined below.

Property & Casualty Reinsurance and Life & Health Reinsurance
Reinsurance consists of two segments, Property & Casualty and Life & Health. The Reinsurance Business Unit operates globally, both through brokers and directly with clients, and provides a large range of solutions for risk and capital management. Clients include stock and mutual insurance companies as well as public sector and governmental entities. In addition to traditional reinsurance solutions, Reinsurance offers insurance-linked securities and other insurance-related capital market products in both Property & Casualty and Life & Health.

Property & Casualty includes the business lines property, casualty (including motor), and specialty. Life & Health includes the life and health lines of business.

Corporate Solutions
Corporate Solutions offers innovative insurance capacity to mid-sized and large multinational corporations across the globe. Offerings range from standard risk transfer covers and multi-line programmes, to customised solutions tailored to the needs of clients. Corporate Solutions serves customers from over 50 offices worldwide.

Life Capital
Life Capital was created on 1 January 2016 to manage Swiss Re's primary life and health business. It comprises the closed and open life and health insurance books, including the existing ReAssure business and the existing primary life and health insurance business formerly conducted by Life & Health Reinsurance. Through ReAssure, Swiss Re acquires closed blocks of inforce life and health insurance business, either through reinsurance or corporate acquisition, and typically assumes responsibility for administering the underlying policies. The administration of the business may be managed directly or, where appropriate, in partnership with a third party.

Group items
Items not allocated to the business segments are included in the "Group items" column, which encompasses Swiss Re Ltd, the Groups' ultimate parent company, the former Legacy business in run-off, Principal Investments and certain Treasury units. Swiss Re Ltd charges trademark licence fees to the business segments which are reported as other revenues. Certain administrative expenses of the corporate centre functions that are not recharged to the operating segments are reported as Group items.

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

a) Business segments – income statement
For the year ended 31 December

2015 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance[1]	Corporate Solutions	Life Capital[1]	Group items	Consolidation	Total
Revenues							
Gross premiums written	16 099	11 942	3 942	1 346		–1 080	32 249
Net premiums written	15 703	10 529	3 494	716			30 442
Change in unearned premiums	–613	38	–115	–1			–691
Premiums earned	15 090	10 567	3 379	715			29 751
Fee income from policyholders		49		414			463
Net investment income – non-participating business	1 097	1 330	135	939	–70	5	3 436
Net realised investment gains/losses – non-participating business	445	311	142	274	34		1 206
Net investment result – unit-linked and with-profit business		42		772			814
Other revenues	45	4	9	1	332	–347	44
Total revenues	16 677	12 303	3 665	3 115	296	–342	35 714
Expenses							
Claims and claim adjustment expenses	–7 892		–1 955		–1		–9 848
Life and health benefits		–8 012		–1 068			–9 080
Return credited to policyholders		–60		–1 106			–1 166
Acquisition costs	–3 836	–1 965	–459	–159			–6 419
Operating expenses[2,3]	–1 198	–774	–734	–365	–495	318	–3 248
Total expenses before interest expenses	–12 926	–10 811	–3 148	–2 698	–496	318	–29 761
Income/loss before interest and income tax expense	3 751	1 492	517	417	–200	–24	5 953
Interest expenses[2]	–272	–323	–24	–16	–23	24	–634
Income/loss before income tax expense/benefit	3 479	1 169	493	401	–223	0	5 319
Income tax expense/benefit	–451	–152	–134	23	63		–651
Net income/loss before attribution of non-controlling interests	3 028	1 017	359	424	–160	0	4 668
Income/loss attributable to non-controlling interests	–1		–2				–3
Net income/loss after attribution of non-controlling interests	3 027	1 017	357	424	–160	0	4 665
Interest on contingent capital instruments	–19	–49					–68
Net income/loss attributable to common shareholders	3 008	968	357	424	–160	0	4 597
Claims ratio in %	52.3		57.9				53.3
Expense ratio in %	33.4		35.3				33.7
Combined ratio in %	85.7		93.2				87.0
Management expense ratio in %		6.5					
Net operating margin in %	22.5	12.2	14.1	17.8	–67.6		17.1

[1] As of 1 January 2016, the primary life and health insurance business (individual and group) is reported in the Life Capital segment instead of the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.
[2] Letter of credit fees of USD 45 million in Life & Health Reinsurance and USD 10 million in Property & Casualty Reinsurance have been reclassified from "Operating expenses" to "Interest expenses".
[3] The Group's new internal service cost framework resulted in a reallocation of operating expenses to Group items from the business segments. Comparative information for 2015 has been adjusted accordingly.

Business segments – income statement
For the year ended 31 December

2016 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Revenues							
Gross premiums written	18 149	12 801	4 155	1 489		–972	35 622
Net premiums written	17 768	11 459	3 662	681			33 570
Change in unearned premiums	–760	27	–159	13			–879
Premiums earned	17 008	11 486	3 503	694			32 691
Fee income from policyholders		41		499			540
Net investment income – non-participating business	985	1 279	138	1 256	101	–98	3 661
Net realised investment gains/losses – non-participating business	770	232	51	503	–72		1 484
Net investment result – unit-linked and with-profit business		15		5 367			5 382
Other revenues	37	5	5	1	346	–366	28
Total revenues	**18 800**	**13 058**	**3 697**	**8 320**	**375**	**–464**	**43 786**
Expenses							
Claims and claim adjustment expenses	–10 301		–2 263				–12 564
Life and health benefits		–8 963		–1 896			–10 859
Return credited to policyholders		–39		–5 060			–5 099
Acquisition costs	–4 405	–1 943	–517	–63			–6 928
Operating expenses	–1 204	–763	–760	–503	–473	345	–3 358
Total expenses before interest expenses	**–15 910**	**–11 708**	**–3 540**	**–7 522**	**–473**	**345**	**–38 808**
Income/loss before interest and income tax expense	**2 890**	**1 350**	**157**	**798**	**–98**	**–119**	**4 978**
Interest expenses	–293	–301	–23	–29	–79	119	–606
Income/loss before income tax expense/benefit	**2 597**	**1 049**	**134**	**769**	**–177**	**0**	**4 372**
Income tax expense/benefit	–479	–193	–1	–131	55		–749
Net income/loss before attribution of non-controlling interests	**2 118**	**856**	**133**	**638**	**–122**	**0**	**3 623**
Income/loss attributable to non-controlling interests	1		2				3
Net income/loss after attribution of non-controlling interests	**2 119**	**856**	**135**	**638**	**–122**	**0**	**3 626**
Interest on contingent capital instruments	–19	–49					–68
Net income/loss attributable to common shareholders	**2 100**	**807**	**135**	**638**	**–122**	**0**	**3 558**
Claims ratio in %	60.5		64.6				61.2
Expense ratio in %	33.0		36.5				33.6
Combined ratio in %	93.5		101.1				94.8
Management expense ratio in %		6.0					
Net operating margin in %	15.4	10.4	4.2	27.0	–26.1		13.0

Business segments – balance sheet

As of 31 December

2015 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance[1]	Corporate Solutions	Life Capital[1]	Group items	Consolidation	Total
Assets							
Fixed income securities	32 146	28 850	5 888	15 429	18		82 331
Equity securities	2 231	921	935		700		4 787
Other investments	12 105	1 976	162	1 524	6 077	–6 798	15 046
Short-term investments	3 458	1 052	1 256	588	1 051		7 405
Investments for unit-linked and with-profit business		818		27 423			28 241
Cash and cash equivalents	4 282	280	680	1 586	1 376		8 204
Deferred acquisition costs	2 051	3 020	387	13			5 471
Acquired present value of future profits		1 134		1 830			2 964
Reinsurance recoverable	2 872	1 652	6 438	1 069		–5 453	6 578
Other reinsurance assets	8 879	7 876	2 296	3 766	3	–1 241	21 579
Goodwill	1 873	1 883	106				3 862
Other[2]	8 310	5 875	934	1 213	397	–7 062	9 667
Total assets	78 207	55 337	19 082	54 441	9 622	–20 554	196 135
Liabilities							
Unpaid claims and claim adjustment expenses	39 366	9 468	10 619	1 380		–5 315	55 518
Liabilities for life and health policy benefits		15 472	257	14 409		–7	30 131
Policyholder account balances		1 368		30 187		–133	31 422
Other reinsurance liabilities	10 597	2 202	4 178	785	3	–1 648	16 117
Short-term debt	1 001	2 612			515	–2 294	1 834
Long-term debt	4 074	8 770	496	808		–3 170	10 978
Other[2]	9 799	8 871	1 187	1 925	2 731	–7 984	16 529
Total liabilities	64 837	48 763	16 737	49 494	3 249	–20 551	162 529
Shareholders' equity[2]	13 347	6 574	2 279	4 947	6 373	–3	33 517
Non-controlling interests	23		66				89
Total equity	13 370	6 574	2 345	4 947	6 373	–3	33 606
Total liabilities and equity	78 207	55 337	19 082	54 441	9 622	–20 554	196 135

[1] As of 1 January 2016, the primary life and health insurance business (individual and group) is reported in the Life Capital segment instead of the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.
[2] The Group's new internal service cost framework resulted in a reallocation of operating expenses to Group items from the business segments. The resulted impact on the balance sheet has been adjusted accordingly for the comparative information 2015.

Business segments – balance sheet
As of 31 December

2016 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Group items	Consolidation	Total
Assets							
Fixed income securities	31 574	29 980	6 361	25 350	11		93 276
Equity securities	1 292	867	539		737		3 435
Other investments	11 962	3 355	141	2 421	4 785	–7 446	15 218
Short-term investments	4 672	2 558	1 272	1 456	951		10 909
Investments for unit-linked and with-profit business		548		31 630			32 178
Cash and cash equivalents	4 922	410	472	2 636	571		9 011
Deferred acquisition costs	2 280	3 465	444	11			6 200
Acquired present value of future profits		966		1 037			2 003
Reinsurance recoverable	2 449	1 580	5 698	2 210		–4 476	7 461
Other reinsurance assets	9 620	6 369	2 616	3 949	4	–1 104	21 454
Goodwill	1 852	1 810	173	130			3 965
Other	8 640	4 049	1 279	1 470	1 181	–6 664	9 955
Total assets	**79 263**	**55 957**	**18 995**	**72 300**	**8 240**	**–19 690**	**215 065**
Liabilities							
Unpaid claims and claim adjustment expenses	39 753	10 288	10 271	1 498		–4 455	57 355
Liabilities for life and health policy benefits		15 431	268	25 499		–22	41 176
Policyholder account balances		1 566		32 788			34 354
Other reinsurance liabilities	10 816	1 709	4 310	684	2	–1 435	16 086
Short-term debt	1 202	5 221		80	431	–5 370	1 564
Long-term debt	3 307	5 074	497	1 465	80	–636	9 787
Other	11 124	9 106	1 370	3 014	2 183	–7 770	19 027
Total liabilities	**66 202**	**48 395**	**16 716**	**65 028**	**2 696**	**–19 688**	**179 349**
Shareholders' equity	**13 040**	**7 562**	**2 218**	**7 272**	**5 544**	**–2**	**35 634**
Non-controlling interests	21		61				82
Total equity	**13 061**	**7 562**	**2 279**	**7 272**	**5 544**	**–2**	**35 716**
Total liabilities and equity	**79 263**	**55 957**	**18 995**	**72 300**	**8 240**	**–19 690**	**215 065**

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

2015 USD millions	Property	Casualty	Specialty	Unallocated	Total
Revenues					
Gross premiums written	6 733	6 802	2 564		16 099
Net premiums written	6 436	6 767	2 500		15 703
Change in unearned premiums	–344	–165	–104		–613
Premiums earned	6 092	6 602	2 396		15 090
Net investment income				1 097	1 097
Net realised investment gains/losses				445	445
Other revenues				45	45
Total revenues	6 092	6 602	2 396	1 587	16 677
Expenses					
Claims and claim adjustment expenses	–2 567	–4 139	–1 186		–7 892
Acquisition costs	–1 198	–2 053	–585		–3 836
Operating expenses[1,2]	–664	–385	–149		–1 198
Total expenses before interest expenses	–4 429	–6 577	–1 920	0	–12 926
Income before interest and income tax expense	1 663	25	476	1 587	3 751
Interest expenses[1]				–272	–272
Income before income tax expense	1 663	25	476	1 315	3 479
Claims ratio in %	42.1	62.7	49.5		52.3
Expense ratio in %	30.6	36.9	30.6		33.4
Combined ratio in %	72.7	99.6	80.1		85.7

[1] Letter of credit fees of USD 10 million in Property & Casualty Reinsurance have been reclassified from "Operating expenses" to "Interest expenses".
[2] The Group's new internal service cost framework resulted in a reallocation of operating expenses to Group Items from the Property & Casualty Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.

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

2016 USD millions	Property	Casualty	Specialty	Unallocated	Total
Revenues					
Gross premiums written	6794	8874	2481		18149
Net premiums written	6499	8833	2436		17768
Change in unearned premiums	153	–830	–83		–760
Premiums earned	6652	8003	2353		17008
Net investment income				985	985
Net realised investment gains/losses				770	770
Other revenues				37	37
Total revenues	**6652**	**8003**	**2353**	**1792**	**18800**
Expenses					
Claims and claim adjustment expenses	–3745	–5466	–1090		–10301
Acquisition costs	–1351	–2468	–586		–4405
Operating expenses	–665	–385	–154		–1204
Total expenses before interest expenses	**–5761**	**–8319**	**–1830**	**0**	**–15910**
Income/loss before interest and income tax expense	**891**	**–316**	**523**	**1792**	**2890**
Interest expenses				–293	–293
Income/loss before income tax expense	**891**	**–316**	**523**	**1499**	**2597**
Claims ratio in %	56.3	68.3	46.4		60.5
Expense ratio in %	30.3	35.6	31.4		33.0
Combined ratio in %	86.6	103.9	77.8		93.5

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

For the year ended 31 December

2015 USD millions	Life	Health	Unallocated	Total[1]
Revenues				
Gross premiums written	8 333	3 609		11 942
Net premiums written	7 048	3 481		10 529
Change in unearned premiums	36	2		38
Premiums earned	7 084	3 483		10 567
Fee income from policyholders	49			49
Net investment income – non-participating business	865	465		1 330
Net realised investment gains/losses – non-participating business	89	42	180	311
Net investment result – unit-linked and with-profit business	42			42
Other revenues	2	2		4
Total revenues	8 131	3 992	180	12 303
Expenses				
Life and health benefits	–5 539	–2 473		–8 012
Return credited to policyholders	–60			–60
Acquisition costs	–1 260	–705		–1 965
Operating expenses[2,3]	–547	–227		–774
Total expenses before interest expenses	–7 406	–3 405	0	–10 811
Income before interest and income tax expense	725	587	180	1 492
Interest expenses[2]			–323	–323
Income/loss before income tax expense	725	587	–143	1 169
Management expense ratio in %	6.8	5.7		6.5
Net operating margin[4] in %	9.0	14.7		12.2

[1] As of 1 January 2016, the primary life and health insurance business (individual and group) is reported in the Life Capital segment instead of the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.
[2] Letter of credit fees of USD 45 million in Life & Health Reinsurance have been reclassified from "Operating expenses" to "Interest expenses".
[3] The Group's new internal service cost framework resulted in a reallocation of operating expenses to Group items from the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.
[4] Net operating margin is calculated as "Income before interest and income tax expense" divided by "Total revenues" excluding "Net investment result – unit-linked and with-profit business".

Life & Health Reinsurance business segment – by line of business
For the year ended 31 December

2016 USD millions	Life	Health	Unallocated	Total
Revenues				
Gross premiums written	9 026	3 775		12 801
Net premiums written	7 773	3 686		11 459
Change in unearned premiums	5	22		27
Premiums earned	7 778	3 708		11 486
Fee income from policyholders	41			41
Net investment income – non-participating business	828	451		1 279
Net realised investment gains/losses – non-participating business	21	–4	215	232
Net investment result – unit-linked and with-profit business	15			15
Other revenues	5			5
Total revenues	**8 688**	**4 155**	**215**	**13 058**
Expenses				
Life and health benefits	–6 093	–2 870		–8 963
Return credited to policyholders	–39			–39
Acquisition costs	–1 237	–706		–1 943
Operating expenses	–536	–227		–763
Total expenses before interest expenses	**–7 905**	**–3 803**	**0**	**–11 708**
Income before interest and income tax expense	**783**	**352**	**215**	**1 350**
Interest expenses			–301	–301
Income/loss before income tax expense	**783**	**352**	**–86**	**1 049**
Management expense ratio in %	6.2	5.5		6.0
Net operating margin[1] in %	9.0	8.5		10.4

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

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

Net premiums earned and fee income from policyholders by regions for the years ended 31 December

USD millions	2015	**2016**
Americas	13 230	15 102
Europe (including Middle East and Africa)	10 333	10 928
Asia-Pacific	6 651	7 201
Total	30 214	**33 231**

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

USD millions	2015	**2016**
United States	10 259	12 401
United Kingdom	3 516	3 759
China	2 516	2 425
Australia	1 639	1 919
Germany	1 217	1 200
Canada	1 190	1 107
Japan	960	1 105
Switzerland	745	902
Ireland	782	754
France	755	733
Republic of Korea	466	498
Other	6 169	6 428
Total	30 214	**33 231**

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

3 Insurance information

Premiums earned and fees assessed against policyholders
For the years ended 31 December

2015 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance[1]	Corporate Solutions	Life Capital[1]	Total
Premiums earned, thereof:					
Direct		39	2 732	1 197	3 968
Reinsurance	15 301	11 353	872	143	27 669
Intra-group transactions (assumed and ceded)	57	595	–57	–595	0
Premiums earned before retrocession to external parties	15 358	11 987	3 547	745	31 637
Retrocession to external parties	–268	–1 420	–168	–30	–1 886
Net premiums earned	15 090	10 567	3 379	715	29 751
Fee income from policyholders, thereof:					
Direct				323	323
Reinsurance		50		91	141
Gross fee income before retrocession to external parties		50		414	464
Retrocession to external parties		–1			–1
Net fee income	0	49	0	414	463

2016 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Premiums earned, thereof:					
Direct		45	2 879	1 293	4 217
Reinsurance	17 166	12 204	968	173	30 511
Intra-group transactions (assumed and ceded)	113	594	–113	–594	0
Premiums earned before retrocession to external parties	17 279	12 843	3 734	872	34 728
Retrocession to external parties	–271	–1 357	–231	–178	–2 037
Net premiums earned	**17 008**	**11 486**	**3 503**	**694**	**32 691**
Fee income from policyholders, thereof:					
Direct				410	410
Reinsurance		40		89	129
Gross fee income before retrocession to external parties		40		499	539
Retrocession to external parties		1			1
Net fee income	**0**	**41**	**0**	**499**	**540**

[1] As of 1 January 2016, the primary life and health insurance business (individual and group) is reported in the Life Capital segment instead of the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.

Claims and claim adjustment expenses

For the year ended 31 December

2015 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance[1]	Corporate Solutions	Life Capital[1]	Group items	Total
Claims paid, thereof:						
Gross claims paid to external parties	–8 651	–8 931	–2 726	–2 310	–38	–22 656
Intra-group transactions (assumed and ceded)	–739	–456	739	456		0
Claims before receivables from retrocession to external parties	–9 390	–9 387	–1 987	–1 854	–38	–22 656
Retrocession to external parties	540	1 168	278	54		2 040
Net claims paid	–8 850	–8 219	–1 709	–1 800	–38	–20 616
Change in unpaid claims and claim adjustment expenses; life and health benefits, thereof:						
Gross – with external parties	567	218	754	726	37	2 302
Intra-group transactions (assumed and ceded)	941	–37	–941	37		0
Unpaid claims and claim adjustment expenses; life and health benefits before impact of retrocession to external parties	1 508	181	–187	763	37	2 302
Retrocession to external parties	–550	26	–59	–31		–614
Net unpaid claims and claim adjustment expenses; life and health benefits	958	207	–246	732	37	1 688
Claims and claim adjustment expenses; life and health benefits	–7 892	–8 012	–1 955	–1 068	–1	–18 928

Acquisition costs

For the year ended 31 December

2015 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance[1]	Corporate Solutions	Life Capital[1]	Total
Acquisition costs, thereof:					
Gross acquisition costs with external parties	–3 898	–2 137	–492	–233	–6 760
Intra-group transactions (assumed and ceded)	–6	–72	6	72	0
Acquisition costs before impact of retrocession to external parties	–3 904	–2 209	–486	–161	–6 760
Retrocession to external parties	68	244	27	2	341
Net acquisition costs	–3 836	–1 965	–459	–159	–6 419

[1] As of 1 January 2016, the primary life and health insurance business (individual and group) is reported in the Life Capital segment instead of the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.

Claims and claim adjustment expenses
For the year ended 31 December

2016 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Claims paid, thereof:					
Gross claims paid to external parties	–8 546	–10 032	–2 563	–3 384	–24 525
Intra-group transactions (assumed and ceded)	–502	–477	502	477	0
Claims before receivables from retrocession to external parties	–9 048	–10 509	–2 061	–2 907	–24 525
Retrocession to external parties	342	1 205	223	227	1 997
Net claims paid	**–8 706**	**–9 304**	**–1 838**	**–2 680**	**–22 528**
Change in unpaid claims and claim adjustment expenses; life and health benefits, thereof:					
Gross – with external parties	–2 014	392	257	833	–532
Intra-group transactions (assumed and ceded)	702	–34	–702	34	0
Unpaid claims and claim adjustment expenses; life and health benefits before impact of retrocession to external parties	–1 312	358	–445	867	–532
Retrocession to external parties	–283	–17	20	–83	–363
Net unpaid claims and claim adjustment expenses; life and health benefits	**–1 595**	**341**	**–425**	**784**	**–895**
Claims and claim adjustment expenses; life and health benefits	**–10 301**	**–8 963**	**–2 263**	**–1 896**	**–23 423**

Acquisition costs
For the year ended 31 December

2016 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Acquisition costs, thereof:					
Gross acquisition costs with external parties	–4 458	–2 094	–589	–137	–7 278
Intra-group transactions (assumed and ceded)	–16	–59	16	59	0
Acquisition costs before impact of retrocession to external parties	–4 474	–2 153	–573	–78	–7 278
Retrocession to external parties	69	210	56	15	350
Net acquisition costs	**–4 405**	**–1 943**	**–517**	**–63**	**–6 928**

Reinsurance recoverable on unpaid claims and policy benefits
As of 31 December 2015 and 2016, the Group had a reinsurance recoverable of USD 6 578 million and USD 7 461 million, respectively. The concentration of credit risk is regularly monitored and evaluated. The reinsurance programme with Berkshire Hathaway and subsidiaries accounted for 52% of the Group's reinsurance recoverable as of year-end 2015 and 40% as of year-end 2016.

Reinsurance receivables
Reinsurance receivables as of 31 December were as follows:

USD millions	2015	**2016**
Premium receivables invoiced	1 441	1 717
Receivables invoiced from ceded re/insurance business	201	177
Assets arising from the application of the deposit method of accounting and meeting the definition of financing receivables	171	141
Recognised allowance	–56	–60

Policyholder dividends
Policyholder dividends are recognised as an element of policyholder benefits. The relative percentage of participating insurance of the life and health policy benefits in 2015 and 2016 was 8% and 10%, respectively. The amount of policyholder dividend expense in 2015 and 2016 was USD 126 million and USD 279 million, respectively.

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4 Premiums written

For the years ended 31 December

2015 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance[1]	Corporate Solutions	Life Capital[1]	Consolidation	Total
Gross premiums written, thereof:						
Direct		40	2 905	1 203		4 148
Reinsurance	15 811	11 302	845	143		28 101
Intra-group transactions (assumed)	288	600	192		–1 080	0
Gross premiums written	16 099	11 942	3 942	1 346	–1 080	32 249
Intra-group transactions (ceded)	–192		–288	–600	1 080	0
Gross premiums written before retrocession to external parties	15 907	11 942	3 654	746		32 249
Retrocession to external parties	–204	–1 413	–160	–30		–1 807
Net premiums written	15 703	10 529	3 494	716	0	30 442

2016 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Consolidation	Total
Gross premiums written, thereof:						
Direct		45	3 056	1 317		4 418
Reinsurance	17 862	12 210	960	172		31 204
Intra-group transactions (assumed)	287	546	139		–972	0
Gross premiums written	18 149	12 801	4 155	1 489	–972	35 622
Intra-group transactions (ceded)	–139		–287	–546	972	0
Gross premiums written before retrocession to external parties	18 010	12 801	3 868	943		35 622
Retrocession to external parties	–242	–1 342	–206	–262		–2 052
Net premiums written	**17 768**	**11 459**	**3 662**	**681**	**0**	**33 570**

[1] As of 1 January 2016, the primary life and health insurance business (individual and group) is reported in the Life Capital segment instead of the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.

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 period is presented as follows:

USD millions	2015[1]	**2016**
Balance as of 1 January	57 954	55 518
Reinsurance recoverable	–5 103	–4 265
Deferred expense on retroactive reinsurance	–14	–340
Net balance as of 1 January	52 837	**50 913**
Incurred related to:		
Current year	20 729	25 825
Prior year	–1 126	–810
Amortisation of deferred expense on retroactive reinsurance and impact of commutations	27	–26
Total incurred	19 630	**24 989**
Paid related to:		
Current year	–8 533	–9 720
Prior year	–12 083	–12 808
Total paid	–20 616	**–22 528**
Foreign exchange	–2 619	–1 317
Effect of acquisitions, disposals, new retroactive reinsurance and other items	1 681	1 043
Net balance as of 31 December	50 913	**53 100**
Reinsurance recoverable	4 265	4 044
Deferred expense on retroactive reinsurance	340	211
Balance as of 31 December	55 518	**57 355**

[1] The Group has adjusted its presentation of the reconciliation to include both non-life and life and health business lines for the current and the comparative reporting period.

Prior-year development

Non-life claims development during 2016 on prior years continued to be driven by favourable experience on most lines of business. Property includes adverse development from the New Zealand earthquakes that occurred in 2010 and 2011. Casualty includes adverse development on US asbestos and environmental claims, while the more recent years were in some cases strengthened in view of the unfavourable prevailing market conditions. Within specialty, the main reserve releases came from marine and engineering business lines.

For life and health lines of business, claims development on prior year business was driven by adverse claim experience across a number of lines of business and geographies. In particular, the UK critical illness portfolio strengthened reserves following adverse trends. This was partially offset by Canadian mortality and disability portfolios which had reserve releases following positive claims experience. Claims development related to prior years also includes an element of interest accretion for unpaid claims reported at the estimated present value.

A summary of prior-year net claims and claim adjustment expenses development by lines of business is shown below:

USD millions	2015	**2016**
Line of business:		
Property	–539	–335
Casualty	–571	–249
Specialty	–284	–357
Life and health	268	131
Total	–1 126	**–810**

US asbestos and environmental claims exposure

The Group's obligation for claims payments and claims settlement charges also includes obligations for long-latent injury claims arising out of policies written prior to 1986, in particular in the area of US asbestos and environmental liability.

At the end of 2016 the Group carried net reserves for US asbestos and environmental liabilities equal to USD 1 977 million. During 2016, the Group incurred net losses of USD 48 million and paid net against these liabilities of USD 164 million.

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.

The Group maintains an active commutation strategy to reduce exposure. When commutation payments are made, the traditional "survival ratio" is artificially reduced by premature payments which should not imply a reduction in reserve adequacy.

Short duration contract unpaid claims and claim adjustment expenses

Basis of presentation for claims development information

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

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

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

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

In the Life Capital segment, short duration contracts include mainly disability medical expenses business. The Group provides no claims development information for Life Capital as its short duration reserves are not material.

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

Claims development information and information on IBNR reserves are shown on a nominal basis, also for cases where the Group discounts claims liabilities for measurement under US GAAP. Information is shown per accident year and by reporting period. The number of years shown in the claims development tables differs by business segment:

For Property & Casualty Reinsurance, the Group discloses data for ten accident years and reporting periods.

For the Life & Health Reinsurance long tail category, the Group discloses data for nine accident years and reporting periods. Disclosure of ten years of information is impracticable for all lines of business contained in this category as the Group historically has not used accident-year based information for reserving purposes in all income protection business lines.

The Corporate Solutions business segment was created in 2012. Therefore, five accident years and reporting periods will be shown for this business unit. All but an immaterial portion of claims arising from accident years prior to 2012 relate to accident years which are over ten years ago and therefore out of the required range of disclosure. Business ceded to Property & Casualty Reinsurance prior to 2012 is included in the net claims development information reported by this segment.

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

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

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

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

Non-life re/insurance contracts
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. Reserving is done on portfolio or contract level depending on the features of the contract:

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

In most cases, these standard actuarial techniques encompass a number of loss development factor techniques applied to claim tables of paid and reported losses. Other actuarial techniques may be applicable to specific categories. For instance, the analysis of frequency and severity could be applied in all disaggregation categories. Life contingency techniques for projecting regular payments related to bodily injury claims are applied to motor proportional, motor non-proportional, liability proportional, liability non-proportional, accident and health and similar Corporate Solutions lines, where the information is available. In some cases, techniques specific to the projection of future payments for specific risks such as asbestos or pollution claims are applied to both proportional and non-proportional liability claims, also in Corporate Solutions (see also separate section "US asbestos and environmental claims exposure" on page 201).

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 that currently are within their deferred period. The IBNR reserving calculations have been made using appropriate techniques, such as chain ladder and/or Bornhuetter-Ferguson approaches, depending upon the level of detail available and the assumed level of development of the claim. For certain lines of business, IBNR claims reserves include reported but not admitted claims, allowing for expected rates of decline for these claims.

Claims frequency information

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

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

For Corporate Solutions, claims frequency is displayed for direct business only, as individual claims information is generally not available for assumed and ceded business. Claims are counted individually per contract to produce the claims frequency table. For some direct business, summary reports are received and multiple claims are booked under a single claim code; this is usually done at a program, policy year, state, country and/or line of business level of detail. This approach may be applied to business which has a high volume of claim counts, but with only minor claims dollars associated with each claim.

Property & Casualty Reinsurance – Property

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Thereof IBNR
2007	2 233	2 167	2 219	2 181	2 087	2 121	2 129	2 127	2 122	2 110	–7
2008		2 617	2 228	2 090	2 008	2 006	2 026	2 017	2 017	2 014	–14
2009			2 221	2 241	2 122	2 079	2 059	2 056	2 053	2 056	1
2010				2 489	2 439	2 314	2 334	2 423	2 466	2 577	–5
2011					4 240	4 308	4 126	4 187	4 143	4 139	123
2012						2 637	2 466	2 273	2 231	2 202	14
2013							3 038	3 050	2 880	2 799	–3
2014								2 681	2 525	2 351	57
2015	RSI								2 781	2 720	405
2016										3 842	2 044
Total										**26 810**	**2 615**

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

USD millions	Reporting year									
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	447	1 364	1 897	2 002	2 049	2 071	2 088	2 093	2 094	2 095
2008		541	1 389	1 689	1 811	1 936	1 969	1 984	1 989	1 990
2009			494	1 512	1 817	1 917	1 965	1 987	1 996	2 006
2010				394	1 491	1 783	1 891	2 089	2 243	2 390
2011					662	2 347	3 141	3 582	3 870	3 972
2012						243	1 551	1 938	2 055	2 097
2013							536	1 936	2 425	2 614
2014								465	1 677	2 052
2015	RSI								467	1 632
2016										633
Total										**21 481**
All liabilities before 2007										125
Liabilities for claims and claim adjustment expenses, net of reinsurance										**5 454**

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)**	18.7%	46.9%	17.1%	6.1%	4.6%	2.4%	1.9%	0.3%	0.0%	0.0%

The liability for unpaid claims for property in Property & Casualty Reinsurance shows positive development on most recent 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 negative development on accident year 2010 in calendar year 2016 was driven by a deterioration in loss estimates for the 2010 New Zealand earthquake. Negative IBNRs can be a feature for claims arising from Property exposure due to overestimated case reserves.

Property & Casualty Reinsurance – Liability, proportional

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Thereof IBNR
2007	1464	1551	1482	1621	1519	1418	1382	1347	1350	1346	45
2008		1131	1112	1175	1240	1136	1033	1092	1090	1108	88
2009			762	894	1008	964	958	928	939	948	90
2010				831	975	914	894	886	889	878	148
2011					633	689	714	658	616	613	139
2012						511	594	550	522	495	115
2013							719	742	749	745	238
2014								984	974	986	518
2015	RSI								1251	1299	872
2016										1705	1398
Total										**10123**	**3651**

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

USD millions	Reporting year									
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	–6	107	334	498	806	921	1000	1053	1084	1117
2008		67	140	286	451	535	651	758	876	928
2009			–18	125	278	400	513	619	668	714
2010				30	157	315	405	512	607	656
2011					4	106	178	247	332	378
2012						13	112	178	236	289
2013							15	124	229	343
2014								24	155	288
2015	RSI								35	207
2016										47
Total										**4967**
All liabilities before 2007										596
Liabilities for claims and claim adjustment expenses, net of reinsurance										**5752**

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)**	2.0%	13.6%	14.6%	12.6%	13.2%	9.7%	6.6%	6.5%	3.5%	2.5%

The increase in incurred losses from accident year 2013 to 2016 is driven by volume increases of business written. In view of current market conditions the loss ratios for accident year 2015 were increased. In line with the Group´s policy, cash flows under loss portfolio transfers are reported through claims paid. For longer tail 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 Accident year	Reporting year 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Thereof IBNR
2007	798	787	762	718	631	582	537	529	523	537	71
2008		676	718	668	544	502	469	437	412	391	67
2009			509	520	430	428	387	354	329	315	43
2010				511	427	393	368	346	325	317	70
2011					393	422	457	419	376	343	95
2012						322	340	301	273	252	104
2013							399	380	346	291	161
2014								425	429	398	265
2015	RSI								1 709	1 747	351
2016										571	368
Total										**5 162**	**1 595**

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

USD millions Accident year	Reporting year 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	–4	27	71	127	213	254	287	309	333	345
2008		6	29	101	131	164	191	233	252	280
2009			–2	21	41	64	102	164	186	194
2010				4	11	34	51	86	103	122
2011					3	9	64	109	135	143
2012						–1	11	35	52	83
2013							1	11	36	59
2014								1	8	40
2015	RSI								0	87
2016										13
Total										**1 366**
All liabilities before 2007										5 891
Liabilities for claims and claim adjustment expenses, net of reinsurance										**9 687**

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)**	0.5%	4.2%	10.3%	8.4%	11.2%	8.4%	7.5%	3.8%	5.8%	2.2%

The increase in incurred losses for accident year 2015 compared to other years is due to an increase in volume of business written. Liabilities before 2007 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 tail 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	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Thereof IBNR
2007	457	486	490	453	439	431	409	396	390	379	0
2008		385	412	400	411	419	408	406	405	410	84
2009			343	367	344	339	336	327	322	314	31
2010				271	223	229	217	215	217	209	34
2011					225	245	242	234	237	231	33
2012						311	321	306	297	294	40
2013							334	342	329	320	62
2014								297	329	322	100
2015	RSI								428	426	151
2016										587	286
Total										**3 492**	**821**

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

USD millions	Reporting year									
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	46	142	231	265	294	309	321	329	337	343
2008		51	157	208	247	263	274	282	289	294
2009			32	135	190	215	232	245	250	256
2010				25	83	114	128	137	143	147
2011					48	119	140	150	159	163
2012						72	167	192	208	218
2013							51	132	172	195
2014								30	100	142
2015	RSI								60	134
2016										73
Total										**1 965**
All liabilities before 2007										3 125
Liabilities for claims and claim adjustment expenses, net of reinsurance										**4 652**

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)**	14.4%	26.6%	13.9%	7.2%	4.8%	3.1%	2.2%	1.9%	1.7%	1.6%

The 2007 accident year includes the run-off of business written by entities acquired as part of the acquisition of General Electric Insurance Solutions during 2006. This business was not renewed. The increase in incurred losses for accident years 2015 and 2016 compared to previous accident years is due to an increase in the volume of workers' compensation written.

Property & Casualty Reinsurance – Motor, proportional

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Thereof IBNR
2007	802	716	831	825	832	836	825	824	826	825	–8
2008		707	573	569	640	670	646	644	632	632	5
2009			640	637	700	724	711	717	715	713	–17
2010				570	631	667	673	669	684	684	–4
2011					972	966	938	915	927	926	–17
2012						1 427	1 419	1 416	1 393	1 384	44
2013							1 502	1 477	1 483	1 459	30
2014								1 902	1 869	1 869	26
2015	RSI								1 877	1 881	219
2016										2 445	1 190
Total										**12 818**	**1 468**

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

USD millions	Reporting year									
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	182	562	737	767	775	784	790	796	800	803
2008		322	526	599	577	588	587	599	603	606
2009			158	391	580	613	624	653	669	676
2010				195	439	522	556	581	612	627
2011					260	651	830	850	879	898
2012						460	1 065	1 218	1 265	1 295
2013							559	1 132	1 308	1 354
2014								816	1 482	1 699
2015	RSI								781	1 413
2016										812
Total										**10 183**
All liabilities before 2007										316
Liabilities for claims and claim adjustment expenses, net of reinsurance										**2 951**

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)**	34.2%	37.9%	15.7%	2.6%	2.2%	2.3%	1.8%	0.8%	0.5%	0.4%

Increase in the incurred losses from accident year 2010 onward 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 overestimated case reserves, mainly on the German business and 2011 includes the effects of an outwards proportional contract in 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	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Thereof IBNR
2007	*401*	*414*	*402*	*369*	*366*	*380*	*379*	*372*	*379*	376	85
2008		*399*	*469*	*412*	*317*	*331*	*329*	*322*	*318*	313	52
2009			*360*	*373*	*270*	*272*	*257*	*262*	*256*	254	78
2010				*313*	*277*	*272*	*259*	*251*	*244*	236	43
2011					*387*	*423*	*408*	*405*	*391*	385	114
2012						*321*	*337*	*317*	*303*	305	101
2013							*414*	*435*	*438*	423	123
2014								*392*	*424*	420	161
2015	***RSI***								*375*	396	217
2016										455	345
Total										**3 563**	**1 319**

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

USD millions	Reporting year									
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2007	*9*	*49*	*83*	*114*	*136*	*152*	*175*	*186*	*192*	199
2008		*16*	*83*	*121*	*126*	*148*	*165*	*176*	*186*	195
2009			*0*	*37*	*55*	*66*	*79*	*93*	*103*	113
2010				*6*	*22*	*48*	*66*	*82*	*98*	111
2011					*–8*	*20*	*55*	*77*	*101*	115
2012						*3*	*24*	*49*	*84*	109
2013							*7*	*80*	*142*	187
2014								*5*	*58*	101
2015	***RSI***								*–1*	33
2016										8
Total										**1 171**
All liabilities before 2007										2 557
Liabilities for claims and claim adjustment expenses, net of reinsurance										**4 949**

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)**	*1.3%*	*11.8%*	*10.2%*	*7.1%*	*6.5%*	*5.1%*	*4.8%*	*3.4%*	*2.2%*	*1.9%*

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 external retrocession on acquired retroactive business. In line with the Group's policy, cash flows under loss portfolio transfers are reported through claims paid. For longer tail 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	2007	2008	2009	2010	2011	2012	2013	2014	2015	**2016**	**Thereof IBNR**
2007	*1 686*	*1 690*	*1 897*	*1 773*	*1 771*	*1 718*	*1 700*	*1 682*	*1 678*	1 672	20
2008		*2 021*	*2 025*	*1 952*	*1 906*	*1 860*	*1 829*	*1 811*	*1 818*	1 804	31
2009			*1 489*	*1 621*	*1 442*	*1 375*	*1 347*	*1 325*	*1 308*	1 292	21
2010				*1 198*	*1 210*	*1 158*	*1 136*	*1 117*	*1 084*	1 064	27
2011					*1 259*	*1 239*	*1 157*	*1 078*	*1 125*	1 123	42
2012						*933*	*991*	*1 012*	*996*	997	52
2013							*1 065*	*994*	*956*	923	79
2014								*1 085*	*1 081*	983	165
2015	***RSI***								*1 208*	1 195	369
2016										1 266	840
Total										**12 319**	**1 646**

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

USD millions	Reporting year									
Accident year	2007	2008	2009	2010	2011	2012	2013	2014	2015	**2016**
2007	*151*	*587*	*1 101*	*1 273*	*1 369*	*1 437*	*1 489*	*1 518*	*1 539*	1 553
2008		*246*	*800*	*1 280*	*1 423*	*1 534*	*1 597*	*1 640*	*1 667*	1 692
2009			*204*	*639*	*884*	*983*	*1 055*	*1 111*	*1 148*	1 171
2010				*193*	*455*	*642*	*741*	*817*	*931*	952
2011					*162*	*549*	*760*	*860*	*909*	946
2012						*122*	*430*	*661*	*750*	806
2013							*145*	*407*	*585*	693
2014								*172*	*402*	581
2015	***RSI***								*133*	379
2016										141
Total										**8 914**
All liabilities before 2007										661
Liabilities for claims and claim adjustment expenses, net of reinsurance										**4 066**

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)**	*13.9%*	*28.1%*	*21.7%*	*9.2%*	*5.8%*	*5.2%*	*2.6%*	*1.7%*	*1.3%*	*0.8%*

This category includes credit and surety business, which was adversely affected by the financial crisis in 2007–2008. The category also includes several individual large losses on marine, aviation and space lines, including the Costa Concordia claims event.

Corporate Solutions

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year						
Accident year	2012	2013	2014	2015	**2016**	**Thereof IBNR**	**Cumulative number of reported claims (in nominals)**
2012	*1 288*	*1 219*	*1 140*	*1 107*	1 104	132	12 449
2013		*1 586*	*1 570*	*1 502*	1 419	218	25 257
2014			*1 817*	*1 759*	1 691	377	19 959
2015	***RSI***			*1 875*	2 038	660	14 164
2016					1 999	1 246	8 060
Total					**8 251**	**2 633**	**79 889**

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

USD millions	Reporting year				
Accident year	2012	2013	2014	2015	**2016**
2012	*182*	*553*	*708*	*801*	889
2013		*271*	*670*	*936*	1 092
2014			*270*	*821*	1 110
2015	***RSI***			*349*	905
2016					373
Total					**4 369**
All liabilities before 2012					716
Liabilities for claims and claim adjustment expenses, net of reinsurance					**4 598**

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

Years	1	2	3	4	5
Corporate Solutions **(RSI)**	*17.5%*	*30.4%*	*16.6%*	*9.7%*	*8.0%*

Claims incurred increased due to general volume growth from accident year 2012 to 2016. Change in claim counts in 2013 and 2014 relate mostly to agriculture business written in 2013, leading to high claim counts in those years. Adverse experience for accident year 2015 is mainly due to a few large loss developments in casualty.

Life & Health Reinsurance, long tail

Incurred claims and allocated claim adjustment expenses, net of reinsurance

USD millions	Reporting year										
Accident year	2008	2009	2010	2011	2012	2013	2014	2015	2016	Thereof IBNR	Cumulative number of reported claims (in nominals)
2008	91	88	88	87	90	103	106	102	109	14	3 068
2009		152	157	149	150	150	173	171	173	21	4 105
2010			188	190	185	209	209	221	195	27	4 451
2011				215	224	284	296	310	288	48	6 105
2012					266	356	359	383	348	47	8 298
2013						480	471	469	434	78	10 269
2014							470	428	407	108	11 021
2015	RSI							401	433	183	11 825
2016									419	317	2 327
Total									**2 806**	**843**	**61 469**

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

USD millions	Reporting year								
Accident year	2008	2009	2010	2011	2012	2013	2014	2015	2016
2008	5	21	38	49	57	64	68	72	76
2009		7	36	55	68	77	84	90	98
2010			8	40	62	80	93	104	114
2011				19	61	99	123	144	164
2012					27	86	138	176	208
2013						37	120	183	244
2014							32	107	195
2015	RSI							35	105
2016									13
Total									**1 217**
All liabilities before 2008									272
Liabilities for Life and Health claims and claim adjustment expenses, net of reinsurance									**1 861**

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

Years	1	2	3	4	5	6	7	8	9
Life & Health Reinsurance, long tail **(RSI)**	6.1%	16.6%	14.6%	10.0%	7.1%	5.8%	4.1%	4.1%	3.7%

In the reporting year 2013, the Group significantly strengthened IBNR claims liabilities in Australia for some lines of business. In addition, for 2009, 2013 and 2014 the effect of business volume increase is discernible as well.

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

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

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

Unallocated reinsurance recoverable on unpaid claims includes reinsurance recoverable which cannot be allocated on a reasonable basis to disaggregation categories used to present claims development information

For details on consolidation please refer to Note 2.

For the year ended 31 December 2016

USD millions	2016
Net outstanding liabilities	
Property & Casualty Reinsurance:	
Property	5 454
Liability, proportional	5 752
Liability, non-proportional	9 687
Accident & Health	4 652
Motor, proportional	2 951
Motor, non-proportional	4 949
Specialty	4 066
Corporate Solutions	4 598
Life & Health Reinsurance, long tail	1 861
Total net undiscounted outstanding liabilities excluding other short duration contract lines and before unallocated reinsurance recoverable	43 970
Discounting impact on (Life & Health Reinsurance) short duration contracts	–241
Impact of acquisition accounting	–704
Total net discounted outstanding liabilities excluding other short duration contract lines and before unallocated reinsurance recoverable	43 025
Other short duration contract lines	2 327
Unallocated reinsurance recoverable on unpaid claims	–394
Total net discounted outstanding short duration liabilities	**44 958**
Allocated reinsurance recoverables on unpaid claims	
Property & Casualty Reinsurance:	
Property	378
Liability, proportional	426
Liability, non-proportional	364
Accident & Health	247
Motor, proportional	87
Motor, non-proportional	237
Specialty	286
Corporate Solutions	5 156
Life & Health Reinsurance, long tail	
Consolidation	–4 087
Impact of acquisition accounting	–157
Other short duration contract lines	417
Unallocated reinsurance recoverable on unpaid claims	394
Total short duration reinsurance recoverable on outstanding liabilities	**3 748**
Exclusions	
Unallocated claim adjustment expenses	824
Long duration contracts	7 825
Total other reconciling items	**8 649**
Total unpaid claims and claim adjustment expenses	**57 355**

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:

USD millions	2015	**2016**
Carrying amount of discounted claims	1 158	1 117
Aggregate amount of the discount	–281	–241
Interest accretion[1]	24	27
Range of interest rates	2.5%–3.7%	3.1%–3.6%

[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:

2015 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance[1]	Corporate Solutions	Life Capital[1]	Total
Opening balance as of 1 January	1 756	2 723	360	1	4 840
Effect of change in Group structure[1]		–12		12	0
Deferred	4 132	1 018	486	35	5 671
Effect of acquisitions/disposals and retrocessions	7	2			9
Amortisation	–3 793	–560	–459	–34	–4 846
Effect of foreign currency translation	–51	–151		–1	–203
Closing balance	2 051	3 020	387	13	5 471

2016 USD millions	Property & Casualty Reinsurance	Life & Health Reinsurance	Corporate Solutions	Life Capital	Total
Opening balance as of 1 January	2 051	3 020	387	13	5 471
Deferred	4 629	893	571	34	6 127
Amortisation	–4 379	–312	–513	–36	–5 240
Effect of foreign currency translation	–21	–136	–1		–158
Closing balance	**2 280**	**3 465**	**444**	**11**	**6 200**

[1] As of 1 January 2016, the primary life and health insurance business (individual and group) is reported in the Life Capital segment instead of the Life & Health Reinsurance segment. Comparative information for 2015 has been adjusted accordingly.

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:

2015 USD millions	Life & Health Reinsurance	Life Capital Positive PVFP	Life Capital Negative PVFP	Life Capital Total	Total
Opening balance as of 1 January	1 294	2 003	0	2 003	3 297
Effect of acquisitions/disposals and retrocessions		2		2	2
Amortisation	–159	–191		–191	–350
Interest accrued on unamortised PVFP	40	84		84	124
Effect of change in unrealised gains/losses		9		9	9
Effect of foreign currency translation	–41	–77		–77	–118
Closing balance	1 134	1 830	0	1 830	2 964

2016 USD millions	Life & Health Reinsurance	Life Capital Positive PVFP	Life Capital Negative PVFP	Life Capital Total	**Total**
Opening balance as of 1 January	**1 134**	1 830	0	**1 830**	**2 964**
Effect of acquisitions/disposals and retrocessions			–603	**–603**	**–603**
Amortisation	**–132**	–198	51	**–147**	**–279**
Interest accrued on unamortised PVFP	**36**	130	–19	**111**	**147**
Effect of change in unrealised gains/losses		1		**1**	**1**
Effect of foreign currency translation	**–72**	–205	50	**–155**	**–227**
Closing balance	**966**	**1 558**	**–521**	**1 037**	**2 003**

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.

In the first quarter 2016, the Group's Business Unit Life Capital acquired Guardian Holdings Europe Limited, the holding company for operations trading under the name Guardian Financial Services ("Guardian"), and recognised negative PVFP. Upon acquisition, PVFP is calculated as the difference between the estimated fair value and established reserves, which is in line with US GAAP accounting policies and assumptions of the Group. The product mix of Guardian is weighted towards annuity business, for which the fair value of insurance and investment contract liabilities significantly exceeds the established US GAAP reserves. This excess is mainly due to differences in discount rates and risk weightings between fair value and US GAAP estimates. Overall, the excess on the annuity business outweighs the estimated future gross profits of other business and synergy expectations included in the fair value of insurance and investment contract liabilities for the business as a whole, resulting in a negative PVFP.

The subsequent measurement of negative PVFP is in alignment with the existing measurement of positive PVFP assets (please refer to Note 1).

The percentage of PVFP which is expected to be amortised in each of the next five years is 10%, 10%, 9%, 9% and 8%.

7 Investments

Investment income

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

USD millions	2015	2016
Fixed income securities	2 553	2 806
Equity securities	105	98
Policy loans, mortgages and other loans	128	156
Investment real estate	158	184
Short-term investments	77	54
Other current investments	155	153
Share in earnings of equity-accounted investees	52	41
Cash and cash equivalents	35	28
Net result from deposit-accounted contracts	95	118
Deposits with ceding companies	462	441
Gross investment income	3 820	**4 079**
Investment expenses	–362	–397
Interest charged for funds held	–22	–21
Net investment income – non-participating business	3 436	**3 661**

Dividends received from investments accounted for using the equity method were USD 254 million and USD 176 million for 2015 and 2016, respectively.

Share in earnings of equity-accounted investees includes an impairment of the carrying amount of an equity-accounted investee of USD 83 million and USD 66 million for 2015 and 2016, respectively.

Realised gains and losses

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

USD millions	2015	2016
Fixed income securities available-for-sale:		
Gross realised gains	889	789
Gross realised losses	–283	–202
Equity securities available-for-sale:		
Gross realised gains	372	371
Gross realised losses	–69	–122
Other-than-temporary impairments	–57	–88
Net realised investment gains/losses on trading securities	64	110
Change in net unrealised investment gains/losses on trading securities	–30	–14
Net realised/unrealised gains/losses on other investments	85	118
Net realised/unrealised gains/losses on insurance-related activities	152	344
Foreign exchange gains/losses	83	178
Net realised investment gains/losses – non-participating business	1 206	**1 484**

Investment result – unit-linked and with-profit business

For unit-linked contracts, the investment risk is borne by the policyholder. For with-profit contracts, the majority of the investment risk is also borne by the policyholder, although there are certain guarantees that limit the down-side risk for the policyholder, and a certain proportion of the returns may be retained by the Group (typically 10%).

Net investment result on unit-linked and with-profit business credited to policyholders was as follows:

USD millions	Unit-linked	2015 With-profit	Unit-linked	2016 With-profit
Investment income – fixed income securities	90	77	100	134
Investment income – equity securities	556	28	735	69
Investment income – other	32	16	28	13
Total investment income – unit-linked and with-profit business	678	121	**863**	**216**
Realised gains/losses – fixed income securities	–75	–58	135	174
Realised gains/losses – equity securities	124	–19	3631	321
Realised gains/losses – other	28	15	53	–11
Total realised gains/losses – unit-linked and with-profit business	77	–62	**3819**	**484**
Total net investment result – unit-linked and with-profit business	755	59	**4682**	**700**

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, a 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	2015	2016
Balance as of 1 January	137	136
Credit losses for which an other-than-temporary impairment was not previously recognised	30	13
Reductions for securities sold during the period	–23	–48
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	7	8
Impact of increase in cash flows expected to be collected	–10	–7
Impact of foreign exchange movements	–5	–5
Balance as of 31 December	136	**97**

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:

2015 USD millions	Amortised cost or cost	Gross unrealised gains	Gross unrealised losses	Other-than-temporary impairments recognised in other comprehensive income	Estimated fair value
Debt securities issued by governments and government agencies:					
US Treasury and other US government corporations and agencies	12 212	612	–92		12 732
US Agency securitised products	2 937	29	–28		2 938
States of the United States and political subdivisions of the states	1 236	55	–10		1 281
United Kingdom	7 514	773	–54		8 233
Canada	3 943	520	–38		4 425
Germany	2 920	239	–31		3 128
France	2 065	223	–18		2 270
Australia	1 590	20	–4		1 606
Other	6 228	242	–142		6 328
Total	40 645	2 713	–417		42 941
Corporate debt securities	30 540	1 448	–530	–11	31 447
Mortgage- and asset-backed securities	4 970	118	–38	–3	5 047
Fixed income securities available-for-sale	76 155	4 279	–985	–14	79 435
Equity securities available-for-sale	4 294	632	–207		4 719

2016 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	13 162	481	–179		13 464
US Agency securitised products	3 415	22	–53		3 384
States of the United States and political subdivisions of the states	1 411	59	–20		1 450
United Kingdom	8 005	1 293	–97		9 201
Canada	3 916	517	–35		4 398
Germany	2 906	325	–15		3 216
France	1 931	277	–10		2 198
Australia	1 967	17	–5		1 979
Other	6 355	287	–96		6 546
Total	43 068	3 278	–510		45 836
Corporate debt securities	37 203	2 733	–181		39 755
Mortgage- and asset-backed securities	4 900	125	–30	–5	4 990
Fixed income securities available-for-sale	**85 171**	**6 136**	**–721**	**–5**	**90 581**
Equity securities available-for-sale	**2 897**	**561**	**–83**		**3 375**

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.

Investments trading
The carrying amounts of fixed income securities and equity securities classified as trading (excluding unit-linked and with-profit business) as of 31 December were as follows:

USD millions	2015	2016
Debt securities issued by governments and government agencies	2 710	2 538
Corporate debt securities	52	45
Mortgage- and asset-backed securities	134	112
Fixed income securities trading – non-participating business	2 896	**2 695**
Equity securities trading – non-participating business	68	**60**

Investments held for unit-linked and with-profit business
The carrying amounts of investments held for unit-linked and with-profit business as of 31 December were as follows:

		2015		2016
USD millions	Unit-linked	With-profit	Unit-linked	With-profit
Fixed income securities trading	2 410	1 659	2 379	2 774
Equity securities trading	21 894	889	23 859	1 948
Investment real estate	691	366	580	298
Other	332		265	75
Total investments for unit-linked and with-profit business	25 327	2 914	**27 083**	**5 095**

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 2015 and 2016, USD 12 725 million and USD 14 640 million, respectively, of fixed income securities available-for-sale were callable.

		2015		2016
USD millions	Amortised cost or cost	Estimated fair value	Amortised cost or cost	Estimated fair value
Due in one year or less	4 874	4 911	6 607	6 650
Due after one year through five years	19 370	19 671	19 180	19 623
Due after five years through ten years	16 577	17 101	19 240	20 079
Due after ten years	30 611	32 952	35 564	39 562
Mortgage- and asset-backed securities with no fixed maturity	4 723	4 800	4 580	4 667
Total fixed income securities available-for-sale	76 155	79 435	**85 171**	**90 581**

Assets pledged
As of 31 December 2016, investments with a carrying value of USD 7 249 million were on deposit with regulatory agencies in accordance with local requirements, and investments with a carrying value of USD 14 005 million were placed on deposit or pledged to secure certain reinsurance liabilities, including pledged investments in subsidiaries.

As of 31 December 2015 and 2016, securities of USD 15 828 million and USD 16 059 million, respectively, were transferred to third parties under securities lending transactions and repurchase agreements on a fully collateralised basis. Corresponding liabilities of USD 995 million and USD 1 010 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 repledge.

As of 31 December 2016, a real estate portfolio with a carrying value of USD 219 million serves as collateral for a credit facility allowing the Group to withdraw funds up to CHF 650 million.

Collateral accepted which the Group has the right to sell or repledge
As of 31 December 2015 and 2016, the fair value of the equity securities, government and corporate debt securities received as collateral was USD 7 030 million and USD 7 666 million, respectively. Of this, the amount that was sold or repledged as of 31 December 2015 and 2016 was USD 2 429 million and USD 3 469 million, respectively. The sources of the collateral are securities borrowing, reverse repurchase agreements and derivative transactions.

Offsetting of derivatives, financial assets and financial liabilities

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

2015 USD millions	Gross amounts of recognised financial assets	Collateral 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	2 713	–1 953	760	–13	747
Reverse repurchase agreements	6 401	–3 000	3 401	–3 394	7
Securities borrowing	452		452	–452	0
Total	9 566	–4 953	4 613	–3 859	754

2015 USD millions	Gross amounts of recognised financial liabilities	Collateral 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	–2 179	1 477	–702	81	–621
Repurchase agreements	–2 844	2 475	–369	369	0
Securities lending	–1 151	525	–626	582	–44
Total	–6 174	4 477	–1 697	1 032	–665

2016 USD millions	Gross amounts of recognised financial assets	Collateral 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	2 801	–1 580	1 221		**1 221**
Reverse repurchase agreements	7 040	–3 986	3 054	–3 054	**0**
Securities borrowing	483	–314	169	–169	**0**
Total	**10 324**	**–5 880**	**4 444**	**–3 223**	**1 221**

2016 USD millions	Gross amounts of recognised financial liabilities	Collateral 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	–2 610	1 568	–1 042	8	**–1 034**
Repurchase agreements	–3 991	3 461	–530	527	**–3**
Securities lending	–1 319	839	–480	454	**–26**
Total	**–7 920**	**5 868**	**–2 052**	**989**	**–1 063**

Collateral pledged or received between two counterparties with a master netting arrangement in place, but not subject to balance sheet netting is disclosed at fair value. The fair values represent the gross carrying value amounts at the reporting date for each financial instrument received or pledged by the Group. Management believes that master netting agreements provide for legally enforceable set-off in the event of default, which substantially reduces credit exposure. Upon occurrence of an event of default the non-defaulting party may set off the obligation against collateral received regardless if it has been offset on the balance sheet prior to the defaulting event. The net amounts of the financial assets and liabilities presented on the balance sheet were recognised in "Other invested assets", "Investments for unit-linked and with-profit business" and "Accrued expenses and other liabilities".

Recognised gross liability for the obligation to return collateral that the Group has the right to sell or repledge

As of 31 December 2015 and 2016, 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. The liabilities are recognised for the obligation to return collateral that the Group has the right to sell or repledge.

2015 USD millions	Remaining contractual maturity of the agreements Overnight and continuous	Up to 30 days	30–90 days	Greater than 90 days	Total
Repurchase agreements					
Debt securities issued by governments and government agencies	370	2 136	176	135	2 817
Corporate debt securities	3	24			27
Total repurchase agreements	373	2 160	176	135	2 844
Securities lending					
Debt securities issued by governments and government agencies	217		501	433	1 151
Total securities lending	217	0	501	433	1 151
Gross amount of recognised liabilities for repurchase agreements and securities lending					3 995

2016 USD millions	Remaining contractual maturity of the agreements Overnight and continuous	Up to 30 days	30–90 days	Greater than 90 days	Total
Repurchase agreements					
Debt securities issued by governments and government agencies	219	3 023	415	334	3 991
Total repurchase agreements	**219**	**3 023**	**415**	**334**	**3 991**
Securities lending					
Debt securities issued by governments and government agencies	237	367	258	426	1 288
Corporate debt securities	13				13
Equity securities	18				18
Total securities lending	**268**	**367**	**258**	**426**	**1 319**
Gross amount of recognised liabilities for repurchase agreements and securities lending					5 310

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.

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 2015 and 2016. As of 31 December 2015 and 2016, USD 161 million and USD 62 million, respectively, of the gross unrealised loss on equity securities available-for-sale relates to declines in value for less than 12 months and USD 46 million and USD 21 million, respectively, to declines in value for more than 12 months.

2015 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	5 993	91	11	1	6 004	92
US Agency securitised products	1 503	23	223	5	1 726	28
States of the United States and political subdivisions of the states	325	9	6	1	331	10
United Kingdom	1 551	52	56	2	1 607	54
Canada	976	14	96	24	1 072	38
Germany	860	25	131	6	991	31
France	502	13	23	5	525	18
Australia	1 085	3	9	1	1 094	4
Other	2 028	108	193	34	2 221	142
Total	14 823	338	748	79	15 571	417
Corporate debt securities	11 246	481	365	60	11 611	541
Mortgage- and asset-backed securities	2 419	32	225	9	2 644	41
Total	28 488	851	1 338	148	29 826	999

2016 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	6 709	179			6 709	179
US Agency securitised products	2 594	53	14	0	2 608	53
States of the United States and political subdivisions of the states	494	18	8	2	502	20
United Kingdom	1 762	87	56	10	1 818	97
Canada	1 759	26	40	9	1 799	35
Germany	1 337	15	100	0	1 437	15
France	703	10			703	10
Australia	461	2	132	3	593	5
Other	2 554	78	247	18	2 801	96
Total	18 373	468	597	42	18 970	510
Corporate debt securities	6 859	172	143	9	7 002	181
Mortgage- and asset-backed securities	1 599	26	147	9	1 746	35
Total	**26 831**	**666**	**887**	**60**	**27 718**	**726**

Mortgages, loans and real estate

As of 31 December, the carrying values of investments in mortgages, policy and other loans, and real estate (excluding unit-linked and with-profit business) were as follows:

USD millions	2015	2016
Policy loans	91	95
Mortgage loans	1 946	2 401
Other loans	1 086	1 186
Investment real estate	1 556	1 925

The fair value of mortgage loans as of 31 December 2015 and 2016 was USD 1 946 million and USD 2 411 million, respectively. The fair value of other loans as of 31 December 2015 and 2016 was USD 1 086 million and USD 1 202 million, respectively. The fair value of the real estate as of 31 December 2015 and 2016 was USD 3 211 million and USD 3 576 million, respectively. The carrying value of policy loans approximates fair value.

Depreciation expense related to income-producing properties was USD 36 million and USD 42 million for 2015 and 2016, respectively. Accumulated depreciation on investment real estate totalled USD 504 million and USD 525 million as of 31 December 2015 and 2016, respectively.

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

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 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.

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 (e.g. 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 (e.g. interest rates, yield curves, volatilities, prepayment speeds, credit risks and default rates); and (iv) inputs derived from, or corroborated by, observable market data.

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.

The types of instruments valued, based on unadjusted quoted market prices in active markets, include most US government and sovereign obligations, active listed equities and most money market securities. Such instruments are generally classified within level 1 of the fair value hierarchy.

The types of instruments that trade in markets that are not considered to be active, but are valued based on quoted market prices, broker or dealer quotations, or alternative pricing sources with reasonable levels of price transparency, include most government agency securities, investment-grade corporate bonds, certain mortgage- and asset-backed products, less liquid listed equities, and state, municipal and provincial obligations. Such instruments are generally classified within level 2 of the fair value hierarchy.

Exchange-traded derivative instruments typically fall within level 1 or level 2 of the fair value hierarchy depending on whether they are considered to be actively traded or not.

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. 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. Such instruments are classified within level 3 of the fair value hierarchy. 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 2016, these adjustments were not material. Whenever the underlying assets or liabilities are reported in a specific business segment, the valuation adjustment is allocated accordingly. Valuation adjustments not attributable to any business segment are reported in Group items.

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

Valuation techniques

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

Corporate debt securities mainly include US and European investment-grade positions, which are priced on the basis of quotes provided by third-party pricing vendors and first utilise valuation inputs from actively traded securities, such as bid prices, bid spreads to Treasury securities, Treasury curves, and same or comparable issuer curves and spreads. Issuer spreads are determined from actual quotes and traded prices and incorporate considerations of credit/default, sector composition, and liquidity and call features. Where market data is not available, valuations are developed based on the modelling techniques that utilise observable inputs and option-adjusted spreads and incorporate considerations of the security's seniority, maturity and the issuer's corporate structure.

Values of mortgage- and asset-backed securities are obtained both from third-party pricing vendors and through quoted prices, some of which may be based on the prices of comparable securities with similar structural and collateral features. Values of certain asset-backed securities (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 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 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.

Governance around level 3 fair valuation

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

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

A formal IPV process is undertaken monthly by members of the Valuation Risk Management team within the 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.

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:

2015 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]	Total
Assets					
Fixed income securities held for proprietary investment purposes	12 900	69 038	393		82 331
Debt securities issued by US government and government agencies	12 900	1 922			14 822
US Agency securitised products		2 952			2 952
Debt securities issued by non-US governments and government agencies		27 877			27 877
Corporate debt securities		31 119	380		31 499
Mortgage- and asset-backed securities		5 168	13		5 181
Fixed income securities backing unit-linked and with-profit business		4 069			4 069
Equity securities held for proprietary investment purposes	4 753		34		4 787
Equity securities backing unit-linked and with-profit business	22 783				22 783
Short-term investments held for proprietary investment purposes	3 438	3 967			7 405
Short-term investments backing unit-linked and with-profit business		64			64
Derivative financial instruments	25	2 241	447	–1 953	760
Interest rate contracts	6	1 300			1 306
Foreign exchange contracts		318			318
Equity contracts	16	617	334		967
Credit contracts		1	1		2
Other contracts	3	5	112		120
Other invested assets	579	50	1 595		2 224
Funds held by ceding companies		245			245
Total assets at fair value	44 478	79 674	2 469	–1 953	124 668
Liabilities					
Derivative financial instruments	–24	–1 574	–581	1 477	–702
Interest rate contracts	–5	–786			–791
Foreign exchange contracts		–201			–201
Equity contracts	–12	–582	–38		–632
Credit contracts			–19		–19
Other contracts	–7	–5	–524		–536
Liabilities for life and health policy benefits			–165		–165
Accrued expenses and other liabilities	–812	–2 524			–3 336
Total liabilities at fair value	–836	–4 098	–746	1 477	–4 203

[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.

2016 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	13 078	79 016	1 182			93 276
Debt securities issued by US government and government agencies	13 078	2 076				15 154
US Agency securitised products		3 423				3 423
Debt securities issued by non-US governments and government agencies		29 797				29 797
Corporate debt securities		38 625	1 175			39 800
Mortgage- and asset-backed securities		5 095	7			5 102
Fixed income securities backing unit-linked and with-profit business		5 153				5 153
Equity securities held for proprietary investment purposes	3 426	5	4			3 435
Equity securities backing unit-linked and with-profit business	25 807					25 807
Short-term investments held for proprietary investment purposes	5 409	5 500				10 909
Short-term investments backing unit-linked and with-profit business		6				6
Derivative financial instruments	30	2 310	461	–1 580		1 221
Interest rate contracts	14	1 044				1 058
Foreign exchange contracts		765				765
Equity contracts	4	433	341			778
Other contracts		5	120			125
Contracts backing unit-linked and with-profit business	12	63				75
Investment real estate			209			209
Other invested assets	266	183	496		937	1 882
Other investments backing unit-linked and with-profit business		42				42
Funds held by ceding companies		225				225
Total assets at fair value	**48 016**	**92 440**	**2 352**	**–1 580**	**937**	**142 165**
Liabilities						
Derivative financial instruments	–5	–1 941	–664	1 568		–1 042
Interest rate contracts	–3	–709				–712
Foreign exchange contracts		–591				–591
Equity contracts	–1	–569	–39			–609
Other contracts		–5	–625			–630
Contracts backing unit-linked and with-profit business	–1	–67				–68
Liabilities for life and health policy benefits			–144			–144
Accrued expenses and other liabilities	–384	–4 084				–4 468
Total liabilities at fair value	**–389**	**–6 025**	**–808**	**1 568**		**–5 654**

[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 reconciliation of the fair values of assets and liabilities measured on a recurring basis using significant unobservable inputs was as follows:

2015 USD millions	Fixed income securities	Equity 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	401	39	521	1 812	2 773	–757	–187	–944
Realised/unrealised gains/losses:								
Included in net income	4		–12	–2	–10	190	22	212
Included in other comprehensive income	–14	–5		–42	–61			0
Purchases	31		30	156	217			0
Issuances					0	–90		–90
Sales	–47		–21	–380	–448	15		15
Settlements	–46		–79		–125	62		62
Transfers into level 3[1]	65		8	70	143	–1		–1
Transfers out of level 3[1]					0			0
Impact of foreign exchange movements	–1			–19	–20			0
Closing balance as of 31 December	393	34	447	1 595	2 469	–581	–165	–746

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

2016 USD millions	Fixed income securities	Equity securities	Derivative assets	Investment real estate	Other invested assets	**Total assets**	Derivative liabilities	Liabilities for life and health policy benefits	**Total liabilities**
Assets and liabilities									
Balance as of 1 January	393	34	447		1 595	**2 469**	–581	–165	**–746**
Impact of Accounting Standards Updates[1]				274	–1 120	**–846**	–207		**–207**
Realised/unrealised gains/losses:									
Included in net income	3		58	32	–20	**73**	188	20	**208**
Included in other comprehensive income	24	1			6	**31**			**0**
Purchases	577		2		43	**622**	4		**4**
Issuances						**0**	–141		**–141**
Sales	–37		–13	–59	–3	**–112**	101		**101**
Settlements	–59		–39			**–98**	–52		**–52**
Transfers into level 3[2]	302		6		12	**320**	–5		**–5**
Transfers out of level 3[2]	–6	–29				**–35**			**0**
Impact of foreign exchange movements	–15	–2		–38	–17	**–72**	29	1	**30**
Closing balance as of 31 December	**1 182**	**4**	**461**	**209**	**496**	**2 352**	**–664**	**–144**	**–808**

[1] Impact of ASU 2015-02 (Investment real estate and Derivative liabilities) and ASU 2015-07 (Other invested assets). Please refer to Note 1 for more details.
[2] 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	2015	2016
Gains/losses included in net income for the period	202	281
Whereof change in unrealised gains/losses relating to assets and liabilities still held at the reporting date	–12	134

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	2015 Fair value	2016 Fair value	Valuation technique	Unobservable input	Range (weighted average)
Assets					
Corporate debt securities	380	**1 175**			
Private placement corporate debt	241	506	Corporate Spread Matrix	Credit spread	62 bps–661 bps (181 bps)
Infrastructure loans	86	486	Discounted Cash Flow Model	Valuation spread	95 bps–242 bps (168 bps)
Private placement credit tenant leases	51	48	Discounted Cash Flow Model	Illiquidity premium	75 bps–175 bps (132 bps)
Derivative equity contracts	334	**341**			
OTC equity option referencing correlated equity indices	334	341	Proprietary Option Model	Correlation	–45%–100% (27.5%)[1]
Investment real estate		**209**	Discounted Cash Flow Model	Discount rate	5% per annum
Liabilities					
Derivative equity contracts	–38	**–39**			
OTC equity option referencing correlated equity indices	–38	–39	Proprietary Option Model	Correlation	–45%–100% (27.5%)[1]
Other derivative contracts and liabilities for life and health policy benefits	–689	**–769**			
Variable annuity and fair valued GMDB contracts	–567	–500	Discounted Cash Flow Model	Risk margin	4% (n.a.)
				Volatility	4%–42%
				Lapse	0.5%–33%
				Mortality adjustment	–10%–0%
				Withdrawal rate	0%–90%
Swap liability referencing real estate investments		–161	Discounted Cash Flow Model	Discount rate	5% per annum
Weather contracts	–82	–41	Proprietary Option Model	Risk Margin	8%–11% (9.7%)
				Correlation	–59%–48% (–19.7%)
				Volatility (power/gas)	23%–104% (43.4%)
				Volatility (temperature)	87–386 (222) HDD/CAT[2]
				Index value (temperature)	440–3890 (1896) HDD/CAT[2]

[1] Represents average input value for the reporting period.
[2] Heating Degree Days (HDD); Cumulative Average Temperature (CAT).

Sensitivity of recurring level 3 measurements to changes in unobservable inputs

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

The significant unobservable input used in the fair value measurement of the Group's investment real estate and swap liability referencing real estate investment is the rate used to discount future cash flows from property sales. A significant increase (decrease) in this input in isolation would result in a significantly lower (higher) fair value measurement.

The significant unobservable inputs used in the fair value measurement of the Group's variable annuity and fair valued guaranteed minimum death benefit (GMDB) contracts are: risk margin, volatility, lapse, mortality adjustment 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 higher (lower) fair value of the Group's obligation. A significant increase (decrease) in isolation in a lapse rate for in-the-money contracts would result in a significantly lower (higher) fair value of the Group's obligation, whereas for out-of-the-money contracts, an isolated increase (decrease) in a lapse assumption would increase (decrease) fair value of the Group's obligation. Changes in the mortality adjustment 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 adjustment rate (i.e. increase (decrease) in mortality, respectively) 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 adjustment rate in isolation would result in an increase (decrease) in fair value of the Group's liability.

The significant unobservable inputs used in the fair value measurement of the Group's weather contracts are risk margin, correlation, volatility and index value. Where the Group has a long position, a significant increase (decrease) in the risk margin input in isolation would result in a significantly higher (lower) fair value measurement. Where the Group has a long volatility or correlation position, a significant increase (decrease) in the correlation and volatility inputs would result in a significantly higher (lower) fair value measurement. Where the Group has a long index position, an increase (decrease) in the index value input in isolation would result in a significantly higher (lower) fair value measurement. Where the Group has a short position, a significant increase (decrease) in the risk margin input in isolation would result in a significantly lower (higher) fair value measurement. Where the Group has a short volatility or correlation position a significant increase (decrease) in the correlation and volatility inputs would result in a significantly lower (higher) fair value measurement. Where the Group has a short index position, an increase (decrease) in the index value input in isolation would result in a significantly lower (higher) fair value measurement.

Other invested assets measured at net asset value

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

USD millions	2015 Fair value	**2016** Fair value	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Private equity funds	686	562	125	non-redeemable	n.a.
Hedge funds	135	106		redeemable[1]	45–95 days[2]
Private equity direct	121	80		non-redeemable	n.a.
Real estate funds	203	189	49	non-redeemable	n.a.
Total	1 145	**937**	**174**		

[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 global macro, relative value, event-driven and long/short equity 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.

Other investments backing unit-linked and with-profit business

For operational efficiencies, the Group elected the fair value option for equity-linked deposits from one of its unit-linked businesses. The assets are carried at fair value and changes in fair value are reported as a component of earnings. In the balance sheet and the following fair value disclosures, this item is included under "Investments for unit-linked and with-profit business".

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.

Other derivative liabilities

For operational efficiencies, the Group elected the fair value option on a hybrid financial instrument, where the host contract is a debt instrument and the embedded derivative is pegged to the performance of the fund's real estate portfolio. The liability is carried at fair value and changes in fair value are reported as a component of earnings. In the balance sheet and the following fair value disclosures, this item is included under "Accrued expenses and other liabilities".

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	2015	2016
Assets		
Other invested assets	10 367	9 611
of which at fair value pursuant to the fair value option	449	442
Funds held by ceding companies	9 870	8 184
of which at fair value pursuant to the fair value option	245	225
Investments for unit-linked and with-profit business		32 178
of which at fair value pursuant to the fair value option		42
Liabilities		
Liabilities for life and health policy benefits	–30 131	–41 176
of which at fair value pursuant to the fair value option	–165	–144
Accrued expenses and other liabilities		–9 811
of which at fair value pursuant to the fair value option		–161

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	2015	2016
Other invested assets	–32	–19
Funds held by ceding companies	7	6
Investments for unit-linked and with-profit business		9
Liabilities for life and health policy benefits	21	20
Accrued expenses and other liabilities		17
Total	–4	**33**

Fair value changes from other invested assets and funds held by ceding companies are reported in “Net investment income — non-participating business”. Fair value changes from investments for unit-linked and with-profit business are reported in “Net investment result — unit-linked and with-profit”. Fair value changes from accrued expenses and other liabilities are reported in “Net realised investment gains/losses — 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:

2015 USD millions	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Assets			
Policy loans		91	91
Mortgage loans		1 946	1 946
Other loans		1 086	1 086
Investment real estate		3 211	3 211
Total assets	0	6 334	6 334
Liabilities			
Debt	–8 681	–5 674	–14 355
Total liabilities	–8 681	–5 674	–14 355

2016 USD millions	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Assets			
Policy loans		95	95
Mortgage loans		2 411	2 411
Other loans		1 202	1 202
Investment real estate		3 367	3 367
Total assets	**0**	**7 075**	**7 075**
Liabilities			
Debt	–8 201	–4 938	–13 139
Total liabilities	**–8 201**	**–4 938**	**–13 139**

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 do 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 based on 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:

2015 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	63485	1306	–791	515
Foreign exchange contracts	14230	281	–201	80
Equity contracts	16374	967	–632	335
Credit contracts	188	2	–19	–17
Other contracts	18113	120	–536	–416
Total	112390	2676	–2179	497
Derivatives designated as hedging instruments				
Foreign exchange contracts	2151	37		37
Total	2151	37	0	37
Total derivative financial instruments	114541	2713	–2179	534
Amount offset				
Where a right of set-off exists		–1162	1162	
Due to cash collateral		–791	315	
Total net amount of derivative financial instruments		760	–702	58

2016 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	42622	1120	–780	340
Foreign exchange contracts	19138	350	–574	–224
Equity contracts	12512	788	–609	179
Credit contracts				
Other contracts	16226	125	–630	–505
Total	**90498**	**2383**	**–2593**	**–210**
Derivatives designated as hedging instruments				
Foreign exchange contracts	9303	418	–17	401
Total	**9303**	**418**	**–17**	**401**
Total derivative financial instruments	**99801**	**2801**	**–2610**	**191**
Amount offset				
Where a right of set-off exists		–1122	1122	
Due to cash collateral		–458	446	
Total net amount of derivative financial instruments		**1221**	**–1042**	**179**

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 "Investments for unit-linked and with-profit business", 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 2015 and 2016.

Non-hedging activities

The Group primarily uses derivative financial instruments for risk management and trading strategies. Gains and losses of derivative financial instruments not designated as hedging instruments are recorded in "Net realised investment gains/losses — non-participating business" and "Net investment result — unit-linked and with-profit business" in the income statement. For the years ended 31 December, the gains and losses of derivative financial instruments not designated as hedging instruments were as follows:

	2015	2016
Derivatives not designated as hedging instruments		
Interest rate contracts	51	391
Foreign exchange contracts	435	–116
Equity contracts	–192	–217
Credit contracts	–5	–1
Other contracts	247	181
Total gains/losses recognised in income	536	**238**

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 2015 and 2016, the following hedging relationships were outstanding:

Fair value hedges

The Group enters into foreign exchange swaps to reduce the exposure to foreign exchange volatility for certain of its issued debt positions and fixed income securities. These derivative instruments are designated as hedging instruments in qualifying fair value hedges. Gains and losses on derivative financial instruments designated as fair value 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 attributable to the hedged risks were as follows:

		2015		2016
USD millions	Gains/losses on derivatives	Gains/losses on hedged items	Gains/losses on derivatives	Gains/losses on hedged items
Fair value hedging relationships				
Foreign exchange contracts	119	–119	250	–250
Total gains/losses recognised in income	119	–119	**250**	**–250**

Cash flow hedges

The Group entered into a cross-currency swap to reduce the exposure to foreign exchange and interest rate volatility for a long-term debt instrument issued in the second quarter of 2016. These derivative instruments are designated as cash flow hedging instruments.

For the year ended 31 December 2016, the Group recorded a gain of USD 32 million on derivatives in accumulated other comprehensive income. For the year ended 31 December 2016, the Group reclassified a gain of USD 39 million from accumulated other comprehensive income into income.

As of 31 December 2016, the maximum length of time over which the Group hedged its exposure to the variability in future cash flows for forecasted transactions, excluding those forecasted transactions related to the payment of variable interest on existing financial instruments, was six years.

The Group believes that the net gains and losses associated with cash flow hedges expected to be reclassified from accumulated other comprehensive income within the next twelve months cannot be reasonably estimated as they relate to foreign exchange volatility.

Hedges of the net investment in foreign operations

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

For the years ended 31 December 2015 and 2016, the Group recorded an accumulated net unrealised foreign currency remeasurement gain of USD 1 631 million and a gain of USD 2 448 million, respectively, in shareholders' equity. 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 2015 and 2016 was approximately USD 1 551 million and USD 1 679 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 106 million and USD 107 million as of 31 December 2015 and 2016, respectively. For derivative financial instruments containing credit risk-related contingent features, the Group posted collateral of nil as of 31 December 2015 and 2016, respectively. In the event of a reduction of the Group's credit rating to below investment grade, a fair value of USD 107 million additional collateral would have had to be posted as of 31 December 2016. The total equals the amount needed to settle the instruments immediately as of 31 December 2016.

10 Acquisitions and disposals

IHC Risk Solutions, LLC

On 31 March 2016, the Group acquired IHC Risk Solutions, LLC (IHC), a leading US employer stop loss company and the direct employer stop loss business of Independence Holding Company. The cost of the acquisition was USD 153 million. The transaction includes IHC's operations, its team of experts and business portfolio, including in-force, new and renewal business and is reflected in the Corporate Solutions Business Unit results. This acquisition broadens the Group's current employer stop loss capabilities in the small- and middle-market self-funded healthcare benefits segment.

Qualifying purchased intangible assets, including distribution/customer relationships and goodwill, have been established.

The following table presents details of acquired intangible assets subject to amortisation as of the date of acquisition:

USD millions	Weighted – average amortisation period	Carrying value
Distribution / customer relationship	6 years	67
Other intangibles	1 year	16

The goodwill of USD 65 million relates to the Corporate Solutions Business Unit. The goodwill is expected to be deductible for tax purposes.

Guardian Holdings Europe Limited

On 6 January 2016, the Group acquired 100% of the shares of Guardian Holdings Europe Limited, the holding company for operations trading under the name Guardian Financial Services ("Guardian") from private equity company Cinven. Guardian provides insurance solutions to financial institutions and insurance companies, either through the acquisition of closed books of business or through entering reinsurance agreements with its customers.

The transaction has further demonstrated progress against the strategy of the Group's Business Unit Life Capital (formerly Admin Re®) as a leading closed life book consolidator in the UK, adding approximately 900 000 policies including a mixture of annuities, life insurance and pensions. As a result, the policyholder and asset base of the Group has expanded and Life Capital has diversified its current business mix, with a total of approximately four million policies under administration.

The results of the operations of Guardian have been included in the Group's consolidated financial statements since 6 January 2016. For the period 6 January until 31 December 2016, Guardian generated USD 1 965 million in revenues (including net investment result — unit-linked and with-profit business of USD 1 015 million) and USD 490 million in net income for the Group.

Determination and allocation of the purchase price

The total cost of acquisition as of 6 January 2016 was USD 2.3 billion in cash, paid in the form of the following components:

USD millions	2016
Share purchase	1 211
Debt repayment	1 118
Total cost of acquisition	**2 329**
Goodwill	153
Total net assets acquired	**2 176**

The purchase price has been allocated based on estimated fair values of assets acquired and liabilities assumed as of the date of acquisition. The allocation required significant judgement. The estimated fair values of assets acquired and liabilities assumed as of the date of the acquisition were as follows:

USD millions	2016
Assets	
Fixed income securities	11 321
Equity securities	1
Policy loans, mortgages and other loans	1 240
Short-term investments	117
Other invested assets	590
Investments for unit-linked and with-profit business	8 023
Total investments	**21 292**
Cash and cash equivalents	2 775
Accrued investment income	265
Premiums and other receivables	39
Reinsurance recoverable[1]	1 676
Negative acquired present value of future profits	–641
Deferred tax assets	119
Other assets	11
Total assets acquired	**25 536**
Liabilities	
Unpaid claims and claim adjustment expenses	56
Liabilities for life and health policy benefits[1]	16 460
Policyholder account balances	6 157
Reinsurance balances payable	9
Income taxes payable	6
Deferred and other non-current tax liabilities	294
Accrued expenses and other liabilities	378
Total liabilities assumed	**23 360**
Total net assets acquired	**2 176**

[1] Due to new information obtained in Q2 2016, based on facts and circumstances existing as of the date of acquisition, reinsurance recoverable and liabilities for life and health policy benefits have been adjusted in Q2 2016 with no impact on goodwill. As of Q1 2016, the estimated reinsurance recoverable and liabilities for life and health policy benefits were USD 1 751 million and USD 16 535 million, respectively.

Intangible assets

Historical intangible assets including goodwill have been eliminated. The Group has established negative acquired PVFP, which qualifies as a purchased intangible liability, and goodwill.

The negative PVFP of USD 641 million is amortised over a weighted average amortisation period of 12 years. The residual amount is expected to be nil.

The goodwill of USD 153 million recognised upon acquisition is attributed to the Life Capital Business Unit. It is mainly the result of synergies, which the Group expects to receive from cost savings, capital savings and asset allocation management actions. These do not qualify for separate recognition. The recorded goodwill is not expected to be deductible for tax purposes and, as of 31 December 2016, remained unchanged at constant foreign exchange rates.

Receivables

Receivables acquired consisted of the following:

2016 USD millions	Fair value	Gross contractual amount
Receivables from ceded re/insurance business	39	39
Other debtors	15	15
Total	**54**	**54**

The receivables are expected to be collectible.

Pro forma financial information (unaudited)

The following table shows the Group's unaudited pro forma consolidated financial information for the year ended 31 December 2015, assuming that the acquisition had occurred on 1 January 2015:

USD millions	2015
Total revenues	36 852
Net income	4 794

The pro forma information for the period 1 January 2016 to 5 January 2016 is immaterial.

The pro forma financial information are presented for informational purposes and in order to illustrate the financial effect on the Group's income statement only. Consequently, they neither reflect the results that would have occurred had the acquisition been closed on the assumed date, nor necessarily indicate future results.

Aurora National Life Assurance Company

In the fourth quarter of 2014, the Group entered into an agreement to sell Aurora National Life Assurance Company (Aurora), a US subsidiary, to Reinsurance Group of America, Incorporated (RGA). Aurora primarily consists of bonds and policyholder liabilities. In the second quarter of 2015, the Group completed the sale following the receipt of all necessary regulatory approvals. The purchase price included a cash payment of USD 184 million.

11 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	2015	2016
Senior financial debt		590
Senior operational debt	765	431
Subordinated financial debt	1 069	543
Short-term debt – financial and operational debt	1 834	**1 564**
Senior financial debt	3 688	3 734
Senior operational debt	467	423
Subordinated financial debt	4 103	3 381
Subordinated operational debt	2 720	2 249
Long-term debt – financial and operational debt	10 978	**9 787**
Total carrying value	12 812	**11 351**
Total fair value	14 355	**13 139**

As of 31 December 2015 and 2016, operational debt, i. e. debt related to operational leverage, amounted to USD 4.0 billion (thereof USD 3.0 billion limited- or non-recourse) and USD 3.1 billion (thereof USD 2.2 billion limited- or non-recourse), respectively. Operational leverage is subject to asset/liability matching and is excluded from rating agency financial leverage calculations.

Maturity of long-term debt

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

USD millions	2015	2016
Due in 2017	1 143	0[1]
Due in 2018	0	0
Due in 2019	2 663	2 367
Due in 2020	204	195
Due in 2021	210	209
Due after 2021	6 758	7 016
Total carrying value	10 978	**9 787**

[1] Balance was reclassified to short-term debt.

Senior long-term debt

Maturity	Instrument	Issued in	Currency	Nominal in millions	Interest rate	Book value in USD millions
2019	Syndicated senior bank loans	2014	GBP	550	variable	680
2019	Senior notes[1]	1999	USD	234	6.45%	254
2019	Bilateral senior bank loans	2016	NGN	6 360	various	21
2022	Senior notes	2012	USD	250	2.88%	249
2023	Senior notes	2016	EUR	750	1.38%	784
2024	EMTN	2014	CHF	250	1.00%	245
2026	Senior notes[1]	1996	USD	397	7.00%	497
2027	EMTN	2015	CHF	250	0.75%	247
2030	Senior notes[1]	2000	USD	193	7.75%	268
2042	Senior notes	2012	USD	500	4.25%	489
Various	Payment undertaking agreements	various	USD	353	various	423
Total senior long-term debt as of 31 December 2016						**4 157**
Total senior long-term debt as of 31 December 2015						4 155

[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
2024	Subordinated contingent write-off loan note	2013	USD	750	6.38%	2019	795
2042	Subordinated fixed-to-floating rate loan note	2012	EUR	500	6.63%	2022	522
2044	Subordinated fixed rate resettable callable loan note	2014	USD	500	4.50%	2024	497
2045	Subordinated contingent write-off securities	2013	CHF	175	7.50%	2020	195
2057	Subordinated private placement (amortising, limited recourse)	2007	GBP	1 819	4.92%		2 250
	Subordinated perpetual loan note	2007	GBP	500	6.30%	2019	617
	Perpetual subordinated fixed-to-floating rate callable loan note	2015	EUR	750	2.60%	2025	754
Total subordinated long-term debt as of 31 December 2016							**5 630**
Total subordinated long-term debt as of 31 December 2015							6 823

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

USD millions	2015	2016
Senior financial debt	118	121
Senior operational debt	13	10
Subordinated financial debt	236	179
Subordinated operational debt	137	122
Total	504	**432**

In addition to the above, interest expense on contingent capital instruments classified as equity was USD 68 million and USD 68 million for the years ended 31 December 2015 and 2016, respectively.

Long-term debt issued in 2016
In May 2016, Swiss Re Admin Re Ltd issued senior notes due 2023. The notes have a face value of EUR 750 million, with a fixed coupon of 1.375% per annum.

Subordinated debt facility established in 2016
In April 2016, Swiss Re Ltd established a subordinated debt facility with a termination date of 15 February 2031. The facility allows Swiss Re Ltd to issue at any time subordinated fixed rate callable notes with a face value of up to USD 400 million, having a first optional redemption date of 15 February 2031 and a scheduled maturity date of 15 February 2056. Swiss Re Ltd pays a fee of 3.92% per annum on the available commitment under the facility. Notes issued under the facility have a fixed coupon of 6.05% per annum.

In June 2016, Swiss Re Ltd established a subordinated debt facility with a termination date of 15 August 2027. The facility allows Swiss Re Ltd to issue at any time subordinated fixed-to-floating rate callable notes with a face value of up to USD 800 million, having a first optional redemption date of 15 August 2027 and a scheduled maturity date of 15 August 2052. Swiss Re Ltd pays a fee of 3.67% per annum on the available commitment under the facility. Notes issued under the facility have a fixed coupon of 5.625% per annum until the first optional redemption date and a floating rate coupon thereafter.

In these financial statements, the facility fees are classified as interest expense. Notes, when issued under these facilities, will be classified as subordinated debt. As of 31 December 2016, no notes have been issued under either facility.

Contingent capital instruments
In February 2012, Swiss Reinsurance Company Ltd issued a perpetual subordinated instrument with stock settlement. The instrument has a face value of CHF 320 million, with a fixed coupon of 7.25% per annum until the first optional redemption date (1 September 2017).

In March 2012, Swiss Reinsurance Company Ltd issued a perpetual subordinated capital instrument with stock settlement. The instrument has a face value of USD 750 million, with a fixed coupon of 8.25% per annum until the first optional redemption date (1 September 2018).

Both instruments may be converted, at the option of the issuer, into Swiss Re Ltd shares at any time through an "at market" conversion using the retrospective five-day volume weighted average share price with a 3% discount or within six months following a solvency event at a pre-set floor price (CHF 26 for the instrument with face value of CHF 320 million and USD 32 for the instrument with face value of USD 750 million, respectively). These instruments are referred to in these financial statements as "contingent capital instruments".

12 Earnings per share

All of the Group's companies prepare statutory financial statements based on local laws and regulations. Most jurisdictions require reinsurers to maintain a minimum amount of capital in excess of statutory definition of net assets or maintain certain minimum capital and surplus levels. In addition, some jurisdictions place certain restrictions on amounts that may be loaned or transferred to the parent company. The Group's ability to pay dividends may be restricted by these requirements.

Dividends are declared in Swiss francs. In the year ended 31 December 2015, the Group paid a dividend per share of CHF 4.25, as well as an additional special dividend of CHF 3.00, which were paid in the form of withholding tax exempt repayment of legal reserves from capital contributions. In the year ended 31 December 2016, the Group paid a dividend per share of CHF 4.60.

Earnings per share for the years ended 31 December were as follows:

USD millions (except share data)	2015	**2016**
Basic earnings per share		
Net income	4 668	3 623
Non-controlling interests	–3	3
Interest on contingent capital instruments[1]	–68	–68
Net income attributable to common shareholders	4 597	**3 558**
Weighted average common shares outstanding	341 951 654	331 767 651
Net income per share in USD	13.44	**10.72**
Net income per share in CHF[2]	12.93	**10.55**
Effect of dilutive securities		
Change in income available to common shares due to contingent capital instruments[1]	68	68
Change in average number of shares due to contingent capital instruments	35 745 192	35 745 192
Change in average number of shares due to employee options	2 241 636	1 768 217
Diluted earnings per share		
Net income assuming debt conversion and exercise of options	4 665	**3 626**
Weighted average common shares outstanding	379 938 482	369 281 060
Net income per share in USD	12.28	**9.82**
Net income per share in CHF[2]	11.81	**9.66**

[1] Please refer to Note 11 "Debt and contingent capital instruments".
[2] The translation from USD to CHF is shown for informational purposes only and has been calculated using the Group's average exchange rates.

At the 151st Annual General Meeting held on 21 April 2015 and at the 152nd Annual General Meeting held on 22 April 2016, the Group's shareholders authorised the Group Board of Directors to repurchase up to a maximum CHF 1 billion purchase value of the Group's own shares through public share buy-back programmes for cancellation purposes prior to the 2016 and 2017 Annual General Meetings, respectively. The buy-back programme prior to the 152nd Annual General Meeting was completed as of 2 March 2016. The total number of shares repurchased amounted to 10.6 million, of which 4.4 million and 6.2 million shares were repurchased as of 31 December 2015 and between 1 January and 2 March 2016, respectively. The 152nd Annual General Meeting resolved the cancellation of the repurchased 10.6 million shares by way of share capital reduction. The shares were cancelled as of 18 July 2016, after completion of the procedure in respect of the share capital reduction as set forth in Article 732 et seqq. of the Swiss Code of Obligations. As of 31 December 2016, 5.5 million shares were repurchased through the buy-back programme launched on 4 November 2016.

13 Income taxes

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

USD millions	2015	**2016**
Current taxes	582	728
Deferred taxes	69	21
Income tax expense	651	**749**

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	2015	**2016**
Income tax at the Swiss statutory tax rate of 21.0%	1 117	918
Increase (decrease) in the income tax charge resulting from:		
Foreign income taxed at different rates	303	191
Impact of foreign exchange movements	–180	–5
Tax exempt income/dividends received deduction	–93	–44
Change in valuation allowance	–72	–256
Basis differences in subsidiaries	–306	–3
Change in liability for unrecognised tax benefits including interest and penalties	–126	–116
Other, net	8	64
Total	651	**749**

The Group reported a tax charge of USD 749 million on a pre-tax income of USD 4 372 million for 2016, compared to a charge of USD 651 million on a pre-tax income of USD 5 319 million for 2015. This translates into an effective tax rate in the current and prior-year reporting periods of 17.1% and 12.2%, respectively.

The tax rate in 2016 was largely driven by benefits from the effective settlement of tax audits in certain jurisdictions and releases of valuation allowance on net operating losses partially offset by tax on profits earned in higher tax jurisdictions. The lower rate in 2015 was largely driven by a tax benefit arising from a local statutory accounting adjustment for restructuring of subsidiaries and higher tax benefits from foreign currency translation differences between statutory and US GAAP accounts.

Deferred and other non-current taxes

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

USD millions	2015	2016
Deferred tax assets		
Income accrued/deferred	295	354
Technical provisions	685	640
Pension provisions	330	378
Benefit on loss carryforwards	3 467	2 914
Currency translation adjustments	394	339
Unrealised gains in income	226	424
Other	1 397	1 381
Gross deferred tax asset	6 794	6 430
Valuation allowance	–789	–505
Unrecognised tax benefits offsetting benefits on loss carryforwards	–35	–23
Total deferred tax assets	5 970	**5 902**
Deferred tax liabilities		
Present value of future profits	–514	–336
Income accrued/deferred	–923	–600
Bond amortisation	–639	–124
Deferred acquisition costs	–914	–961
Technical provisions	–2 685	–3 547
Unrealised gains on investments	–702	–1 072
Untaxed realised gains	–224	–393
Foreign exchange provisions	–352	–527
Other	–760	–778
Total deferred tax liabilities	–7 713	**–8 338**
Liability for unrecognised tax benefits including interest and penalties	–380	–245
Total deferred and other non-current tax liabilities	–8 093	**–8 583**
Net deferred and other non-current taxes	–2 123	**–2 681**

As of 31 December 2016, 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 2.2 billion. In the remote scenario in which these temporary differences were to reverse simultaneously, the resulting tax liabilities would be very limited due to participation exemption rules.

As of 31 December 2016, the Group had USD 8 697 million net operating tax loss carryforwards, expiring as follows: USD 25 million in 2018, USD 51 million in 2019, USD 19 million in 2020, USD 7 650 million in 2021 and beyond, and USD 952 million never expire.

The Group also had capital loss carryforwards of USD 1 030 million, expiring as follows: USD 82 million in 2019, USD 37 million in 2020, USD 4 million in 2021 and USD 907 million never expire.

Net operating tax losses of USD 1 713 million and net capital tax losses of USD 236 million were utilised during the period ended 31 December 2016.

Income taxes paid in 2015 and 2016 were USD 1 190 million and USD 755 million, respectively.

Unrecognised tax benefits

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

USD millions	2015	2016
Balance as of 1 January	579	343
Additions based on tax positions related to current year	35	37
Additions based on tax positions related to prior years	115	21
Current year acquisitions	0	24
Reduction for tax positions of prior years	–266	–106
Statute expiration	0	–47
Settlements	–98	–53
Other (including foreign currency translation)	–22	–3
Balance as of 31 December	343	**216**

The amount of gross unrecognised tax benefits within the tabular reconciliation that, if recognised, would affect the effective tax rate were approximately USD 345 million and USD 215 million at 31 December 2015 and 31 December 2016, respectively.

Interest and penalties related to unrecognised tax benefits are recorded in income tax expense. Such expense in 2016 was USD 21 million (USD 35 million in 2015). As of 31 December 2015 and 31 December 2016, USD 72 million and USD 52 million, respectively, were accrued for the payment of interest (net of tax benefits) and penalties. The accrued interest balance as of 31 December 2016 is included within the deferred and other non-current taxes section reflected in the balance sheet.

The balance of gross unrecognised tax benefits as of 31 December 2016 presented in the table above excludes accrued interest and penalties (USD 52 million).

During the year, certain tax positions and audits in Switzerland, Germany, Italy, France, United Kingdom, Canada and the United States 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 subjects to examination:

Australia	2010–2016
Belgium	2010–2016
Brazil	2011–2016
Canada	2008–2016
China	2007–2016
Colombia	1999, 2009, 2014–2016
Denmark	2010–2016
France	2008,2012–2016
Germany	2014–2016
Hong Kong	2010–2016
India	2004–2016
Ireland	2012–2016
Israel	2008–2016
Italy	2012–2016
Japan	2012–2016
Korea	2013–2016
Luxembourg	2012–2016
Malaysia	2013–2016
Mexico	2011–2016
Netherlands	2012–2016
New Zealand	2009–2016
Singapore	2013–2016
Slovakia	2012–2016
South Africa	2011–2016
Spain	2011–2016
Switzerland	2013–2016
United Kingdom	2008, 2011–2016
United States	2011–2016

14 Benefit plans

Defined benefit pension plans and post-retirement benefits

The Group sponsors various funded defined benefit pension plans. Employer contributions to the plans are charged to income on a basis which recognises the costs of pensions over the expected service lives of employees covered by the plans. The Group's funding policy for these plans is to contribute annually at a rate that is intended to maintain a level percentage of compensation for the employees covered. A full valuation is prepared at least every three years.

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

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

2015 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Benefit obligation as of 1 January	3 685	2 389	371	6 445
Service cost	111	8	5	124
Interest cost	42	79	10	131
Actuarial gains/losses	236	–67	–2	167
Benefits paid	–189	–74	–16	–279
Employee contribution	26			26
Acquisitions/disposals/additions		2		2
Effect of settlement, curtailment and termination	2			2
Effect of foreign currency translation	–36	–131	–5	–172
Benefit obligation as of 31 December	3 877	2 206	363	6 446
Fair value of plan assets as of 1 January	3 535	2 354	0	5 889
Actual return on plan assets	36	7		43
Company contribution	94	85	16	195
Benefits paid	–189	–74	–16	–279
Employee contribution	26			26
Acquisitions/disposals/additions		1		1
Effect of settlement, curtailment and termination	2			2
Effect of foreign currency translation	–25	–138		–163
Fair value of plan assets as of 31 December	3 479	2 235	0	5 714
Funded status	–398	29	–363	–732

2016 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Benefit obligation as of 1 January	3 877	2 206	363	6 446
Service cost	113	8	5	126
Interest cost	31	76	10	117
Actuarial gains/losses	71	349	9	429
Benefits paid	–140	–72	–16	–228
Employee contribution	25			25
Acquisitions/disposals/additions				0
Effect of settlement, curtailment and termination	1			1
Effect of foreign currency translation	–62	–209	–2	–273
Benefit obligation as of 31 December	**3 916**	**2 358**	**369**	**6 643**
Fair value of plan assets as of 1 January	3 479	2 235	0	5 714
Actual return on plan assets	128	256		384
Company contribution	95	62	16	173
Benefits paid	–140	–72	–16	–228
Employee contribution	25			25
Acquisitions/disposals/additions				0
Effect of settlement, curtailment and termination	1			1
Effect of foreign currency translation	–56	–224		–280
Fair value of plan assets as of 31 December	**3 532**	**2 257**	**0**	**5 789**
Funded status	**–384**	**–101**	**–369**	**–854**

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

2015 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Non-current assets		232		232
Current liabilities		–3	–15	–18
Non-current liabilities	–398	–200	–348	–946
Net amount recognised	–398	29	–363	–732

2016 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Non-current assets		140		140
Current liabilities		–2	–15	–17
Non-current liabilities	–384	–239	–354	–977
Net amount recognised	**–384**	**–101**	**–369**	**–854**

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

2015 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	1 133	384	–43	1 474
Prior service cost/credit	–78	2	–67	–143
Total	1 055	386	–110	1 331

2016 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	1 113	513	–30	1 596
Prior service cost/credit	–69	2	–58	–125
Total	**1 044**	**515**	**–88**	**1 471**

Components of net periodic benefit cost

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

2015 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Service cost (net of participant contributions)	111	8	5	124
Interest cost	42	79	10	131
Expected return on assets	–113	–95		–208
Amortisation of:				
Net gain/loss	76	22	–4	94
Prior service cost	–9		–10	–19
Effect of settlement, curtailment and termination	2			2
Net periodic benefit cost	109	14	1	124

2016 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Service cost (net of participant contributions)	113	8	5	126
Interest cost	31	76	10	117
Expected return on assets	–113	–89		–202
Amortisation of:				
Net gain/loss	76	11	–4	83
Prior service cost	–9		–9	–18
Effect of settlement, curtailment and termination	1			1
Net periodic benefit cost	**99**	**6**	**2**	**107**

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

2015 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	313	21	–2	332
Amortisation of:				
Net gain/loss	–76	–22	4	–94
Prior service cost	9		10	19
Effect of settlement, curtailment and termination				0
Exchange rate gain/loss recognised during the year		–22		–22
Total recognised in other comprehensive income, gross of tax	246	–23	12	235
Total recognised in net periodic benefit cost and other comprehensive income, gross of tax	355	–9	13	359

2016 USD millions	Swiss plan	Foreign plans	Other benefits	Total
Net gain/loss	56	182	9	247
Amortisation of:				
Net gain/loss	–76	–11	4	–83
Prior service cost	9		9	18
Effect of settlement, curtailment and termination				0
Exchange rate gain/loss recognised during the year		–42		–42
Total recognised in other comprehensive income, gross of tax	**–11**	**129**	**22**	**140**
Total recognised in net periodic benefit cost and other comprehensive income, gross of tax	**88**	**135**	**24**	**247**

The estimated net loss and prior service credit for the defined benefit pension plans that will be amortised from accumulated other comprehensive income into net periodic benefit cost in 2017 are USD 104 million and USD 9 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 2017 are USD 2 million and USD 9 million, respectively.

The accumulated benefit obligation (the current value of accrued benefits excluding future salary increases) for pension benefits was USD 6 016 million and USD 6 205 million as of 31 December 2015 and 2016, respectively.

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

USD millions	2015	**2016**
Projected benefit obligation	4 883	5 478
Accumulated benefit obligation	4 843	5 441
Fair value of plan assets	4 283	4 854

Principal actuarial assumptions

	Swiss plan		Foreign plans weighted average		Other benefits weighted average	
	2015	**2016**	2015	**2016**	2015	**2016**
Assumptions used to determine obligations at the end of the year						
Discount rate	0.8%	0.6%	3.7%	2.9%	2.7%	2.4%
Rate of compensation increase	2.0%	1.8%	2.9%	3.1%	2.1%	2.1%
Assumptions used to determine net periodic pension costs for the year ended						
Discount rate	1.1%	0.8%	3.5%	3.7%	2.7%	2.7%
Expected long-term return on plan assets	3.3%	3.3%	4.3%	4.1%		
Rate of compensation increase	2.3%	2.0%	2.9%	2.9%	2.1%	2.1%
Assumed medical trend rates at year end						
Medical trend – initial rate					6.1%	5.1%
Medical trend – ultimate rate					4.6%	3.8%
Year that the rate reaches the ultimate trend rate					2020	2021

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 2016:

USD millions	1 percentage point increase	1 percentage point decrease
Effect on total of service and interest cost components	1	–1
Effect on post-retirement benefit obligation	27	–23

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 2015 and 2016 was as follows:

	Swiss plan allocation			Foreign plans allocation		
	2015	**2016**	**Target allocation**	2015	**2016**	**Target allocation**
Asset category						
Equity securities	26%	27%	25%	26%	23%	23%
Debt securities	47%	44%	47%	68%	51%	53%
Real estate	21%	22%	20%	0%	0%	1%
Other	6%	7%	8%	6%	26%	23%
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 common stock of USD 6 million (0.1% of total plan assets) and USD 7 million (0.1% of total plan assets) as of 31 December 2015 and 2016, 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.

Other assets classified within level 3 mainly consist of private equity investments valued with the same methodology as mentioned in Note 8.

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

2015 USD millions	Quoted prices in active markets for identical assets (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)	Total
Assets				
Fixed income securities:				
Debt securities issued by the US government and government agencies	34	149		183
Debt securities issued by non-US governments and government agencies		799		799
Corporate debt securities		2 179		2 179
Residential mortgage-backed securities		16		16
Commercial mortgage-backed securities		1		1
Other asset-backed securities		4		4
Equity securities:				
Equity securities held for proprietary investment purposes	917	572		1 489
Derivative financial instruments	–9			–9
Real estate	129	9	596	734
Other assets	19	79	142	240
Total assets at fair value	1 090	3 808	738	5 636
Cash	82	–4		78
Total plan assets	1 172	3 804	738	5 714

2016 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 US government and government agencies	28	145			173
Debt securities issued by non-US governments and government agencies		348			348
Corporate debt securities		2 069	9		2 078
Residential mortgage-backed securities		26			26
Commercial mortgage-backed securities		4			4
Other asset-backed securities		6			6
Equity securities:					
Equity securities held for proprietary investment purposes	1 004	451	97		1 552
Derivative financial instruments		–6			–6
Real estate			612		612
Other assets		514		387	901
Total assets at fair value	**1 032**	**3 557**	**718**	**387**	**5 694**
Cash	97	–2			95
Total plan assets	**1 129**	**3 555**	**718**	**387**	**5 789**

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:

2015 USD millions	Real estate	Other assets	Total
Balance as of 1 January	578	139	717
Realised/unrealised gains/losses:			
Relating to assets still held at the reporting date	10	–13	–3
Relating to assets sold during the period		17	17
Purchases, issuances and settlements	12	6	18
Transfers in and/or out of level 3			0
Impact of foreign exchange movements	–4	–7	–11
Closing balance as of 31 December	596	142	738

2016 USD millions	Real estate	Other assets	Total
Balance as of 1 January	596	142	738
Realised/unrealised gains/losses:			
Relating to assets still held at the reporting date	17	–14	3
Relating to assets sold during the period		13	13
Purchases, issuances and settlements	8	21	29
Transfers in and/or out of level 3		–53	–53
Impact of foreign exchange movements	–9	–3	–12
Closing balance as of 31 December	**612**	**106**	**718**

Expected contributions and estimated future benefit payments

The employer contributions expected to be made in 2017 to the defined benefit pension plans are USD 151 million and to the post-retirement benefit plan are USD 15 million.

As of 31 December 2016, 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
2017	196	71	15	282
2018	193	75	15	283
2019	186	78	16	280
2020	185	80	17	282
2021	180	82	18	280
Years 2022–2026	847	446	101	1 394

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 2015 and in 2016 was USD 77 million and USD 69 million, respectively.

15 Share-based payments

As of 31 December 2015 and 2016, the Group had the share-based compensation plans as described below.

Total compensation cost for share-based compensation plans recognised in net income was USD 61 million and USD 66 million in 2015 and 2016, respectively. The related tax benefit was USD 13 million and USD 14 million, respectively.

Stock option plans

No options were granted under stock option plans from 2007 onwards. Options issued vest at the end of the fourth year and have a maximum life of ten years.

A summary of the activity of the Group's stock option plans for the year ended 31 December 2016 is as follows:

	Weighted average exercise price in CHF	Number of options
Outstanding as of 1 January	82	100 000
Options sold	82	–100 000
Outstanding as of 31 December		**0**
Exercisable as of 31 December		**0**

The total intrinsic value of the options sold was CHF 1 million. The fair value of the option grant was estimated on the date of grant using a binomial option-pricing model. The underlying strike price for the outstanding options has been adjusted for the special dividend payout in 2013, 2014 and 2015.

Restricted shares

The Group granted 7 776 and 47 795 restricted shares to selected employees in 2015 and 2016, respectively. Moreover, as an alternative to the Group's cash bonus programme, 288 125 and 300 382 shares were delivered during 2015 and 2016, respectively, which are not subject to forfeiture risk.

A summary of the movements in shares relating to outstanding awards granted under the restricted share plans for the year ended 31 December 2016 is as follows:

	Weighted average grant date fair value in CHF[1]	Number of shares
Non-vested at 1 January	79	531 018
Granted	88	348 177
Delivery of restricted shares	78	–339 103
Forfeited	62	–11 420
Outstanding as of 31 December	**86**	**528 672**

[1] Equal to the market price of the shares on the date of grant.

Leadership Performance Plan

The Leadership Performance Plan (LPP) awards are expected to be settled in shares, and the requisite service as well as the maximum contractual term are three years. For LPP 2014, LPP 2015 and LPP 2016 awards, an additional two-year holding period applies for all members of the Group EC and other key executives. At grant date the award is split equally into two underlying components — Restricted Share Units (RSUs) and Performance Share Units (PSUs). The RSUs are measured against a ROE performance condition and will vest within a range of 0–100%. The PSUs are based on relative total shareholder return, measured against a pre-defined group of peers and will vest within a range of 0–200%. The fair values of both components are measured separately, based on stochastic models.

The fair value assumptions included in the grant valuation are based on market estimates for dividends (and an additional special dividend of CHF 4.00 for the LPP 2013, a special dividend of CHF 4.15 for the LPP 2014, and a special dividend of CHF 3.00 for the LPP 2015 respectively) and the risk free rate based on the average of the 5-year US government bond rate (for LPP 2013, LPP 2014 and LPP 2015) and the average of the 10-year US government bond rate (for LPP 2016) taken monthly over each year in the performance period. This resulted in risk free rates between 1.0% and 3.1% for all LPP plans.

For the year ended 31 December 2016, the outstanding units were as follows:

RSUs	LPP 2013	LPP 2014	LPP 2015	LPP 2016
Non-vested at 1 January	329 860	354 090	324 690	
Granted				364 472
Forfeitures		–4 130	–3 885	–3 685
Vested	–329 860			
Outstanding as of 31 December	**0**	**349 960**	**320 805**	**360 787**
Grant date fair value in CHF	**61.19**	**60.85**	**67.65**	**67.91**

PSUs				
Non-vested at 1 January	383 880	357 840	358 080	
Granted				494 518
Forfeitures		–4 170	–4 295	–4 999
Vested	–383 880			
Outstanding as of 31 December	**0**	**353 670**	**353 785**	**489 519**
Grant date fair value in CHF	**52.59**	**60.21**	**61.37**	**50.04**

Unrecognised compensation costs

As of 31 December 2016, the total unrecognised compensation cost (net of forfeitures) related to non-vested, share-based compensation awards was USD 57 million and the weighted average period over which that cost is expected to be recognised is 1.9 years.

The number of shares authorised for the Group’s share-based payments to employees was 3 554 592 and 3 665 794 as of 31 December 2015 and 2016, respectively. The Group’s policy is to ensure that sufficient treasury shares are available at all times to settle share-based compensation plans.

Global Share Participation Plan

In June 2013, Swiss Re introduced the Global Share Participation Plan, which is a share purchase plan that was rolled out for the benefit of employees of companies within the Group. Swiss Re makes a financial contribution to participants in the Plan, by matching the commitment that they make during the plan cycle with additional Swiss Re shares.

If the employee is still employed by Swiss Re at the end of a plan cycle, the employee will receive an additional number of shares equal to 30% of the total number of purchased and dividend shares held at that time. In 2015 and 2016, Swiss Re contributed USD 10 million and USD 12 million to the plans and authorised 211 472 and 178 233 shares as of 31 December 2015 and 2016, respectively.

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16 Compensation, participations and loans of members of governing bodies

The disclosure requirements under Swiss Company Law in respect of compensation and loans to the members of the Board of Directors and of the Group Executive Committee, as well as closely related persons, are detailed in the Compensation report on pages 155–160 of the Financial Report of the Swiss Re Group.

The disclosure requirements under Swiss Company Law in respect of participations of members of the Board of Directors and the Group Executive Committee, as well as closely related persons, are detailed on pages 292–293 of the Annual Report of Swiss Re Ltd.

17 Related parties

The Group defines the following as related parties to the Group: subsidiaries of Swiss Re Ltd, entities in which the Group has significant influence, pension plans, members of the Board of Directors (BoD) and the Group Executive Committee (EC) and their close family members, and entities which are directly and indirectly controlled by members of governing bodies of the Group and their close family members.

As part of the consolidation process, transactions between Swiss Re Ltd and subsidiaries are eliminated in consolidation and are not disclosed in the notes.

As of 31 December 2015 and 2016, the Group's investment in mortgages and other loans included USD 287 million and USD 292 million, respectively, of loans due from employees, and USD 196 million and USD 184 million, respectively, due from officers. These loans generally consist of mortgages offered at variable and fixed interest rates.

Contributions made to defined benefit pension plans and post-retirement benefit plans are disclosed in Note 14 Benefit plans. Plan assets of the defined benefit pension plans include Swiss Re common stock of USD 6 million (0.1% of total plan assets) and USD 7 million (0.1% of total plan assets) as of 31 December 2015 and 2016, respectively.

Share ownership and loans extended to members of BoD and Group EC are disclosed in Note 16 Compensation, participations and loans of members of governing bodies. The total number of shares, options and related instruments held by members of the BoD and the Group EC and persons closely related to, amounts to less than 1% of the shares issued by Swiss Re Ltd. None of the members of BoD and the Group EC has any significant business connection with Swiss Re Ltd or any of its Group companies. The Group BoD member Susan L. Wagner is also board member of BlackRock, Inc. BlackRock, Inc is acting as external asset manager for the Group.

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

USD millions	2015	**2016**
Share in earnings of equity-accounted investees	52	41
Dividends received from equity-accounted investees	254	176

18 Commitments and contingent liabilities

Leasing commitments

As part of its normal business operations, the Group enters into a number of lease agreements. As of 31 December, such agreements, which are operating leases, total the following obligations for the next five years and thereafter:

USD millions	2016
2017	82
2018	69
2019	57
2020	51
2021	41
After 2021	297
Total operating lease commitments	**597**
Less minimum non-cancellable sublease rentals	23
Total net future minimum lease commitments	**574**

Minimum rentals for all operating leases (except those with terms of a month or less that were not renewed) for the years ended 31 December 2015 and 2016 were USD 63 million and USD 76 million, respectively.

Other commitments

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 2016 were USD 1 234 million.

The Group entered into a real estate construction contract. The commitments under the contract amount to USD 92 million over the next four years.

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 disposition 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.

19 Significant subsidiaries and equity investees

		Share capital (millions)	Affiliation in % as of 31.12.2016	Method of consolidation
Europe				
Germany				
Swiss Re Germany GmbH, Munich	EUR	45	100	f
Ireland				
Ark Life Assurance Company dac, Dublin	EUR	19	100	f
Jersey				
ReAssure Holdings Limited, St Helier	GBP	0	100	f
ReAssure Jersey One Limited, St Helier	GBP	1	100	f
ReAssure Jersey Two Limited, St Helier	GBP	3	100	f
Swiss Re Admin Re Limited, St Helier	GBP	3	100	f
Swiss Re ReAssure Midco Limited, St Helier	GBP	0	100	f
Liechtenstein				
Elips Life AG, Triesen	CHF	12	100	f
Elips Versicherungen AG, Triesen	CHF	5	100	f
Luxembourg				
iptiQ Life S.A., Luxembourg	EUR	6	100	f
Swiss Re Europe Holdings S.A., Luxembourg	EUR	105	100	f
Swiss Re Europe S.A., Luxembourg	EUR	350	100	f
Swiss Re Finance (Luxembourg) S.A., Luxembourg	EUR	0	100	f
Swiss Re Funds (Lux) I, Senningerberg[1]	EUR	12 316	100	f
Swiss Re International SE, Luxembourg	EUR	182	100	f
Netherlands				
Algemene Levensherverzekering Maatschappij N.V., Amstelveen	EUR	1	100	f
Switzerland				
Swiss Re Asia Ltd, Zurich	CHF	312	100	f
Swiss Re Asset Management Geneva SA, Carouge	CHF	0	100	f
Swiss Re Corporate Solutions Ltd, Zurich	CHF	100	100	f
Swiss Re Direct Investments Company Ltd, Zurich	CHF	0	100	f
Swiss Re Investments Company Ltd, Zurich	CHF	0	100	f
Swiss Re Investments Holding Company Ltd, Zurich	CHF	0	100	f
Swiss Re Investments Ltd, Zurich	CHF	1	100	f
Swiss Re Life Capital Ltd, Zurich	CHF	0	100	f
Swiss Re Management Ltd, Adliswil	CHF	0	100	f
Swiss Re Principal Investments Company Ltd, Zurich	CHF	0	100	f
Swiss Re Reinsurance Holding Company Ltd, Zurich	CHF	0	100	f
Swiss Reinsurance Company Ltd, Zurich	CHF	34	100	f

Method of consolidation

f full
e equity
fv fair value
[1] Net asset value instead of share capital

	Share capital (millions)		Affiliation in % as of 31.12.2016	Method of consolidation
United Kingdom				
Pension Insurance Corporation Group Limited, London	GBP	757	4	fv
ReAssure FSH UK Limited, Shropshire	GBP	710	100	f
ReAssure Group Limited, Shropshire	GBP	949	100	f
ReAssure Life Limited, Shropshire	GBP	0	100	f
ReAssure Limited, Shropshire	GBP	289	100	f
Swiss Re Services Limited, London	GBP	2	100	f
Swiss Re Specialised Investments Holdings (UK) Limited, London	GBP	1	100	f
Americas and Caribbean				
Barbados				
European Finance Reinsurance Company Ltd., Bridgetown	USD	5	100	f
European International Reinsurance Company Ltd., Bridgetown	USD	1	100	f
Milvus I Reassurance Limited, Bridgetown	USD	397	100	f
Swiss Re (Barbados) Finance Limited, Bridgetown	GBP	0	100	f
Bermuda				
CORE Reinsurance Company Limited, Hamilton	USD	0	100	f
Swiss Re Global Markets Limited, Hamilton	USD	0	100	f
Brazil				
Sul America S.A., Rio de Janeiro	BRL	2 320	15	e
Swiss Re Brasil Resseguros S.A., São Paulo	BRL	295	100	f
Cayman Islands				
Ampersand Investments (UK) Limited, George Town	GBP	0	100	f
FWD Group Ltd, George Town	USD	0	15	e
PEP SR I Umbrella L.P., George Town	USD	671	100	f
Swiss Re Strategic Investments UK Limited, George Town	GBP	0	100	f
Colombia				
Compañía Aseguradora de Fianzas S.A. Confianza, Bogotá	COP	224 003	51	f

		Share capital (millions)	Affiliation in % as of 31.12.2016	Method of consolidation
United States				
Claret Re Inc., Burlington	USD	5	100	f
Facility Insurance Holding Corporation, Dallas	USD	0	100	f
First Specialty Insurance Corporation, Jefferson City	USD	5	100	f
North American Capacity Insurance Company, Manchester	USD	4	100	f
North American Elite Insurance Company, Manchester	USD	4	100	f
North American Specialty Insurance Company, Manchester	USD	13	100	f
Pecan Re Inc., Burlington	USD	5	100	f
Pillar RE Holdings LLC, Wilmington	USD	0	100	f
SR Corporate Solutions America Holding Corporation, Wilmington	USD	0	100	f
Sterling Re Inc., Burlington	USD	219	100	f
Swiss Re America Holding Corporation, Wilmington	USD	0	100	f
Swiss Re Capital Markets Corporation, New York	USD	0	100	f
Swiss Re Corporate Solutions Global Markets Inc., New York	USD	0	100	f
Swiss Re Financial Markets Corporation, Wilmington	USD	0	100	f
Swiss Re Financial Products Corporation, Wilmington	USD	2 116	100	f
Swiss Re Life & Health America Holding Company, Wilmington	USD	0	100	f
Swiss Re Life & Health America Inc., Jefferson City	USD	4	100	f
Swiss Re Management (US) Corporation, Wilmington	USD	0	100	f
Swiss Re Partnership Holding, LLC, Dover	USD	308	100	f
Swiss Re Risk Solutions Corporation, Wilmington	USD	0	100	f
Swiss Re Treasury (US) Corporation, Wilmington	USD	0	100	f
Swiss Reinsurance America Corporation, Armonk	USD	10	100	f
Washington International Insurance Company, Manchester	USD	4	100	f
Westport Insurance Corporation, Jefferson City	USD	6	100	f
Africa				
South Africa				
Swiss Re Life and Health Africa Limited, Cape Town	ZAR	2	100	f
Asia-Pacific				
Australia				
Swiss Re Australia Ltd, Sydney	AUD	845	100	f
Swiss Re Life & Health Australia Limited, Sydney	AUD	980	100	f
China				
Alltrust Insurance Company of China Limited, Shanghai	CNY	2 178	5	fv
Swiss Re Corporate Solutions Insurance China Ltd, Shanghai	CNY	500	100	f
Vietnam				
Vietnam National Reinsurance Corporation, Hanoi	VND	1 310 759	25	e

20 Variable interest entities

The adoption of ASU 2015-02 as of 1 January 2016 led to an increase in the number of variable interest entities (VIEs), mainly due to the evaluation of partnerships and investment funds.

The Group enters into arrangements with 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 of the following:

- 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 reassesses regularly 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 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 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.

The Group consolidates a debt-financing vehicle created to borrow locally part of the funding for a strategic investment. The Group established and capitalised the entity, decided terms of its debt and provides debt guarantee to the lender, thereby satisfying both criteria for a controlling financial interest: power over activities most significant to the vehicle's economic performance and potentially significant economic interest.

As part of a broader run-off transaction, the Group holds equity in and borrows funds from a VIE. The assets held by the VIE consist primarily of investment grade securities and the majority of their returns is absorbed by a third party, minimising the Group's maximum exposure. The Group is not a primary beneficiary of the VIE, because it does not have power over most significant activities of the VIE and its interests are not potentially significant.

Investment vehicles

The ASU 2015-02 implementation resulted in consolidation by the Group of a real estate investment entity, which holds real estate backing annuities business. The Group is its primary beneficiary, because it has both power over the entity's investment decisions, as well as a significant variable interest in the entity.

The Group's variable interests in investment partnerships arise through ownership of the limited partner interests. Many investment partnerships are VIEs under ASU 2015-02, 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 7 and not included in the tables below.

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 under ASU 2015-02, 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 below.

Investment vehicles (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, as well as provides retrocession for the majority of the vehicle's insurance risk and receives performance-based fees. Additionally, the Group is obligated to provide the vehicle with loans in case of a deficit. The vehicle is a VIE, primarily because its total equity investment at risk is insufficient and the members lack decision-making rights.

The Group did not provide financial or other support to any VIEs during 2016 that it was not previously contractually required to provide.

Consolidated VIEs

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

USD millions	2015	2016
Fixed income securities available-for-sale	3 876	3 715
Investment real estate		209
Short-term investments	88	128
Other invested assets	26	
Cash and cash equivalents	147	42
Accrued investment income	42	33
Premiums and other receivables	34	33
Deferred acquisition costs	9	9
Deferred tax assets	38	94
Other assets	8	12
Total assets	4 268	**4 275**
Unpaid claims and claim adjustment expenses	53	65
Unearned premiums	26	25
Reinsurance balances payable	2	6
Deferred and other non-current tax liabilities	96	213
Accrued expenses and other liabilities	17	178
Long-term debt	2 720	2 270
Total liabilities	2 914	**2 757**

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 in 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	2015	2016
Fixed income securities available-for-sale	52	525
Equity securities available-for-sale		492
Policy loans, mortgages and other loans	1	876
Other invested assets	1 706	2 387
Investments for unit-linked and with-profit business		8 770
Premiums and other receivables		3
Total assets	1 759	**13 053**
Accrued expenses and other liabilities	45	78
Total liabilities	45	**78**

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:

			2015			2016
USD millions	Total assets	Total liabilities	Maximum exposure to loss[1]	Total assets	Total liabilities	Maximum exposure to loss[1]
Insurance-linked securitisations	52		52	336		331
Life and health funding vehicles	2	1	1 777	2	1	1 948
Swaps in trusts	146	44	–[2]	164	77	–[2]
Debt financing	361		27	302		22
Investment vehicles	1 009		1 011	2 423		2 424
Investment vehicles for unit-linked and with-profit business				8 770		
Commercial mortgage/infrastructure loans				1 053		1 053
Other	189		189	3		3
Total	1 759	45	–[2]	**13 053**	**78**	**–[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.

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Report of the statutory auditor

Report of the statutory auditor
to the General Meeting of
Swiss Re Ltd
Zurich

Report of the statutory auditor on the consolidated financial statements

As statutory auditor, we have audited the consolidated financial statements of Swiss Re Ltd and its subsidiaries (the 'Company'), which comprise the consolidated balance sheet as of 31 December 2016, and the related consolidated income statement, statement of comprehensive income, statement of shareholders' equity, statement of cash flow and notes (pages 164 to 274) for the year ended 31 December 2016.

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 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 judgement, 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 present fairly, in all material respects, the financial position of the Company at 31 December 2016, the results of their operations and their cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America and comply with Swiss law.

Other matter

Accounting principles generally accepted in the United States of America require that the supplementary information based on the requirements of ASU 2015-09, Disclosures about Short-Duration Contracts, on pages 206 to 214 be presented to supplment 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 management about the methods of preparing the information and comparing the information for consistency with management'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.

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 judgement, 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

Given the ongoing market volatility and macroeconomic uncertainty, investment valuation continues to be an area of inherent risk. The risk is not the same for all investment types and is greatest for those listed below, where the investments are more difficult to value because quoted prices are not always available:

- Fixed income securitised products
- Fixed income mortgage and asset-backed securities
- Private placements
- Private equity
- Derivatives — equity funds
- Derivatives — credit contracts
- Derivatives — rates
- Other derivatives and insurance-related financial products

How our audit addressed the key audit matter

We assessed and tested the design and operating effectiveness of selected key controls of the valuation models for level 2 and 3 investments, including the Company's independent price verification process.

In relation to the matters set out opposite, our substantive testing procedures included the following:

- Evaluating the 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.
- Testing the operation of data integrity and change management controls relating to the models.
- Engaging our own valuation experts to perform independent valuations, where applicable.

On the basis of the work performed, we consider the assumptions used by management to be appropriate and that the investments classified as level 2 and 3 are properly valued as of 31 December 2016.

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

Key audit matter

The 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. The Company uses a range of actuarial methodologies and methods to estimate these provisions. Actuarially determined P&C loss reserves require significant judgement 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 assumptions include, but are not limited to, interest rates, inflation trends, claims trends, regulatory decisions, historical claims information and the growth of exposure.

In particular, 'long tail' lines of business (for example, Liability, US Asbestos and Environmental, Motor Liability and Workers' Compensation) are generally more difficult to project. This is due to the protracted period over which claims can be reported as well as the fact that claims settlements are often less frequent but of higher impact. They are also subject to greater uncertainties than claims relating to 'short-tail' business. Long-tailed lines of business generally rely on many assumptions based on experts' judgement.

Moreover, not all natural catastrophe events and/or significant man-made losses can be modelled using traditional actuarial methodologies, which increases the degree of judgement needed in establishing reserves for these events.

How our audit addressed the key audit matter

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 management 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:

- 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 test independently management's estimates of P&C loss reserves, and evaluating 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 product lines. For these product lines, we compared our calculations of projected reserves with those of the Company taking into account the available corroborating and contrary evidence and challenging management's assumptions as appropriate.
- Assessing the process and related judgements of management 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 testing and evaluating the appropriateness of any significant adjustments made by management to P&C loss reserve estimates.

On the basis of the work performed, we consider that the methodology, assumptions and underlying data used in the valuation of actuarially determined P&C loss reserves to be reasonable and in line with financial reporting requirements and accepted industry practice.

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

Key audit matter

The Company's valuation of liabilities for L&H policy benefits and policyholder account balances involves complex judgements about future events affecting the business. Actuarial assumptions selected by the Company with respect to interest rates, 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.

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, management 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 changes in estimates or as an out-of-period adjustment.

How our audit addressed the key audit matter

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 management in the valuation of actuarially determined L&H reserves.

In relation to the matters set out opposite, our substantive testing procedures included the following:
- 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.
- Performing independent model validation procedures, including detailed testing of models, independent recalculations and back testing.
- Involving our own life insurance actuarial specialists to test the methodology and assumptions used by management, with particular consideration of industry studies, the Company's experience and management's liability adequacy test procedures.
- 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.

On the basis of the work performed, we consider that the methodology, assumptions and underlying data used in the valuation of actuarially determined L&H reserves to be reasonable and in line with financial reporting requirements and accepted industry practice.

Valuation of uncertain tax items — initial probability assessment

Key audit matter

The Company is carrying a provision for uncertain tax items on its books. The valuations of these items are based on management's estimates and 'more-likely-than-not' tax assessments. Fluctuations in the estimates of uncertain tax items have an impact (through income tax expense) on the results.

How our audit addressed the key audit matter

We assessed and tested the design and operating effectiveness of selected key controls of the completeness of the uncertain tax items and management's assessment of them.

In relation to the matters set out opposite, our substantive testing procedures included the following:
- Critically reviewing the 'more-likely-than-not' tax assessments to evaluate the Company's judgements and estimates of the probabilities and the amounts.
- Assessing how the Company had considered new information or changes in tax law or case law, and assessing the Company's judgement of how these impact the Company's position or measurement of the required provision.

On the basis of the work performed, we consider management's initial assessment relating to the valuation of the uncertain tax items 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 Ltd

Alex Finn

Bret M. Griffin

Alex Finn
Audit expert
Auditor in charge

Bret Griffin

Zurich, 15 March 2017

Group financial years 2007–2016

USD millions	2007[1]	2008[1]	2009[1]
Income statement			
Revenues			
Premiums earned	26 337	23 577	22 664
Fee income	794	746	847
Net investment income	8 893	7 331	6 399
Net realised investment gains/losses	–615	–8 677	875
Other revenues	251	249	178
Total revenues	35 660	23 226	30 963
Expenses			
Claims and claim adjustment expenses	–10 035	–9 222	–8 336
Life and health benefits	–9 243	–8 381	–8 639
Return credited to policyholders	–1 763	2 611	–4 597
Acquisition costs	–5 406	–4 950	–4 495
Other operating costs and expenses	–4 900	–4 358	–3 976
Total expenses	–31 347	–24 300	–30 043
Income/loss before income tax expense	4 313	–1 074	920
Income tax expense	–853	411	–221
Net income/loss before attribution of non-controlling interests	3 460	–663	699
Income/loss attributable to non-controlling interests			
Net income/loss after attribution of non-controlling interests	3 460	–663	699
Interest on contingent capital instruments			–203
Net income/loss attributable to common shareholders	3 460	–663	496
Balance sheet			
Assets			
Investments	201 221	154 053	151 341
Other assets	70 198	71 322	81 407
Total assets	271 419	225 375	232 748
Liabilities			
Unpaid claims and claim adjustment expenses	78 195	70 944	68 412
Liabilities for life and health policy benefits	44 187	37 497	39 944
Unearned premiums	6 821	7 330	6 528
Other liabilities	95 172	73 366	73 336
Long-term debt	18 898	17 018	19 184
Total liabilities	243 273	206 155	207 404
Shareholders' equity	28 146	19 220	25 344
Non-controlling interests			
Total equity	28 146	19 220	25 344
Earnings/losses per share in USD	9.94	–2.00	1.46
Earnings/losses per share in CHF	11.95	–2.61	1.49

[1] The Group changed its reporting currency from CHF into USD in 2010. Periods prior to 2010 have been translated to USD for informational purposes only based on the Group's average exchange rates for the income statements and year-end rates for the balance sheets.
[2] The Group updated its balance sheet presentation of deferred tax assets and liabilities. Deferred tax assets and liabilities are presented on a gross basis as per the first quarter 2013. The comparative period has been adjusted accordingly and is consistent with the relevant income tax disclosure in the notes to the financial statements in the prior year.

2010	2011	2012[2]	2013	2014	2015	**2016**
19 652	21 300	24 661	28 276	30 756	29 751	**32 691**
918	876	785	542	506	463	**540**
5 422	5 469	5 302	4 735	4 992	4 236	**4 740**
2 783	388	2 688	3 325	1 059	1 220	**5 787**
60	50	188	24	34	44	**28**
28 835	28 083	33 624	36 902	37 347	35 714	**43 786**
–7 254	–8 810	–7 763	–9 655	–10 577	–9 848	**–12 564**
–8 236	–8 414	–8 878	–9 581	–10 611	–9 080	**–10 859**
–3 371	–61	–2 959	–3 678	–1 541	–1 166	**–5 099**
–3 679	–4 021	–4 548	–4 895	–6 515	–6 419	**–6 928**
–3 620	–3 902	–3 953	–4 268	–3 876	–3 882	**–3 964**
–26 160	–25 208	–28 101	–32 077	–33 120	–30 395	**–39 414**
2 675	2 875	5 523	4 825	4 227	5 319	**4 372**
–541	–77	–1 125	–312	–658	–651	**–749**
2 134	2 798	4 398	4 513	3 569	4 668	**3 623**
–154	–172	–141	–2		–3	**3**
1 980	2 626	4 257	4 511	3 569	4 665	**3 626**
–1 117		–56	–67	–69	–68	**–68**
863	2 626	4 201	4 444	3 500	4 597	**3 558**
156 947	162 224	152 812	150 075	143 987	137 810	**155 016**
71 456	63 675	68 691	63 445	60 474	58 325	**60 049**
228 403	225 899	221 503	213 520	204 461	196 135	**215 065**
64 690	64 878	63 670	61 484	57 954	55 518	**57 355**
39 551	39 044	36 117	36 033	33 605	30 131	**41 176**
6 305	8 299	9 384	10 334	10 576	10 869	**11 629**
72 524	65 850	62 020	57 970	53 670	55 033	**59 402**
18 427	16 541	16 286	14 722	12 615	10 978	**9 787**
201 497	194 612	187 477	180 543	168 420	162 529	**179 349**
25 342	29 590	34 002	32 952	35 930	33 517	**35 634**
1 564	1 697	24	25	111	89	**82**
26 906	31 287	34 026	32 977	36 041	33 606	**35 716**
2.52	7.68	11.85	12.97	10.23	13.44	**10.72**
2.64	6.79	11.13	12.04	9.33	12.93	**10.55**

Annual Report Swiss Re Ltd

Swiss Re Ltd (the Company), domiciled in Zurich, Switzerland, is the ultimate holding company of the Swiss Re Group. Its principal activity is the holding of investments in Swiss Re Group companies.

Income statement

Net income for 2016 amounted to CHF 3 972 million (2015: CHF 3 865 million) and was mostly driven by cash dividends from subsidiaries and affiliated companies of CHF 3 517 million.

The Company earned trademark licence fees of CHF 339 million and other revenues of CHF 263 million, mainly consisting of net realised foreign exchange gains of CHF 252 million. In addition, the Company incurred administrative expenses of CHF 147 million, of which CHF 143 million were charges for services provided by Swiss Re Management Ltd and Swiss Reinsurance Company Ltd, and other expenses of CHF 70 million, due to financing costs related to subordinated debt facilities of CHF 63 million and capital and indirect taxes of CHF 7 million.

Assets

Total assets increased from CHF 21 840 million as of 31 December 2015 to CHF 23 173 million as of 31 December 2016.

Current assets decreased by CHF 683 million to CHF 3 596 million as of 31 December 2016, mainly driven by a decrease in short-term investments due to the funding of the acquisition of Guardian Financial Services.

Non-current assets increased from CHF 17 561 million as of 31 December 2015 to CHF 19 577 million as of 31 December 2016. Loans to subsidiaries and affiliated companies increased by CHF 103 million due to a new credit facility with Swiss Re Management Ltd. Investments in subsidiaries and affiliated companies increased from CHF 17 561 million as of 31 December 2015 to CHF 19 474 million as of 31 December 2016 due to capital contributions to Swiss Re Life Capital Ltd of CHF 1 736 million, Swiss Re Management Ltd of CHF 100 million and Swiss Re Principal Investments Company Ltd of CHF 77 million.

Liabilities

Total liabilities decreased from CHF 371 million as of 31 December 2015 to CHF 352 million as of 31 December 2016.

Short-term liabilities increased by CHF 121 million to CHF 239 million as of 31 December 2016, mainly due to an increase in accrued expenses of CHF 80 million and payables to subsidiaries and affiliated companies of CHF 40 million.

Long-term liabilities decreased by CHF 140 million to CHF 113 million as of 31 December 2016, mainly due to a reduction in the provision for currency fluctuations of CHF 154 million, partially offset by an increase in the tax provision of CHF 14 million.

Shareholders' equity

Shareholders' equity increased from CHF 21 469 million as of 31 December 2015 to CHF 22 821 million as of 31 December 2016, mainly due to net income of CHF 3 972 million, partially offset by dividends to shareholders of CHF 1 525 million and share buy-back programmes of CHF 1 091 million.

Share capital decreased by CHF 1 million to CHF 36 million as of 31 December 2016 and legal profit reserves decreased by CHF 903 million to CHF 8 265 million as of 31 December 2016 resulting from the cancellation of own shares.

Legal capital reserves decreased by CHF 65 million to CHF 192 million as of 31 December 2016 due to the cancellation of own shares of CHF 96 million, partially offset by net realised gains on sale of own shares of CHF 31 million.

Own shares (directly held by the Company) increased by CHF 125 million to CHF 1 555 million as of 31 December 2016 due to net purchases of own shares of CHF 34 million and share buy-back programmes of CHF 1 091 million, partially offset by the cancellation of own shares of CHF 1 000 million.

Income statement Swiss Re Ltd

For the years ended 31 December

CHF millions	Notes	2015	2016
Revenues			
Investment income	2	3 563	**3 613**
Trademark licence fees		306	**339**
Other revenues		156	**263**
Total revenues		4 025	**4 215**
Expenses			
Administrative expenses	3	–112	**–147**
Investment expenses	2	–1	**–1**
Other expenses		–20	**–70**
Total expenses		–133	**–218**
Income before income tax expense		3 892	**3 997**
Income tax expense		–27	**–25**
Net income		3 865	**3 972**

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

Balance sheet Swiss Re Ltd

As of 31 December

Assets

CHF millions	Notes	2015	2016
Current assets			
Cash and cash equivalents		26	**6**
Short-term investments	4	1 917	**1 158**
Receivables from subsidiaries and affiliated companies		49	**170**
Other receivables and accrued income		0	**2**
Loans to subsidiaries and affiliated companies		2 287	**2 260**
Total current assets		4 279	**3 596**
Non-current assets			
Loans to subsidiaries and affiliated companies		0	**103**
Investments in subsidiaries and affiliated companies	5	17 561	**19 474**
Total non-current assets		17 561	**19 577**
Total assets		21 840	**23 173**

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

Liabilities and shareholders' equity

CHF millions	Notes	2015	2016
Liabilities			
Short-term liabilities			
Payables to subsidiaries and affiliated companies		0	**40**
Other liabilities and accrued expenses		118	**199**
Total short-term liabilities		118	**239**
Long-term liabilities			
Provisions		253	**113**
Total long-term liabilities		253	**113**
Total liabilities		371	**352**
Shareholders' equity	7		
Share capital	9	37	**36**
Legal reserves from capital contributions	*10*	*192*	***192***
Other legal capital reserves		*65*	***0***
Legal capital reserves		257	**192**
Legal profit reserves		9 168	**8 265**
Reserve for own shares (indirectly held by subsidiaries)		18	**17**
Voluntary profit reserves		9 550	**11 890**
Retained earnings brought forward		4	**4**
Net income for the financial year		3 865	**3 972**
Own shares (directly held by the Company)	8	–1 430	**–1 555**
Total shareholders' equity		21 469	**22 821**
Total liabilities and shareholders' equity		21 840	**23 173**

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

Notes Swiss Re Ltd

1 Significant accounting principles

Basis of presentation
The financial statements are prepared in accordance with Swiss Company Law.

Time period
The financial year 2016 comprises the accounting period from 1 January 2016 to 31 December 2016.

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

Foreign currency translation
Assets and liabilities denominated in foreign currencies are converted into Swiss francs at year-end exchange rates with the exception of participations, which are 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.

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

Short-term investments
Short-term investments contain investments with an original maturity between three months and one year. Such investments are carried at cost, less necessary and legally permissible depreciation.

Receivables from subsidiaries and affiliated companies/Other receivables
These assets are carried at nominal value. Value adjustments are recorded where the expected recovery value is lower than the nominal value.

Accrued income
Accrued income consists of both other expenditures incurred during the financial year but relating to a subsequent financial year, and revenues relating to the current financial year but receivable in a subsequent financial year.

Loans to subsidiaries and affiliated companies
Loans to subsidiaries and affiliated companies are carried at nominal value. Value adjustments are recorded where the expected recovery value is lower than the nominal value.

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

Payables to subsidiaries and affiliated companies/Other liabilities
These liabilities are carried at nominal value.

Accrued expenses
Accrued expenses consist of both income received before the balance sheet date but relating to a subsequent financial year, and charges relating to the current financial year but payable in a subsequent financial year.

Provisions

Provisions contain provision for currency fluctuation and provision for taxation.

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

The provision for taxation represents an estimate of taxes payable in respect of the reporting year.

Other legal capital reserves

Other legal capital reserves reflect gains and losses from sale of own shares (directly held by the Company).

Reserve for own shares (indirectly held by subsidiaries)

Reserve for own shares is accounted for at the book value of those shares in the statutory financial statements of the respective subsidiary.

Own shares (directly held by the Company)

Own shares are carried at cost and presented as a deduction in shareholders' equity.

Foreign exchange transaction gains and losses

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

Dividends from subsidiaries and affiliated companies

Dividends from subsidiaries and affiliated companies are recognised as investment income in the year in which they are declared.

Trademark licence fees

Trademark licence fees are charged by the Company to its direct and indirect subsidiaries and their branches that benefit from the use of the Swiss Re brand.

Capital and indirect taxes

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

Income tax expense

As a holding company incorporated in Switzerland, Swiss Re Ltd is exempt from income taxation at cantonal/communal level. On the federal level, dividends from subsidiaries and affiliated companies are indirectly exempt from income taxation (participation relief). However, income tax is payable on trademark licence fees charged to certain subsidiaries and affiliated companies.

Subsequent events

Subsequent events for the current reporting period have been evaluated up to 15 March 2017.
This is the date on which the financial statements are available to be issued.

2 Investment income and expenses

CHF millions	2015	2016
Cash dividends from subsidiaries and affiliated companies	3 539	**3 517**
Realised gains on sale of investments	4	**7**
Income from short-term investments	2	**2**
Income from loans to subsidiaries and affiliated companies	17	**35**
Investment management income	1	**1**
Other interest revenues	0	**51**
Investment income	3 563	**3 613**

CHF millions	2015	2016
Realised losses on sale of investments	0	**0**
Investment management expenses	1	**1**
Other interest expenses	0	**0**
Investment expenses	1	**1**

3 Administrative expenses and personnel information

Swiss Re Ltd receives management and other services from Swiss Re Management Ltd and Swiss Reinsurance Company Ltd and has no employees of its own.

4 Securities lending

As of 31 December 2016, securities of CHF 1 034 million were lent to Group companies under securities lending agreements, whereas in 2015 securities of CHF 545 million were lent to Group companies. As of 31 December 2016 and 2015, there were no securities lent to third parties.

5 Investments in subsidiaries and affiliated companies

As of 31 December 2016 and 2015, Swiss Re Ltd held directly the following investments in subsidiaries and affiliated companies:

As of 31 December 2016	Domicile	Currency	Share capital (millions)	Affiliation in %	Voting interest in %
Swiss Reinsurance Company Ltd	Zurich	CHF	34.4	100	100
Swiss Re Corporate Solutions Ltd	Zurich	CHF	100.0	100	100
Swiss Re Life Capital Ltd	Zurich	CHF	0.1	100	100
Swiss Re Investments Holding Company Ltd	Zurich	CHF	0.1	100	100
Swiss Re Principal Investments Company Ltd	Zurich	CHF	0.1	100	100
Swiss Re Management Ltd	Zurich	CHF	0.1	100	100
Swiss Re Specialised Investments Holdings (UK) Ltd	London	GBP	1.0	100	100

As of 31 December 2015	Domicile	Currency	Share capital (millions)	Affiliation in %	Voting interest in %
Swiss Reinsurance Company Ltd	Zurich	CHF	34.4	100	100
Swiss Re Corporate Solutions Ltd	Zurich	CHF	100.0	100	100
Swiss Re Life Capital Ltd	Zurich	CHF	0.1	100	100
Swiss Re Investments Holding Company Ltd	Zurich	CHF	0.1	100	100
Swiss Re Principal Investments Company Ltd	Zurich	CHF	0.1	100	100
Swiss Re Specialised Investments Holdings (UK) Ltd	London	GBP	1.0	100	100

Further disclosures in respect of investments in significant indirect subsidiaries and affiliated companies are detailed in note 19 "Significant subsidiaries and equity investees" on pages 267 to 269 in the notes to the Group financial statements, where the voting interests are equal to the affiliations disclosed, except of Sul América S.A. where the voting rights are equal to 10%.

6 Commitments

In November 2015, the Company established a subordinated debt facility with a termination date of 15 August 2025. The facility allows the Company to issue at any time subordinated fixed-to-floating rate callable notes with a face value of up to USD 700 million, having a first optional redemption date of 15 August 2025 and a maturity date of 15 August 2050. The Company pays a fee of 3.53% per annum on the available commitment under the facility. Notes issued under the facility have a fixed coupon of 5.75% per annum until the first optional redemption date. Notes, when issued under the facility, will be classified as subordinated debt. As of 31 December 2016, no notes have been issued under the facility.

In November 2015, the Company entered into a subordinated funding facility with its subsidiary Swiss Reinsurance Company Ltd under which Swiss Reinsurance Company Ltd has the right, among others, to issue subordinated notes to the Company of up to USD 700 million at any time before August 2030. For its various rights, Swiss Reinsurance Company Ltd owes the Company an unconditional fixed commitment fee, payable in annual instalments calculated as 5.80% on the total facility amount. Annually, Swiss Reinsurance Company Ltd receives a partial reimbursement of the commitment fee equal to 2.22% per annum on the undrawn facility amount. As of 31 December 2016, the facility was undrawn.

In April 2016, the Company established a subordinated debt facility with a termination date of 15 February 2031. The facility allows the Company to issue at any time subordinated fixed rate callable notes with a face value of up to USD 400 million, having a first optional redemption date of 15 February 2031 and a scheduled maturity date of 15 February 2056. The Company pays a fee of 3.92% per annum on the available commitment under the facility. Notes issued under the facility have a fixed coupon of 6.05% per annum. Notes, when issued under the facility will be classified as subordinated debt. As of 31 December 2016, no notes have been issued under the facility.

In April 2016, the Company entered into a subordinated funding facility with its subsidiary Swiss Reinsurance Company Ltd under which Swiss Reinsurance Company Ltd has the right, among others, to issue subordinated notes to the Company of up to USD 400 million at any time before February 2036. For its various rights, Swiss Reinsurance Company Ltd owes the Company an unconditional fixed commitment fee, payable in annual instalments calculated as 6.10% on the total facility amount. Annually, Swiss Reinsurance Company Ltd receives a partial reimbursement of the commitment fee equal to 2.13% per annum on the undrawn facility amount. As of 31 December 2016, the facility was undrawn.

In June 2016, the Company established a subordinated debt facility with a termination date of 15 August 2027. The facility allows the Company to issue at any time subordinated fixed-to-floating rate callable notes with a face value of up to USD 800 million, having a first optional redemption date of 15 August 2027 and a scheduled maturity date of 15 August 2052. The Company pays a fee of 3.67% per annum on the available commitment under the facility. Notes issued under the facility have a fixed coupon of 5.625% per annum until the first optional redemption date and a floating rate coupon thereafter. Notes, when issued under the facility will be classified as subordinated debt. As of 31 December 2016, no notes have been issued under the facility.

In June 2016, the Company entered into a subordinated funding facility with its subsidiary Swiss Reinsurance Company Ltd under which Swiss Reinsurance Company Ltd has the right, among others, to issue subordinated notes to the Company of up to USD 800 million at any time before August 2032. For its various rights, Swiss Reinsurance Company Ltd owes the Company an unconditional fixed commitment fee, payable in annual instalments calculated as 5.68% on the total facility amount. Annually, the Company receives a partial reimbursement of the commitment fee equal to 1.95% per annum on the undrawn facility amount. As of 31 December 2016, the facility was undrawn.

7 Change in shareholders' equity

CHF millions	Share capital	Legal capital reserves	Legal profit reserves	Reserves for own shares	Voluntary profit reserves	Retained earnings brought forward	Net income for the financial year	Own shares	Total Shareholders' equity
Shareholders' equity 1.1.2016	37	257	9 168	18	9 550	4	3 865	–1 430	21 469
Allocations relating to the dividend paid					3 865		–3 865		0
Dividend for the financial year 2015					–1 525				–1 525
Net income for the financial year							3 972		3 972
Share buy-back programme 2015[1]								–570	–570
Share cancellation[1]	–1	–96	–903					1 000	0
Share buy-back programme 2016[2]								–521	–521
Other movements in own shares		31		–1				–34	–4
Shareholders' equity 31.12.2016	**36**	**192**	**8 265**	**17**	**11 890**	**4**	**3 972**	**–1 555**	**22 821**

CHF millions	Share capital	Legal capital reserves	Legal profit reserves	Reserves for own shares	Voluntary profit reserves	Retained earnings brought forward	Net income for the financial year	Own shares	Total Shareholders' equity
Shareholders' equity 1.1.2015	37	2 682	9 177	9	5 440	4	4 110	–956	20 503
Allocations relating to the dividend paid		–2 490			6 600		–4 110		0
Dividend for the financial year 2014					–2 490				–2 490
Net income for the financial year							3 865		3 865
Share buy-back programme 2015[1]								–430	–430
Other movements in own shares		65	–9	9				–44	21
Shareholders' equity 31.12.2015	37	257	9 168	18	9 550	4	3 865	–1 430	21 469

[1] At the 151st Annual General Meeting held on 21 April 2015, the Group's shareholders authorised the Group Board of Directors to repurchase up to a maximum CHF 1 billion purchase value of the Group's own shares prior to the 2016 Annual General Meeting through a public share buy-back programme for cancellation purposes. The buy-back programme was completed on 2 March 2016. The total number of shares repurchased amounted to 10.6 million, of which 4.4 million and 6.2 million shares were repurchased by 31 December 2015 and between 1 January and 2 March 2016, respectively. On 22 April 2016, the 152nd Annual General Meeting resolved the cancellation of the repurchased 10.6 million shares by way of share capital reduction. The shares were cancelled on 18 July 2016, after completion of the procedure in respect of a share capital reduction as set forth in Article 732 et seqq. of the Swiss Code of Obligation.
[2] At the 152nd Annual General Meeting held on 22 April 2016, the Group's shareholders authorised the Group Board of Directors to repurchase up to a maximum CHF 1 billion purchase value of the Group's own shares prior to the 2017 Annual General Meeting through a public share buy-back programme for cancellation purposes.

8 Own shares (directly and indirectly held by the Company)

Number of own shares	2015	2016
Own shares held by subsidiaries	*112 788*	***211 472***
Own shares held by Swiss Re Ltd direct	*28 395 225*	***32 755 754***
Opening balance own shares	28 508 013	**32 967 226**
Purchase of own shares[1]	1 615 389	**987 559**
Sale of own shares [2]	–1 576 176[5]	**–983 451**
Share buy-back programme (151st AGM 2015)[3]	4 420 000	**6 214 370**
Cancellation of shares bought back (151st AGM 2015)	0	**–10 634 370**
Share buy-back programme (152nd AGM 2016)[4]	0	**5 542 500**
Own shares as of 31 December	32 967 226	**34 093 834**

[1] Purchased at average price CHF 88.73 (2015: CHF 92.91)
[2] Sold at average price CHF 87.97 (2015: CHF 93.31)
[3] Purchased at average price CHF 91.73 (2015: CHF 97.27)
[4] Purchased at average price CHF 94.00
[5] Number of sold own shares has been updated by 522 shares from a subsidiary

9 Major shareholders

As of 31 December 2016, there was one shareholder with a participation exceeding the 3% threshold of Swiss Re Ltd's share capital:

Shareholder	Number of shares	% of voting rights and share capital[1]	Creation of the obligation to notify
BlackRock, Inc.	18 218 492	5.06	10 October 2016

[1] The percentage of voting rights is calculated at the date the obligation was created and notified.

In addition, Swiss Re Ltd held, as of 31 December 2016, directly and indirectly 34 093 834 (2015: 32 967 226) own shares, representing 9.47% (2015: 8.89%) of voting rights and share capital. Swiss Re Ltd cannot exercise the voting rights of own shares held.

10 Legal reserves from capital contributions

CHF millions	2015	2016
Opening balance of legal reserves from capital contributions	2 682	**192**
Reclassification to voluntary profit reserves for dividend payments	–2 490	**0**
Legal reserves from capital contributions as of 31 December	192	**192**
thereof confirmed by the Swiss Federal Tax Administration[1]	***1***	***1***

[1] Under current Swiss tax legislation, the amount of legal reserves from capital contributions, which has been confirmed by the Swiss Federal Tax Administration, can be paid out as dividends exempt from Swiss withholding tax, and for Swiss resident individual shareholders holding shares in private wealth also exempt from Swiss income taxes.

11 Release of undisclosed reserves

In 2016 and 2015 no net undisclosed reserves were released.

12 Share ownership, options and related instruments of governing bodies

This section is in line with Articles 663c para. 3 and 959c para. 2 cif. 11 of the Swiss Code of Obligations, which requires disclosure of shareholdings, options and related instruments held by members of the Board of Directors and Group Executive Committee (Group EC) at the end of the reporting year and of share-based compensation for the Board of Directors during the reporting year. Further disclosures in respect of board and management compensation, and persons closely related, are detailed in the Compensation Report on pages 155 to 160 of the Financial Report of the Swiss Re Group.

Share ownership

The number of shares held as of 31 December were:

Members of the Group EC	2015	**2016**
Christian Mumenthaler, Group CEO	50 000	63 854
Michel Liès, previous Group CEO[1]	262 808	n/a
David Cole, Group Chief Financial Officer	54 207	68 061
John R. Dacey, Group Chief Strategy Officer	171	7 526
Guido Fürer, Group Chief Investment Officer	42 302	56 156
Agostino Galvagni, CEO Corporate Solutions	65 816	79 670
Jean-Jacques Henchoz, CEO Reinsurance EMEA	35 476	46 817
Thierry Léger, CEO Life Capital	n/a	57 610
Moses Ojeisekhoba, CEO Reinsurance	26 404	27 895
Jayne Plunkett, CEO Reinsurance Asia	n/a	29 095
J. Eric Smith, CEO Reinsurance Americas[2]	6 990	13 984
Matthias Weber, Group Chief Underwriting Officer	25 410	25 750
Thomas Wellauer, Group Chief Operating Officer	116 111	130 224
Total	685 695	**606 642**

[1] The number of shares held on 30 June 2016 when Michel Liès stepped down from the Group EC was 290 692.
[2] The figure shown in the 2015 Compensation Report did not reflect the sale of 10 000 shares in May 2015, which was appropriately reported as a management transaction in May 2015 according to the listing rules of the SIX Swiss Exchange.

Members of the Board of Directors	2015	**2016**
Walter B. Kielholz, Chairman	447 241	414 613
Renato Fassbind, Vice Chairman, Chairman of the Audit Committee[1]	15 844	19 954
Mathis Cabiallavetta, former Member[2]	71 346	n/a
Raymond K.F. Ch'ien, Member	18 459	19 978
Mary Francis, Member	4 329	5 927
Rajna Gibson Brandon, Member	20 216	21 700
C. Robert Henrikson, Chairman of the Compensation Committee	8 896	11 065
Hans Ulrich Maerki, former Member[2]	28 969	n/a
Trevor Manuel, Member[3]	868	2 363
Carlos E. Represas, Member	11 581	12 837
Jean-Pierre Roth, former Member[2]	8 443	n/a
Philip K. Ryan, Chairman of the Finance and Risk Committee[3]	3 394	6 134
Sir Paul Tucker, Member[4]	n/a	1 036
Susan L. Wagner, Chairman of the Investment Committee	3 485	6 111
Total	643 071	**521 718**

[1] Acting also as the Lead Independent Director.
[2] Term of office expired at the AGM of 22 April 2016 and did not stand for re-election.
[3] Elected to Swiss Re's Board of Directors at the AGM of 21 April 2015.
[4] Elected to Swiss Re's Board of Directors at the AGM of 22 April 2016.

Share-based compensation

The share-based compensation for the members of the Board of Directors for 2015 and 2016 was:

Members of the Board of Directors	2015 Fees in blocked shares[1] (CHF thousands)	2015 Number of shares[2]	**2016 Fees in blocked shares[1] (CHF thousands)**	**2016 Number of shares[2]**
Walter B. Kielholz, Chairman	1 906	21 531	1 955	22 372
Renato Fassbind, Vice Chairman, Chairman of the Audit Committee[3]	350	3 955	359	4 110
Raymund Breu, former Member[4]	36	403	n/a	n/a
Mathis Cabiallavetta, former Member[5]	359	4 059	39	449
Raymond K.F. Ch'ien, Member	136	1 538	133	1 519
Mary Francis, Member	136	1 538	140	1 598
Rajna Gibson Brandon, Member	126	1 429	130	1 484
C. Robert Henrikson, Chairman of the Compensation Committee	185	2 088	190	2 169
Hans Ulrich Maerki, former Member[5]	136	1 538	42	483
Trevor Manuel, Member[6]	77	868	131	1 495
Carlos E. Represas, Member	107	1 209	110	1 256
Jean-Pierre Roth, former Member[5]	107	1 209	33	380
Philip K. Ryan, Chairman of the Finance and Risk Committee[6]	168	1 894	239	2 740
Sir Paul Tucker, Member[7]	n/a	n/a	91	1 036
Susan L. Wagner, Chairman of the Investment Committee	197	2 218	229	2 626
Total	**4 026**	**45 477**	**3 821**	**43 717**

[1] Represents the portion (40%) of the total fees for the members of the Board of Directors that is delivered in Swiss Re Ltd shares, with a four-year blocking period.
[2] The number of shares is calculated by dividing the portion (40%) of the total fees with the average closing price of the shares on the SIX Swiss Exchange during the ten trading days preceding the AGM less the amount of any dividend resolved by the AGM.
[3] Acting also as the Lead Independent Director.
[4] Term of office expired at the AGM of 21 April 2015 and did not stand for re-election.
[5] Term of office expired at the AGM of 22 April 2016 and did not stand for re-election.
[6] Elected to Swiss Re's Board of Directors at the AGM of 21 April 2015.
[7] Elected to Swiss Re's Board of Directors at the AGM of 22 April 2016.

Restricted shares

For the years ended 31 December 2015 and 2016, neither the members of the Board of Directors nor the members of the Group EC held any restricted shares.

Vested options

For the years ended 31 December 2015 and 2016, neither the members of the Board of Directors nor the members of the Group EC held any vested options.

Proposal for allocation of disposable profit

The Board of Directors proposes to the Annual General Meeting to be held in Zurich on 21 April 2017 to approve the following allocations and dividend payment:

CHF millions	2015	2016
Retained earnings brought forward	4	**4**
Net income for the financial year	3 865	**3 972**
Disposable profit	3 869	**3 976**
Allocation to voluntary profit reserves	–3 865	**–3 972**
Retained earnings after allocation	4	**4**

CHF millions	2015	2016
Voluntary profit reserves brought forward	9 550	**11 890**
Allocation from retained earnings	3 865	**3 972**
Ordinary dividend payment out of voluntary profit reserves	–1 525[1]	**–1 581**[2]
Voluntary profit reserves after allocation and dividend payment	11 890	**14 281**

[1] Since the Board of Directors' proposal for allocation of disposable profit, included in the Annual Report 2015, the number of registered shares eligible for dividend, at the dividend payment date of 28 April 2016, decreased due to the share buy-back programme of 6 214 370 shares and transfer of 39 300 shares for employee participation purposes from not eligible to eligible for dividend. This resulted in a lower dividend of CHF 29 million, compared to the Board of Directors' proposal, and higher voluntary profit reserves by the same amount.
[2] The Board of Directors' proposal to the Annual General Meeting of 21 April 2017, is subject to the actual number of shares outstanding and eligible for dividend.

Dividend

If the Board of Directors' proposal for allocations and dividend payment is accepted, an ordinary dividend of CHF 4.85 per share will be paid on 27 April 2017 from voluntary profit reserves.

Share structure per 31 December 2016	Number of registered shares	Nominal capital in CHF
Eligible for dividend[1]	325 978 727	**32 597 873**
Not eligible for dividend	34 093 834	**3 409 383**
Total shares issued	360 072 561	**36 007 256**

[1] The Board of Directors' proposal to the Annual General Meeting of 21 April 2017 is subject to the actual number of shares outstanding and eligible for dividend.

Zurich, 15 March 2017

Report of the statutory auditor

Report of the statutory auditor
to the General Meeting of
Swiss Re Ltd
Zurich

Report of the statutory auditor on the financial statements

As statutory auditor, we have audited the financial statements of Swiss Re Ltd (the "Company"), which comprise the income statement, balance sheet and notes (pages 283 to 294), for the year ended 31 December 2016.

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 judgement, 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 the 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 2016 comply with Swiss law and the Company's Articles of Association.

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

A key audit matter is a matter that, in our professional judgement, was of most significance in our audit of the financial statements of the current period. The matter was addressed in the context of our audit of the financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on this matter.

Impairment assessment of investments in subsidiaries and affiliated companies

Key audit matter	How our audit addressed the key audit matter
The Company applies individual valuation in accordance with Swiss Accounting Law. In performing impairment assesments of investments in subsidiaries and affiliated companies, management uses considerable judgement in determining different valuation-method inputs. In the current year, the Company provided capital contributions to a subsidiary for the funding of acquisitions; as a result, the underlying business structure was newly set up in the business year. Accordingly, the approach to determining fair value for the impairment assessment for this particular subsidiary was revised by management. The impairment assessment is considered a key audit matter due to the considerable judgement in performing the impairment assessment.	In relation to the matter set out opposite, our substantive testing procedures included the following: ■ Evaluating management's method and assumptions to determine a value in use. ■ Assessing whether the model applied for each subsidiary is reasonable. ■ Understanding changes in the approach and discussing these with management to ensure they are in accordance with our own expectation based on our knowledge of the business and industry. On the basis of the work performed, we consider the methods and assumptions used by management to be reasonable. We agree with their conclusion that the book value for all investments in subsidiaries is recoverable.

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 Ltd

Alex Finn

Bret M. Griffin

Alex Finn
Audit expert
Auditor in charge

Bret Griffin

Zurich, 15 March 2017