somewhat different

Half-yearly Financial Report 2018

hannover re®

Key figures

in EUR million	2018					2017		
	1.1.– 31.3.	1.4.– 30.6.	+/– previous year	1.1.– 30.6.	+/– previous year	1.4.– 30.6.[1]	1.1.– 30.6.[1]	31.12.
Results								
Gross written premium	5,345.0	4,640.3	+4.3%	9,985.3	+11.0%	4,451.0	8,997.6	
Net premium earned	3,999.3	4,346.4	+14.5%	8,345.6	+10.8%	3,795.0	7,533.1	
Net underwriting result	37.1	63.5		100.6		(55.4)	(78.8)	
Net investment income	391.5	352.1	-8.9%	743.6	-4.6%	386.5	779.4	
Operating profit (EBIT)	433.9	473.4	+18.5%	907.3	+13.5%	399.5	799.4	
Group net income	273.4	281.9	+4.3%	555.3	+3.8%	270.2	535.0	
Balance sheet								
Policyholders´ surplus	10,559.8			10,547.4	-2.1%		10,788.4	10,778.5
Equity attributable to shareholders of Hannover Rück SE	8,353.6			8,321.7	-2.4%		8,562.2	8,528.5
Non-controlling interests	714.0			732.9	-3.3%		734.6	758.1
Hybrid capital	1,492.3			1,492.8	+0.1%		1,491.6	1,492.0
Investments (excl. funds withheld by ceding companies)	40,446.4			40,891.7	+2.1%		40,393.0	40,057.5
Total assets	62,542.3			63,950.1	+4.5%		62,039.9	61,196.8
Share								
Earnings per share (basic and diluted) in EUR	2.27	2.34	+4.3%	4.60	+3.8%	2.24	4.44	
Book value per share in EUR	69.27			69.00	-2.4%		71.00	70.72
Share price at the end of the period in EUR	110.90			106.80	+1.8%		104.95	104.90
Market capitalisation at the end of the period	13,374.2			12,879.8	+1.8%		12,656.7	12,650.6
Ratios								
Combined ratio (property and casualty reinsurance)[2]	95.9%	95.6%		95.7%		97.4%	96.5%	
Large losses as percentage of net premium earned (property and casualty reinsurance)[3]	3.0%	0.7%		1.8%		(0.5%)	2.8%	
Retention	91.3%	91.4%		91.3%		90.9%	90.3%	
Return on investment (excl. funds withheld by ceding companies)[4]	3.4%	2.9%		3.1%		3.2%	3.2%	
EBIT margin[5]	10.8%	10.9%		10.9%		10.5%	10.6%	
Return on equity (after tax)	13.0%	13.5%		13.2%		12.1%	12.2%	

[1] Restated pursuant to IAS 8
[2] Including funds withheld
[3] Hannover Re Group´s net share for natural catastrophes and other major losses in excess of EUR 10 million gross as a percentage of net premium earned
[4] Excluding effects from ModCo derivatives
[5] Operating result (EBIT)/net premium earned

Ulrich Wallin,
Chairman of the
Executive Board

Dear shareholders, ladies and gentlemen,

The development of your company's business in the first half of 2018 was very pleasing overall. Despite a higher tax load, attributable not least to the US tax reform, we were able to increase the comparable period's good result by a further 3.8 percent to EUR 555 million. The same is true of the annualised return on equity, which rose from 12.2 percent to 13.2 percent and is thus quite comfortably ahead of our minimum target.

I would especially like to highlight the exceptionally positive growth in the operating profit (EBIT), which we boosted by 13.5 percent to EUR 907 million. This is due principally to a sharply improved underwriting result, most notably in life and health reinsurance.

Although this business group has also been adversely impacted in recent years by rising losses from our US mortality business, the loss experience here in the first half of 2018 proved to be considerably better than anticipated. For this reason, the loss from this business was more than halved. In the period under review the spotlight consequently turned to the healthy profitability of our life and health reinsurance portfolio excluding US mortality business. As a result, the EBIT surged by 33 percent to EUR 219 million.

On the one hand, this underscores the very healthy profit potential of our life and health reinsurance portfolio, but at the same time it makes very clear that we can only fully realise this potential if we contain the negative earnings situation in US mortality business. To this end we launched a project last year tasked with analysing the reasons for the unsatisfactory performance – particularly with respect to the large block of business acquired at the beginning of 2009. Based on these analyses we exercised our right to implement consistent rate increases across the entire block.

The resulting right of ceding companies to recapture the treaties will, however, lead to considerable strains on the IFRS result in life and health reinsurance in the second half of 2018. In the third quarter, for example, we have already been notified of recaptures in the period until 6 August 2018 that will result in a pre-tax charge of USD 264 million. This figure will likely increase in the course of the year and could, in an extreme scenario, rise to an amount in the order of USD 500 million to USD 600 million. On the other hand, though, this would also mean that the strains associated with US mortality business would be extensively eliminated in subsequent years, as a consequence of which we would be able to realise the entire profit potential of our life and health reinsurance business, as demonstrated in the first half of 2018.

In view of the business development to date, it remains our assumption that we shall generate Group net income of more than EUR 1 billion for 2018 despite the strains from the US mortality portfolio discussed above. As always, this is subject to the premise that major loss expenditure does not significantly exceed our budgeted amount of EUR 825 million and assumes that there are no unforeseen distortions on the capital market. It should also be pointed out that the greater the burden from the aforementioned treaty recaptures, the more difficult it will be for us to achieve our target.

As in the comparable period, large loss expenditure in the first six months was well below the budgeted level. In view of our unchanged prudent reserving policy, however, this was for the most part not reflected in the statement of income.

I would also like to elaborate on our decision to transfer our specialty insurer Inter Hannover SE in the coming year to a joint venture with our affiliate HDI Global SE. We are convinced that the company will be able to develop even more successfully through its repositioning and that we, as Hannover Re, can focus even more closely on our core business of reinsurance. We shall participate in the growth of the specialty company through corresponding reinsurance treaties, which means that we can expect to boost our earnings from this business more strongly than would have been the case if we had continued to operate Inter Hannover SE within the Hannover Re Group.

I would now like to explore the development of our business groups and the investments in greater detail.

Despite the considerable expenditure incurred by reinsurers from the large losses of 2017, the state of the property and casualty reinsurance markets remains fiercely competitive. The losses of the previous year did not prompt traditional market players or alternative capital providers on the ILS market to pull capacity from the market. Quite the contrary, in many instances the available capacity has even continued to grow. This means that, as before, the supply of reinsurance capacity exceeds demand, even though it should be noted that demand for reinsurance has also risen.

Nevertheless, we have succeeded – in part thanks to our very good market position – in pushing through higher reinsurance rates overall in the current year, although they were not on the scale anticipated by many market players. Despite this, we were able to write more business that met our margin requirements, hence enabling us to enlarge our premium volume. This was also true of the renewals as at 1 June and 1 July 2018, the dates when parts of the North American portfolio – most notably natural catastrophe risks in Florida – as well as business from Australia and New Zealand and in the area of credit and surety are traditionally renewed.

The renewal season in Florida, where hurricane Irma had caused considerable reinsured losses in 2017, proved particularly disappointing overall, prompting us not to increase our exposures here. On the whole, though, we were able to generate appreciable double-digit growth in these renewals by strengthening our position with some larger customer accounts.

The good development of property and casualty reinsurance business was reflected in a 37 percent increase in the underwriting result to EUR 205 million, corresponding to an improved combined ratio of 95.7 percent. The operating profit (EBIT) was boosted to EUR 689 million on the back of significant double-digit growth in premium income.

The development of life and health reinsurance outside of US mortality business was very positive overall, as mentioned. Financial solutions business continues to deliver excellent results. We also booked pleasing growth with healthy profitability in Asian markets. Not only that, we are seeing encouraging trends in longevity business, including for example in countries such as Australia and Canada.

Against this backdrop we were able to grow the premium income – adjusted for exchange-rate effects – by 3.7 percent.

Our investments continue to develop as planned, despite the protracted low level of interest rates and market volatility. The volume of assets increased slightly on the back of a sustained very positive operating cash flow. The return on investment generated from our portfolio of assets under own management stood at 3.1 percent, thereby clearly beating the minimum target of 2.7 percent set for the current year.

In view of our comfortable capital position we have raised the upper end of our payout range for the basic dividend from 40 percent to 45 percent of IFRS Group net income. This gives us more latitude to increase the basic dividend. As in recent years, we shall also consider paying a special dividend if the company's capitalisation appreciably exceeds the capital required for our business.

As things currently stand, and also bearing in mind the potential strains associated with treaty recaptures in US mortality business, it is our expectation that we should at least achieve a total dividend on the level of the previous year, with the proportion attributable to the basic dividend likely to grow at the expense of the special dividend.

I would like to thank you – also on behalf of my colleagues on the Executive Board – most sincerely for your trust in Hannover Re. Going forward, as in the past, our paramount concern will be to lead your company responsibly and securely into a continued profitable future.

Yours sincerely,

Ulrich Wallin
Chairman of the Executive Board

Interim management report

Report on economic position

Business development

- Profitable premium growth in a market shaped by surplus capacities
- Underwriting result in property and casualty reinsurance significantly boosted
- Return on investment ahead of full-year expectations at 3.1%

Hannover Re can look back on a positive business development in both its business groups of Property & Casualty and Life & Health reinsurance. The first half of 2018 was notable for minimal large losses and sustained demand for innovative reinsurance solutions.

In a market environment still characterised by surplus capacities Hannover Re was able to assert its position in property and casualty as well as life and health reinsurance. Against a backdrop of continued low interest rates, investment income also played a robust and important part in the Group's success. This is borne out by the fact that our Group net income rose to EUR 555.3 million (EUR 535.0 million), an increase of 3.8% compared to the first half of 2017 which had similarly been extensively free of large losses.

Gross premium written by the Group climbed by 11% as at 30 June 2018 to just under EUR 10.0 billion (EUR 9.0 billion). At constant exchange rates the increase would have been 18.1%. The first half of 2018 thus puts us very much on track to achieve our full-year guidance, which we had raised in the first quarter to currency-adjusted growth of more than 10%. The level of retained premium rose slightly to 91.3% (90.3%). Net premium earned increased by 10.8% to EUR 8.3 billion (EUR 7.5 billion). Growth of 17.9% would have been booked at constant exchange rates.

Bearing in mind the ongoing challenging market climate, the performance of our investments in the first six months was highly satisfactory. The portfolio of assets under own management grew to EUR 40.9 billion (31 December 2017: EUR 40.1 billion). It is gratifying to note that ordinary investment income remained stable year-on-year at EUR 632.5 million (EUR 635.1 million). This is especially true of the income generated from our fixed-income securities, although earnings booked from real estate and private equity were also on a par with or – in the latter case – even slightly above the level of the previous year.

Interest on funds withheld and contract deposits fell to EUR 113.8 million (EUR 123.4 million). Net realised gains stood at EUR 53.4 million (EUR 83.4 million). Our financial assets measured at fair value through profit or loss gave rise to net gains of EUR 19.6 million (EUR 10.6 million) in the period under review. The impairments taken in the reporting period were once again only very minimal. Income from investments under own management contracted to EUR 629.8 million (EUR 656.0 million) as at 30 June 2018.

A bond issued by our company in April with a volume of EUR 750 million gives us access to additional liquidity, inter alia for longer-term prefinancing business in life and health reinsurance. This issue, which has a coupon of 1.125% and a maturity of 10 years, enables us to leverage the continued low interest rate level in Europe and benefit from increased flexibility in the management of our investments.

The operating profit (EBIT) for the first half-year 2018 grew by 13.5% to EUR 907.3 million (EUR 799.4 million). Earnings per share amounted to EUR 4.60 (EUR 4.44).

Hannover Re's equity base remained robust as at 30 June 2018 on a level of EUR 8.3 billion (31 December 2017: EUR 8.5 billion) despite the dividend payment of EUR 603.0 million. The book value per share stood at EUR 69.00 (31 December 2017: EUR 70.72). The annualised return on equity amounted to 13.2% as at 30 June 2018 (31 December 2017: 10.9%).

Results of operations, financial position and net assets

Property and casualty reinsurance

- Earnings and premium growth amid sustained intense competition
- Large losses lower than in the similarly lightly impacted comparable period
- Significant increase in the underwriting result

Even after the previous year's heavy windstorm losses, worldwide property and casualty reinsurance remains fiercely competitive; the supply of reinsurance coverage continues to far outstrip demand. Although the business results posted by insurers have come under pressure in some areas, the capital resources of most market players are still adequate. Nevertheless, we are seeing rising demand for reinsurance because primary insurers are making increasing use of reinsurance solutions to limit the volatility of their results.

The additional capacities originating from the insurance-linked securities (ILS) market are a further factor in the sustained pressure on prices and conditions – especially in US natural catastrophe business. In the wake of the recent large losses it was notable that most investors remained loyal to the ILS market with a view to profiting from rising prices as a consequence of the high loss expenditure. Owing to the additional capacity, however, the price increases failed to materialise in the expected amount.

This general business environment shaped the various rounds of treaty renewals in the first half of the year. The renewal season for Japan took place as at 1 April, together with more modest treaty renegotiations – in terms of volume – for the markets of Australia, New Zealand, Korea and North America. The total premium volume booked from these treaty renewals increased by 10.3%. The part of our North American treaty business up for renegotiation was renewed at adequate prices. We modestly expanded the property portfolio in response to advantageous conditions, especially under programmes that had suffered losses.

In Japan rates for casualty business improved on the back of prior losses. The premium contracted slightly, however, in view of a planned share reduction in a large-volume treaty. We similarly chose not to renew shares of some business in South Korea; prices and conditions were not sufficiently attractive owing to the competition prevailing in this market. Hannover Re did, however, book pleasing growth in the area of agricultural risks.

The gross written premium for our total portfolio in property and casualty reinsurance rose by 19.2% as at 30 June 2018 to EUR 6.5 billion (EUR 5.4 billion). This was again a reflection of the sustained surge in demand for reinsurance solutions offering solvency relief, not only in Europe but also in North America. We were thus able to more than offset premium declines in other areas. At constant exchange rates, gross written premium in property and casualty reinsurance would have grown by as much as 27.6%. The level of retained premium was higher than in the corresponding period of the previous year at 91.4% (89.4%). Net premium earned increased by 20% to EUR 5.2 billion (EUR 4.3 billion); adjusted for exchange rate effects, the growth would have been 28.4%.

Net expenditure on large losses as at 30 June 2018 totalled EUR 93.3 million, a figure below the level of the similarly lightly impacted comparable period (EUR 122.9 million). The largest catastrophe losses included the European winter storm Friederike and an earthquake in Papua New Guinea. Altogether, major loss expenditure remained well below our budgeted amount of EUR 351 million for the first six months.

The underwriting result for total property and casualty reinsurance improved by 37.4% to EUR 204.7 million (EUR 149.0 million). The combined ratio of 95.7% (96.5%) is still within the bounds of our planning with an eye to our target ratio of 96% or lower for the full financial year.

Investment income was thoroughly gratifying at EUR 503.0 million (EUR 475.5 million). Driven by slightly higher realised gains, income from assets under own management grew by 2.7% to EUR 486.7 million (EUR 473.7 million). The income generated from investments held by ceding companies increased to EUR 16.3 million (EUR 1.8 million).

Overall, the operating profit (EBIT) for the Property & Casualty reinsurance business group increased by 8.6% as at 30 June 2018 to EUR 688.8 million (EUR 634.3 million). The EBIT margin of 13.3% (14.7%) was again well above our minimum target of 10%. Group net income for the segment contracted by 2.1% to EUR 434.4 million (EUR 444.0 million) owing to higher tax expenditure.

Key figures for property and casualty reinsurance

in EUR million	2018					2017	
	1.1.–31.3.	1.4.–30.6.	+/– previous year	1.1.–30.6.	+/– previous year	1.4.–30.6.	1.1.–30.6.
Gross written premium	3,578.7	2,888.4	+10.5%	6,467.1	+19.2%	2,612.7	5,427.5
Net premium earned	2,424.9	2,750.0	+28.1%	5,174.8	+20.0%	2,147.0	4,312.8
Underwriting result	91.8	112.9	+93.6%	204.7	+37.4%	58.3	149.0
Net investment income	268.0	235.0	+1.2%	503.0	+5.8%	232.1	475.5
Operating result (EBIT)	338.9	349.9	+7.8%	688.8	+8.6%	324.5	634.3
Group net income	234.8	199.6	-12.7%	434.4	-2.1%	228.6	444.0
Earnings per share in EUR	1.95	1.66	-12.7%	3.60	-2.1%	1.90	3.68
EBIT margin[1]	14.0%	12.7%		13.3%		15.1%	14.7%
Combined ratio[2]	95.9%	95.6%		95.7%		97.4%	96.5%
Retention	91.6%	91.3%		91.4%		90.3%	89.4%

[1] Operating result (EBIT) / net premium earned
[2] Including funds withheld

Life and health reinsurance

- Consistently favourable developments across international markets
- US financial solutions business beats expectations
- Operating result boosted against a backdrop of stable premiums

Life and health reinsurance somewhat exceeded our expectations in the first half of 2018.

The situation on the German market was virtually unchanged. According to the SFCRs (Solvency and Financial Condition Reports) published in May, the capital adequacy ratios of German primary insurers calculated under Solvency II continued to show an improving trend year-on-year as at the end of 2017. With the insurance industry still hoping for accommodations from policy makers, reinsurance offerings in the area of financial solutions designed to ease the strain associated with the additional statutory reserve requirement for the interest rate risk (Zinszusatzreserve) or to deliver solvency relief attracted only muted interest.

In the rest of Europe the development of our business was highly promising. In the case of Western European markets, a trend can be discerned among new and existing customers alike towards the expansion of product portfolios – especially when it comes to risk-oriented covers. The United Kingdom continued to see intense competition, which was further exacerbated by pricing pressure in the market and hampered business profitability.

Markets in Central Europe for the most part maintained their favourable course and are typically showing growth, leading to profitable new business for our portfolio.

In Eastern European markets, most notably Ukraine, Bulgaria, Azerbaijan and Russia, market developments were in line with expectations and we were able to build on the positive movements of the previous year.

In Asian countries interest in financial solutions was again very lively. Furthermore, it was evident that health insurance products were increasingly coming into focus for primary insurers. Particularly in China, economic growth was extremely dynamic and went hand-in-hand with a further rise in demand for insurance protection. This opened up thoroughly favourable opportunities for our company to write new business. In Japan and Korea, too, we were able to write new business in the areas of both risk solutions and financial solutions.

In Australia the regulatory framework for retirement provision was adjusted, which will likely prompt a need for action on both the insurance and reinsurance side with an eye to the underlying insurance products. The primary market saw further moves towards consolidation among larger banks and the resulting sales of life insurance portfolios. These dynamic developments promise an attractive business potential for our Australian subsidiary.

We view Latin America as a growing insurance market, albeit one that is under intense competitive pressure. We were able to successfully renew our portfolio and also generated additional new business, thereby maintaining our market position on a consistently stable, high level.

In the United States the financial solutions business written by our subsidiary developed very favourably in line with our expectations. Rate increases have been initiated to improve the results of our legacy US mortality business from older underwriting years. While these actions negatively impact earnings in the short term, the long-term effects on profitability will nevertheless be positive. We were pleased to see that the mortality in the period under review came in below our revised expectations. The charge to earnings from this business was consequently significantly lower than in the previous year. All in all, then, both the mortality solutions and the health and special risk segments performed better than forecast.

Primary insurers in international markets are showing enthusiastic and steadily rising interest in the field of automated underwriting. So-called “lifestyle” insurance products, which particularly target the sector of the population focused on a healthy lifestyle through integrated wellness components, are also taking on growing prominence. Insurers around the world are increasingly recognising the demand here and hence also the need for holistic solutions of this type.

The gross premium volume in life and health reinsurance posted a modest decline of 1.5% as at 30 June 2018 to EUR 3.5 billion (EUR 3.6 billion). Growth of 3.7% would have been booked at unchanged exchange rates. The retention was virtually stable at 91.2% (91.6%). Net premium earned was also unchanged at EUR 3.2 billion (EUR 3.2 billion). Growth would have come in at 3.8% at constant exchange rates.

Bearing in mind the low interest rate environment, we are satisfied with the investment income of EUR 239.1 million (EUR 301.7 million). While ordinary investment income remained stable, realised gains and losses came in lower. Income from assets under own management consequently contracted to EUR 141.6 million (EUR 180.2 million). The income booked from securities deposited with our ceding companies fell to EUR 97.5 million (EUR 121.5 million).

The operating result (EBIT) as at the end of the first half-year amounted to EUR 219.4 million (EUR 165.2 million), an improvement of 32.8% compared to the previous year’s level. The strategic target is to increase the operating result (EBIT) by 5% per year. Group net income totalled EUR 146.8 million (EUR 114.2 million).

Key figures for life and health reinsurance

in EUR million	2018					2017[1]	
	1.1.–31.3.	1.4.–30.6.	+/– previous year	1.1.–30.6.	+/– previous year	1.4.–30.6.	1.1.–30.6.
Gross written premium	1,766.2	1,752.0	-4.7%	3,518.2	-1.5%	1,838.2	3,570.1
Net premium earned	1,574.4	1,596.3	-3.1%	3,170.7	-1.5%	1,648.0	3,220.3
Investment income	122.8	116.3	-24.2%	239.1	-20.8%	153.4	301.7
Operating result (EBIT)	95.9	123.5	+63.6%	219.4	+32.8%	75.4	165.2
Net income after tax	51.1	95.7	+78.5%	146.8	+28.5%	53.6	114.2
Earnings per share in EUR	0.42	0.79	+78.5%	1.22	+28.5%	0.44	0.95
Retention	90.7%	91.7%		91.2%		91.8%	91.6%
EBIT margin[2]	6.1%	7.7%		6.9%		4.6%	5.1%

[1] Restated pursuant to IAS 8
[2] Operating result (EBIT)/net premium earned

Investments

- High-quality diversified investment portfolio maintained
- Ordinary investment income virtually on a par with the previous year
- Return on investment beats expectations at 3.1%

The investment climate was rather volatile in the period under review in the face of numerous geopolitical and economic policy issues. In February, for example, the expectation of higher interest rates as a consequence of an anticipated rise in inflation was reflected around the world in stock market corrections and sharply increased volatility. Our company remained unaffected, however, thanks to the liquidation of our equity portfolio in the previous year. The turbulence on the stock market had scarcely any effect on other markets.

In the area of fixed-income securities, however, the dominant factor was still the generally low level of interest rates. The US dollar segment, which saw further significant interest rate increases at a pace not anticipated by the market, was once again the exception here. Appreciable rate increases were also observed across all maturities in the sterling bond market, whereas EUR-denominated bonds have seen scarcely any changes since the beginning of the year. German government bonds are still being sold at negative returns well into the medium maturities. It was only the repeated flare-up of anxieties surrounding instability in Italy that triggered disquiet in this sector.

Credit spreads on European and US corporate bonds recorded sometimes significant increases in the first half of the year across almost all rating classes, although they remain at historic lows owing to the declines of past years. In this respect it is important to monitor the levels at which the potential for funding companies starts to become restricted. Overall, while the unrealised gains on our fixed-income securities thus fell to EUR 571.3 million (EUR 1,021.5 million) as at 30 June 2018, we benefit from higher interest rates and credit spreads when it comes to new investments and the reinvestment of assets.

Our portfolio of assets under own management grew to EUR 40.9 billion (31 December 2017: EUR 40.1 billion). We adjusted the allocation of our investments to the individual classes of securities in the first half of the year in that we somewhat modified the nature of our government bond holdings and expanded our portfolio of instruments with inflation-linked coupons and redemption amounts. By taking this step we are counteracting inflation risks in property and casualty reinsurance. Through the reduction of certain positions in the area of high-yield bonds we also smoothed the risk profile of our investments and generated liquidity for future opportunities in the capital market as well as for financing transactions in life reinsurance. The modified duration of our portfolio of fixed-income securities remained virtually unchanged year-on-year at 4.9 (4.8).

Ordinary investment income excluding interest on funds withheld and contract deposits amounted to EUR 632.5 million as at 30 June 2018, a figure on a par with the comparable period (EUR 635.1 million). Particularly bearing in mind the continued low interest rates, it is highly gratifying that we were able to maintain the ordinary income from fixed-income securities on a stable level year-on-year while also booking slightly stronger earnings from real estate and private equity. We were thus very successful in offsetting the loss of dividend income from the equity portfolio that we had liquidated in the previous year. Interest on funds withheld and contract deposits retreated to EUR 113.8 million (EUR 123.4 million).

Impairments of altogether just EUR 21.1 million (EUR 23.1 million) were taken. Of this amount, EUR 4.5 million (EUR 2.2 million) was attributable to alternative investments. Scheduled depreciation on directly held real estate increased marginally to EUR 16.6 million (EUR 15.0 million), a reflection of our growing ongoing involvement in this area. Once again, the impairments were not opposed by any write-ups. The net balance of gains realised on disposals stood at EUR 53.4 million (EUR 83.4 million). The decrease compared to the previous year reflects the fact that as part of portfolio restructuring activities owing to the steeper US yield curve we realised not inconsiderable hidden losses. These were, however, more than offset by highly profitable realisations on the reduction of high-yield bonds. In addition, we are already benefiting from the rising interest rate level for our reinvestments.

We recognise a derivative for the credit risk associated with special life reinsurance treaties (ModCo) under which securities deposits are held by cedants for our account; the performance of this derivative in the period under review gave rise to unrealised losses of EUR 5.9 million (gain of EUR 3.3 million) recognised in income. In economic terms we assume a neutral development for this item over time, and hence the volatility that can occur in specific quarters provides no insight into the actual business development. Altogether, the unrealised gains in our assets recognised at fair value through profit or loss amounted to EUR 19.6 million. This contrasted with unrealised gains of EUR 10.6 million in the corresponding period of the previous year.

Despite diminished returns from funds withheld and contract deposits we thus generated very healthy investment income. The key drivers were stable ordinary income from fixed-income securities as well as very good earnings from real estate and private equity. The net investment income of EUR 743.6 million was slightly below the level of the comparable period (EUR 779.4 million). Income from assets under own management accounted for an amount of EUR 629.8 million (EUR 656.0 million), producing an annualised average return (including effects from ModCo derivatives) of 3.1%. The half-year result is thus appreciably higher than our expected target of 2.7% for the full year.

Net investment income

in EUR million	2018					2017	
	1.1.–31.3.	1.4.–30.6.	+/– previous year	1.1.–30.6.	+/– previous year	1.4.–30.6.	1.1.–30.6.
Ordinary investment income [1]	315.8	316.7	+0.2%	632.5	-0.4%	316.0	635.1
Result from participations in associated companies	1.3	0.5	-58.2%	1.8	-68.3%	1.3	5.7
Realised gains/losses	48.8	4.5	-92.3%	53.4	-36.0%	59.3	83.4
Appreciation [2]	11.0	10.0	-17.6%	21.1	-8.7%	12.2	23.1
Change in fair value of financial instruments [3]	6.1	13.5		19.6	+84.8%	(0.4)	10.6
Investment expenses	28.2	28.2	+0.6%	56.3	+1.3%	28.0	55.6
Net investment income from assets under own management	332.8	297.0	-11.6%	629.8	-4.0%	336.0	656.0
Net investment income from funds withheld	58.7	55.1	+9.1%	113.8	-7.8%	50.5	123.4
Total investment income	**391.5**	**352.1**	**-8.9%**	**743.6**	**-4.6%**	**386.5**	**779.4**

[1] Excluding expenses on funds withheld and contract deposits
[2] Including depreciation/impairments on real estate
[3] Portfolio at fair value through profit or loss and trading

Opportunity and risk report

Risk report

- Hannover Re has a very strong capital position, which is constantly reviewed against the backdrop of possible changes in the risk profile.
- Our risk management system continuously monitors newly added and changing risks and is able to respond flexibly to changes in internal and external factors.

Risk landscape of Hannover Re

In the context of its business operations the Hannover Re Group enters into a broad variety of risks. These risks are deliberately accepted, steered and monitored in order to be able to act on the associated opportunities. The parameters and decisions of the Executive Board with respect to the risk appetite of the Hannover Re Group are fundamental to the acceptance of risks. They are based on the calculations of risk-bearing capacity. Through our business operations on all continents and the diversification between our Property & Casualty and Life & Health reinsurance business groups we are able to effectively allocate our capital in light of opportunity and risk considerations and generate a higher-than-average return on equity. Along with our principal business operations as a reinsurer of property & casualty and life & health business, we also transact primary insurance in selected niche markets as a complement to our core reinsurance business. With this approach we are well positioned for further profitable growth. In this context crucial importance attaches to our risk management in order to ensure that, among other things, risks to the reinsurance portfolio remain calculable and also exceptional major losses do not have an unduly adverse impact on the result.

The risk landscape of Hannover Re encompasses:

- underwriting risks in property & casualty and life & health reinsurance which originate from our business activities and manifest themselves inter alia in fluctuations in loss estimates as well as in unexpected catastrophes and changes in biometric factors such as mortality,
- market risks which arise in connection with our investments and also as a consequence of the valuation of sometimes long-term payment obligations associated with the technical account,
- counterparty default risks resulting from our diverse business relationships and payment obligations inter alia with clients and retrocessionaires,
- operational risks which may derive, for example, from deficient processes or systems and
- other risks, such as reputational risks as well as strategic and emerging risks.

At the present time our most significant risks are the default and spread risks within the market risks, the reserving and catastrophe risks within the underwriting risks of property and casualty reinsurance and the risk of changes in mortality within the underwriting risks of life and health reinsurance.

Strategy implementation

Our current corporate strategy encompasses ten guiding principles that safeguard the realisation of our vision “Creating value through reinsurance” across the various divisions. The following principles of the corporate strategy constitute the key strategic points of departure for our Group-wide risk management:

- We manage risks actively.
- We maintain an adequate level of capitalisation.
- We are committed to sustainability, integrity and compliance.

Our risk strategy is derived from the corporate strategy. It is the core element in our handling of opportunities and risks. The risk strategy specifies more closely the goals of risk management and documents our understanding of risk. We have defined eight overriding principles within the risk strategy:

1. We monitor adherence to the risk appetite set by the Executive Board.
2. We integrate risk management into value-based management.
3. We promote an open risk culture and the transparency of our risk management system.
4. We fulfil regulatory requirements.
5. We fulfil the requirements of rating agencies.

6. We act in light of materiality and proportionality considerations.
7. We make balanced use of both quantitative and qualitative methods.
8. We ensure the independence of the risk management function.

The risk strategy, risk register and central system of limits and thresholds – as integral components of our Risk and Capital Management Guideline – are reviewed at least once a year. In this way we ensure that our risk management system is kept up-to-date.

We manage our total enterprise risk such that we can expect to generate positive IFRS Group net income with a probability of 90% p.a. and the likelihood of the complete loss of our economic capital and shareholders' equity under IFRS does not exceed 0.03% p.a. These indicators are monitored using our internal capital model and the Executive Board is informed quarterly about adherence to these key parameters as part of regular reporting. The necessary equity resources are determined according to the requirements of our economic capital model, regulatory parameters, the expectations of rating agencies with respect to our target rating and the expectations of our clients. Above and beyond that, we maintain a capital cushion in order to be able to act on new business opportunities at any time.

Major external factors influencing risk management

Brexit: In view of the slow progress of negotiations in 2017, it is increasingly likely that the status of legal relations between the European Union and United Kingdom will not be entirely resolved by the withdrawal date of 30 March 2019. Consequently, the Hannover Re Group must also be prepared for a "hard" Brexit and the associated workload and expenses. With this in mind, Hannover Re has set up a Group-wide working group to address readiness measures. The major impacts will be felt by our entities in the United Kingdom. The "Hannover Re Life UK Branch" and "Inter Hannover UK Branch" write significant premium volumes in life reinsurance as well as property and casualty insurance respectively. The legal status of a locally authorised entity in the United Kingdom in the form of a "third-country branch" will be sought in order to continue operations after a hard Brexit. This would be necessary in the event of the United Kingdom not recognising EU supervision and/or the Solvency II regulatory regime in the future. This will, however, entail an increased regulatory workload and capital expenditure. "Argenta Holdings plc" is a stand-alone subsidiary in the United Kingdom and already authorised as a member of Lloyd's. Furthermore, the business volume transacted with the EU is minimal with a premium share of less than 5%. Argenta will therefore be affected only marginally. We also write business in the United Kingdom through Group companies in Hannover and Ireland. In this regard we do not anticipate any significant changes as a result of Brexit.

All in all, our current analyses indicate that the implications of Brexit are manageable for the Hannover Re Group.

US tax reform: The changes in tax legislation adopted by the US administration at the end of 2017 entered into force on 1 January 2018. They provide for new tax regulations that have far-reaching implications for subsidiaries operating in the United States. On the one hand, the reform cuts the corporate tax rate from 35% to 21%. On the other hand, the legislative package includes the introduction of the so-called "Base Erosion and Anti-Abuse Tax" (BEAT). In this connection, premiums for ceded insurance risks within the corporate group are also included in the taxable base and will in future be taxed at a rate of 5% to 12.5% (rising over the next nine years). Extensive restructuring activities were undertaken within the Group in the first half of 2018 in order to avert this increased burden of taxation. As a consequence of these moves, large parts of US business are now no longer ceded to Hannover Re Ireland but rather to Hannover Life Re America Bermuda.

Risks from electronic data retention: Recent years have seen the increasing emergence of risks relating to electronic systems and their data. Hannover Re, in common with other companies, is at risk of attacks on its IT systems and has put in place extensive safeguards. Furthermore, Hannover Re offers reinsurance coverage for risks connected with electronic systems and the associated data. The dynamic pace of developments in the context of digitalisation presents a particular challenge to the assessment of such risks.

Natural catastrophe risks and climate change: The above-average number of natural disasters in 2017 was optimally reflected in the assumptions underlying the natural perils models used for pricing and managing natural catastrophe risks. The possibility that the increased storm activity is due to progressive global warming cannot be ruled out. Hannover Re works together with partners to closely monitor the implications of global warming for extreme weather events so as to be able to incorporate the insights obtained into the models.

US mortality business: In view of the deterioration in the performance of, most notably, the large block of business acquired by Hannover Re at the beginning of 2009, the technical provisions calculated in accordance with IFRS and in the economic balance sheet according to Solvency II were reassessed by a project set up specifically for this purpose. This resulted in a substantial increase in the technical provisions under Solvency II. Under IFRS the provisions continued to be calculated according to the lock-in principle because the value in force (VIF) of the book of US mortality business remained positive overall. The actual mortality experience in the first half of 2018 proved to be better than anticipated. As part of our portfolio management we initiated rate adjustments for the portfolio in question. Insofar as the affected cedants exercise their right of recapture, this can lead to charges to the IFRS result.

Capital market environment: On the investment side we expect to see increased volatility on equity and credit markets worldwide. We take the view, however, that we are suitably prepared with our rather defensively oriented investment posture.

Risk capital

In the interests of our shareholders and clients we strive to ensure that our risks remain commensurate with our capital resources. Our quantitative risk management provides a uniform framework for the evaluation and steering of all risks affecting the company as well as of our capital position. In this context, the internal capital model is the central tool and constitutes a stochastic enterprise model. It covers all subsidiaries and business groups of the Hannover Re Group. The core variable in risk and enterprise management is the economic equity, which is calculated according to market-consistent measurement principles and also constitutes the basis for calculating the own funds under Solvency II. Hannover Re's full internal capital model reflects all risks that influence the development of the economic equity. These are split into underwriting risks, market risks, counterparty default risks and operational risks. For each of these risk classes we have identified a number of risk factors for which we define probability distributions. These risk factors include, for example, economic indicators such as interest rates, exchange rates and inflation indices, but also insurance-specific indicators such as the mortality of a particular age group within our portfolio of insureds in a particular country or the number of natural catastrophes in a certain region and the insured loss amount per catastrophe. The specification of the probability distributions for the risk factors draws upon historical and publically available data as well as on the internal data resources of the Hannover Re Group. This process is further supplemented by the know-how of internal and external experts. The fit of the probability distributions is regularly checked by our specialist departments, although more importantly it is also verified in the context of the regular, company-wide use of the capital model when assessing risks and allocating the cost of capital. Hannover Re calculates the required risk capital as the Value at Risk (VaR) of the economic change in value over a period of one year with a confidence level of 99.97%. This reflects the goal of not exceeding a one-year ruin probability of 0.03%. The internal target capitalisation of the Hannover Re Group is therefore significantly higher than the confidence level of 99.5% required under Solvency II. For its capitalisation under Solvency II Hannover Re has set as a limit a capital adequacy ratio of 180% and as a threshold a capital adequacy ratio of 200%.

In contrast to a standard model, our internal capital model enables us to optimally map the risk structure of our reinsurance business and hence also to continue to efficiently fulfil our regulatory capital requirements under Solvency II. Our excess capital coverage at the target confidence level of 99.97% is currently very comfortable. Hannover Re is well capitalised and our available capital comfortably exceeds the required capital, both from the economic and the regulatory perspective.

We hold additional capital above all to meet the requirements of the rating agencies for our target rating and to be able to act flexibly on business opportunities. We strive for a rating from the rating agencies most relevant to our industry that facilitates and secures our access to all reinsurance business worldwide. Hannover Re is analysed by the rating agencies Standard & Poor's (S & P) and A. M. Best as part of an interactive rating process, meaning that both these rating agencies are also given access to confidential information about Hannover Re. The current financial strength ratings are assessed as "AA-" (Very Strong, stable outlook) by Standard & Poor's and "A+" (Superior, stable outlook) by A. M. Best. Standard & Poor's evaluates Hannover Re's risk management as "Very Strong", the best possible rating.

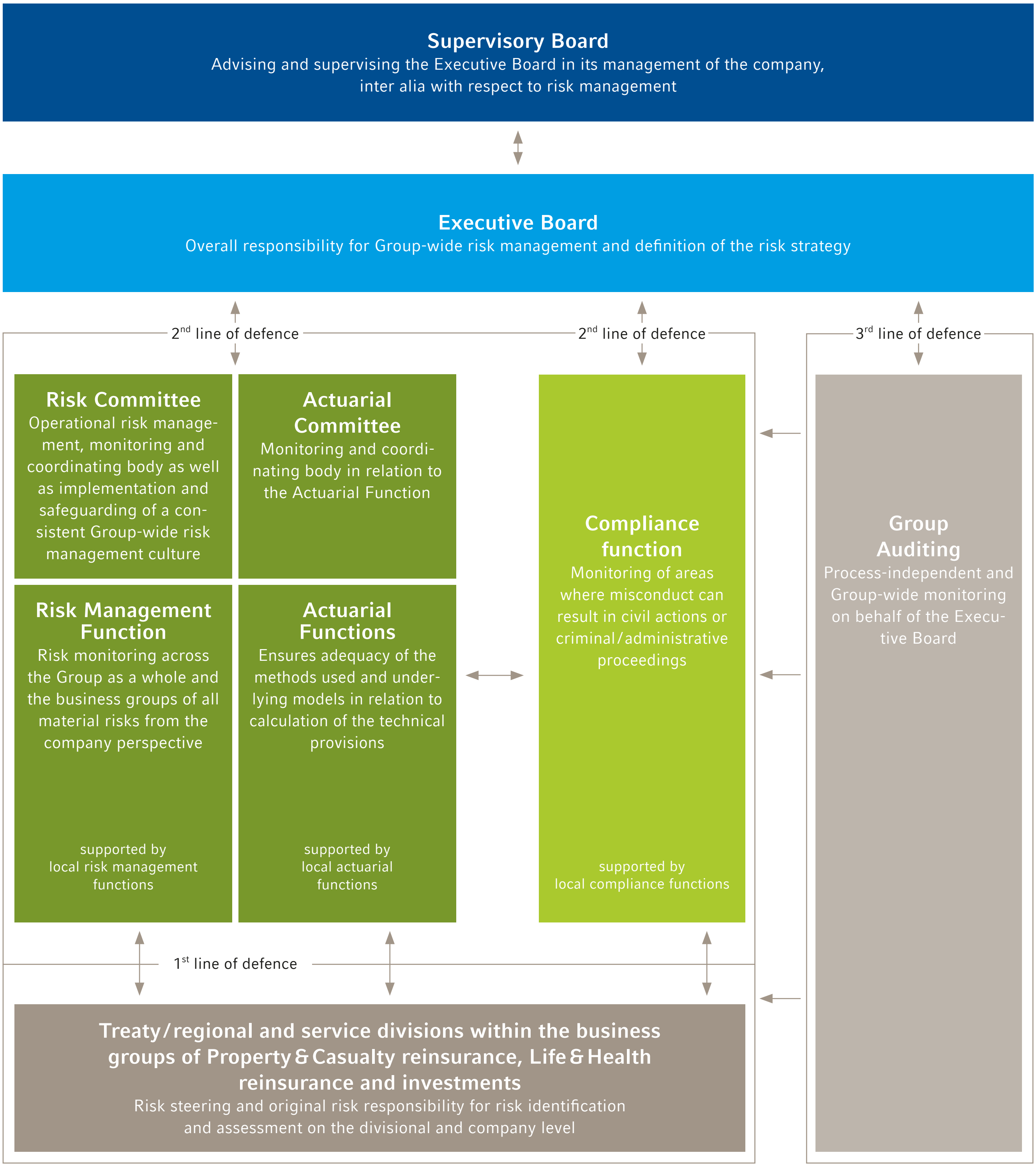
In awarding these ratings the agencies highlighted the company's very good risk management, the consistent and systematic implementation of corporate strategy by management and the excellent capital resources. Hannover Re's internal capital model is also examined as part of the rating. Based on this review, Standard & Poor's factors the results of the internal capital model of the Hannover Re Group into the determination of the target capital for the rating.

Organisation and processes of risk management

Hannover Re has set up risk management functions and bodies Group-wide to safeguard an efficient risk management system. The organisation and interplay of the individual functions in risk management are crucial to our internal risk steering and control system. The central functions of risk management are closely interlinked in our system and the roles, tasks and reporting channels are clearly defined and documented in terms of the so-called "three lines of defence". The first line of defence consists of risk steering and the original risk responsibility on the divisional or company level. The second line of defence consists of the core functions of risk management, the actuarial function and the compliance function. These units are responsible for monitoring and control. The third line of defence is the process-independent monitoring performed by the internal audit function. The chart below provides an overview of the central functions and bodies within the overall system as well as of their major tasks and powers.

The actuarial units and risk management functions within the Group meet regularly in order to support Group-wide risk communication and establish an open risk culture. In addition, risk management requirements are formulated in guidelines that are communicated throughout the organisation.

Central functions of risk monitoring and steering



Key elements of our risk management system

Our risk strategy and our Risk and Capital Management Guideline including the system of limits and thresholds for material risks of the Hannover Re Group describe the central elements of our risk management system. This is subject to a constant cycle of planning, action, control and improvement. Systematic risk identification, analysis, measurement, steering and monitoring as well as risk reporting are especially crucial to the effectiveness of the system as a whole.

This guideline describes, among other things, the major tasks, rights and responsibilities, the organisational framework conditions and the risk control process. The rules, which are derived from the corporate strategy and the risk strategy, additionally take account of the regulatory minimum requirements for risk management as well as international standards and developments relating to appropriate enterprise management.

Risk-bearing capacity concept

The establishment of the risk-bearing capacity involves determining the total available risk coverage potential and calculating the funds required to cover all risks. This is done in conformity with the parameters of the risk strategy and the risk appetite defined by the Executive Board. The quantitatively measurable individual risks and the risk position as a whole are evaluated using our risk model. A central system of limits and thresholds is in place to monitor material risks. This system incorporates – along with other risk-related key figures – in particular the indicators derived and calculated from the risk-bearing capacity. Adherence to the overall risk appetite is verified on an ongoing basis.

Risk identification

A key source of information for monitoring risks is the risk identification carried out on a periodic basis. All identified risks are documented in a central register containing all material risks. Risk identification takes the form of, among other things, structured assessments, interviews or scenario analyses. External insights such as recognised industry know-how from relevant bodies or working groups are incorporated into the process. Risk identification is important for ensuring that our risk management consistently remains up-to-date.

Risk analysis and assessment

In principle, every risk that is identified and considered material is quantitatively assessed. Only risk types for which quantitative risk measurement is currently impossible or difficult are qualitatively assessed (e.g. strategic risks, reputational risks or emerging risks). Qualitative assessment can take the form of, for example, expert evaluations. Quantitative assessment of material risks and the overall risk position is performed using Hannover Re's internal capital model. The model makes allowance for risk concentration and risk diversification.

Risk steering

The steering of all material risks is the task of the operational business units on the divisional and company level. In this context, the identified and analysed risks are either consciously accepted, avoided or minimised. The risk/reward ratio is factored into the division's decision. Risk steering is assisted by the parameters of the central and local underwriting guidelines and by defined limits and thresholds.

Risk monitoring

The monitoring of all identified material risks is a core function of risk management. This includes, inter alia, monitoring execution of the risk strategy as well as adherence to the defined limits and thresholds and to risk-related methods and processes. A further major task of risk monitoring is the ascertainment of whether risk steering measures were carried out and whether the planned effect of the measures is sufficient.

Risk communication and risk culture

Risk management is firmly integrated into our operational processes. It is assisted by transparent risk communication and the open handling of risks as part of our risk culture. Risk communication takes the form, for example, of internal and external risk reports, information on current risk complexes in the intranet and training opportunities for staff. The regular sharing of information between risk-steering and risk-monitoring units is also fundamental to the proper functioning of risk management.

Risk reporting

Our risk reporting provides systematic and timely information about all material risks and their potential implications. The central risk reporting system consists primarily of regular risk reports, e.g. on the overall risk situation, adherence to the parameters defined in the risk strategy or on the capacity utilisation of natural catastrophe scenarios. Complementary to the regular risk reporting, immediate internal reporting on material risks that emerge at short notice takes place as necessary. The already existing range of risk reports was supplemented by further reports in the context of Solvency II requirements and the associated Pillars II and III.

Process-integrated and -independent monitoring and quality assurance

Irrespective of internally assigned competencies, the Executive Board is responsible for the orderly organisation of the company's business. This also encompasses monitoring of the internal risk steering and control system. Process-independent monitoring and quality assurance of risk management is carried out by the internal audit function and external instances (regulators, independent auditors and rating agencies). Most notably, the independent auditors review the trigger mechanism and the internal control system. The risk management system is rounded off with process-integrated procedures and rules, such as those of the internal control system.

Internal control system

We organise our business activities in such a way that they are always in conformity with all legal requirements. The internal control system (ICS) is an important subsystem that serves, among other things, to secure and protect existing assets, prevent and reveal errors and irregularities and comply with laws and regulations. The core elements of Hannover Re's ICS are documented in a guideline that establishes a common understanding of the differentiated execution of the necessary controls. In the final analysis, it is designed to systematically steer and monitor the implementation of our corporate strategy. This guideline defines concepts, stipulates responsibilities and provides a guide for the description of controls. In addition, it forms the basis for the accomplishment of internal objectives and the fulfilment of external requirements imposed on Hannover Re. The ICS consists of systematically structured organisational and technical measures and controls within the enterprise.

These include, among other things:

- the principle of dual control,
- separation of functions,
- documentation of the controls within processes,
- and technical plausibility checks and access privileges in the IT systems.

The proper functioning of the ICS necessitates the involvement of management, executive staff and employees on all levels.

The financial reporting of the parent company and the Group must satisfy international and national financial reporting standards as well as regulatory requirements. This is safeguarded in the area of accounting and financial reporting by processes with integrated controls which ensure the completeness and accuracy of the annual and consolidated financial statements. A structure made up of differentiated criteria, control points and materiality thresholds assures our ability to identify and minimise the risk of material errors in the annual and consolidated financial statements at an early stage.

We use a central IT solution with standardised accounting and consolidation processes, posting rules and interfaces for data delivery in order to draw up the consolidated financial statement. Access rights for the reporting systems are assigned through an approval process. All components of the accounting-related internal control system, the processes for the organisation and implementation of consolidation tasks and for the preparation of the consolidated financial statement as well as the accompanying controls are consistently documented. In order to safeguard and continuously improve the adequacy of the control system it is subject to regular review and evaluation. In this regard, the internal audit function ensures that the quality of the control system is constantly monitored. All relevant accounting principles are collated in a Group Accounting Manual that sets out uniform Group-wide rules for the recognition, measurement and reporting of items in the consolidated financial statement. The process for updating and, if necessary, adjusting these rules is clearly regulated with respect to information channels, responsibilities and period of validity. Not only that, we provide prompt Group-wide notification of significant developments and modified requirements in Group financial reporting.

Within the scope of our control system the Group companies are responsible for Group-wide adherence to the accounting policies and the internal control guidelines. The managing directors and chief financial officers of the Group companies defined as material in our control system affirm at each closing date to the Executive Board of Hannover Rück SE – as the leading company with the Group – the completeness, correctness and reliability of the financial data that they pass on to Group Accounting. Data for the preparation of the consolidated financial statement is delivered using a networked IT application. The relevant data for Group financial reporting is collected in a database and processed via automatic interfaces in a consolidation system. As part of the financial reporting process we perform preventive and detective checks on the reported figures in order to minimise the probability and reduce the impacts of a potentially incorrect disclosure. Depending upon the results of our checks, these figures can be corrected if necessary. Given that our Group financial reporting is heavily dependent on IT systems, these systems also need to be subject to controls. Authorisation concepts regulate system access and for each step content-based as well as system-side checks have been implemented, by means of which errors are analysed and promptly eliminated.

Internal risk assessment

Hannover Re calculates the economic equity as the difference between the market-consistent value of the assets and the market-consistent value of the liabilities. While fair values are available for most investments, the market-consistent valuation of reinsurance treaties necessitates a specific valuation model. We establish the market-consistent value of technical items as the present value of projected payments using actuarial methods. This is adjusted by a risk loading that factors in the fluctuation in future payments. Such fluctuations result from risks that cannot be hedged by means of capital market products, such as underwriting risks. For the discounting of future cash flows we use the risk-free basic yield curves without volatility adjustment or matching adjustment calculated in accordance with Solvency II rules. The market prices for options and guarantees embedded in insurance contracts are determined or approximated using option valuation models from the field of financial mathematics. The significance of these options and guarantees in our portfolio is, however, minor.

The available economic capital, which is available as liable capital for policyholders, is composed of the economic equity and the hybrid capital and includes the deduction of foreseeable dividends as required by Solvency II. The internal capital model is based on current methods from actuarial science and financial mathematics. In the case of underwriting risks, we are able to draw on a rich internal data history to estimate the probability distributions, e. g. for the reserve risk. For risks from natural perils we use external models, which are adjusted in the context of a detailed internal review process such that they reflect our risk profile as closely as possible. In the area of life and health reinsurance long-term payment flows are modelled under various scenarios. With respect to all the aforementioned risks we use internal data to define scenarios and probability distributions. The internal data is enhanced by way of parameters set by our internal experts. These parameters are especially significant in relation to extreme events that have not previously been observed.

When it comes to aggregating the individual risks, we make allowance for dependencies between risk factors. Dependencies arise, for example, as a consequence of market shocks, such as the financial crisis, which simultaneously impact multiple market segments. What is more, several observation periods may be interrelated on account of market phenomena such as price cycles. In dealing with these dependencies, however, it is our assumption that not all extreme events occur at the same time. The absence of complete dependency is referred to as diversification. Hannover Re's business model is based inter alia on building up the most balanced possible portfolio so as to achieve the greatest possible diversification effects and in order to deploy capital efficiently. Diversification exists between individual reinsurance treaties, lines, business segments and risks. We define the cost of capital to be generated per business unit according to the capital required by our business segments and lines and based on their contribution to diversification.

Underwriting risks in property and casualty reinsurance

Risk management in property and casualty reinsurance has defined various overall guidelines for efficient risk steering. These include, among other things, the use of retrocessions to reduce volatility and conserve capital. It is also crucially important to consistently maximise the available risk capacities on the basis of the risk management parameters of the Hannover Re Group and to steer the acceptance of risks systematically through the existing central and local underwriting guidelines. Our conservative reserving level is a key factor in our risk management. We make a fundamental distinction between risks that result from business operations of past years (reserve risk) and those stemming from activities in the current or future years (price / premium risk). In the latter case, special importance attaches to the catastrophe risk.

Diversification within the Property & Casualty reinsurance business group is actively managed through allocation of the cost of capital according to the contribution made to diversification. A high diversification effect arises out of the underwriting of business in different lines and different regions with different business partners.

The reserve risk, i. e. the risk of under-reserving losses and the resulting strain on the underwriting result, is a high priority in our risk management. We attach the utmost importance to a conservative reserving level and therefore traditionally have a high confidence level. In order to counter the risk of under-reserving we calculate our loss reserves based on our own actuarial estimations and establish, where necessary, additional reserves supplementary to those posted by our cedants as well as the segment reserve for losses that have already occurred but have not yet been reported to us.

The statistical run-off triangles are another monitoring tool used by our company. They show the changes in the reserve over time as a consequence of paid claims and in the recalculation of the reserves to be established as at each balance sheet date. Their adequacy is monitored by the actuarial units.

In order to partially hedge inflation risks Hannover Re holds securities in its portfolio with inflation-linked coupons and redemption amounts. An inflation risk exists particularly inasmuch as the liabilities (e. g. loss reserves) could develop differently than assumed at the time when the reserve was constituted because of inflation. The specified bonds protect these parts of the loss reserves against inflation risks.

For the purpose of assessing our material catastrophe risks from natural hazards (especially earthquake, windstorm and flood) we use licensed scientific simulation models, supplemented by the expertise of our own specialist departments, that deliver probability distributions for losses from natural catastrophes. The monitoring of the risks resulting from natural hazards is rounded out by scenario analyses.

Within the scope of the process for managing natural catastrophe risks, the Executive Board defines the risk appetite for natural perils once a year on the basis of the risk strategy by specifying the portion of the economic capital that is available to cover risks from natural perils. This is a key basis for our underwriting approach in this segment. As part of our holistic approach to risk management across business groups, we take into account numerous relevant scenarios and extreme scenarios, determine their effect on portfolio and performance data, evaluate them in relation to the planned figures and identify alternative courses of action.

For the purposes of risk limitation, maximum amounts are also stipulated for various extreme loss scenarios and return periods in light of profitability criteria. Risk management ensures adherence to these maximum amounts. The Executive Board, Risk Committee and P & C Executive Committee are kept regularly updated on the degree of capacity utilisation.

The price / premium risk lies primarily in the possibility of a random claims realisation that diverges from the claims expectancy on which the premium calculation was based. Regular and independent reviews of the models used for treaty quotation as well as central and local underwriting guidelines are vital management components. We have put in place a multi-step quotation process to ensure the quality of our portfolios. In addition, Hannover Re's regional and treaty departments prepare regular reports on the progress of their respective renewals. The reporting in this regard makes reference inter alia to significant changes in conditions, risks (such as inadequate premiums) as well as to emerging market opportunities and the strategy pursued in order to accomplish targets. The development of the combined ratio in property and casualty reinsurance is shown in the table below:

Combined and catastrophe loss ratio

in %	1H 2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Combined ratio (property and casualty reinsurance)	95.7	99.8	93.7	94.4	94.7	94.9	95.8	104.3	98.2	96.6	95.4
Thereof catastrophe losses [1]	1.8	12.3	7.8	7.1	6.1	8.4	7.0	16.5	12.3	4.6	10.7

[1] Net share of the Hannover Re Group for natural catastrophes and other major claims in excess of EUR 10 million gross as a percentage of net premium earned (until 31 December 2011: in excess of EUR 5 million gross)

Underwriting risks in life and health reinsurance

All risks directly connected with the life of an insured person are referred to as biometric risks. They include in particular the miscalculation of mortality, life expectancy, morbidity, occupational disability and health risks. Biometric risks are the material risks for our company in the area of life and health reinsurance. Our goal is to strike a balance between biometric risks. Counterparty default risks are also material since we partly prefinance our cedants' new business acquisition costs. Furthermore, we are exposed to catastrophe risks, especially events involving a high number of fatalities in our insurance portfolio.

The reserves are determined on the basis of secure biometric actuarial bases in light of the information provided by our clients. The biometric actuarial bases used and the lapse assumptions are continuously reviewed with an eye to their adequacy and where necessary adjusted. This is done using the company's own empirical data as well as market-specific insights. Our current risk profile in life and health reinsurance is dominated by mortality and longevity risks. This is due to the fact that under some of our contracts we pay death benefits, while under others we pay survival benefits. The volume of our annuity portfolio contributes to diversification within life and health reinsurance.

Diversification is a central management tool for our company. We seek to spread risks as far as possible across different risk classes and different regions. In our pricing of reinsurance treaties we provide incentives to further increase diversification.

Through our quality assurance measures we ensure that the reserves established by ceding companies in accordance with local accounting principles satisfy all requirements with respect to the calculation methods used and assumptions made (e. g. use of mortality and morbidity tables, assumptions regarding the lapse rate). In addition, the assumptions are continuously reviewed on the basis of empirical data and modified if necessary. New business is written in all regions in compliance with underwriting guidelines applicable worldwide, which set out detailed rules governing the type, quality, level and origin of risks. These global guidelines are revised annually and approved by the Executive Board. Special underwriting guidelines give due consideration to the particular features of individual markets. By monitoring compliance with these underwriting guidelines we minimise the risk of an inability to pay or of deterioration in the financial status of cedants. Regular reviews and holistic analyses (e. g. with an eye to lapse risks) are carried out with respect to new business activities and the assumption of international portfolios. Large transactions are also examined by our risk management department. Individual actuarial reports and documentation ensure that regular scrutiny also takes place on the level of the subsidiaries. The interest rate risk, which in the primary sector is important in life business owing to the guarantees that are given, is of only minimal relevance to our company thanks to the design of our reinsurance treaties. We have confidence in the entrepreneurial abilities of our underwriters and grant them the most extensive possible powers. In our decentralised organisation we manage risks where they arise using a consistent Group-wide approach in order to obtain an overall view of the risks in life and health reinsurance. Our global underwriting guidelines provide underwriters with an appropriate framework for this purpose.

In recent years we have already reported regularly on the fact that results in our US mortality business have been poorer than anticipated. The reason for this development is the negative earnings performance of a large portfolio that we acquired, as reported at the time, at the beginning of 2009. The other US mortality business that we have written is, by contrast, performing highly satisfactorily and showing good growth. In consequence, this business overall - i. e. including the poorly performing portfolio - shows a positive value in force (VIF). For this reason, in accordance with the lock-in principle, the assumptions made at the time of treaty formation constitute the basis of reserving that is applicable for IFRS accounting purposes.

In view of the unsatisfactory performance of the aforementioned portfolio, we had already initiated a project at the end of 2016 with the aim of, firstly, exploring the actuarial assumptions in a greater degree of detail and, secondly, deploying our available means to improve results through portfolio management measures on an even more targeted basis. This primarily involves rate management pursuant to contractual rights. Based on the information available to us today, we continue to assume a positive VIF for our US mortality business as a whole. This assumption is based in large measure on the value of the cash flows that will be generated through rate management actions. Should additional information lead to the determination that this is no longer the case, this would result in a one-off charge to the IFRS result. Similarly, the IFRS result may also incur one-off charges if the cedants affected by rate adjustments exercise their right of recapture.

The risks arising out of life and health reinsurance are reflected in the internal capital model.

Market risks

Faced with a challenging capital market climate, particularly high importance attaches to preserving the value of assets under own management and the stability of the return. Hannover Re's portfolio is therefore guided by the principles of a balanced risk/return profile and broad diversification. Based on a risk-averse asset mix, the investments reflect both the currencies and durations of our liabilities. Market price risks include equity risks, interest rate risks, foreign exchange risks, real estate risks, default and spread risks.

With a view to preserving the value of our assets under own management, we constantly monitor adherence to a trigger mechanism based on a clearly defined traffic light system that is applied across all portfolios. This system defines clear thresholds and escalation channels for the cumulative fluctuations in fair value and realised gains/losses on investments since the beginning of the year. These are unambiguously defined in conformity with our risk appetite and trigger specified information and escalation channels if a corresponding fair value development is overstepped.

The short-term loss probability measured as the "Value at Risk" (VaR) is another vital tool used for monitoring and managing market price risks. It is calculated on the basis of historical data, e. g. the volatility of the securities positions under own management and the correlation between these risks. As part of these calculations the decline in the fair value of our portfolio is simulated with a certain probability and within a certain period. The VaR of the Hannover Re Group determined in accordance with these principles specifies the decrease in the fair value of our securities portfolio under own management that with a probability of 95% will not be exceeded within ten trading days. A multi-factor model is used to calculate the VaR indicators for the Hannover Re Group. It is based on time series of selected representative market parameters (equity prices, yield curves, spread curves, exchange rates, commodity prices and macro-economic variables). All asset positions are mapped on the level of individual positions within the multi-factor model; residual risks (e. g. market price risks that are not directly explained by the multi-factor model) can be determined through back-calculation and are incorporated into the overall calculation. The model takes into account interest rate risks, default and spread risks, systematic and specific equity risks, commodity risks and option-specific risks.

Stress tests are conducted in order to be able to map extreme scenarios as well as normal market scenarios for the purpose of calculating the Value at Risk. In this context, the loss potentials for fair values and shareholders' equity (before tax) are simulated on the basis of already occurred or notional extreme events.

Further significant risk management tools – along with the various stress tests used to estimate the loss potential under extreme market conditions – include sensitivity and duration analyses and our asset/liability management (ALM). The internal capital model provides us with quantitative support for the investment strategy as well as a broad diversity of VaR calculations. In addition, tactical duration ranges are in place, within which the portfolio can be positioned opportunistically according to market expectations. The parameters for these ranges are directly linked to our calculated risk-bearing capacity.

Equity risks derive from the possibility of unfavourable changes in the value of equities, equity derivatives or equity index derivatives in our portfolio. Their relevance to our investments has, however, declined because at the end of the previous year we liquidated our portfolio of non-strategic listed equities and equity funds, leaving only a minimal holding in the context of strategic participations. Our exposure to the private equity market remains unchanged. In this case, changes in fair value are influenced less by general market conditions than by more company-specific valuations. Consequently, the risks are associated primarily with the business model and profitability and to a lesser extent with the interest rate component in the consideration of cash flow forecasts.

The portfolio of fixed-income securities is exposed to the interest rate risk. Declining market yields lead to increases and rising market yields to decreases in the fair value of the fixed-income securities portfolio. The credit spread risk should also be mentioned. The credit spread refers to the interest rate differential between a risk-entailing bond and risk-free bond with the same maturity. Changes in these risk premiums, which are observable on the market, result – analogously to changes in pure market yields – in changes in the fair values of the corresponding securities.

Foreign exchange risks are especially relevant if there is a currency imbalance between the technical liabilities and the assets. Through extensive matching of currency distributions on the assets and liabilities side, we reduce this risk on the basis of the individual balance sheets within the Group. The short-term VaR therefore does not include quantification of the foreign exchange risks. We regularly compare the liabilities per currency with the covering assets and optimise the currency coverage by regrouping assets. In so doing, we make allowance for collateral conditions such as different accounting requirements. Remaining currency surpluses are systematically quantified and monitored within the scope of economic modelling.

Real estate risks result from the possibility of unfavourable changes in the value of real estate held either directly or through fund units. They may be caused by a deterioration in particular qualities of a property or by a general downslide in market values. Real estate risks continued to grow in importance for our portfolio owing to our ongoing involvement in this sector. We spread these risks through broadly diversified investments in high-quality markets of Germany, Europe as a whole and the United States; each investment is preceded by detailed analyses of the property, manager and market concerned.

We use derivative financial instruments only to the extent needed to hedge risks. The primary purpose of such financial instruments is to hedge against potentially adverse developments on capital markets. Part of our cash flows from the insurance business as well as currency risks arising because currency matching cannot be efficiently achieved are partially hedged using forward exchange transactions. Hannover Re holds further derivative financial instruments to hedge interest rate risks from loans taken out to finance real estate. In addition, Hannover Re has taken out hedges in the form of equity swaps to hedge price risks in connection with the stock appreciation rights granted in 2014 under the Share Award Plan. These are intended to neutralise changes in the fair values of the awarded stock appreciation rights. Contracts are concluded with reliable counterparties and for the most part collateralised on a daily basis so as to avoid credit risks associated with the use of such derivative transactions. The remaining exposures are controlled according to the restrictive parameters set out in the investment guidelines.

Derivatives in connection with the technical account play a minor role in Hannover Re's portfolio.

Our investments entail credit risks that arise out of the risk of a failure to pay (interest and/or capital repayment) or a change in the credit status (rating downgrade) of issuers of securities. We attach equally vital importance to exceptionally broad diversification as we do to credit assessment conducted on the basis of the quality criteria set out in the investment guidelines. We measure credit risks in the first place using the standard market credit risk components, especially the probability of default and the potential amount of loss – making allowance for any collateral and the ranking of the individual instruments depending on their effect in each case.

We then assess the credit risk first on the level of individual securities (issues) and in subsequent steps on a combined basis on the issuer level. In order to limit the risk of counterparty default we set various limits on the issuer and issue level as well as in the form of dedicated rating quotas. A comprehensive system of risk reporting ensures timely reporting to the functions entrusted with risk management.

Rating structure of our fixed-income securities[1]

Rating classes	Government bonds		Securities issued by semi-governmental entities[2]		Corporate bonds		Covered bonds/asset-backed securities	
	in %	in EUR million	in %	in EUR million	in %	in EUR million	in %	in EUR million
AAA	78.1	11,254.8	61.1	3,973.7	1.2	134.3	62.7	1,927.8
AA	12.7	1,829.8	26.2	1,707.3	14.4	1,659.9	20.8	637.6
A	5.4	780.9	5.7	373.3	33.9	3,900.9	9.7	296.7
BBB	2.0	288.6	1.5	97.9	42.8	4,934.9	5.0	153.9
< BBB	1.8	258.0	5.5	358.8	7.7	883.6	1.8	55.4
Total	**100.0**	**14,412.1**	**100.0**	**6,511.0**	**100.0**	**11,513.5**	**100.0**	**3,071.4**

1 Securities held through investment funds are recognised pro rata with their corresponding individual ratings.
2 Including government-guaranteed corporate bonds

On a fair value basis EUR 4,091.2 million of the corporate bonds held by our company were issued by entities in the financial sector. Of this amount, EUR 3,259.2 million was attributable to banks. The vast majority of these bank bonds (66.5%) are rated "A" or better. Our investment portfolio under own management does not contain any written or issued credit default swaps.

Counterparty default risks

The counterparty default risk consists primarily of the risk of complete or partial failure of the counterparty and the associated default on payment. Since the business that we accept is not always fully retained, but instead portions are retroceded as necessary, the counterparty default risk is material for our company in reinsurance transactions. Our retrocession partners are carefully selected and monitored in light of credit considerations in order to keep the risk as small as possible. This is also true of our broker relationships, which entail a risk inter alia through the potential loss of the premium paid by the cedant to the broker. We minimise these risks, among other things, by reviewing all broker relationships with an eye to criteria such as the existence of professional indemnity insurance, payment performance and proper contract implementation. The credit status of retrocessionaires is continuously monitored. On the basis of this ongoing monitoring a Security Committee decides on measures where necessary to secure receivables that appear to be at risk of default. This process is supported by a Web-based risk management application, which specifies cession limits for the individual retrocessionaires participating in protection cover programmes and determines the capacities still available for short-, medium- and long-term business. Depending on the type and expected run-off duration of the reinsured business, the selection of reinsurers takes into account not only the minimum ratings of the rating agencies Standard & Poor's and A.M. Best but also internal and external expert assessments (e.g. market information from brokers). Overall, retrocessions conserve our capital, stabilise and optimise our results and enable us to act on opportunities across a broader front, e.g. following a major loss event. Regular visits to our retrocessionaires give us a reliable overview of the market and put us in a position to respond quickly to capacity changes. Alongside traditional retrocessions in property and casualty reinsurance we also transfer risks to the capital market.

Counterparty default risks are also relevant to our investments and in life and health reinsurance because we prefinance acquisition costs for our ceding companies. Our clients, retrocessionaires and broker relationships as well as our investments are therefore carefully evaluated and limited in light of credit considerations and are constantly monitored and controlled within the scope of our system of limits and thresholds. In terms of the Hannover Re Group's major companies, EUR 538.2 million (12.2%) of our accounts receivable from reinsurance business totalling EUR 4,394.0 million were older than 90 days as at the balance sheet date. The average default rate over the past four years was 0.06%.

Operational risks

Operational risks refer to the risk of losses occurring because of the inadequacy or failure of internal processes or as a result of events triggered by employee-related, system-induced or external factors. In contrast to underwriting risks (e. g. the reserve risk), which we enter into in a deliberate and controlled manner in the context of our business activities, operational risks are an indivisible part of our business activities. The focus is therefore on risk minimisation. Unlike market, counterparty default and underwriting risks, operational risks are categorised as non-financial risks.

With the aid of the Self-Assessment for Operational Risks we determine the maturity level of our operational risk management system and define action fields for improvements. The assessment is carried out, for example, by assessing the maturity level of the risk management function or of the respective risk monitoring and reporting. The system enables us, among other things, to prioritise operational risks and is used to calculate the capital commitment in our internal capital model.

Within the overall framework of operational risks we consider, in particular, business process and data quality risks, compliance risks, outsourcing risks, fraud risks, personnel risks, information / IT security risks and business interruption risks.

Business process risks are associated with the risk of deficient or flawed internal processes, which can arise inter alia as a consequence of an inadequate process organisation. The criteria that we have defined for managing the risk result in a high process quality. Data quality is similarly a very critical success factor, especially in risk management, because – among other things – the validity of the results delivered by the internal model depends primarily on the data provided.

Compliance risks are associated with the risk of breaches of standards and requirements, non-compliance with which may entail lawsuits or official proceedings with not inconsiderable detrimental implications for the business activities of the Hannover Re Group. Regulatory compliance, compliance with the company's Code of Conduct, data privacy and compliance with anti-trust and competition laws have been defined as issues of particular relevance. The compliance risk also extends to tax and legal risks. Among other things, we use sanctions screening software on parts of the Hannover Re Group's portfolio to filter out individuals who are subject to sanctions on account of a criminal or terrorist background. Suitable steps are taken if such individuals are identified. Business partners are also screened in this way. Responsibilities within the compliance organisation are regulated and documented Group-wide and interfaces with risk management have been put in place. The set of tools is rounded off with regular compliance training programmes.

Outsourcing risks can result from the outsourcing of functions, services and / or organisational units to third parties outside Hannover Re. Mandatory rules have been put in place to limit this risk; among other things, they stipulate that a risk analysis is to be performed prior to a material outsourcing. In the context of this analysis a check is carried out to determine, inter alia, what specific risks exist and whether outsourcing can even occur in the first place. In addition, our external partners are subject to regular due diligence checks.

In selected market niches we transact primary insurance business that complements our reinsurance activities. In so doing, just as on the reinsurance side, we always work together with partners from the primary sector – such as insurance brokers and underwriting agencies. This gives rise to risks associated with such distribution channels, although these are minimised through the careful selection of agencies, mandatory underwriting guidelines and regular checks.

Fraud risks refer to the risk of intentional violations of laws or regulations committed by members of staff (internal fraud) and / or by externals (external fraud) for personal gain. This risk is reduced by the internal control system as well as by the audits conducted by Group Auditing on a Group-wide and line-independent basis.

The proper functioning and competitiveness of the Hannover Re Group can be attributed in large measure to the expertise and dedication of our staff. In order to minimise personnel risks, we pay special attention to the skills, experience and motivation of our employees and foster these qualities through outstanding personnel development and leadership activities. Regular employee surveys and the monitoring of turnover rates ensure that such risks are identified at an early stage and scope to take the necessary actions is created.

Information technology risks and information security risks arise, inter alia, out of the risk of the inadequate integrity, confidentiality or availability of systems and information. By way of example, losses and damage resulting from the unauthorised passing on of confidential information, the malicious overloading of important IT systems or from computer viruses are material to the Hannover Re Group. Given the broad spectrum of such risks, a diverse range of steering and monitoring measures and organisational standards, including for example the requirement to conclude confidentiality agreements with service providers, have been put in place. In addition, our employees are made more conscious of such security risks through practically oriented tools, including for example information campaigns and training activities.

When it comes to reducing business interruption risks, the paramount objective is the quickest possible return to normal operations after a crisis, for example through implementation of existing contingency plans. Guided by internationally accepted standards, we have defined the key framework conditions and – among other measures – we have assembled a crisis team to serve as a temporary steering body in the event of an emergency. The system is complemented by regular exercises and tests.

Other risks

Of material importance to our company in the category of other risks are primarily emerging risks, strategic risks, reputational risks and liquidity risks. Reputational risks are categorised as non-financial risks.

The hallmark of emerging risks is that the content of such risks cannot as yet be reliably assessed – especially on the underwriting side with respect to our treaty portfolio. Such risks evolve gradually from weak signals to unmistakable tendencies. It is therefore vital to detect these risks at an early stage and then determine their relevance. For the purpose of early detection we have developed an efficient process that spans divisions and lines of business and we have ensured its linkage to risk management. Operational implementation is handled by an expert working group assembled specially for this task. The analyses performed by this working group are used Group-wide in order to pinpoint any necessary measures (e. g. the implementation of contractual exclusions or the development of new reinsurance products). By way of example, the risks associated with possible climate change are analysed by this working group. Global warming would have implications not only for natural perils, but also for human health, the world economy, the agricultural sector and much more besides. These problematic issues may also be relevant to our treaty portfolio – in the form not just of risks but also opportunities, such as increased demand for reinsurance products. Further examples of emerging risks include cyber risks, shortage of resources and nanotechnology.

Strategic risks derive from a possible imbalance between the corporate strategy of the Hannover Re Group and the constantly changing general business environment. Such an imbalance might be caused, for example, by incorrect strategic policy decisions, a failure to consistently implement the defined strategies and business plans or an incorrect allocation of resources. We therefore regularly review our corporate strategy in a multi-step procedure and adjust our processes and the resulting guidelines as and when required. We have defined performance criteria and indicators for the operational implementation of the strategic guidelines; these are authoritative when it comes to determining fulfilment of the various targets. With the "Strategy Cockpit" the Executive Board and responsible managers have at their disposal a strategy tool that assists them with the planning, elaboration and management of strategic objectives and measures and safeguards their overall perspective on the company and its strategic risks. In addition, the process for the management of strategic risks is assessed annually as part of the monitoring of business process risks.

Reputational risks refer to the risk that the trust put in our company by clients, shareholders, employees or the public at large may be damaged. This risk has the potential to jeopardise the business foundation of the Hannover Re Group. A good corporate reputation is therefore an indispensable prerequisite for our core business as a reinsurer. Reputational risks may arise out of all business activities conducted by the Hannover Re Group. Reputational damage may be caused, inter alia, by a loss of data that becomes public knowledge or financial difficulties on account of an underwriting risk. In addition to the risk identification methods already described, we use a number of different techniques for risk minimisation, such as our defined communication channels (e. g. Crisis Communication Guideline), a professional approach to corporate communications, tried and tested processes for specific crisis scenarios as well as our established Code of Conduct.

The liquidity risk refers to the risk of being unable to meet our financial obligations when they become due. The liquidity risk consists of the refinancing risk, i. e. the necessary cash cannot be obtained or can only be raised at increased costs, and the market liquidity risk, meaning that financial market transactions can only be completed at a poorer price than expected due to a lack of market liquidity. Core elements of the liquidity management of our investments are, in the first place, management of the maturity structure of our investments on the basis of the planned payment profiles arising out of our technical liabilities and, secondly, regular liquidity planning as well as the asset structure of the investments. Above and beyond the foreseeable payments, unexpected and exceptionally large payments may pose a threat to liquidity. In reinsurance business, however, significant events (major losses) are normally paid out after a lead time that can be reliably planned. As part of our liquidity management we have nevertheless defined asset holdings that have proven to be highly liquid even in times of financial stress. In addition, we manage the liquidity of the portfolio by checking on each trading day the liquidity of the instruments contained therein; their underlying parameters are verified on a regular and ad hoc basis. These measures serve to effectively reduce the liquidity risk.

Opportunity report

Speed is one of the qualities used to measure a successful knowledge transfer. Quick solutions and staying one step ahead of the competition is the name of the game. Hannover Re searches systematically for new business opportunities in order to generate sustainable growth and strengthen the company's profitable development. With a view to identifying opportunities and successfully translating ideas into business, Hannover Re adopts a number of closely related approaches in order to achieve holistic opportunity and risk management. Of significance here is the interplay without overlaps of the various functions within opportunity and risk management, which is ensured by defined interfaces.

Major elements in Hannover Re's business opportunity management include its various market-specific innovations in the Life & Health and Property & Casualty reinsurance business groups. Not only that, Hannover Re has set up an organisational unit for "Innovation Management". This service unit deals systematically with ideas and potential business possibilities and it concentrates its activities on opening up additional growth opportunities.

A key project initiated back in 2016 went by the name "Journey Re". It forged a connection to students, university graduates and young professionals with a view to developing new business models for primary insurance and reinsurance and translating the creativity that exists outside the industry into new business opportunities. The principal venues for this global ideas competition were Berlin, Boston, Dublin and Johannesburg. The results of the project were refined in a subsequent incubator phase with the participation of external partners.

The networking of the innovative minds involved in these activities gives rise to close links with other projects, working groups and bodies, such as with the working group on "Emerging Risks und Scientific Affairs" in regard to emerging risks and opportunities (see page 24 et seq. "Other risks"). This working group carries out qualitative assessments of emerging risks. As a result, however, not only are the potential risks explored but also any available business opportunities. In the year under review, for example, issues such as "Political crimes" and the "Regulatory environment" were analysed by the working group.

If a business idea is translated into reality and a new reinsurance product results, the normal procedure – provided the criteria defined for this purpose by Risk Management are applicable – is to work through the so-called new product process. This process is supported by Risk Management at Hannover Re. The process is always worked through if a contractual commitment is to be entered into in a form not previously used by Hannover Re or if a new type of risk is to be insured. If this is the case, all material internal and external influencing factors are examined beforehand by Risk Management (e. g. implications for the overall risk profile or the risk strategy) and evaluated. Risk Management ensures that before it can be used or sold a new reinsurance product must be approved by the Executive Board.

Overall assessment by the Executive Board

Based on our currently available insights arrived from a holistic analysis of the opportunities and risks, the Executive Board of Hannover Re cannot discern any risks that could jeopardise the continued existence of the Hannover Re Group in the short or medium term or have a material and lasting effect on its assets, financial position or net income. We are convinced that:

- our established system of risk management affords us a transparent overview of the current risk situation at all times
- our overall risk profile is appropriate, and
- our opportunity management plays an important part in Hannover Re's profitable growth.

As an internationally operating reinsurance group, we move in a highly complex environment. Nevertheless, thanks to our business activities in all lines of reinsurance we are able to achieve optimal risk spreading through geographical and risk-specific diversification while at the same time maintaining a balanced opportunity/risk profile. We consider the risks described in the above sections to be manageable, particularly because our steering and monitoring measures are effectively and closely interlinked. Despite these diverse mechanisms, individual and especially accumulation risks can decisively affect our assets, financial position and net income. In accordance with our understanding of risk, however, we consider not only risks but also at the same time opportunities. We therefore only enter into those risks that go hand-in-hand with opportunities. Our steering and monitoring tools as well as our organisational and operational structure ensure that we identify risks at an early stage and are able to act on our opportunities. Our central monitoring tool is the system of risk management that we have installed Group-wide, which brings together both qualitative and quantitative information for the purpose of effective risk monitoring. Most notably, the interplay between domestic and foreign risk management functions affords us a holistic and Group-wide overview.

Our own evaluation of the manageability of existing risks is confirmed by various financial indicators and external assessments. Specific monitoring indicators, reporting limits and potential escalation steps are defined on a mandatory basis in our central system of limits and thresholds for the material risks of the Hannover Re Group. As a result, the system provides us with a precise overview of potentially undesirable developments in the defined risk tolerances and enables us to react in a timely manner. One testament to our financial stability, for example, is the growth of our shareholders' equity: the total policyholders' surplus (hybrid capital, non-controlling interests and shareholders' equity) stands at 144% of the corresponding figure from 2011. In this context, our necessary equity resources are determined by the requirements of our economic capital model, solvency regulations, the assumptions of rating agencies with respect to our target rating and the expectations of our clients and shareholders. This increase gives us a sufficient capital cushion to be able both to absorb risks and act on business opportunities that may arise. Similarly, our very good ratings also testify to our financial stability. The quality of our Enterprise Risk Management (ERM) is evaluated separately by Standard & Poor's and received the highest possible rating of "Very Strong". Special attention is paid here to our established risk culture, which promotes the development of appropriate risk monitoring systems and strategic risk management. The evaluation encompasses in particular the areas of risk culture, risk controls, the management of emerging risks, risk models and strategic risk management. This external appraisal confirms the quality of our holistic approach to risk management.

In addition, the risk trigger mechanism and internal monitoring system are reviewed annually by the independent auditor.

The Group-wide risk management system is also a regular part of the audits conducted by the internal audit function.

For additional information on the opportunities and risks associated with our business please see the Group Annual Report 2017.

Outlook for 2018

Forecast

- Profit guidance for the current year of more than EUR 1 billion confirmed
- Considerable strains anticipated in life and health reinsurance in the second half-year owing to treaty recaptures in US mortality business
- Double-digit growth forecast in property and casualty reinsurance with a combined ratio of less than 96%
- Targeted return on investment of at least 2.7% for assets under own management confirmed

Despite the continued challenging general conditions facing the international (re)insurance industry and – especially in Europe – the protracted low level of interest rates, Hannover Re expects to be able to continue operating profitably on a sustained basis even in this environment. For the current financial year we expect to grow gross premium for the Group – based on constant exchange rates – by more than 10%, hence beating the figure of around 5% targeted at the beginning of the year. A large part of the growth in excess of our original expectations derives from property and casualty reinsurance and here especially from contracts in the area of structured reinsurance.

Following the good results in the first six months, we expect growth and earnings figures in property and casualty reinsurance to develop favourably for the full financial year as well. Allowing for loss expectancies, especially in relation to large events, we anticipate a combined ratio of less than 96%. Furthermore, we also expect to beat our target EBIT margin of at least 10%.

Building on the positive outcome of the renewals as at 1 January and 1 April 2018 for our company, we also enjoyed thoroughly successful rounds of renewals on 1 June and 1 July 2018. This is all the more pleasing because market conditions continue to be intensely competitive. This was especially true of the 1 June renewals. When it came to the renegotiation of reinsurance treaties in Florida, which primarily cover natural catastrophe losses from windstorm events and had suffered in some instances considerable losses in the previous year, we maintained our profit-oriented underwriting policy – as a consequence of which our exposure to natural catastrophe risks remained comfortably within our risk appetite, which was unchanged from the previous year. On the other hand, we were able to significantly improve our position with a number of larger accounts, particularly in North America and Europe. The premium volume from the portfolio up for renewal on 1 June and 1 July 2018 consequently grew by 16%.

In life and health reinsurance we expect to incur a substantial strain on our result in the second half of the year due to anticipated treaty recaptures in US mortality business. The reason here is the very poor performance of a large block of business that we acquired at the beginning of 2009 and have already reported on regularly in the past. In the second quarter of 2018 we exercised our right to raise the reinsurance rates for all similar treaties that form part of this business. In this connection the ceding companies have the right to recapture the treaties. Nevertheless, these recaptures will have positive effects in the long run because we thereby avoid future losses that would have occurred without the rate increases.

At this stage we have already been given notice of treaty recaptures that will trigger a pre-tax strain of USD 264 million – notifications that were received after the balance sheet date. It should, however, be assumed that this amount will increase further during the second half of the year. In the unlikely event that all treaties were to be recaptured, the resulting strain could be in the region of USD 500 million to USD 600 million. In this case, the EBIT of around EUR 200 million expected for 2018 in life and health reinsurance would no longer be attainable. On the other hand, the charge to earnings from US mortality business in subsequent years would be extensively eliminated, and we could therefore anticipate a substantial surge in profitability.

For life and health reinsurance excluding US mortality business we expect the favourable development of the first six months to be sustained in the second half of the year, especially in relation to the earnings figures. What is more, we see good opportunities here for further profitable expansion of our portfolio. In the Scandinavian markets, for example, we are recording stronger demand for risk-oriented products and customised financial solutions arrangements. Rising demand for reinsurance solutions in longevity business is also evident. In view of changes in framework conditions we are engaged in promising talks in this area with several Australian business partners, for example.

In life and health reinsurance it is our expectation that gross premium income – adjusted for exchange rate effects – will come in higher than in the previous reporting year. In addition, the value of new business is expected to exceed our target of EUR 220 million.

The expected positive cash flow that we generate from the technical account and our investments should – subject to stable exchange rates and yield levels – lead to further growth in our asset portfolio. In the area of fixed-income securities we continue to emphasise the high quality and diversification of the portfolio. For 2018 we anticipate a return on investment of at least 2.7%.

Bearing in mind the development of business to date, we expect to generate Group net income of more than EUR 1 billion in 2018 despite strains that will be incurred in the second half of the year from our portfolio management actions in connection with our US mortality business. This is subject to the premise that the burden of major losses does not significantly exceed the budgeted level of EUR 825 million and that there are no exceptional distortions on capital markets. It should also be borne in mind that this target will be more difficult to achieve in the event of a very heavy strain from treaty recaptures in US mortality business.

In view of our healthy capital base, we have expanded the target range of our payout ratio for the basic dividend to 35% to 45% of IFRS Group net income. Until recently, the range had been set at 35% to 40%. The reason for this move is that it gives us more scope to increase the basic dividend. In light of capital management considerations we shall, however, also continue to pay special dividends if the comfortable level of capitalisation remains unchanged. Irrespective of the level of strains incurred from the aforementioned treaty recaptures, it is our expectation – based on the information currently available to us – that we shall be able to distribute a total dividend at least on a par with the previous year.

Events after the reporting date

Matters of special significance occurring after the balance sheet date are described in section 8.6 of the notes "Events after the end of the reporting period" on page 67.

Consolidated financial statements

Consolidated balance sheet as at 30 June 2018

Assets in EUR thousand	30.6.2018	31.12.2017
Fixed-income securities – held to maturity	295,659	336,182
Fixed-income securities – loans and receivables	2,478,327	2,455,164
Fixed-income securities – available for sale	32,173,850	31,281,908
Fixed-income securities – at fair value through profit or loss	560,114	212,042
Equity securities – available for sale	37,098	37,520
Other financial assets – at fair value through profit or loss	130,559	88,832
Real estate and real estate funds	2,002,102	1,968,702
Investments in associated companies	112,596	121,075
Other invested assets	1,694,039	1,761,678
Short-term investments	644,341	958,669
Cash and cash equivalents	763,062	835,706
Total investments and cash under own management	**40,891,747**	**40,057,478**
Funds withheld	11,031,921	10,735,012
Contract deposits	168,533	167,854
Total investments	**52,092,201**	**50,960,344**
Reinsurance recoverables on unpaid claims	1,489,629	1,651,335
Reinsurance recoverables on benefit reserve	971,352	959,533
Prepaid reinsurance premium	137,947	96,402
Reinsurance recoverables on other technical reserves	10,077	7,301
Deferred acquisition costs	2,315,956	2,228,246
Accounts receivable	4,394,031	3,821,124
Goodwill	94,904	91,692
Deferred tax assets	496,208	466,564
Other assets	952,518	904,253
Accrued interest and rent	11,852	10,052
Assets held for sale	983,474	–
Total assets	**63,950,149**	**61,196,846**

Liabilities in EUR thousand	**30.6.2018**	31.12.2017
Loss and loss adjustment expense reserve	27,601,889	28,378,545
Benefit reserve	9,037,657	8,977,946
Unearned premium reserve	3,889,243	3,541,194
Other technical provisions	461,356	394,460
Funds withheld	932,223	974,786
Contract deposits	3,941,159	3,949,207
Reinsurance payable	1,211,754	980,241
Provisions for pensions	179,166	177,786
Taxes	287,585	319,845
Deferred tax liabilities	1,811,886	1,819,867
Other liabilities	775,817	654,338
Long-term debt and notes payable	2,556,502	1,742,073
Liabilities related to assets held for sale	2,209,315	–
Total liabilities	**54,895,552**	**51,910,288**
Shareholders' equity		
Common shares	120,597	120,597
Nominal value: 120,597 Conditional capital: 60,299		
Additional paid-in capital	724,562	724,562
Common shares and additional paid-in capital	**845,159**	**845,159**
Cumulative other comprehensive income		
Unrealised gains and losses on investments	472,165	818,350
Cumulative foreign currency translation adjustment	121,669	(62,548)
Changes from hedging instruments	(2,899)	(6,292)
Other changes in cumulative other comprehensive income	(51,163)	(50,598)
Total other comprehensive income	**539,772**	**698,912**
Retained earnings	6,936,733	6,984,407
Equity attributable to shareholders of Hannover Rück SE	**8,321,664**	**8,528,478**
Non-controlling interests	732,933	758,080
Total shareholders' equity	**9,054,597**	**9,286,558**
Total liabilities and shareholders´ equity	**63,950,149**	**61,196,846**

Consolidated statement of income as at 30 June 2018

in EUR thousand	1.4.–30.6.2018	1.1.–30.6.2018	1.4.–30.6.2017 [1]	1.1.–30.6.2017 [1]
Gross written premium	4,640,331	9,985,292	4,450,979	8,997,598
Ceded written premium	397,853	864,109	403,423	874,503
Change in gross unearned premium	102,130	(838,379)	(240,521)	(634,934)
Change in ceded unearned premium	1,756	62,838	(12,002)	44,964
Net premium earned	**4,346,364**	**8,345,642**	**3,795,033**	**7,533,125**
Ordinary investment income	316,674	632,476	316,018	635,107
Profit/loss from investments in associated companies	529	1,792	1,265	5,653
Realised gains and losses on investments	4,536	53,380	59,278	83,361
Change in fair value of financial instruments	13,499	19,561	(359)	10,586
Total depreciation, impairments and appreciation of investments	10,041	21,060	12,191	23,056
Other investment expenses	28,154	56,347	27,974	55,624
Net income from investments under own management	**297,043**	**629,802**	**336,037**	**656,027**
Income/expense on funds withheld and contract deposits	55,091	113,796	50,490	123,380
Net investment income	**352,134**	**743,598**	**386,527**	**779,407**
Other technical income	55	76	–	808
Total revenues	**4,698,553**	**9,089,316**	**4,181,560**	**8,313,340**
Claims and claims expenses	3,064,975	6,019,196	2,938,919	5,801,366
Change in benefit reserves	(34,610)	(58,803)	(33,839)	(70,886)
Commission and brokerage, change in deferred acquisition costs	1,135,499	2,052,933	822,114	1,649,439
Other acquisition costs	4,737	10,578	6,333	14,575
Other technical expenses	829	1,910	1,043	1,884
Administrative expenses	111,534	219,332	115,860	216,364
Total technical expenses	**4,282,964**	**8,245,146**	**3,850,430**	**7,612,742**
Other income and expenses	57,795	63,111	68,418	98,828
Operating profit (EBIT)	**473,384**	**907,281**	**399,548**	**799,426**
Financing costs	19,963	37,684	18,117	35,825
Net income before taxes	**453,421**	**869,597**	**381,431**	**763,601**
Taxes	156,568	273,373	94,000	189,785
Net income	**296,853**	**596,224**	**287,431**	**573,816**
thereof				
Non-controlling interest in profit and loss	14,958	40,919	17,218	38,802
Group net income	**281,895**	**555,305**	**270,213**	**535,014**
Earnings per share (in EUR)				
Basic earnings per share	2.34	4.60	2.24	4.44
Diluted earnings per share	2.34	4.60	2.24	4.44

[1] Restated pursuant to IAS 8

Consolidated statement of comprehensive income as at 30 June 2018

in EUR thousand	1.4.– 30.6.2018	1.1.– 30.6.2018	1.4.– 30.6.2017	1.1.– 30.6.2017
Net income	**296,853**	**596,224**	**287,431**	**573,816**
Not reclassifiable to the consolidated statement of income				
Actuarial gains and losses				
Gains (losses) recognised directly in equity	(1,149)	(928)	4,172	3,116
Tax income (expense)	372	307	(1,351)	(1,014)
	(777)	**(621)**	**2,821**	**2,102**
Income and expense recognised directly in equity that cannot be reclassified				
Gains (losses) recognised directly in equity	(1,149)	(928)	4,172	3,116
Tax income (expense)	372	307	(1,351)	(1,014)
	(777)	**(621)**	**2,821**	**2,102**
Reclassifiable to the consolidated statement of income				
Unrealised gains and losses on investments				
Gains (losses) recognised directly in equity	(62,699)	(429,188)	68,765	199,767
Transferred to the consolidated statement of income	(4,569)	(48,888)	(50,876)	(70,918)
Tax income (expense)	20,886	117,555	(7,533)	(11,251)
	(46,382)	**(360,521)**	**10,356**	**117,598**
Currency translation				
Gains (losses) recognised directly in equity	354,726	187,135	(470,811)	(525,066)
Tax income (expense)	(16,076)	(911)	32,694	32,822
	338,650	**186,224**	**(438,117)**	**(492,244)**
Changes from the measurement of associated companies				
Gains (losses) recognised directly in equity	(8)	(7)	(5)	(3)
	(8)	**(7)**	**(5)**	**(3)**
Changes from hedging instruments				
Gains (losses) recognised directly in equity	2,009	3,931	(3,837)	1,549
Tax income (expense)	(266)	(534)	795	418
	1,743	**3,397**	**(3,042)**	**1,967**
Reclassifiable income and expense recognised directly in equity				
Gains (losses) recognised directly in equity	294,028	(238,129)	(405,888)	(323,753)
Transferred to the consolidated statement of income	(4,569)	(48,888)	(50,876)	(70,918)
Tax income (expense)	4,544	116,110	25,956	21,989
	294,003	**(170,907)**	**(430,808)**	**(372,682)**
Total income and expense recognised directly in equity				
Gains (losses) recognised directly in equity	292,879	(239,057)	(401,716)	(320,637)
Transferred to the consolidated statement of income	(4,569)	(48,888)	(50,876)	(70,918)
Tax income (expense)	4,916	116,417	24,605	20,975
	293,226	**(171,528)**	**(427,987)**	**(370,580)**
Total recognised income and expense	**590,079**	**424,696**	**(140,556)**	**203,236**
thereof				
Attributable to non-controlling interests	19,027	28,531	11,062	35,203
Attributable to shareholders of Hannover Rück SE	571,052	396,165	(151,618)	168,033

Consolidated statement of changes in shareholders' equity as at 30 June 2018

in EUR thousand	Common shares	Additional paid-in capital	Other reserves (cumulative other comprehensive income)	
			Unrealised gains/losses	Currency translation
Balance as at 1.1.2017	**120,597**	**724,562**	**904,196**	**680,082**
Capital increase/additions	–	–	–	–
Capital repayments	–	–	–	–
Acquisition/disposal of treasury shares	–	–	–	–
Total income and expense recognised directly in equity	–	–	113,252	(485,116)
Net income	–	–	–	–
Dividends paid	–	–	–	–
Balance as at 30.6.2017	**120,597**	**724,562**	**1,017,448**	**194,966**
Balance as at 1.1.2018	**120,597**	**724,562**	**818,350**	**(62,548)**
Changes in the consolidated group	–	–	–	–
Capital increase/additions	–	–	–	–
Capital repayments	–	–	–	–
Acquisition/disposal of treasury shares	–	–	–	–
Total income and expense recognised directly in equity	–	–	(346,185)	184,217
Net income	–	–	–	–
Dividends paid	–	–	–	–
Balance as at 30.6.2018	**120,597**	**724,562**	**472,165**	**121,669**

	Continuation: Other reserves (cumulative other comprehensive income)		Retained earnings	Equity attributable to shareholders of Hannover Rück SE	Non-controlling interests	Total shareholders' equity
	Hedging instruments	Other				
	(6,703)	**(53,778)**	**6,628,274**	**8,997,230**	**743,317**	**9,740,547**
	–	–	–	–	54	54
	–	–	–	–	(3)	(3)
	–	–	(54)	(54)	–	(54)
	1,968	2,915	–	(366,981)	(3,599)	(370,580)
	–	–	535,014	535,014	38,802	573,816
	–	–	(602,986)	(602,986)	(44,011)	(646,997)
	(4,735)	**(50,863)**	**6,560,248**	**8,562,223**	**734,560**	**9,296,783**
	(6,292)	**(50,598)**	**6,984,407**	**8,528,478**	**758,080**	**9,286,558**
	–	–	–	–	(167)	(167)
	–	–	–	–	29	29
	–	–	–	–	(19)	(19)
	–	–	7	7	–	7
	3,393	(565)	–	(159,140)	(12,388)	(171,528)
	–	–	555,305	555,305	40,919	596,224
	–	–	(602,986)	(602,986)	(53,521)	(656,507)
	(2,899)	**(51,163)**	**6,936,733**	**8,321,664**	**732,933**	**9,054,597**

Consolidated cash flow statement as at 30 June 2018

in EUR thousand	1.1.–30.6.2018	1.1.–30.6.2017 [1]
I. Cash flow from operating activities		
Net income	596,224	573,816
Appreciation/depreciation	31,638	15,430
Net realised gains and losses on investments	(53,380)	(83,361)
Change in fair value of financial instruments (through profit or loss)	(19,561)	(10,586)
Realised gains and losses on deconsolidation	(2,978)	–
Amortisation of investments	5,521	26,963
Changes in funds withheld	(230,649)	(471,605)
Net changes in contract deposits	(69,445)	97,801
Changes in prepaid reinsurance premium (net)	775,540	589,783
Changes in tax assets/provisions for taxes	5,748	65,818
Changes in benefit reserve (net)	(21,356)	1,009
Changes in claims reserves (net)	677,797	756,222
Changes in deferred acquisition costs	(201,089)	(124,738)
Changes in other technical provisions	67,573	15,941
Changes in clearing balances	(741,473)	(536,419)
Changes in other assets and liabilities (net)	197,124	(8,235)
Cash flow from operating activities	**1,017,234**	**907,839**

[1] Restated pursuant to IAS 8

in EUR thousand	1.1.–30.6.2018	1.1.–30.6.2017
II. Cash flow from investing activities		
Fixed-income securities – held to maturity		
Maturities	40,725	123,402
Fixed-income securities – loans and receivables		
Maturities, sales	32,303	180,196
Purchases	(64,452)	(96,303)
Fixed-income securities – available for sale		
Maturities, sales	9,141,221	4,783,413
Purchases	(10,321,085)	(4,997,319)
Fixed-income securities – at fair value through profit or loss		
Maturities, sales	–	3,691
Purchases	(337,070)	–
Equity securities – available for sale		
Sales	5,493	11,572
Purchases	(3,556)	(13,850)
Other financial assets – at fair value through profit or loss		
Sales	35,149	32,383
Purchases	(48,330)	(58,743)
Other invested assets		
Sales	278,909	90,130
Purchases	(184,158)	(149,798)
Affiliated companies and participating interests		
Sales	3,974	47,160
Purchases	(7,786)	(61,221)
Real estate and real estate funds		
Sales	35,354	131,199
Purchases	(71,363)	(137,987)
Short-term investments		
Changes	295,567	(49,695)
Other changes (net)	(18,502)	(1,552)
Cash flow from investing activities	**(1,187,607)**	**(163,322)**

in EUR thousand	1.1.–30.6.2018	1.1.–30.6.2017
III. Cash flow from financing activities		
Contribution from capital measures	29	54
Payment on capital measures	(19)	(4,927)
Dividends paid	(656,507)	(646,997)
Proceeds from long-term debts	809,869	127
Repayment of long-term debts	(872)	(39,786)
Other changes	7	(54)
Cash flow from financing activities	**152,507**	**(691,583)**
IV. Exchange rate differences on cash	**5,123**	**(37,894)**
Cash and cash equivalents at the beginning of the period	**835,706**	**848,667**
Change in cash and cash equivalents (I. + II. + III. + IV.)	**(12,743)**	**15,040**
Cash and cash equivalents at the end of the period	**822,963**	**863,707**
Thereof cash and cash equivalents of the disposal group	59,901	–
Cash and cash equivalents at the end of the period excluding the disposal group	**763,062**	**863,707**
Supplementary information on the cash flow statement [1]		
Income taxes paid (on balance)	(260,804)	(135,732)
Dividend receipts[2]	110,432	112,074
Interest received	835,014	803,236
Interest paid	(130,651)	(142,925)

[1] The income taxes paid, dividend receipts as well as interest received and paid are included entirely in the cash flow from operating activities.
[2] Including dividend-like profit participations from investment funds

Notes to the consolidated financial statements as at 30 June 2018

Notes

1. General reporting principles

Hannover Rück SE and its subsidiaries (collectively referred to as the "Hannover Re Group" or "Hannover Re") are 50.2% (rounded) owned by Talanx AG and included in its consolidated financial statement. Talanx AG is majority-owned by HDI Haftpflichtverband der Deutschen Industrie V.a.G. (HDI). Hannover Re is obliged to prepare a consolidated financial statement and group management report in accordance with § 290 German Commercial Code (HGB). Furthermore, HDI is required by §§ 341 i et seq. German Commercial Code (HGB) to prepare consolidated annual accounts that include the annual financial statements of Hannover Rück SE and its subsidiaries. Hannover Rück SE is a European Company, Societas Europaea (SE), and its registered office is located at Karl-Wiechert-Allee 50, 30625 Hannover, Germany.

The consolidated financial statement of Hannover Re was drawn up in compliance with the International Financial Reporting Standards (IFRS) that are to be used within the European Union. This also applies to all figures provided in this report for previous periods.

As provided for by IAS 34, in our preparation of the consolidated quarterly financial statement, consisting of the consolidated balance sheet, consolidated statement of income, consolidated statement of comprehensive income, consolidated cash flow statement, consolidated statement of changes in shareholders' equity and selected explanatory notes, we draw on estimates and assumptions to a greater extent than is the case with the annual financial reporting. This can have implications for items in the balance sheet and the statement of income as well as for other financial obligations. Although the estimates are always based on realistic premises, they are of course subject to uncertainties that may be reflected accordingly in the result. Losses from natural disasters and other catastrophic losses impact the result of the reporting period in which they occur. Furthermore, belatedly reported claims for major loss events can also lead to substantial fluctuations in individual quarterly results. Gains and losses on the disposal of investments are accounted for in the quarter in which the investments are sold.

The present consolidated quarterly financial statement was prepared by the Executive Board on 6 August 2018 and released for publication.

2. Accounting principles including major accounting policies

The quarterly accounts of the consolidated companies included in the consolidated financial statement were drawn up as at 30 June 2018.

The consolidated quarterly financial report was compiled in accordance with IAS 34 "Interim Financial Reporting". Consequently, the accounting policies adopted in the period under review were the same as those applied in the preceding consolidated annual financial statement; changes made in specific justified cases pursuant to IAS 8 are reported separately in the section entitled "Changes in accounting policies". For more details of the accounting policies please see the Group annual financial report for the previous year.

All standards adopted by the IASB as at 30 June 2018 with binding effect for the period under review have been observed in the consolidated financial statement.

Accounting standards applied for the first time

In May 2014 the IASB issued IFRS 15 "Revenue from Contracts with Customers". The standard specifies when and in what amount revenue is to be recognised and which disclosures are required for this purpose. IFRS 15 provides a single five-step model framework to be applied to all contracts with customers. In the "Clarifications to IFRS 15 Revenue from Contracts with Customers", which were published in April 2016, the IASB clarified various principles of IFRS 15 and included additional transition relief provisions. Financial instruments and other contractual rights and obligations which are to be recognised under separate standards as well as (re)insurance contracts within the scope of IFRS 4 "Insurance Contracts" are expressly exempted from the standard's scope of application. Both the standard and the clarifications were applied for the first time to the financial year beginning on 1 January 2018. Hannover Re subjected the service contracts existing as at the balance sheet date to analysis and did not identify any significant changes relative to current practice. The predominant activity of the Hannover Re Group falls within the scope of application of IFRS 4. Consequently, the services falling within the scope of application of IFRS 15 do not have any significant implications overall for the Group's net assets, financial position or results of operations. Hannover Re opted for the modified retrospective approach on initial application of IFRS 15, according to which the cumulative effect of applying the new standard is recognised in retained earnings as at 1 January 2018. This effect was considered to be not significant for the Hannover Re Group as a whole, and the retained earnings resulting from the transition to IFRS 15 were therefore not restated on grounds of materiality. In addition, the practical transition relief provided in the standard with respect to completed contracts and contract modifications is utilised.

All in all, Hannover Re recognised revenue as defined by IFRS 15 in an amount of EUR 37.4 million in the first half of 2018.

Revenue categories

in EUR thousand	30.6.2018
Brokerage commissions, performance fees and similar forms of remuneration [1]	2,713
Other insurance-related services [2]	34,684
Total	**37,397**

[1] revenue recognition over time
[2] revenue recognition predominantly over time

In addition, the IASB published amendments to IFRS 4 "Applying IFRS 9 with IFRS 4", which gives certain insurance entities the option to defer mandatory application of IFRS 9 to 2021. The Hannover Re Group meets the qualifying criteria (the proportion of the Group's activities connected with insurance is over 90%) and is therefore applying the temporary exemption. The new disclosures required as part of the deferral approach, which are intended to facilitate some comparability with entities already applying IFRS 9, will be provided for the first time in the notes to the Annual Report as at 31 December 2018.

Furthermore, a number of other interpretations and amendments to existing standards were issued with no significant implications for the consolidated financial statement:

- Classification and Measurement of Share-based Payment Transactions (Amendments to IFRS 2),
- Clarifications to IFRS 15: Revenue from Contracts with Customers,
- Transfers of Investment Property: Amendments to IAS 40 "Investment Property"
- Amendments as part of the "Annual Improvements to IFRS Standards 2014–2016 Cycle" with respect to IAS 28 "Investments in Associates and Joint Ventures" and IFRS 1 "First-time Adoption of International Financial Reporting Standards"
- IFRIC 22 "Foreign Currency Transactions and Advance Consideration".

Key exchange rates

The individual companies' statements of income prepared in the respective functional currency are converted into euro at the average rates of exchange and transferred to the consolidated financial statement. The conversion of foreign currency items in the balance sheets of the individual companies and the transfer of these items to the consolidated financial statement are effected at the mean rates of exchange on the balance sheet date.

Key exchange rates

1 EUR corresponds to:	30.6.2018	31.12.2017	1.1.–30.6.2018	1.1.–30,6.2017
	Mean rate of exchange on the balance sheet date		Average rate of exchange	
AUD	1.5782	1.5347	1.5656	1.4439
BHD	0.4410	0.4523	0.4551	0.4100
CAD	1.5434	1.5047	1.5409	1.4469
CNY	7.7155	7.8051	7.7114	7.4670
GBP	0.8861	0.8875	0.8814	0.8603
HKD	9.1439	9.3728	9.4507	8.4545
INR	79.8363	76.6076	79.2957	71.5431
KRW	1,298.7900	1,280.3000	1,299.4271	1,244.5886
MYR	4.7057	4.8552	4.7665	4.7668
SEK	10.4508	9.8387	10.1710	9.5913
USD	1.1653	1.1994	1.2061	1.0874
ZAR	16.0315	14.8140	14.9047	14.4294

3. Changes in accounting policies

In the consolidated financial statement for the 2017 financial year Hannover Re disclosed components of the deferred acquisition costs and the unearned premium reserve netted with the benefit reserve for a certain portfolio of reinsurance treaties. This inaccurate disclosure was corrected retrospectively pursuant to IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" and the comparative figures for previous periods were restated. The effects of this change on the individual items of the consolidated balance sheet and the consolidated statement of income are shown in the following table. There were no implications for Group net income.

Restatements pursuant to IAS 8

in EUR thousand	1.1.2017	30.6.2017
Consolidated balance sheet		
Deferred acquisition costs	65,945	66,288
Benefit reserve	24,098	35,230
Unearned premium reserve	41,847	31,058
in EUR thousand		1.1.–30.6.2017
Consolidated statement of income		
Change in gross unearned premium		10,357
Change in benefit reserves		11,867
Commission and brokerage, change in deferred acquisition costs		(1,510)
Group net income		–

4. Consolidated companies and consolidation principles

Capital consolidation

The capital consolidation is carried out according to the requirements of IFRS 10 "Consolidated Financial Statements" on the basis of a consistent consolidation model for all entities that identifies control as the single basis for verifying the consolidation requirement, irrespective of whether control is substantiated in company law, contractually or economically. Group companies are consolidated from the point in time when Hannover Re gains control over them. Control exists if Hannover Re directly or indirectly has decision-making power over a Group company on the basis of voting rights or other rights, if it has exposure or rights to positive and negative variable returns from its involvement with the Group company and if it can use its power to influence these returns. All of these criteria must be met. Other circumstances may also give rise to control, for example the existence of a principal-agent relationship. In this case a party outside the Group with decision-making powers (agent) acts for Hannover Re, but does not control the company since it merely exercises decision-making powers that have been delegated by Hannover Re (principal). In the context of their operational activities some companies belonging to the Hannover Re Group enter into business relations with structured entities that are also to be examined in accordance with IFRS 10 in conjunction with IFRS 12 with an eye to their implications for consolidation. Structured entities are entities designed in such a way that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements. Consolidation decisions are reviewed as necessary and at least once a year. Group companies are consolidated until the Hannover Re Group loses control over them. The accounting policies of Group companies are adjusted, where necessary, in order to ensure consistent application of the Hannover Re Group's accounting policies. The capital consolidation is based on the acquisition method. In the context of the acquisition method the acquisition costs, measured at the fair value of the consideration rendered by the parent company on the acquisition date, are netted with the proportionate shareholders' equity of the subsidiary at the time when it is first included in the consolidated financial statement after the revaluation of all assets and liabilities. After recognition of all acquired intangible assets that in accordance with IFRS 3 "Business Combinations" are to be accounted for separately from goodwill, the difference between the revalued shareholders' equity of the subsidiary and the purchase price is recognised as goodwill. Under IFRS 3 scheduled amortisation is not taken on goodwill. Instead, impairment is taken where necessary on the basis of annual impairment tests. Immaterial and negative goodwill are recognised in the statement of income in the year of their occurrence. Costs associated with acquisition are expensed.

Companies over which Hannover Re is able to exercise a significant influence are consolidated as associated companies using the equity method of accounting with the proportion of the shareholders' equity attributable to the Group. A significant influence is presumed to exist if a company belonging to the Hannover Re Group directly or indirectly holds at least 20% – but no more than 50% – of the voting rights. We also derive evidence of significant influence over an associated company from representation on a governing body of such company, participation in its policy-making processes – e. g. with respect to dividends or other distributions –, the existence of material inter-company transactions, the possibility of interchanging managerial personnel or the provision of key technical information for the company. Income from investments in associated companies is recognised separately in the consolidated statement of income.

Non-controlling interests in shareholders' equity are reported separately within Group shareholders' equity in accordance with IAS 1 "Presentation of Financial Statements". The non-controlling interest in profit or loss, which forms part of net income and is shown separately after net income as a "thereof " note, amounted to EUR 40.9 million (EUR 38.8 million) as at 30 June 2018.

For further details we would refer to the relevant information in the Group annual financial report as at 31 December 2017.

Consolidation of business transactions within the Group

Receivables and liabilities between the companies included in the consolidated financial statement are offset against each other. Profits and expenses from business transactions within the Group are also eliminated.

Transactions between a disposal group and the continuing operations of the Group are similarly eliminated in accordance with IFRS 10.

Major acquisitions and new formations

Within the 95.1%-owned US subgroup Hannover Re Real Estate Holdings, Inc., the special purpose property company 1600FLL LLC, Wilmington, was established via the subsidiary GLL HRE Core Properties, LP, for the purpose of real estate acquisition. An amount of roughly EUR 30.4 million was invested in this connection.

Effective 11 Januar 2018 Hannover Re acquired all the shares in The Omaha Indemnity Company, Madison, through its wholly owned subsidiary Hannover Finance, Inc., Wilmington. The company is now trading under the name Glencar Insurance Company, Orlando. The purchase price of the shares was EUR 21.2 million.

The business was included in the consolidated financial statement in the first quarter. In the context of the purchase price allocation the determination of the fair values of the acquired assets and assumed liabilities undertaken for the purpose of initial consolidation gave rise to goodwill of EUR 3.5 million.

Major disposals

On 11 May 2018 the Executive Board of Hannover Re announced the plan to sell the majority of shares in International Insurance Company of Hannover SE, Hannover (Inter Hannover), a wholly owned subsidiary of Hannover Rück SE, to HDI Global SE, Hannover.

It is envisaged that HDI Global SE will acquire 50.2% of the shares in Inter Hannover. Inter Hannover will subsequently be renamed HDI Global Specialty SE. HDI Global SE will then transfer its specialty portfolio to the new company. The remaining shares in Inter Hannover will continue to be held by Hannover Re. The transaction is expected to close in the first quarter of 2019 with the associated deconsolidation for Hannover Re.

Pursuant to IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations" Inter Hannover was classified as at the balance sheet date as a disposal group, which is to be measured at the lower of the carrying amount and fair value less costs to sell. This measurement did not give rise to any impairment expense.

The cumulative other comprehensive income of EUR -4.0 million arising out of the currency translation of the assets and liabilities belonging to the disposal group as well as the profits and losses netted directly in equity from the measurement of available-for-sale financial assets in an amount of EUR -0.5 million will only be realised in the context of deconsolidation. In addition, actuarial gains and losses in an amount of EUR -0.5 million were netted directly in equity as at the balance sheet date.

In compliance with IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations" we recognise the assets and liabilities of the disposal group in corresponding balance sheet items. Transactions between the disposal group and the other consolidated companies continue to be entirely eliminated in conformity with IFRS 10 "Consolidated Financial Statements".

The assets and liabilities are presented on a consolidated basis in the following table and broken down into their major components.

Assets and liabilities of the disposal group

in EUR thousand	30.6.2018
Assets	
Fixed-income securities – loans and receivables	22,190
Fixed-income securities – available for sale	225,583
Real estate and real estate funds	7,013
Short-term investments and other invested assets	13,521
Cash and cash equivalents	59,901
Reinsurance recoverables on unpaid claims	102,851
Prepaid reinsurance premium	25,322
Deferred acquisition costs	119,896
Accounts receivable	400,278
Other assets	6,919
Assets held for sale	**983,474**
Liabilities	
Loss and loss adjustment expense reserve	1,638,250
Unearned premium reserve	541,825
Other liabilities	29,240
Liabilities related to assets held for sale	**2,209,315**

Notes

5. Group segment report

Segmentation of assets

in EUR thousand	Property and casualty reinsurance 30.6.2018	Property and casualty reinsurance 31.12.2017
Assets		
Fixed-income securities – held to maturity	228,946	259,284
Fixed-income securities – loans and receivables	2,442,236	2,417,894
Fixed-income securities – available for sale	23,632,839	23,662,710
Equity securities – available for sale	37,098	37,520
Financial assets at fair value through profit or loss	64,848	56,652
Other invested assets	3,521,882	3,612,795
Short-term investments	339,177	342,744
Cash and cash equivalents	528,632	610,585
Total investments and cash under own management	**30,795,658**	**31,000,184**
Funds withheld	1,996,781	1,636,993
Contract deposits	2,438	(121)
Total investments	**32,794,877**	**32,637,056**
Reinsurance recoverables on unpaid claims	1,279,678	1,443,869
Reinsurance recoverables on benefit reserve	–	–
Prepaid reinsurance premium	137,841	96,383
Reinsurance recoverables on other reserves	577	1,269
Deferred acquisition costs	942,141	841,911
Accounts receivable	2,899,988	2,458,038
Other assets in the segment	2,944,492	1,351,426
Assets held for sale	984,960	–
Total assets	**41,984,554**	**38,829,952**

Segmentation of liabilities

in EUR thousand		
Liabilities		
Loss and loss adjustment expense reserve	23,290,460	24,130,443
Benefit reserve	–	–
Unearned premium reserve	3,640,901	3,332,083
Provisions for contingent commissions	236,263	162,620
Funds withheld	358,339	400,290
Contract deposits	75,704	72,056
Reinsurance payable	738,889	512,372
Long-term debt and notes payable	321,574	250,122
Other liabilities in the segment	1,897,957	1,948,148
Liabilities related to assets held for sale	2,209,315	–
Total liabilities	**32,769,402**	**30,808,134**

Life and health reinsurance		Consolidation		Total	
30.6.2018	31.12.2017	30.6.2018	31.12.2017	30.6.2018	31.12.2017
66,713	71,898	–	5,000	295,659	336,182
36,091	37,270	–	–	2,478,327	2,455,164
8,525,622	7,617,113	15,389	2,085	32,173,850	31,281,908
–	–	–	–	37,098	37,520
625,825	244,222	–	–	690,673	300,874
244,366	189,441	42,489	49,219	3,808,737	3,851,455
280,167	615,925	24,997	–	644,341	958,669
231,739	213,065	2,691	12,056	763,062	835,706
10,010,523	**8,988,934**	**85,566**	**68,360**	**40,891,747**	**40,057,478**
9,035,140	9,098,019	–	–	11,031,921	10,735,012
166,095	167,975	–	–	168,533	167,854
19,211,758	**18,254,928**	**85,566**	**68,360**	**52,092,201**	**50,960,344**
209,951	207,660	–	(194)	1,489,629	1,651,335
971,352	959,533	–	–	971,352	959,533
184	19	(78)	–	137,947	96,402
9,500	6,032	–	–	10,077	7,301
1,373,815	1,386,335	–	–	2,315,956	2,228,246
1,494,498	1,363,610	(455)	(524)	4,394,031	3,821,124
829,742	792,297	(2,218,752)	(671,162)	1,555,482	1,472,561
–	–	(1,486)	–	983,474	–
24,100,800	22,970,414	(2,135,205)	(603,520)	63,950,149	61,196,846

4,311,623	4,248,296	(194)	(194)	27,601,889	28,378,545
9,037,657	8,977,946	–	–	9,037,657	8,977,946
248,342	209,111	–	–	3,889,243	3,541,194
225,093	231,840	–	–	461,356	394,460
573,884	574,496	–	–	932,223	974,786
3,865,455	3,877,151	–	–	3,941,159	3,949,207
472,865	467,869	–	–	1,211,754	980,241
–	–	2,234,928	1,491,951	2,556,502	1,742,073
3,356,233	1,705,864	(2,199,736)	(682,176)	3,054,454	2,971,836
–	–	–	–	2,209,315	–
22,091,152	20,292,573	34,998	809,581	54,895,552	51,910,288

Segment statement of income

in EUR thousand	Property and casualty reinsurance 1.1.–30.6.2018	1.1.–30.6.2017
Gross written premium	6,467,100	5,427,458
thereof		
From insurance business with other segments	–	–
From insurance business with external third parties	6,467,100	5,427,458
Net premium earned	5,174,847	4,312,764
Net investment income	502,973	475,501
thereof		
Change in fair value of financial instruments	1,339	1,345
Total depreciation, impairments and appreciation of investments	21,044	23,040
Income/expense on funds withheld and contract deposits	16,278	1,828
Claims and claims expenses	3,346,565	2,926,442
Change in benefit reserve	–	–
Commission and brokerage, change in deferred acquisition costs and other technical income/expenses	1,510,540	1,129,534
Administrative expenses	113,072	107,794
Other income and expenses	(18,871)	9,786
Operating profit/loss (EBIT)	**688,772**	**634,281**
Financing costs	–	–
Net income before taxes	**688,772**	**634,281**
Taxes	213,394	155,493
Net income	**475,378**	**478,788**
thereof		
Non-controlling interest in profit or loss	40,947	34,818
Group net income	**434,431**	**443,970**

[1] Restated pursuant to IAS 8

The segment information shown here is based on the same principles as those applied in the consolidated financial statement as at 31 December 2017. It follows the system used for internal reporting purposes, on the basis of which the full Executive Board regularly evaluates the performance of segments and decides on the allocation of resources to them. The “Consolidation” column includes not only the elimination of cross-segment transactions but also, more significantly, companies whose business operations cannot be unambiguously allocated to property and casualty reinsurance or life and health reinsurance. These are principally the service and financing companies belonging to the Group. Since the performance indicators used to steer the segments correspond to the system according to which the consolidated financial statement is prepared, a separate reconciliation of the segment results with the Group result is not provided. We would also refer to the relevant information in the Group annual financial report as at 31 December 2017.

The special purpose property company 1600FLL LLC, Wilmington, which was established in the first half of 2018, and Glencar Insurance Company, Orlando, which was acquired in the same period, are allocated to the property and casualty reinsurance segment.

Life and health reinsurance		Consolidation		Total	
1.1.–30.6.2018	1.1.–30.6.2017 [1]	1.1.–30.6.2018	1.1.–30.6.2017	1.1.–30.6.2018	1.1.–30.6.2017 [1]
3,518,192	3,570,140	–	–	9,985,292	8,997,598
–	–	–	–	–	–
3,518,192	3,570,140	–	–	9,985,292	8,997,598
3,170,719	3,220,278	76	83	8,345,642	7,533,125
239,102	301,717	1,523	2,189	743,598	779,407
18,279	9,336	(57)	(95)	19,561	10,586
16	16	–	–	21,060	23,056
97,518	121,552	–	–	113,796	123,380
2,672,631	2,874,924	–	–	6,019,196	5,801,366
(58,803)	(70,886)	–	–	(58,803)	(70,886)
554,805	535,556	–	–	2,065,345	1,665,090
106,131	108,554	129	16	219,332	216,364
84,328	91,373	(2,346)	(2,331)	63,111	98,828
219,385	**165,220**	**(876)**	**(75)**	**907,281**	**799,426**
–	–	37,684	35,825	37,684	35,825
219,385	**165,220**	**(38,560)**	**(35,900)**	**869,597**	**763,601**
72,605	47,030	(12,626)	(12,738)	273,373	189,785
146,780	**118,190**	**(25,934)**	**(23,162)**	**596,224**	**573,816**
(28)	3,984	–	–	40,919	38,802
146,808	114,206	(25,934)	(23,162)	555,305	535,014

Notes

6. Notes on the individual items of the balance sheet

6.1 Investments under own management

Investments are classified and measured in accordance with IAS 39 "Financial Instruments: Recognition and Measurement". Hannover Re classifies investments according to the following categories: held-to-maturity, loans and receivables, financial assets at fair value through profit or loss and available-for-sale. The allocation and measurement of investments are determined by the investment intent.

The investments under own management also encompass investments in associated companies, real estate and real estate funds (also includes: investment property), other invested assets, short-term investments as well as cash and cash equivalents. Real estate as well as investments held by disposal groups which are intended for sale as defined by IFRS 5 are recognised separately in the consolidated balance sheet. Intentions to sell are substantiated by individual real estate market conditions and specific property circumstances, taking into consideration current and future opportunity/risk profiles.

For further details we would refer to the relevant information in the Group annual financial report as at 31 December 2017.

The following table shows the regional origin of the investments under own management.

Investments

in EUR thousand	30.6.2018	31.12.2017
Regional origin		
Germany	7,343,377	6,999,285
United Kingdom	3,117,863	3,286,400
France	1,344,068	1,419,423
Other	5,289,844	6,108,855
Europe	**17,095,152**	**17,813,963**
USA	14,488,977	13,380,576
Other	1,814,544	1,876,686
North America	**16,303,521**	**15,257,262**
Asia	2,823,615	2,353,786
Australia	2,618,617	2,496,589
Australasia	**5,442,232**	**4,850,375**
Africa	423,086	442,684
Other	1,627,756	1,693,194
Total	**40,891,747**	**40,057,478**

Maturities of the fixed-income and variable-yield securities

	30.6.2018		31.12.2017	
in EUR thousand	Amortised cost[1]	Fair value	Amortised cost[1]	Fair value
Held to maturity				
due in one year	44,455	44,727	85,411	86,359
due after one through two years	33,385	34,979	28,055	29,586
due after two through three years	86,073	93,977	35,145	39,097
due after three through four years	83,383	93,208	138,465	156,064
due after four through five years	47,536	53,502	–	–
due after five through ten years	–	–	48,278	54,789
due after more than ten years	827	264	828	263
Total	**295,659**	**320,657**	**336,182**	**366,158**
Loans and receivables				
due in one year	135,804	136,914	129,159	130,841
due after one through two years	224,570	234,707	179,739	188,653
due after two through three years	204,000	215,638	218,893	233,670
due after three through four years	353,815	369,347	302,243	320,436
due after four through five years	243,247	273,999	214,455	235,151
due after five through ten years	845,489	1,002,218	942,722	1,126,196
due after more than ten years	471,402	502,050	467,953	505,538
Total	**2,478,327**	**2,734,873**	**2,455,164**	**2,740,485**
Available for sale				
due in one year[2]	5,350,857	5,349,130	5,345,018	5,346,842
due after one through two years	3,038,098	3,048,246	2,711,972	2,721,829
due after two through three years	3,726,727	3,725,710	3,310,919	3,364,264
due after three through four years	2,594,440	2,596,783	3,659,321	3,675,048
due after four through five years	3,356,368	3,370,325	2,748,835	2,814,657
due after five through ten years	9,570,063	9,610,698	9,992,925	10,218,549
due after more than ten years	5,654,873	5,880,361	4,601,225	4,935,094
Total	**33,291,426**	**33,581,253**	**32,370,215**	**33,076,283**
Financial assets at fair value through profit or loss				
due in one year	503,498	503,498	177,634	177,634
due after one through two years	10,887	10,887	8,620	8,620
due after two through three years	4,321	4,321	–	–
due after three through four years	2,584	2,584	–	–
due after four through five years	15,214	15,214	7,075	7,075
due after five through ten years	4,376	4,376	–	–
due after more than ten years	19,234	19,234	18,713	18,713
Total	**560,114**	**560,114**	**212,042**	**212,042**

[1] Including accrued interest
[2] Including short-term investments and cash

Notes

Amortised cost, unrealised gains and losses and accrued interest on the portfolio of investments classified as held to maturity as well as their fair value

in EUR thousand	30.6.2018				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Investments held to maturity					
Fixed-income securities					
Government debt securities of EU member states	29,044	742	156	–	29,200
Debt securities issued by semi-governmental entities	24,122	573	2,086	–	26,208
Corporate securities	81,031	1,472	6,993	–	88,024
Covered bonds/asset-backed securities	161,462	3,729	16,326	563	177,225
Total	**295,659**	**6,516**	**25,561**	**563**	**320,657**

Amortised cost, unrealised gains and losses and accrued interest on the portfolio of investments classified as held to maturity as well as their fair value

in EUR thousand	31.12.2017				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Investments held to maturity					
Fixed-income securities					
Government debt securities of EU member states	28,624	217	471	–	29,095
Debt securities issued by semi-governmental entities	29,493	437	2,433	–	31,926
Corporate securities	91,286	1,522	8,037	–	99,323
Covered bonds/asset-backed securities	186,779	3,872	19,600	565	205,814
Total	**336,182**	**6,048**	**30,541**	**565**	**366,158**

Amortised cost, unrealised gains and losses and accrued interest on loans and receivables as well as their fair value

in EUR thousand	30.6.2018				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Loans and receivables					
Debt securities issued by semi-governmental entities	1,537,681	24,348	172,074	4,328	1,705,427
Corporate securities	454,631	3,852	20,112	1,350	473,393
Covered bonds / asset-backed securities	486,015	10,417	70,038	–	556,053
Total	**2,478,327**	**38,617**	**262,224**	**5,678**	**2,734,873**

Amortised cost, unrealised gains and losses and accrued interest on loans and receivables as well as their fair value

in EUR thousand	31.12.2017				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Loans and receivables					
Debt securities issued by semi-governmental entities	1,544,933	22,830	187,976	5,221	1,727,688
Corporate securities	396,794	2,326	25,988	1,454	421,328
Covered bonds / asset-backed securities	513,437	9,331	78,032	–	591,469
Total	**2,455,164**	**34,487**	**291,996**	**6,675**	**2,740,485**

Amortised cost, unrealised gains and losses and accrued interest on the portfolio of investments classified as available for sale as well as their fair value

in EUR thousand	30.6.2018				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Available for sale					
Fixed-income securities					
Government debt securities of EU member states	3,905,634	17,686	156,077	5,759	4,055,952
US Treasury notes	8,116,673	29,677	20,150	120,941	8,015,882
Other foreign government debt securities	1,933,305	16,143	15,897	24,704	1,924,498
Debt securities issued by semi-governmental entities	4,828,958	34,760	157,004	36,806	4,949,156
Corporate securities	10,658,232	115,870	217,720	164,959	10,710,993
Covered bonds/asset-backed securities	2,360,056	17,893	74,986	11,128	2,423,914
Investment funds	81,242	–	12,632	419	93,455
	31,884,100	**232,029**	**654,466**	**364,716**	**32,173,850**
Equity securities					
Shares	12,194	–	6,701	–	18,895
Investment funds	12,308	–	5,981	86	18,203
	24,502	**–**	**12,682**	**86**	**37,098**
Short-term investments	644,264	4,803	119	42	644,341
Total	**32,552,866**	**236,832**	**667,267**	**364,844**	**32,855,289**

Amortised cost, unrealised gains and losses and accrued interest on the portfolio of investments classified as available for sale as well as their fair value

in EUR thousand	31.12.2017				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Available for sale					
Fixed-income securities					
Government debt securities of EU member states	3,101,426	19,901	132,208	10,214	3,223,420
US Treasury notes	6,945,508	28,144	19,192	97,721	6,866,979
Other foreign government debt securities	1,893,711	16,513	26,766	16,290	1,904,187
Debt securities issued by semi-governmental entities	5,137,974	37,859	183,998	45,058	5,276,914
Corporate securities	10,945,807	119,725	401,952	29,217	11,318,542
Covered bonds/asset-backed securities	2,427,624	23,942	116,370	6,497	2,537,497
Investment funds	123,608	–	31,690	929	154,369
	30,575,658	**246,084**	**912,176**	**205,926**	**31,281,908**
Equity securities					
Shares	12,794	–	6,388	17	19,165
Investment funds	12,865	–	5,692	202	18,355
	25,659	**–**	**12,080**	**219**	**37,520**
Short-term investments	958,851	5,582	58	240	958,669
Total	**31,560,168**	**251,666**	**924,314**	**206,385**	**32,278,097**

Fair value of financial assets at fair value through profit or loss before and after accrued interest as well as accrued interest on such financial assets

in EUR thousand	30.6.2018	31.12.2017	30.6.2018	31.12.2017	30.6.2018	31.12.2017
	Fair value before accrued interest		Accrued interest		Fair value	
Financial assets at fair value through profit or loss						
Fixed-income securities						
US Treasury notes	57,114	–	–	–	57,114	–
Other foreign government debt securities	287,007	–	–	–	287,007	–
Corporate securities	215,703	211,856	290	186	215,993	212,042
	559,824	**211,856**	**290**	**186**	**560,114**	**212,042**
Other financial assets						
Derivatives	130,559	88,832	–	–	130,559	88,832
	130,559	**88,832**	**–**	**–**	**130,559**	**88,832**
Total	**690,383**	**300,688**	**290**	**186**	**690,673**	**300,874**

Information on fair values and fair value hierarchy

The methods and models set out below are used to establish the fair value of financial instruments on the assets and liabilities side of the balance sheet. The fair value of a financial instrument corresponds in principle to the amount that Hannover Re would receive or pay if it were to sell or settle the said financial instrument on the balance sheet date. Insofar as market prices are listed on markets for financial instruments, their bid price is used. In other cases the fair values are established on the basis of the market conditions prevailing on the balance sheet date for financial assets with similar credit rating, duration and return characteristics or using recognised models of mathematical finance. Hannover Re uses a number of different valuation models for this purpose. The details are set out in the following table.

Valuation models

Financial instrument	Parameter	Pricing model
Fixed-income securities		
Unlisted plain vanilla bonds, interest rate swaps	Interest rate curve	Present value method
Unlisted structured bonds	Interest rate curve, volatility surfaces	Hull-White, Black-Karasinski, LIBOR market model etc.
Unlisted ABS/MBS, CDO/CLO	Risk premiums, default rates, prepayment speed and recovery rates	Present value method
Other invested assets		
Unlisted equities and equity investments	Acquisition cost, cash flows, EBIT multiples, as applicable book value	Capitalised earnings method, discounted cash flow method, multiple-based approaches
Private equity funds, private equity real estate funds	Audited net asset values (NAV)	Net asset value method
Unlisted bond, equity and real estate funds	Audited net asset values (NAV)	Net asset value method
Other financial assets – at fair value through profit or loss		
Currency forwards	Interest rate curves, spot and forward rates	Interest parity model
Inflation swaps	Inflation swap rates (Consumer Price Index), historical index fixings, interest rate curve	Present value method with seasonality adjustment
OTC stock options, OTC stock index options	Listing of the underlying share, implicit volatilities, money-market interest rate, dividend yield	Black-Scholes
Insurance derivatives	Fair values, actuarial parameters, interest rate curve	Present value method

Fair value hierarchy

For the purposes of the disclosure requirements pursuant to IFRS 13 "Fair Value Measurement", it is necessary to assign financial assets and liabilities to a three-level fair value hierarchy.

The fair value hierarchy, which reflects characteristics of the price data and inputs used for measurement purposes, is structured as follows:

- Level 1: Assets or liabilities measured at (unadjusted) prices quoted directly in active and liquid markets.
- Level 2: Assets or liabilities which are measured using observable market data and are not allocable to level 1. Measurement is based, in particular, on prices for comparable assets and liabilities that are traded on active markets, prices on markets that are not considered active as well as inputs derived from such prices or market data.
- Level 3: Assets or liabilities that cannot be measured or can only be partially measured using observable market inputs. The measurement of such instruments draws principally on valuation models and methods.

If input factors from different levels are used to measure a financial instrument, the level of the lowest input factor material to measurement is determinative.

The operational units responsible for coordinating and documenting measurement are organisationally separate from the operational units that enter into investment risks. All relevant valuation processes and valuation methods are documented. Decisions on fundamental valuation issues are taken by a valuation committee that meets monthly.

In the current reporting period, as in the comparable period of the previous year, no financial assets or liabilities had to be reclassified to a different level of the fair value hierarchy.

The following table shows the breakdown of financial assets and liabilities recognised at fair value into the three-level fair value hierarchy.

Fair value hierarchy of financial assets and liabilities recognised at fair value

in EUR thousand	30.6.2018			
	Level 1	Level 2	Level 3	Total
Fixed-income securities	27,230	32,706,734	–	32,733,964
Equity securities	35,342	1,756	–	37,098
Other financial assets	–	63,544	67,015	130,559
Real estate and real estate funds	–	–	384,630	384,630
Other invested assets	–	–	1,569,028	1,569,028
Short-term investments	644,341	–	–	644,341
Total financial assets	**706,913**	**32,772,034**	**2,020,673**	**35,499,620**
Other liabilities	–	60,872	181,802	242,674
Total financial liabilities	**–**	**60,872**	**181,802**	**242,674**

Fair value hierarchy of financial assets and liabilities recognised at fair value

in EUR thousand	31.12.2017			
	Level 1	Level 2	Level 3	Total
Fixed-income securities	34,043	31,459,907	–	31,493,950
Equity securities	35,521	1,897	102	37,520
Other financial assets	–	39,793	49,039	88,832
Real estate and real estate funds	–	–	384,973	384,973
Other invested assets	–	–	1,639,065	1,639,065
Short-term investments	958,669	–	–	958,669
Total financial assets	**1,028,233**	**31,501,597**	**2,073,179**	**34,603,009**
Other liabilities	–	78,838	185,498	264,336
Total financial liabilities	**–**	**78,838**	**185,498**	**264,336**

The following table provides a reconciliation of the fair values of financial assets and liabilities included in level 3 at the beginning of the period with the fair values as at the balance sheet date.

Movements in level 3 financial assets and liabilities

in EUR thousand	1.1.–30.6.2018				
	Fixed-income securities	Equities, equity funds and other variable-yield securities	Real estate and real estate funds	Other invested assets	Other liabilities
Net book value at 31 December of the previous year	**102**	**49,039**	**384,973**	**1,639,065**	**185,498**
Currency translation at 1 January of the year under review	–	1,438	3,944	28,792	5,437
Net book value after currency translation	**102**	**50,477**	**388,917**	**1,667,857**	**190,935**
Income and expenses					
recognised in the statement of income	–	976	–	51,314	(15,692)
recognised directly in shareholders' equity	–	–	(4,209)	(58,147)	–
Transfers	(103)	–	–	–	–
Purchases	–	23,806	40,307	183,338	7,718
Sales	–	6,552	33,502	273,045	–
Settlements	–	–	–	4,756	–
Reclassifications pursuant to IFRS 5	–	–	(7,013)	–	–
Transfers to level 3	–	–	–	–	–
Transfers from level 3	–	–	–	–	–
Currency translation at 30 June of the year under review	1	(1,692)	130	2,467	(1,159)
Closing balance at 30 June of the year under review	**–**	**67,015**	**384,630**	**1,569,028**	**181,802**

Movements in level 3 financial assets and liabilities

in EUR thousand	1.1.–30.6.2017				
	Fixed-income securities	Equities, equity funds and other variable-yield securities	Real estate and real estate funds	Other invested assets	Other liabilities
Net book value at 31 December of the previous year	**10**	**–**	**390,676**	**1,653,902**	**168,943**
Currency translation at 1 January of the year under review	–	–	(11,306)	(81,972)	(12,806)
Net book value after currency translation	**10**	**–**	**379,370**	**1,571,930**	**156,137**
Income and expenses					
recognised in the statement of income	–	897	(2,127)	(5,863)	(11,795)
recognised directly in shareholders' equity	–	–	(3,218)	23,646	–
Purchases	–	48,217	45,168	145,913	44,059
Sales	–	13,676	34,474	87,437	–
Transfers to level 3	–	–	–	–	–
Transfers from level 3	–	–	–	–	–
Currency translation at 30 June of the year under review	–	(109)	(128)	(1,569)	(1,150)
Closing balance at 30 June of the year under review	**10**	**35,329**	**384,591**	**1,646,620**	**187,251**

The breakdown of income and expenses recognised in the statement of income in the period in connection with financial assets and liabilities assigned to level 3 is as follows.

Income and expenses from level 3 financial assets and liabilities

in EUR thousand	1.1.–30.6.2018			
	Other financial assets	Real estate and real estate funds	Other invested assets	Other liabilities
Total in the period under review				
Ordinary investment income	–	–	63	–
Realised gains and losses on investments	–	–	54,793	–
Change in fair value of financial instruments	976	–	920	15,692
Total depreciation, impairments and appreciation of investments	–	–	(4,462)	–
Thereof attributable to financial instruments included in the portfolio at 30 June				
Ordinary investment income	–	–	63	–
Change in fair value of financial instruments	976	–	920	15,692
Total depreciation, impairments and appreciation of investments	–	–	(4,462)	–

Income and expenses from level 3 financial assets and liabilities

in EUR thousand	1.1.–30.6.2017			
	Other financial assets	Real estate and real estate funds	Other invested assets	Other liabilities
Total in the period under review				
Ordinary investment income	–	–	(31)	–
Realised gains and losses on investments	–	–	(2,338)	–
Change in fair value of financial instruments	897	–	(1,282)	11,795
Total depreciation, impairments and appreciation of investments	–	(2,127)	(2,212)	–
Thereof attributable to financial instruments included in the portfolio at 30 June				
Ordinary investment income	–	–	(31)	–
Change in fair value of financial instruments	897	–	63	11,795
Total depreciation, impairments and appreciation of investments	–	(2,127)	(2,212)	–

If models are used to measure financial assets and liabilities included in level 3 under which the adoption of alternative inputs leads to a material change in fair value, IFRS 13 requires disclosure of the effects of these alternative assumptions. Of the financial assets included in level 3 with fair values of altogether EUR 2,020.7 million (EUR 2,073.2 million) as at the balance sheet date, Hannover Re measures financial assets with a volume of EUR 1,833.0 million (EUR 1,892.6 million) using the net asset value method, in respect of which alternative inputs within the meaning of the standard cannot reasonably be established. The remaining financial assets included in level 3 with a volume of EUR 187.7 million (EUR 180.6 million) relate to financial assets, the valuation of which is based on technical parameters. Derivative financial instruments in connection with the reinsurance business were recognised under the other liabilities included in level 3 in the year under review. Their performance is dependent upon the risk experience of an underlying group of primary insurance contracts with statutory reserving requirements. The application of alternative inputs and assumptions has no material effect on the consolidated financial statement.

6.2 Notes payable

Hannover Re recognised altogether three (three) subordinated bonds with an amortised cost of EUR 1,492.8 million (EUR 1,492.0 million) as at the balance sheet date. The subordinated debts from the 2010 and 2012 financial years in amounts of EUR 500.0 million each were placed on the European capital market through Hannover Finance (Luxembourg) S.A. The fair value of the aforementioned bonds as at 30 June 2018 was EUR 1,174.9 million (EUR 1,193.1 million).

A further subordinated debt from the 2014 financial year with a volume of EUR 500.0 million, the fair value of which was EUR 518.1 million (EUR 563.1 million), was issued by Hannover Rück SE and similarly placed on the European capital market.

In April 2018 Hannover Rück SE issued a senior unsecured bond with a volume of EUR 750.0 million on the European capital market. The bond has a maturity of ten years and carries a fixed coupon of 1.125% p. a. The fair value of this bond was EUR 737.6 million as at the balance sheet date.

For further information on these bonds please see the previous year's Group annual financial report.

6.3 Shareholders' equity, non-controlling interests and treasury shares

Shareholders' equity is shown as a separate component of the financial statement in accordance with IAS 1 "Presentation of Financial Statements" and subject to IAS 32 "Financial Instruments: Disclosure and Presentation" in conjunction with IAS 39 "Financial Instruments: Recognition and Measurement". The change in shareholders' equity comprises not only the net income deriving from the statement of income but also the changes in the value of asset and liability items not recognised in the statement of income.

The common shares (share capital of Hannover Rück SE) amount to EUR 120,597,134.00. They are divided into 120,597,134 voting and dividend-bearing registered ordinary shares in the form of no-par shares. The shares are paid in in full. Each share carries an equal voting right and an equal dividend entitlement.

Non-controlling interests in the shareholders' equity of the subsidiaries amounted to EUR 732.9 million (EUR 758.1 million) as at the balance sheet date. They were principally attributable to non-controlling interests in the shareholders' equity of E+S Rückversicherung AG in an amount of EUR 680.8 million (EUR 702.4 million).

Conditional capital of up to EUR 60,299 thousand is available. It can be used to grant shares to holders of bonds and / or profit-sharing rights with conversion rights and warrants and has a time limit of 9 May 2021.

In addition, authorised capital of up to EUR 60,299 thousand is available with a time limit of 9 May 2021.

The subscription right of shareholders may be excluded in each case with the consent of the Supervisory Board under certain conditions.

The Executive Board is further authorised, with the consent of the Supervisory Board, to acquire treasury shares – including through the use of derivatives – up to an amount of 10% of the share capital. The authorisation has a time limit of 5 May 2020.

The Executive Board is additionally authorised, with the consent of the Supervisory Board, to use an amount of up to EUR 1,000 thousand of the existing authorised capital to issue employee shares.

The Annual General Meeting of Hannover Rück SE resolved on 7 May 2018 to distribute a gross dividend of EUR 5.00 per share, altogether EUR 603.0 million (EUR 603.0 million), for the 2017 financial year. The distribution is comprised of a dividend of EUR 3.50 per share and a special dividend of EUR 1.50 per share.

IAS 1 requires separate disclosure of treasury shares in shareholders' equity. As part of this year's employee share option plan Hannover Rück SE acquired altogether 16,530 (18,805) treasury shares during the second quarter of 2018 and delivered them to eligible employees at preferential conditions. These shares are blocked until 31 May 2022. This transaction resulted in an expense of EUR 0.4 million (EUR 0.4 million), which was recognised under personnel expenditure, as well as a negligible change in retained earnings recognised in equity. The company was no longer in possession of treasury shares as at the balance sheet date.

The increase in the other reserves arising out of currency translation, which is recognised in equity, was attributable in an amount of EUR 6.0 million (30 June 2017: EUR 35.2 million) to the translation of long-term debt or loans with no maturity date extended to Group companies and branches abroad.

7. Notes on the individual items of the statement of income

7.1 Gross written premium

Gross written premium

in EUR thousand	1.1.–30.6.2018	1.1.–30.6.2017
Regional origin		
Germany	714,979	713,806
United Kingdom	1,321,328	1,211,227
France	401,942	376,520
Other	1,282,995	1,129,697
Europe	**3,721,244**	**3,431,250**
USA	3,074,313	2,678,585
Other	391,049	340,251
North America	**3,465,362**	**3,018,836**
Asia	1,450,483	1,356,438
Australia	638,023	485,896
Australasia	**2,088,506**	**1,842,334**
Africa	264,266	239,877
Other	445,914	465,301
Total	**9,985,292**	**8,997,598**

7.2 Investment income

Investment income

in EUR thousand	1.1.–30.6.2018	1.1.–30.6.2017
Income from real estate	82,588	81,279
Dividends	1,045	15,045
Interest income	451,450	471,779
Other investment income	97,393	67,004
Ordinary investment income	**632,476**	**635,107**
Profit or loss on shares in associated companies	1,792	5,653
Realised gains on investments	163,635	116,710
Realised losses on investments	110,255	33,349
Change in fair value of financial instruments	19,561	10,586
Impairments on real estate	16,597	17,172
Impairments on equity securities	–	3,672
Impairments on participating interests and other financial assets	4,463	2,212
Other investment expenses	56,347	55,624
Net income from assets under own management	**629,802**	**656,027**
Interest income on funds withheld and contract deposits	164,065	186,457
Interest expense on funds withheld and contract deposits	50,269	63,077
Total investment income	**743,598**	**779,407**

The impairments totalling EUR 4.5 million (EUR 8.0 million) were taken exclusively in the area of alternative investments and were attributable to private equity.

As in the previous year, these write-downs were not opposed by any write-ups made on investments that had been written down in previous periods. The portfolio did not contain any overdue, unadjusted assets as at the balance sheet date since overdue securities are written down immediately.

Interest income on investments

in EUR thousand	1.1.–30.6.2018	1.1.–30.6.2017
Fixed-income securities – held to maturity	5,767	7,223
Fixed-income securities – loans and receivables	40,908	40,597
Fixed-income securities – available for sale	388,159	408,948
Financial assets – at fair value through profit or loss	960	925
Other	15,656	14,086
Total	**451,450**	**471,779**

8. Other notes

8.1 Derivative financial instruments and financial guarantees

Hannover Re holds derivative financial instruments to hedge interest rate risks from loans connected with the financing of real estate; these gave rise to recognition of other liabilities in an amount of EUR 0.4 million (EUR 1.0 million) and other financial assets at fair value through profit or loss of EUR 0.8 million (EUR 0.5 million).

Hannover Re's portfolio contained derivative financial instruments as at the balance sheet date in the form of forward exchange transactions taken out to hedge currency risks. These transactions gave rise to recognition of other liabilities in an amount of EUR 7.8 million (EUR 17.7 million) and other financial assets at fair value through profit or loss in an amount of EUR 22.4 million (EUR 2.0 million). The increase in equity from hedging instruments recognised directly in equity pursuant to IAS 39 derived in an amount of EUR 2.3 million (EUR 2.8 million) from the forward exchange transactions taken out to hedge currency risks from long-term investments in foreign operations. These hedging instruments resulted in the recognition of other financial assets at fair value through profit or loss in an amount of EUR 2.1 million (other liabilities of EUR 2.4 million). Ineffective components of the hedge were recognised in profit or loss under other investment income in an amount of EUR 1.1 million (EUR 0.3 million).

In order to hedge the risk of share price changes in connection with the stock appreciation rights granted under the share award plan, Hannover Re took out hedges in 2014 in the form of so-called equity swaps. The fair value of these instruments amounted to EUR 0.1 million (EUR 0.8 million) as at the balance sheet date and was recognised under other liabilities. The hedge gave rise to an increase in equity from hedging instruments recognised directly in equity in an amount of EUR 1.6 million (decrease in equity recognised directly in equity in an amount of EUR 1.3 million); ineffective components of the hedge were recognised in a minimal amount under other investment expenses.

The net changes in the fair value of the aforementioned instruments resulted in an improvement of EUR 0.1 million in the result of the period under review (charge to the result of EUR 2.0 million).

Derivative financial instruments in connection with reinsurance

Certain reinsurance treaties meet criteria which require application of the prescriptions in IFRS 4 governing embedded derivatives. These accounting regulations require that derivatives embedded in reinsurance contracts be separated from the underlying insurance contract ("host contract") according to the conditions specified in IFRS 4 and IAS 39 and recognised separately at fair value in accordance with IAS 39. Fluctuations in the fair value of the derivative components are to be recognised in income in subsequent periods.

On this basis Hannover Re recognised under financial assets at fair value through profit or loss derivatives in connection with the reinsurance business that were separated from the underlying transaction and measured at fair value in an amount of EUR 104.2 million (EUR 86.3 million) as at the balance sheet date.

In addition, derivatives in connection with the reinsurance business were recognised under other liabilities in an amount of EUR 234.4 million (EUR 244.7 million) as at the balance sheet date.

Of this amount, EUR 157.7 million (EUR 165.1 million) is attributable to a number of transactions in the Life & Health reinsurance business group that are to be classified as derivative financial instruments. Under these transactions Hannover Re companies offer their contracting parties coverage for risks from possible future payment obligations arising out of hedging instruments. The payment obligations result from contractually defined events and relate to the development of an underlying group of primary insurance contracts with statutory reserving requirements. The contracts are to be classified and recognised as stand-alone credit derivatives pursuant to IAS 39. These instruments gave rise to an improvement in investment income of EUR 16.0 million (EUR 12.1 million).

Of the derivatives carried on the assets side, fair values of EUR 19.8 million (EUR 25.1 million) were attributable as at the balance sheet date to derivatives embedded in "modified coinsurance" and "coinsurance funds withheld" (ModCo) reinsurance treaties.

Within the scope of the accounting of ModCo reinsurance treaties, under which securities deposits are held by the ceding companies and payments rendered on the basis of the income from certain securities of the ceding company, the interest-rate risk elements are clearly and closely related to the underlying reinsurance arrangements. Embedded derivatives consequently result solely from the credit risk of the underlying securities portfolio. Hannover Re calculates the fair value of the embedded derivatives in ModCo treaties using the market information available on the valuation date on the basis of a "credit spread" method. Under this method the derivative is valued at zero on the date when the contract commences and its value then fluctuates over time according to changes in the credit spreads of the securities.

The ModCo derivatives gave rise to a charge to investment income of EUR 5.9 million in the period under review (improvement of EUR 3.3 million in investment income).

A derivative financial instrument was also unbundled from another similarly structured transaction. This gave rise to recognition of other financial assets at fair value through profit or loss in an amount of EUR 7.8 million (EUR 7.4 million). In the course of the year the performance of this derivative improved the result by EUR 0.4 million (deterioration in the result of EUR 0.5 million).

A retrocession agreement exists in the area of life and health reinsurance under which the premiums were deposited with Hannover Re and invested in a structured bond. The retrocessionaire has furnished a guarantee for its fair value. In accordance with the requirements of IFRS 4 this guarantee was to be unbundled from the retrocession agreement and is carried as a derivative financial instrument at fair value. The derivative was recognised with a positive fair value of EUR 9.6 million (EUR 2.2 million) as at the balance sheet date under other financial assets at fair value through profit or loss. In the course of the year the change in the fair value of the derivative resulted in income of EUR 7.0 million (charge of EUR 13.6 million). Conversely, the performance of the structured bond, which is also measured at fair value, gave rise to a charge (income) in the same amount.

In the area of life and health reinsurance a reinsurance treaty was also written with a financing component under which the amount and timing of the return flows are dependent on lapse rates within an underlying primary insurance portfolio. This treaty and a corresponding retrocession agreement, which were classified as financial instruments pursuant to IAS 39, resulted in the recognition of other liabilities of EUR 24.1 million (EUR 20.4 million) and other financial assets at fair value through profit or loss in an amount of EUR 67.0 million (EUR 49.0 million). Altogether, these arrangements gave rise to an improvement in income of EUR 0.6 million (EUR 0.6 million) as at the balance sheet date.

At the end of the previous financial year an index-linked cover was written for longevity risks. The resulting derivative was recognised as at the balance sheet date with a negative fair value of EUR 46.6 million (EUR 52.6 million) under other liabilities. The change in the fair value of the derivative resulted in income of EUR 6.0 million (EUR 0 million) in the course of the year.

Notes

Financial guarantees

Structured transactions were entered into in the Life & Health reinsurance business group in order to finance statutory reserves (so-called Triple-X or AXXX reserves) of US ceding companies. In each case such structures necessitated the involvement of a special purpose entity. The special purpose entities carry extreme mortality risks securitised by the cedants above a contractually defined retention and transfer these risks by way of a fixed/floating swap to a member company of the Hannover Re Group. The total amount of the contractually agreed capacities of the transactions is equivalent to EUR 3,323.8 million (EUR 3,229.1 million); an amount equivalent to EUR 2,625.6 million (EUR 2,525.9 million) had been taken up as at the balance sheet date. The variable payments to the special purpose entities that are guaranteed by the Hannover Re Group cover their payment obligations. Under some of the transactions the payments resulting from the swaps in the event of a claim are reimbursed by the parent companies of the cedants by way of compensation agreements. In this case the reimbursement claims from the compensation agreements are to be capitalised separately from and up to the amount of the provision. Under IAS 39 these transactions are to be recognised at fair value as financial guarantees. To this end Hannover Re uses the net method, according to which the present value of the agreed fixed swap premiums is netted with the present value of the guarantee commitment. The fair value on initial recognition therefore amounted to zero. The higher of the fair value and the amount carried as a provision on the liabilities side pursuant to IAS 37 is recognised at the point in time when utilisation is considered probable. This was not the case as at the balance sheet date.

8.2 Related party disclosures

IAS 24 "Related Party Disclosures" defines related parties as group entities of a common parent, associated entities, legal entities under the influence of key management personnel and the key management personnel of the entity itself. Transactions between Hannover Rück SE and its subsidiaries, which are to be regarded as related parties, were eliminated through consolidation and are therefore not discussed in the notes to the consolidated financial statement. In the period under review the following significant business relations existed with related parties.

Talanx AG holds an unchanged majority interest of 50.22% in Hannover Rück SE. For its part, HDI-Haftpflichtverband der Deutschen Industrie Versicherungsverein auf Gegenseitigkeit, Hannover, (HDI), holds a stake of 79.0% in Talanx AG and therefore indirectly holds 39.7% (rounded) of the voting rights in Hannover Rück SE.

The business relationship between Hannover Rück SE and its subsidiary E+S Rückversicherung AG is based on a cooperation agreement. A retrocession by Hannover Rück SE to E+S Rückversicherung AG exists in property and casualty reinsurance. Exclusive responsibility rests with E+S Rückversicherung AG for German business and with Hannover Rück SE for international markets.

Companies belonging to the Talanx Group granted the Hannover Re Group insurance protection inter alia in the areas of public liability, building, contractors all risks, group accident and business travel insurance. Divisions of Talanx AG also performed services for the Hannover Re Group in the areas of taxes and general administration.

Talanx Reinsurance Broker AG grants Hannover Rück SE and E+S Rückversicherung AG a preferential position as reinsurers of cedants within the Talanx Group. In addition, Hannover Rück SE and E+S Rückversicherung AG are able to participate in the protection covers on the retention of Group cedants and share in the protection afforded by them. In certain circumstances Hannover Rück SE and E+S Rückversicherung AG are obliged to assume unplaced shares of the reinsurance of Group cedants from Talanx Reinsurance Broker AG.

The Hannover Re Group provides reinsurance protection for the HDI Group. To this extent, numerous underwriting business relations exist with related parties in Germany and abroad which are not included in the Hannover Re Group's consolidation. This includes business both assumed and ceded at usual market conditions.

The reinsurance relationships with related parties in the period under review are shown with their total amounts in the following table.

Business assumed and ceded in Germany and abroad

in EUR thousand	1.1.–30.6.2018		1.1.–30.6.2017	
	Premium	Underwriting result	Premium	Underwriting result
Business assumed				
Property and casualty reinsurance	185,059	(11,705)	234,093	2,513
Life and health reinsurance	73,030	12,150	71,527	11,714
	258,089	**445**	**305,620**	**14,227**
Business ceded				
Property and casualty reinsurance	1,040	(1,183)	(2,232)	(10,686)
Life and health reinsurance	(27,610)	(4,254)	(34,383)	(4,800)
	(26,570)	**(5,437)**	**(36,615)**	**(15,486)**
Total	231,519	(4,992)	269,005	(1,259)

In the context of a bond issue by Talanx AG the Group companies Hannover Rück SE and E+S Rückversicherung AG invested in a nominal amount of EUR 47.0 million in the issued bearer debt, which has a coupon of 3.125%. The carrying amount of the instrument, which is recognised under fixed-income securities held to maturity, was EUR 47.5 million (EUR 47.5 million) including accrued interest of EUR 0.5 million (EUR 0.5 million).

HDI Lebensversicherung AG, Cologne, participated in a nominal amount of EUR 50.0 million in the subordinated bond issued by Hannover Rück SE in September 2014 with a coupon of 3.375%.

Within the contractually agreed framework Talanx Asset Management GmbH performs investment and asset management services for Hannover Rück SE and some of its subsidiaries. Assets in special funds are managed by Ampega Investment GmbH. Talanx Immobilien Management GmbH performs services for Hannover Re under a number of management contracts.

In 2014 Hannover Rück SE reached an agreement with Talanx Asset Management GmbH that allows Talanx Asset Management GmbH to use software for checking sanctions lists.

Under long-term lease arrangements companies belonging to the Hannover Re Group rented out business premises in 2015 to Talanx Service AG, Hannover. In addition, lease agreements exist with Talanx Service AG for use of a portion of the space in our data centre.

Furthermore, IT and management services were performed for Talanx Reinsurance Broker AG, Hannover, under service contracts.

Actuarial opinions with respect to the pension commitments given to staff are drawn up for Hannover Rück SE and E+S Rückversicherung AG by Talanx Pensionsmanagement AG and HDI Lebensversicherung AG under an actuarial service contract.

Talanx AG performs various services in the area of taxes for a number of investment vehicles of the Hannover Re Group in the asset classes of private equity and real estate. In this regard corresponding agreements have been concluded with altogether nine Hannover Re companies.

Since 2012 a service agreement has existed between Hannover Rück SE and Talanx AG regarding the receipt of services for operation of data acquisition software used in the preparation of the consolidated financial statement.

Hannover Rück SE has concluded a service contract with Talanx Service AG in the area of flight services as well as a contract regarding the reciprocal provision of business continuity management services.

Since 2004 a service agreement has existed between Hannover Rück SE, E+S Rückversicherung AG and Talanx Reinsurance Broker GmbH regarding the receipt of market security services and access to the business partner information system of Hannover Rück SE.

8.3 Staff

As at the balance sheet date altogether 3,272 (3,251) staff were employed by the Hannover Re Group, with 1,405 (1,385) employed in Germany and 1,867 (1,866) working for the consolidated Group companies abroad.

8.4 Earnings per share

Calculation of the earnings per share

	1.1.–30.6.2018	1.1.–30.6.2017
Group net income in EUR thousand	555,305	535,014
Weighted average of issued shares	120,596,856	120,596,821
Basic earnings per share in EUR	4.60	4.44
Diluted earnings per share in EUR	4.60	4.44

The earnings per share is calculated by dividing the net income attributable to the shareholders of Hannover Rück SE by the weighted average number of shares outstanding within the period under review.

Neither in the period under review nor in the previous reporting period were there any dilutive effects.

The weighted average number of issued shares was slightly below the number of shares outstanding as at the balance sheet date. On the basis of this year's employee share option plan Hannover Rück SE acquired treasury shares in the course of the second quarter of 2018 and sold them to eligible employees at a later date.

The weighted average number of shares does not include 16,530 (18,805) treasury shares pro rata temporis for the duration of the holding period. For further details please see our comments in Section 6.3 "Shareholders' equity, non-controlling interests and treasury shares".

There were no other extraordinary components of income which should have been recognised or disclosed separately in the calculation of the earnings per share.

The earnings per share could potentially be diluted in future through the issue of shares or subscription rights from the authorised or conditional capital.

8.5 Contingent liabilities and commitments

Hannover Rück SE has secured by subordinated guarantee the subordinated debts issued by Hannover Finance (Luxembourg) S.A. in the 2010 and 2012 financial years in amounts of EUR 500.0 million each.

The guarantees given by Hannover Rück SE for the subordinated debts attach if the issuer fails to render payments due under the bonds. The guarantees cover the relevant bond volumes as well as interest due until the repayment dates. Given the fact that interest on the bonds is partly dependent on the capital market rates applicable at the interest payment dates (floating rates), the maximum undiscounted amounts that can be called cannot be estimated with sufficient accuracy. Hannover Rück SE does not have any rights of recourse outside the Group with respect to the guarantee payments.

As security for technical liabilities to our US clients, we have established two trust accounts (master trust and supplemental trust) in the United States. They amounted to EUR 3,820.4 million (EUR 3,716.4 million) and EUR 77.7 million (EUR 71.5 million) respectively as at the balance sheet date. The securities held in the trust accounts are shown as available-for-sale investments. In addition, we furnished further collateral to ceding companies in an amount of EUR 2,077.0 million (EUR 1,946.5 million) in the form of so-called "single trust funds". This amount includes a sum equivalent to EUR 1,836.1 million (EUR 1,634.5 million) which was furnished by investors as security for potential reinsurance obligations from ILS transactions.

As part of our business activities we hold collateral available outside the United States in various blocked custody accounts and trust accounts, the total amount of which in relation to the Group's major companies was EUR 3,223.3 million (EUR 3,173.0 million) as at the balance sheet date.

The securities held in the blocked custody accounts and trust accounts are recognised predominantly as available-for-sale investments.

As security for our technical liabilities, various financial institutions have furnished sureties for our company in the form of letters of credit. The total amount as at the balance sheet date was EUR 1,263.4 million (EUR 1,216.9 million).

We put up own investments with a book value of EUR 7.0 million (EUR 17.2 million) as collateral for existing derivative transactions. We received collateral with a fair value of EUR 26.9 million (EUR 3.0 million) for existing derivative transactions.

As collateral for commitments in connection with participating interests in real estate companies and real estate transactions the usual collateral under such transactions has been furnished to various banks, the amount of which totalled EUR 524.8 million (EUR 508.2 million) as at the balance sheet date.

Outstanding capital commitments with respect to alternative investments exist on the part of the Group in an amount of EUR 1,393.6 million (EUR 1,201.9 million). These primarily involve as yet unfulfilled payment obligations from investment commitments given to private equity funds and venture capital firms.

Group companies are members of the association for the reinsurance of pharmaceutical risks and several atomic and nuclear pools. The failure of one of the other pool members to meet its liabilities would result in an additional call according to the quota participation.

Hannover Rück SE has put up a guarantee limited to GBP 10.0 million (EUR 11.4 million) for an indefinite period in favour of the pension scheme "The Congregational & General Insurance Plc Pension and Life Assurance Scheme" of the company Congregational & General Insurance Plc., Bradford / UK, which is in liquidation, at usual market conditions.

The application of tax regulations may not have been resolved at the time when tax items are brought to account. The calculation of tax refund claims and tax liabilities is based on what we consider to be the regulations most likely to be applied in each case. The revenue authorities may, however, take a differing view, as a consequence of which additional tax liabilities could arise in the future.

Hannover Rück SE enters into contingent liabilities as part of its normal business operations. A number of reinsurance treaties concluded by Group companies with outside third parties include letters of comfort, guarantees or novation agreements under which Hannover Rück SE guarantees the liabilities of the subsidiary in question or enters into the rights and obligations of the subsidiary under the treaties if particular constellations materialise.

8.6 Events after the end of the reporting period

After the balance sheet date, in the period until 6 August 2018, cedants of US life reinsurance treaties gave notice to recapture these treaties following price increases implemented by Hannover Re. This will result in a pre-tax charge of USD 264 million. The treaties are part of a portfolio of US mortality business that was acquired in 2009 and has since delivered profit contributions below expectations. The charge to income results from the commutation of reserves based on biometric assumptions made at the time when the portfolio was acquired. The corresponding obligation arising out of the coverage commitments given under these treaties thereby ends. As a consequence of the commutation Hannover Re's long-term exposure to the risks associated with these treaties as well as the resulting capital requirements is reduced.

On 1 August 2018 Hannover Rück SE concluded a purchase agreement with HDI Global SE, Hannover, regarding the sale of 50.22% of the shares in International Insurance Company of Hannover SE, Hannover. The transaction is expected to close at the beginning of January 2019, subject to timely completion of the supervisory review process. No appreciable effect on income is anticipated in connection with deconsolidation.

Hannover, 7 August 2018

Executive Board

Wallin Althoff Chèvre Gräber

Dr. Miller Dr. Pickel Vogel

Review report by the independent auditors

To Hannover Rück SE, Hannover

We have reviewed the condensed consolidated interim financial statements – comprising the consolidated balance sheet, consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in shareholders' equity, consolidated cash flow statement and the notes to the consolidated financial statements – together with the interim Group management report of Hannover Rück SE, Hannover, for the period from 1 January to 30 June 2018, which are components of the half-yearly financial report pursuant to § 115 of the German Securities Trading Act (WpHG). The preparation of the condensed consolidated interim financial statements in accordance with the IFRS applicable to interim financial reporting as adopted by the EU and of the interim management report for the Group in accordance with the provisions of the German Securities Trading Act applicable to interim group management reports is the responsibility of the parent company's Board of Management. Our responsibility is to issue a review report on the condensed consolidated interim financial statements and on the interim management report for the Group based on our review.

We conducted our review of the condensed consolidated interim financial statements and the interim management report for the Group in accordance with German generally accepted standards for the review of financial statements promulgated by the Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer – IDW). Those standards require that we plan and perform the review so that we can preclude through critical evaluation, with moderate assurance, that the condensed consolidated interim financial statements have not been prepared, in all material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU and that the interim management report for the Group has not been prepared, in all material respects, in accordance with the provisions of the German Securities Trading Act applicable to interim group management reports. A review is limited primarily to inquiries of company personnel and analytical procedures and thus provides less assurance than an audit. Since, in accordance with our mandate, we have not performed a financial statement audit, we cannot express an audit opinion.

Based on our review, no matters have come to our attention that cause us to presume that the condensed consolidated interim financial statements have not been prepared, in all material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU or that the interim management report for the Group has not been prepared, in all material respects, in accordance with the provisions of the German Securities Trading Act applicable to interim group management reports.

Hannover, 7 August 2018

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Mathias Röcker	ppa. Dennis Schnittger
Wirtschaftsprüfer	Wirtschaftsprüfer

Responsibility statement

To the best of our knowledge, and in accordance with the applicable reporting principles for interim financial reporting, the interim consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the interim management report of the Group includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group for the remaining months of the financial year.

Hannover, 7 August 2018

Executive Board

Wallin	Althoff	Chèvre	Gräber
Dr. Miller	Dr. Pickel	Vogel	

Contact information

Corporate Communications

Karl Steinle

Tel. +49 511 5604-1500
Fax +49 511 5604-1648

karl.steinle@hannover-re.com

Media Relations

Oliver Süß

Tel. +49 511 5604-1502
Fax +49 511 5604-1648

oliver.suess@hannover-re.com

Investor Relations

Julia Hartmann

Tel. +49 511 5604-1529
Fax +49 511 5604-1648

julia.hartmann@hannover-re.com

Published by

Hannover Rück SE

Karl-Wiechert-Allee 50
30625 Hannover, Germany

Tel. +49 511 5604-0
Fax +49 511 5604-1188

Concept, design and realisation

Silvester Group

www.silvestergroup.com