

somewhat
different

Beyond risk sharing –
we team up
to create opportunities

Annual Report 2019

hannover **re**[®]

Key figures

I 06

in EUR million	2019	+/- previous year	2018	2017	2016 ¹	2015
Results						
Gross written premium	22,597.6	+17.8%	19,176.4	17,790.5	16,353.6	17,068.7
Net premium earned	19,729.7	+14.1%	17,289.1	15,631.7	14,410.3	14,593.0
Net underwriting result ²	(9.7)	-106.2%	156.9	(253.6)	448.1	488.9
Net investment income	1,757.1	+14.8%	1,530.0	1,773.9	1,550.4	1,665.1
Operating profit (EBIT)	1,853.2	+16.1%	1,596.6	1,364.4	1,689.3	1,755.2
Group net income	1,284.2	+21.2%	1,059.5	958.6	1,171.2	1,150.7
Balance sheet						
Policyholders' surplus	13,588.9	+23.1%	11,035.1	10,778.5	11,231.4	10,267.3
Equity attributable to shareholders of Hannover Rück SE	10,528.0	+20.0%	8,776.8	8,528.5	8,997.2	8,068.3
Non-controlling interests	826.5	+8.0%	765.2	758.1	743.3	709.1
Hybrid capital	2,234.4	+49.6%	1,493.1	1,492.0	1,490.8	1,489.9
Investments (excl. funds withheld by ceding companies)	47,629.4	+12.9%	42,197.3	40,057.5	41,793.5	39,346.9
Total assets	71,356.4	+10.6%	64,508.6	61,196.8	63,594.5	63,214.9
Share						
Earnings per share (basic and diluted) in EUR	10.65	+21.2%	8.79	7.95	9.71	9.54
Book value per share in EUR	87.30	+20.0%	72.78	70.72	74.61	66.90
Dividend	663.3	+4.8%	633.1	603.0	603.0	572.8
Dividend per share in EUR	4.00 + 1.50 ^{3,4}	+4.8%	3.75 + 1.50 ⁴	3.50 + 1.50 ⁴	3.50 + 1.50 ⁴	3.25 + 1.50 ⁴
Share price at year-end in EUR	172.30	+46.4%	117.70	104.90	102.80	105.65
Market capitalisation at year-end	20,778.9	+46.4%	14,194.3	12,650.6	12,397.4	12,741.1
Ratios						
Combined ratio (property and casualty reinsurance) ²	98.2%		96.5%	99.8%	93.7%	94.4%
Large losses as percentage of net premium earned (property and casualty reinsurance) ⁵	7.5%		7.9%	12.3%	7.8%	7.1%
Retention	90.0%		90.7%	90.5%	89.3%	87.0%
Return on investment (excl. funds withheld by ceding companies)	3.5%		3.2%	3.8%	3.0%	3.4%
EBIT margin ⁶	9.4%		9.2%	8.7%	11.7%	12.0%
Return on equity (after tax)	13.3%		12.2%	10.9%	13.7%	14.7%

¹ Restated pursuant to IAS 8

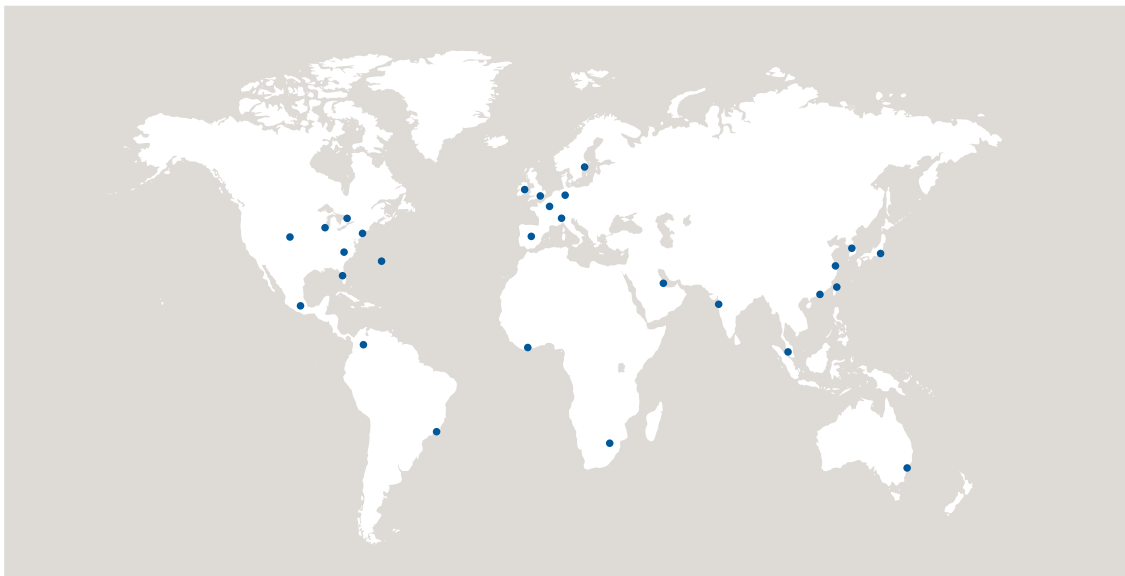
² Including expenses on funds withheld and contract deposits

³ Proposed dividend

⁴ Dividend of EUR 4.00 plus special dividend of EUR 1.50 for 2019, dividend of EUR 3.75 plus special dividend of EUR 1.50 for 2018, dividend of EUR 3.50 plus special dividend of EUR 1.50 for 2017, dividend of EUR 3.50 plus special dividend of EUR 1.50 for 2016 and dividend of EUR 3.25 plus special dividend of EUR 1.50 for 2015

⁵ 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

⁶ Operating result (EBIT)/net premium earned



A complete list of our shareholdings is provided on page 184 et seq. of the notes. The addresses of the Hannover Re Group's branch offices and subsidiaries abroad are to be found in the section "Further information" on page 285 et seq.

Strategic business groups



Regional Markets

- North America
- Latin America, Iberian Peninsula and Agricultural Risks
- Germany, Switzerland, Austria and Italy
- United Kingdom, Ireland and London Market
- Continental Europe and Africa
- Asia, Australia and Middle East

Global Markets

- Structured Reinsurance and Insurance-Linked Securities
- Catastrophe XL (Cat XL)
- Facultative Reinsurance and Direct Business
- Aviation and Marine
- Credit, Surety and Political Risks

Financial Solutions

Risk Solutions

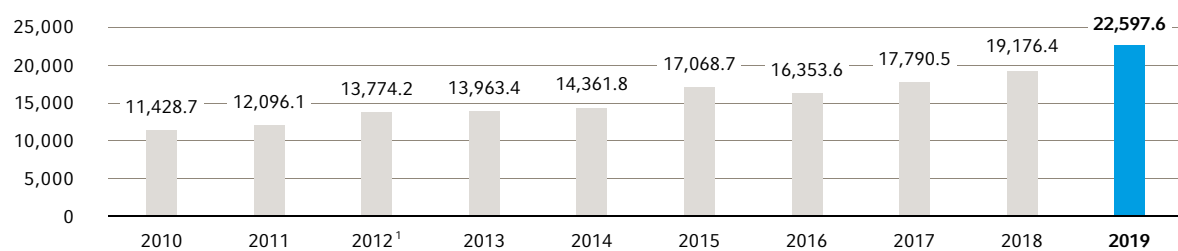
- Longevity
- Mortality
- Morbidity

An overview

Gross premium

in EUR million

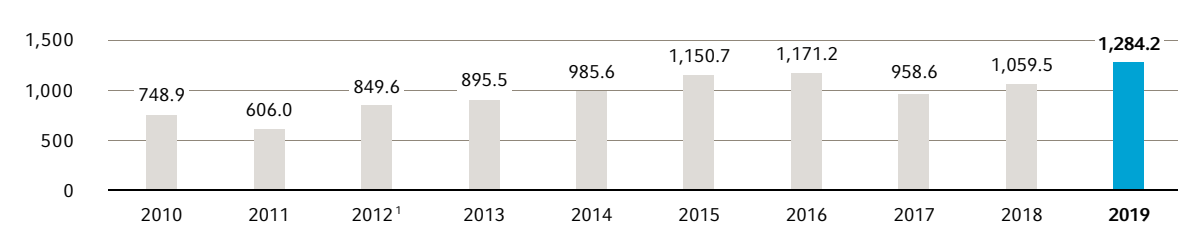
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Group net income

in EUR million

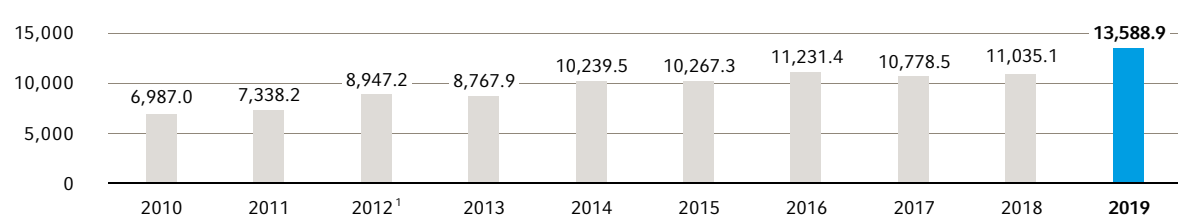
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Policyholders' surplus

in EUR million

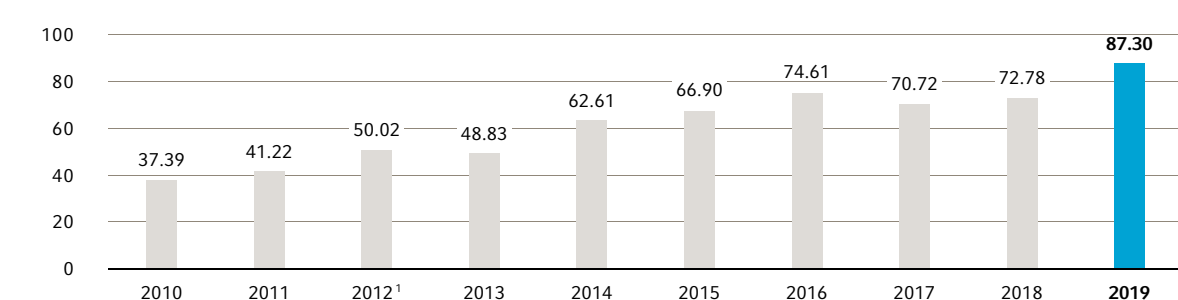
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Book value per share

in EUR

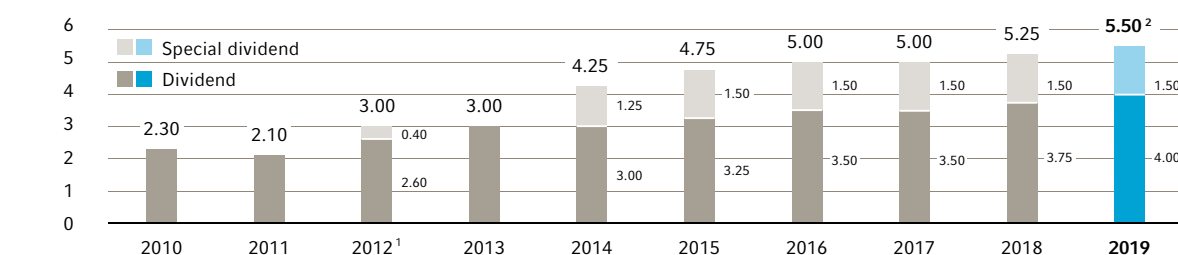
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Dividend

in EUR

I 05



¹ Restated pursuant to IAS 8

² Proposed dividend

Our self-image

Our values



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A value structure for the future

When it comes to leading an enterprise successfully into the future, the pursuit of profits is not a sufficient *raison d'être*. That was the consensus at the Global Management Forum 2019. In response, the Executive Board launched a project to define the self-image and values of Hannover Re. Some 560 employees from all areas and 13 locations of the Hannover Re Group contributed their views and experiences. Jean-Jacques Henchoz, Chief Executive Officer of Hannover Re, and Roland Vogel, Chief Financial Officer, backed the project in the role of sponsors. We asked them why it is important for a company to be aware of its own self-image – and what value-added its actions create for customers and society.

Roland Vogel and
Jean-Jacques Henchoz



Why did Hannover Re engage with its self-image and its core values in 2019?

Henchoz: We can look back on a history of success: for ten years we have clearly outperformed the market average. We are proud to have grown our premium and our profits. Yet where does this strong performance commitment in our company come from? And how can we preserve it for the future? I came to Hannover Re as Chief Executive Officer with these questions on my mind – and I was met with open ears: a broad-based desire for a binding statement of our values and corporate purpose was palpable throughout the undertaking. It only made sense, therefore, to motivate all the members of staff to develop these foundations in a spirit of togetherness. After all, having a goal and a vision that extend beyond financial indicators is a fundamental need not only of our employees, but also of our investors and all our stakeholders in society.

By defining our company's purpose we have accomplished something very significant: we have identified the factors in our past success and embraced them on our path into the future.

Jean-Jacques Henchoz

Vogel: Looked at from the perspective of my thirty-year career with Hannover Re, I can state with confidence: our actions have always been driven by the self-image of an entrepreneur – and that will remain so going forward. By defining our self-image and codifying our values, we have put a good basis in place.

Henchoz: By defining our company's purpose we have accomplished something very significant: we have identified the factors in our past success and embraced them on our path into the future.

How do you experience Hannover Re's self-image in concrete terms? Could you cite an example by way of illustration?

Vogel: There was one situation that left a really deep impression on me: our response to the September 11 attacks of 2001. At the time we were searching for innovative solutions to improve our capital position. We had drawn some of our inspiration from ideas outside our own industry. So we assembled a team, created the first securitisation of reinsurance recoverables and even went on to win an award for the transaction. In so doing, we improved our capital position, boosted our financial strength rating and – unlike some of our competitors – we did not withdraw from the market for aviation risks. That entrepreneurial spirit was our hallmark back then and remains so to this day.

Henchoz: For me, our self-image is tangible on a daily basis. Hannover Re is ruled by a spirit of collaboration, all our employees are real team players. We are there for our clients and we take a thoroughly pragmatic approach – it's in our DNA, and it's captured in the phrase "we team up".



Why is it important for Hannover Re's future to be clear about the company's purpose?

Henchoz: In today's world we are approached by a wide range of stakeholders, no longer just shareholders and customers. We must respond to them with a consistent message. We can best reach them with clear and readily understandable statements about our values and our self-image, and at the same time we thereby establish the basis for our strategic orientation and our corporate culture.

It was wholly intentional that we involved a large number of employees all around the world, since in this case the journey was the destination. This process was extremely valuable in enabling us to condense and concisely define our self-image and our corporate culture.

Vogel: Our days as a start-up are long behind us, even though we perhaps still carry this feeling inside us. Being the number three reinsurer in the world brings obligations and opportunities alike. We now want to draw on our self-image and our values as guidance for the future so as to continue to succeed going forward.

What values particularly set Hannover Re apart?

Henchoz: Fundamentally, Hannover Re's approach is characterised by credibility, reliability, honesty and an entrepreneurial mindset. We intend to and must retain these qualities. In concrete terms, they are reflected in our guiding values of "Responsibility", "We-spirit" and "Drive" that we elaborated jointly with our staff around the world.

Our actions have always been driven by the self-image of an entrepreneur – and that will remain so going forward.

Roland Vogel

How do your employees embody these values in their daily work?

Vogel: We operate based on a self-image that has its roots in our history: when our company was established we entered an industry that was populated by long-established and very conservative players. Hannover Re set about doing many things differently and declined to follow conventions. Since then, we too have become an established market presence. And even though we have successfully retained our original approach to this day, it is by no means guaranteed for the future. By means of our values system we remind our employees of this on a daily basis. We act as a true partner for our customers, and we win them over with a sustainable long-term perspective and the conviction that our business model offers added value for society.

Our purpose statement

Our values



Our values are part of our self-image

Responsibility

We have integrity

I am honest and humble with a strong sense of accountability. I deliver what I promise and openly address things which don't turn out as expected. Everything I do could be reported in the news without embarrassing anyone.

We take ownership

I am proactive and accountable for my actions. I decide and act reliably and transparently. In everything I do, I consider sustainability and long-term impacts.

We are empowered to master challenges

I have trust in myself. I know my strengths and weaknesses.

We-spirit

We all contribute to common success

I know the strategy and goals of Hannover Re and how I help in achieving them. I network and share knowledge without boundaries. I place joint success above personal success.

We value every individual and embrace diversity

I value every person's uniqueness. I meet everyone on equal terms. I ask for different points of view.

We foster a culture of respect

I communicate clearly, transparently and objectively. I listen carefully in order to understand. I give and welcome constructive feedback.

Drive

We are ambitious – for our clients' success

I deliver value-adding solutions to build sustainable partnerships. I generate and promote good ideas. I collaborate with all relevant parties. I get things done – fast.

We are open-minded and give things a try

I see change as an opportunity for development and innovation. I strive for pragmatic and efficient solutions rather than perfect ones. I treat mistakes as an opportunity for learning. I help to cut the "somewhat different" path of the company.

The development process: a collaborative effort

The second half of 2019 was devoted to exploring the question of why Hannover Re actually exists. What added value does our company create for society? And what is its relationship to the values for which Hannover Re stands? In interviews and workshops more than 560 employees around the world elaborated answers to these questions.



5

interviews with
7 Board members

22

regional workshops at
13 international
locations

14

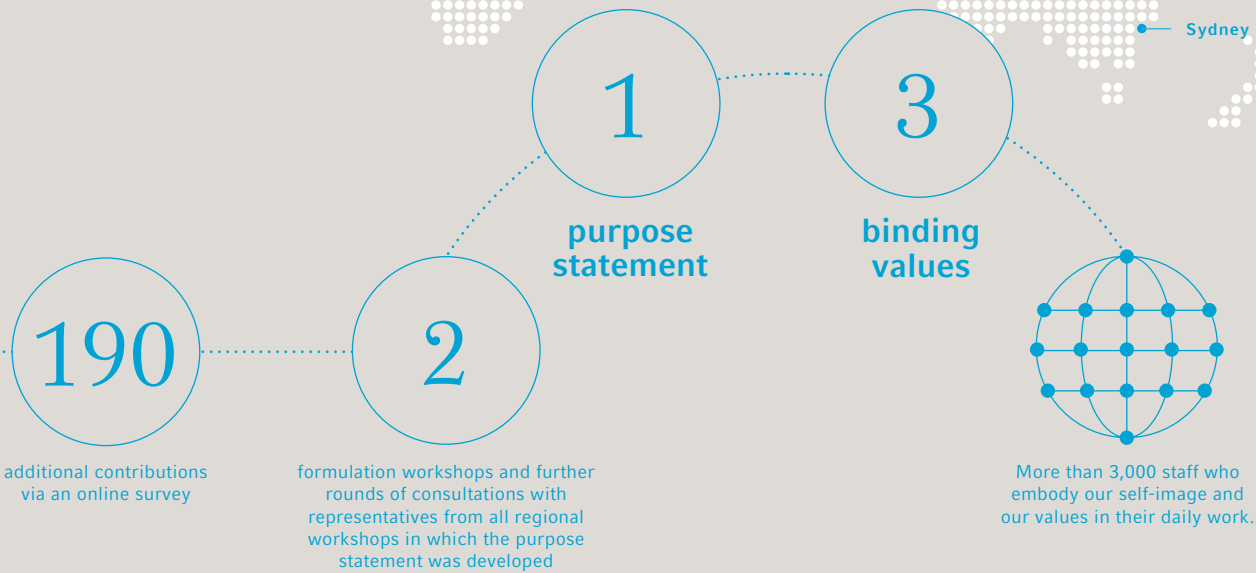
responsible project officers
from 3 departments

434

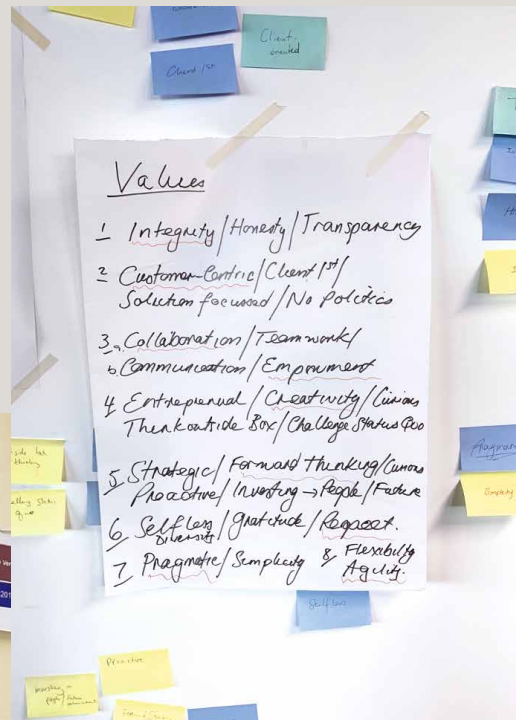
participants in the workshops

55

drafts for
purpose statements



Beyond risk sharing – we team up to create opportunities



Our self-image

We were founded as an in-house reinsurer and started small, a new kid on the block, proving ourselves every day for over fifty years. We've grown into a company with the resources of a major player and the flexibility of a boutique one.

We are pragmatic, specialised and highly focused on costs. Modest yet self-assured. All our people count – and our clients sense this.

At Hannover Re we operate at the speed of trust. We work when our clients need us and always pick up the phone. We're there to help, committed to excellence. We do not judge our clients, we assess their business opportunities. Fast in our decision-making, we are well prepared and offer execution certainty.

We acutely understand the pace and nature of market changes. We enable industries and people to recover from distress and move forward. By expanding the availability of insurance and reinsurance we improve the lives of many, opening up new avenues and creating fresh opportunities.

We make sure we always move with the times, guided by our purpose which embraces our past, present and future. We promise to work in concert with our clients, our partners, and our shareholders to do more than just preserve the status quo. Our relationship is one of equals.

We team up to go the extra mile. Beyond risk sharing. Beyond mainstream.

We are somewhat different. Every day.

We respond to the challenges of the future with our “some-what different” approach. By defining our self-image and our values we build on our strengths and at the same time look ahead: in order to cement our market position among the top reinsurers, we combine tried and trusted strengths with our partnership-based approach to doing business. Together we create opportunities.


About us



Hannover Re, with gross premium of more than EUR 22 billion, is the third-largest reinsurer in the world.

We transact all lines of property & casualty and life & health reinsurance and are present on all continents with more than 3,000 staff. Established in 1966, the Hannover Re Group today has a network of more than 170 subsidiaries, branches and representative offices worldwide. The German business of the Hannover Re Group is transacted by our subsidiary E+S Rück.

The rating agencies most relevant to the insurance industry have awarded both Hannover Re and E+S Rück very good financial strength ratings: Standard & Poor's AA- "Very Strong" and A.M. Best A+ "Superior".



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Jean-Jacques Henchoz,
Chairman of the
Executive Board

Dear Shareholders, Ladies and Gentlemen,

Hannover Re can look back on a very successful 2019 financial year. Personally, I am absolutely delighted that we are able to present to you a record result for the year just ended.

In my first few months as Chief Executive Officer, a role which I took over in May, the positive impression that I had previously formed of Hannover Re as an outsider was unreservedly confirmed. The dedication and expertise of our employees, our long-standing and partnership-based customer relationships and our efficient business model establish the foundations for our superb positioning – and this will remain the case going forward.

With a view to ensuring that Hannover Re continues to enjoy this exceptional level of success, we shall be revising our Group strategy as part of the regular review process in the 2020 financial year. Without doubt, Hannover Re is on the right track. Nevertheless, given the changing landscape in our industry, we too must continue to evolve and will have to make ongoing course adjustments going forward.

I am able to report on some of the early initiatives that we have already set in motion in the 2019 financial year. We shall, for example, expand our footprint in Asia so as to better participate in the

growth of this region's insurance markets. Furthermore, we remain committed to improving our customer relationships and to strategic projects in the areas of digital innovation and talent development.

In the second half of 2019 we also grappled with the definition of a Purpose Statement for Hannover Re. More than 400 members of staff around the world engaged in a frank exchange about the purpose of our work, about our culture and values and about the future orientation of our company. On this basis, we formulated a corporate purpose that – to my mind – perfectly encapsulates the strengths and ambition of Hannover Re:

“Beyond risk sharing – we team up to create opportunities”.

In keeping with our corporate values, our Purpose Statement highlights our desire to deliver added value for our clients that goes above and beyond pure risk coverage (“Beyond risk sharing”). We aim to do this on a partnership basis and as a global team (“we team up”). At the same time, we see ourselves in a proactive role as an innovation partner for our clients (“to create opportunities”).

One very good example of how we act on our purpose is the cooperation that we announced in December with Global Parametrics, the Federal Ministry of Economic Cooperation and Development, Kreditanstalt für Wiederaufbau (KfW) and the Department for International Development (DFID) in the United Kingdom. Working together, we have developed an innovative concept for the coverage of climate risks in developing countries based on parametric indices. As our experience shows, partnering with government institutions on solutions of this type offers an effective means of closing the protection gap.

In the reinsurance industry the capacity for innovation is becoming an increasingly key differentiating factor. Technological changes in the context of digitalisation will further accelerate this trend.

Hannover Re is well positioned for this transformation. We were one of the first players in our industry to enable investors to participate directly in insurance risks and to this day we still enjoy a leading role in the insurance-linked securities market. The same is true of bespoke covers offered in structured reinsurance: in both property & casualty and life & health reinsurance we played a pioneering role here in shaping the market and we have cemented our position over the years as one of the top providers.

We also make systematic efforts to foster the internal power of innovation within Hannover Re, including for example through an in-house ideas competition – the “Hannover Re Intrapreneurship Programme”. Our employees around the world submitted almost 150 business ideas to the programme, giving rise to a number of projects that we intend to implement. Launched at the start of 2019, our insurtech platform “hr|equarium” has already been well received on the market. It enables our customers to connect with insurtechs and other innovative solution providers on a worldwide basis.

In general terms, the continued inadequate supply of insurance protection offers a great opportunity for insurers and reinsurers alike. This is especially true of emerging markets in Asia and Latin America. Yet even in industrial nations that are already more advanced, the protection gap remains large in many areas. Our industry can help here with innovative products, thereby underscoring its social relevance.

I would like to turn now to the results of the financial year just ended. With Group net income of EUR 1.28 billion Hannover Re achieved another record result. The fact that we did this even though 2019 was another relatively costly year for the reinsurance industry merely underlines our profitability.

The crucial success factors in the property & casualty reinsurance business group were the high quality and diversification of our portfolio, a leading position in specialty lines and a disciplined underwriting policy coupled with our risk management. Our life & health reinsurance business group contributed good results in traditional reinsurance and in the areas of longevity risks and financial solutions. The continuous improvements in our in-force US mortality portfolio were also beneficial. We similarly generated a very good performance with our investments. We benefited here from a number of positive one-time effects, while at the same time maintaining ordinary income on a stable level despite the challenging situation on capital markets.

This is now the eleventh year in succession that we are reporting a double-digit return on equity. In view of Hannover Re's robust equity base, the Executive Board and Supervisory Board will propose to the Annual General Meeting that an increased dividend of EUR 5.50 per share should be paid to you, our valued shareholders. This proposed dividend consists of an increased ordinary dividend of EUR 4.00 per share and an unchanged special dividend of EUR 1.50 per share.

Based on the thoroughly successful results of the 2019 financial year, our guidance for 2020 is optimistic even though the competitive environment remains challenging. This optimism is reinforced by the fact that the renewals in property and casualty reinsurance as at 1 January 2020 once again passed off successfully for our company. For the current financial year we are expecting to grow our Group gross premium by around 5 percent and we anticipate Group net income of around EUR 1.2 billion.

Our employees are the basis on which Hannover Re has built this track record of success. I would like to thank them most sincerely, also on behalf of the entire Executive Board. As the Executive Board of Hannover Re, we similarly extend our thanks to you, our shareholders, just as we do to our customers and business partners for the trust that is placed in us. Going forward, as in the past, it remains our primary goal to lead Hannover Re responsibly, securely and with the necessary foresight into a profitable future.

Yours sincerely,



Jean-Jacques Henchoz
Chairman of the Executive Board

Executive Board of Hannover Rück SE

As of 31 December 2019



Dr. Michael Pickel

Group Legal Services
Run-Off Solutions
Property & Casualty
Reinsurance

- Germany, Switzerland, Austria and Italy
- Latin America, Iberian Peninsula and Agricultural Risks
- North America

Sven Althoff

Property & Casualty Reinsurance

- Asia, Australia and Middle East
- Aviation and Marine
- Credit, Surety and Political Risks
- United Kingdom, Ireland and London Market
- Facultative Reinsurance and Direct Business

Coordination of Property & Casualty Business Group

Silke Sehm

Retrocessions
Property & Casualty
Reinsurance

- Continental Europe and Africa
- Catastrophe XL (Cat XL)
- Structured Reinsurance and Insurance-Linked Securities



Jean-Jacques Henchoz

Chairman
 Compliance
 Controlling
 Innovation Management
 Human Resources
 Management
 Internal Auditing
 Risk Management
 Corporate Development
 Corporate Communications

Roland Vogel

Finance and Accounting
 Information Technology
 Investment and
 Collateral Management
 Facility Management

Dr. Klaus Miller

Life & Health Reinsurance
 • North America, United
 Kingdom/Ireland,
 Northern, Eastern
 and Central Europe

Claude Chèvre

Life & Health Reinsurance
 • Africa, Asia, Australia/
 New Zealand, Latin
 America, Western
 and Southern Europe
 • Longevity Solutions

The Hannover Re share

- Share price soars to new all-time high of EUR 175.20
- Share performance of +52.5% beats benchmark indices
- Proposed dividend of EUR 4.00 plus special dividend of EUR 1.50

Capital market development

Capital markets once again proved to be volatile and challenging in the 2019 financial year in the face of numerous geopolitical and economic issues. The ongoing tariff and trade disputes between the United States and China as well as the lack of clarity surrounding the United Kingdom's exit from the European Union were a recurring source of uncertainty on capital markets throughout the year. Despite this, the major stock indices posted consistent gains in 2019 after pulling back at the end of the previous year.

The German DAX index had entered the year at 10,559 points. After some brief initial hesitations, the domestic bellwether index rose steadily in the period until May to surpass 12,000 points. As the year progressed, German blue chips moved sideways against the backdrop of a renewed flare-up of concerns about the stability of the global economy. In the fourth quarter the DAX picked up steam again to reach its highest point of the year on 16 December 2019 at 13,408, before closing out the year 25.5% higher at 13,249 points.

The MDAX, which had been expanded in the year under review following a decision by Deutsche Börse AG, performed significantly more strongly. It similarly recorded its lowest level right out of the gate at 21,398 points. The index rose relentlessly throughout the year to touch its highest point of 28,545 points on 23 December 2019. A few days later the MDAX ended the year with a gain of 31.2% at 28,313 points.

Movements were just as positive on the US S&P 500 and the Dow Jones Industrial indices, which closed 28.9% and 22.3% higher on the year respectively. The MSCI World index also ended the year up by 25.4% at 2,359 points.

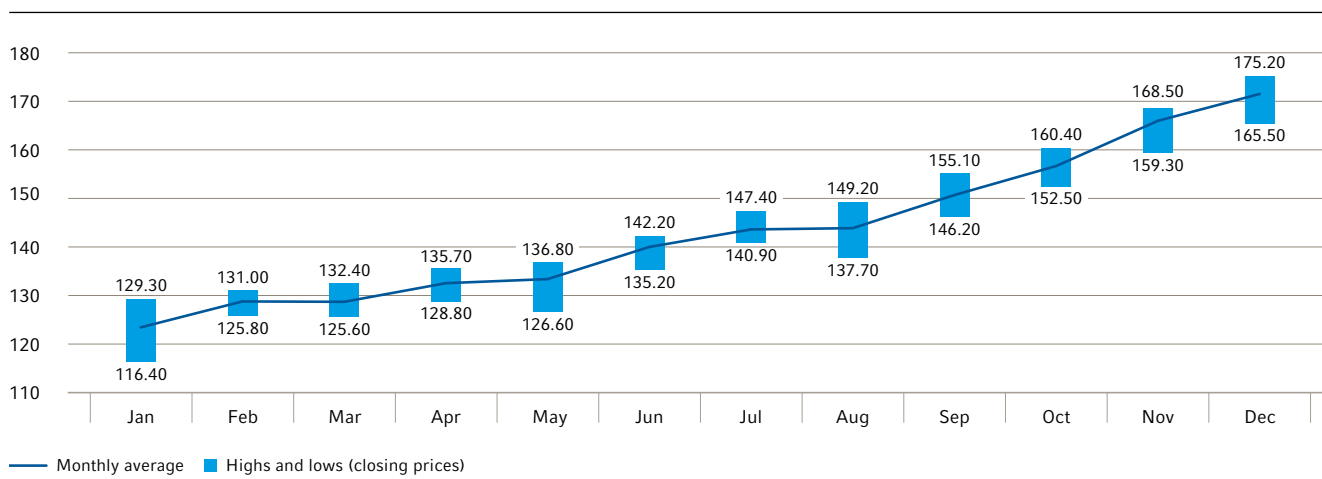
The Hannover Re share

The Hannover Re share stood at EUR 117.70 going into the year. On the first day of trading it slipped back to EUR 116.40 – a level that was to prove its lowest point of the year. Against a backdrop of encouraging news from the treaty renewals as at 1 January 2019, the share price rose steadily into the middle of February and then remained stable until the General Meeting and publication of the quarterly results in May. Brushing off geopolitical and economic uncertainties, the share price then moved consistently higher before ultimately peaking for the year – and recording a new all-time high – of EUR 175.20 on 17 December 2019. The Hannover Re share closed out the year with a gain of 46.4% at EUR 172.30 – equivalent to a performance of 52.5%, including reinvested dividends. Looked at over the year as a whole, the Hannover Re share thus comfortably outperformed its domestic benchmark indices as well as the international Global Reinsurance (Performance) Index (+31.4%).

In a three-year comparison, the Hannover Re share delivered a performance (including reinvested dividends) of 90.6%. From a longer-term perspective, too, it thus continues to

Highs and lows of the Hannover Re share

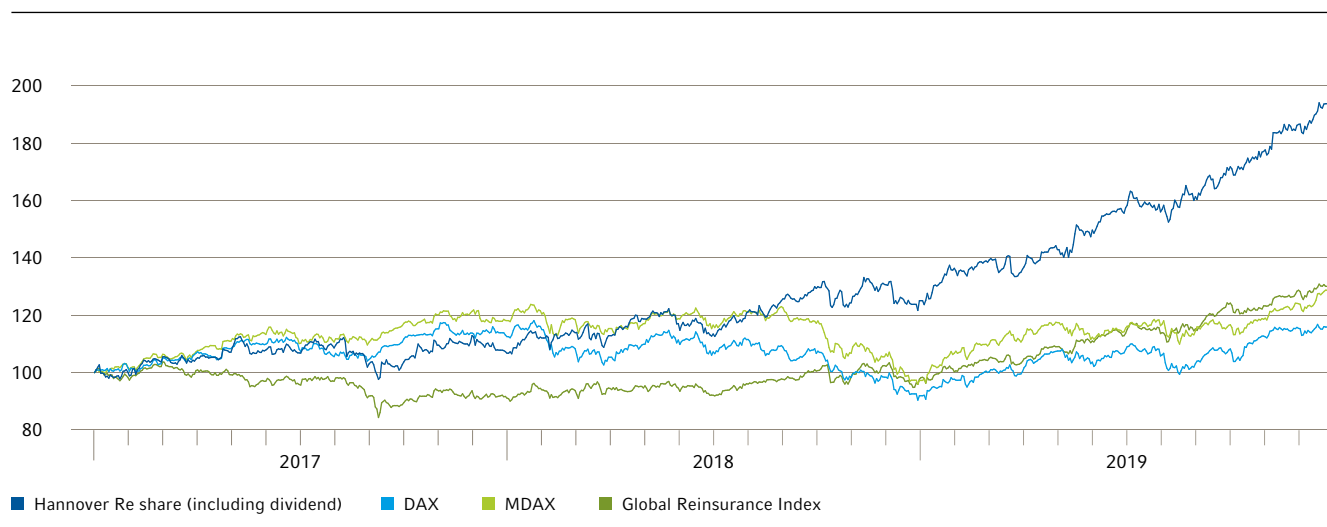
in EUR



Relative performance of the Hannover Re share

I 10

in %



clearly outperform the benchmark DAX (+15.4%) and MDAX (+27.6%) indices as well as the Global Reinsurance Index (+29.1%).

Based on the year-end closing price of EUR 172.30, Hannover Re's market capitalisation totalled EUR 20.8 billion at the end of the 2019 financial year, an increase of EUR 6.6 billion or 46.4% compared to the previous year's figure. According to the rankings drawn up by Deutsche Börse AG, the company placed first in the MDAX at the end of December in terms of its free float market capitalisation and ninth by trading volume.

With a book value per share of EUR 87.30, the Hannover Re share showed a price-to-book (P/B) ratio of 1.97 at the end of the year under review; it was thus just marginally below the average MDAX P/B ratio of 2.02 at year-end. Compared to the average P/B ratio for its peer group, the Hannover Re share continues to be significantly better valued.

Dividend

The Executive Board and the Supervisory Board intend to propose to the Annual General Meeting on 6 May 2020 that a dividend of EUR 4.00 plus a special dividend of EUR 1.50 per share should be distributed. The total dividend of EUR 5.50 would thus be EUR 0.25 higher than the previous year's dividend. As was also the case in the previous years, the special dividend will be paid as a capital management measure because the company's capitalisation continues to exceed the required level. Based on the year-end closing price, this produces a dividend yield of 3.2%.

Annual General Meeting

The Annual General Meeting of Hannover Rück SE was held on 8 May 2019 at Hannover Congress Centrum (HCC) in Hannover. Altogether, including postal ballots, around 82% of the share capital was represented.

In his address to shareholders, the retiring Chief Executive Officer Ulrich Wallin looked back on the exceptionally pleasing 2018 financial year. Despite significant major losses and a one-time charge in life and health reinsurance, Group net income increased by 10.5% to EUR 1,059.5 million. Herbert Haas, the Chairman of the Supervisory Board, responded to this speech by thanking Mr. Wallin not only for the good result in 2018 but also for his outstanding entrepreneurial achievement during the past ten years in which he had led the company as Chief Executive Officer. At the conclusion of the Annual General Meeting Jean-Jacques Henchoz took over as Chief Executive Officer. There were also changes in the ranks of the Supervisory Board. The Annual General Meeting 2019 held the regularly scheduled elections for the shareholder representatives. Dr. Michael Ollmann was chosen as a new member of the Supervisory Board; he succeeds Dr. Immo Querner, who as a member of the Board of Management of Talanx AG had previously represented the interests of the major shareholder on Hannover Re's Supervisory Board together with Mr. Haas and Mr. Leue. As a consequence of his departure, the proportion of independent members on the Supervisory Board increased from two to three of the altogether six shareholder representatives. The other existing members of the Supervisory Board were confirmed in office by a large majority. Furthermore, the Annual General Meeting approved the proposed resolutions put to the vote by management under all other items on the agenda by a comfortable three-quarters majority.

Following the Annual General Meeting the constituent meeting of the Supervisory Board was held in its new composition. Torsten Leue, Chief Executive Officer of Talanx AG, was elected as the new Chairman of the Supervisory Board. He succeeds Herbert Haas, who had chaired the Supervisory Board since 5 May 2009. Mr. Haas has since continued to serve as a member of the Supervisory Board. All voting results and the attendance were published on the company's website following the Annual General Meeting.

Dialogue with the capital market

Throughout 2019, the Executive Board and representatives of the Investor Relations department once again cultivated an ongoing dialogue with institutional investors, analysts and private investors. The focus of their efforts remained on the financial centres of Europe and North America. The number of capital market conferences attended and roadshow days was virtually unchanged at 16 (previous year: 17) and 11 (10) respectively. Discussions focused in particular on the changes that had taken place on the company's Executive Board and potentially associated shifts in its strategic orientation, the trend in the large loss situation and its implications for the rate level in property and casualty reinsurance as well as general growth prospects on the reinsurance market.

The growth opportunities in the two business groups of Property & Casualty and Life & Health reinsurance, especially in Asia, were a key topic of discussion at Hannover Re's 22nd Investors' Day, which was held on 23 October 2019 in Frankfurt and also carried as a parallel webcast on the company's website.

Sustainability reporting and ratings

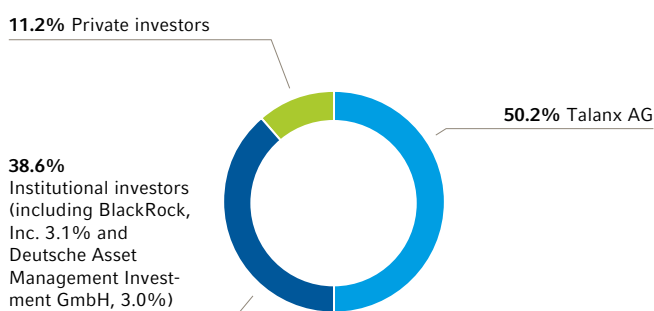
Along with traditional financial considerations, so-called non-financial or ESG (environmental, social and governance) key performance indicators are coming to play an increasingly important role in the evaluation of companies on the capital market. In the financial year just ended, therefore, Hannover Re again reported on these non-financial efforts undertaken as a responsible enterprise. Publication took the form of the non-financial information statement that forms an integral component of the Group management report as well as an extensive, stand-alone sustainability report compiled in accordance with the internationally recognised reporting standards of the Global Reporting Initiative (GRI). Based on this information, the company's sustainability performance was assessed by multiple rating agencies, including MSCI, FTSE-4Good, Sustainalytics, ISS-oeikom, VigeoEiris and the Carbon Disclosure Project (CDP).

Shareholder structure

Our share register showed some 55,200 shareholders at the end of the year, another increase in the number of shareholders year-on-year (51,000). The largest shareholders at year-end were Talanx AG with 50.2% as well as the asset manager BlackRock, Inc., with a reported 3.05% and Deutsche Asset Management Investment GmbH with 3.02% of the voting rights. Of the remaining shares outstanding, by far the bulk – at 32.5% – were held by other institutional investors such as banks, insurers and investment companies (previous year in total: 40.9%); private investors held 11.2% (8.9%). Our shareholders include investors who pay particularly close attention to sustainability criteria.

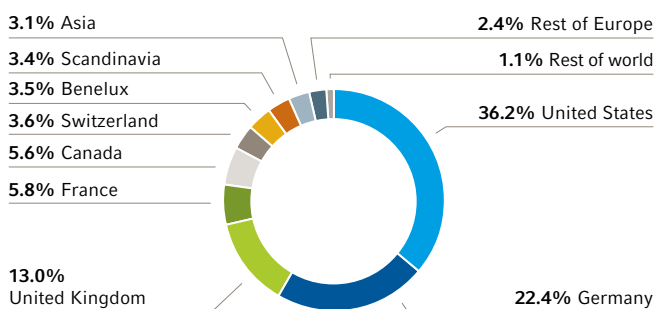
Shareholder structure as at 31 December 2019

I 11



Geographical breakdown of the shares held by institutional investors

I 12



Basic information

I 13

Securities identification number	840 221
International Securities Identification Number (ISIN)	DE 000 840 221 5
Ticker symbols	
Bloomberg	HNR1
Reuters	HNRGn
ADR	HVRRY
Exchange listings	
Germany	Xetra, Frankfurt, Munich, Stuttgart, Hamburg, Berlin, Düsseldorf, Hannover (official trading: Xetra, Frankfurt and Hannover)
United States	American Depositary Receipts (Level 1 ADR program; 2 ADR = 1 share)
Market segment	Prime Standard
Index membership	MDAX
First listed	30 November 1994
Common shares (as at 31 December 2019)	EUR 120,597,134.00
Share class	No-par-value registered shares

Key figures

I 14

in EUR	2019	2018	2017	2016	2015
Number of shares in million	120.6	120.6	120.6	120.6	120.6
Annual low ¹	116.40	104.70	95.95	84.12	73.81
Annual high ¹	175.20	125.30	115.65	106.20	111.50
Year-opening price ¹	117.70	104.90	102.80	105.65	74.97
Year-ending price ¹	172.30	117.70	104.90	102.80	105.65
Market capitalisation at year-end in EUR million	20,778.9	14,194.3	12,650.6	12,397.4	12,741.1
Equity attributable to shareholders of Hannover Rück SE in EUR million	10,528.0	8,776.8	8,528.5	8,997.2	8,068.3
Book value per share	87.30	72.78	70.72	74.61	66.90
Earnings per share (basic and diluted)	10.65	8.79	7.95	9.71	9.54
Dividend per share	4.00 + 1.50 ^{2,3}	3.75 + 1.50 ³	3.50 + 1.50 ³	3.50 + 1.50 ³	3.25 + 1.50 ³
Cash flow per share	20.81	18.45	14.05	19.33	25.75
Return on equity (after tax) ⁴	13.3%	12.2%	10.9%	13.7%	14.7%
Dividend yield ⁵	3.2%	4.5%	4.8%	4.9%	4.5%
Price-to-book (P/B) ratio ⁶	2.0	1.6	1.5	1.4	1.6
Price/earnings (P/E) ratio ⁷	16.2	13.4	13.2	10.6	11.1
Price-to-cash flow (P/CF) ratio ⁸	8.3	6.4	7.5	5.3	4.1

¹ Xetra daily closing prices from Bloomberg

² Proposed dividend

³ Dividend of EUR 4.00 plus special dividend of EUR 1.50 for 2019, dividend of EUR 3.75 plus special dividend of EUR 1.50 for 2018, dividend of EUR 3.50 plus special dividend of EUR 1.50 for 2017 and 2016 and dividend of EUR 3.25 plus special dividend of EUR 1.50 for 2015

⁴ Earnings per share/average of book value per share at start and end of year

⁵ Dividend per share/year-end closing price

⁶ Year-end closing price/book value per share

⁷ Year-end closing price/earnings per share

⁸ Year-end closing price/cash flow (from operating activities) per share

Combined management report



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Foundations of the Group

Business model

- Worldwide reinsurance, transacting all lines of property & casualty and life & health reinsurance with the goal of achieving the broadest and most balanced possible regional and line-based diversification
- Competitive advantages due to our low cost of capital and administrative expense ratio
- Financial strength secured through sophisticated risk management

With a gross premium volume of more than EUR 22 billion, the Hannover Re Group is the third-largest reinsurer in the world. Hannover Rück SE is a European Company, *Societas Europaea* (SE), based in Hannover, Germany. We transact reinsurance in our Property&Casualty and Life&Health business groups.

The strategy pursued in both property & casualty and life & health reinsurance supports our Group's paramount mission, namely: "Creating value through reinsurance". Our entire business operations are geared to our goal of being the best option for our business partners when they come to choose their reinsurance provider. It is for this reason that our clients and their concerns form the focus of our activities.

We generate competitive advantages to the benefit of our clients and shareholders by conducting our reinsurance business with lower administrative expenses than our rivals. In this way we deliver above-average profitability while at the same time being able to offer our customers reinsurance protection on competitive terms.

We also strive for the broadest possible diversification and hence an efficient risk balance. This is achieved by accepting reinsurance risks with mostly little or no correlation in our Property&Casualty and Life&Health business groups across all lines of business as well as by maintaining a global pres-

ence. In conjunction with our capital management, this is the key to our comparatively low cost of capital.

Guided by a clearly defined risk appetite, the Executive Board steers the company using risk management techniques so as to be able to act on business opportunities while securing our financial strength on a lasting basis.

Our subsidiary E+S Rückversicherung AG (E+S Rück), as the "dedicated reinsurer for the German market", offers a range of products and services tailored to the specific features of the German market. Of special importance here are the mutual insurers with whom we maintain a strategic partnership that is underscored through their participation in E+S Rück.

In the Property&Casualty reinsurance business group we consider ourselves to be a reliable, flexible and innovative market player that ranks among the best in any given market. Cost leadership, effective cycle management and superlative risk management are the key elements of our competitive positioning.

In the Life&Health reinsurance business group we are recognised – as customer surveys confirm – as one of the top players and a leading provider of structured solutions. We achieve this standing by opening up new markets for our company and by identifying trends in order to anticipate the future needs of our customers.

Management system

Value-based management

Our integrated system of enterprise management constitutes the basis for attainment of our strategic objectives. Located at its core are, first and foremost, our profit and growth targets, which are summarised for the Group and its business groups in the so-called target matrix. In addition to traditional performance indicators geared to the IFRS balance sheet, our system of strategic targets also includes economic targets de-

rived from our internal capital model approved by the regulator and from the economic equity pursuant to Solvency II reporting. The targets are regularly analysed and adjusted in the context of the strategy review conducted at periodic intervals. In general terms, our primary focus is on medium- and long-term attainment of the strategic targets.

Target attainment

M 01

Business group	Key data	Targets for 2019	Target attainment			
			2019	2018	2017	Ø 2017–2019 ¹
Group	Investment return ²	≥ 2.8%	3.4%	3.2%	3.8%	3.5%
	Return on equity ³	≥ 9.3%	13.3%	12.2%	10.9%	12.2%
	Growth in earnings per share	≥ 5%	21.2%	10.5%	-18.2%	3.1%
	Economic value creation ⁴	≥ 6.3%	13.5%	8.2% ¹³	2.1%	7.3%
	Solvency ratio ⁵	≥ 200%	251.8%	246.0% ¹³	260.0%	252.4%
Property & Casualty reinsurance	Gross premium growth	3–5% ⁶	20.4%	16.2%	18.7%	18.4%
	Combined ratio	≤ 97% ⁷	98.2%	96.5%	99.8%	98.1%
	EBIT margin ⁸	≥ 10%	10.0%	12.2%	12.2%	11.4%
	xRoCA ⁹	≥ 2%	0.1%	9.0%	1.1%	3.4%
Life & Health reinsurance	Gross premium growth	3–5% ¹⁰	6.7%	4.6%	1.4%	4.2%
	Value of New Business (VNB) ¹¹	≥ EUR 220 million	EUR 663 million	EUR 290 million	EUR 364 million	EUR 439 million
	EBIT growth	≥ 5% ¹²	106.6%	12.5%	-28.6%	18.4%
	xRoCA ⁹	≥ 2%	12.4%	-2.2% ¹³	-8.5%	0.7%

¹ Annual average growth, otherwise weighted averages

² Excluding effects from ModCo derivatives

³ After tax; target: 900 basis points above the five-year average return on ten-year German government bonds

⁴ Growth in the economic equity including dividend paid

Target: 600 basis points above the five-year average return on ten-year German government bonds

⁵ In accordance with our internal capital model and Solvency II requirements

⁶ Average over the reinsurance cycle; at constant exchange rates

⁷ Including large loss budget of EUR 875 million; target until 2018: 96%

⁸ EBIT/net premium earned

⁹ Value contribution relative to allocated economic capital

¹⁰ Organic growth only; target: annual average growth over a three-year period; at constant exchange rates

¹¹ Based on Solvency II principles; pre-tax reporting

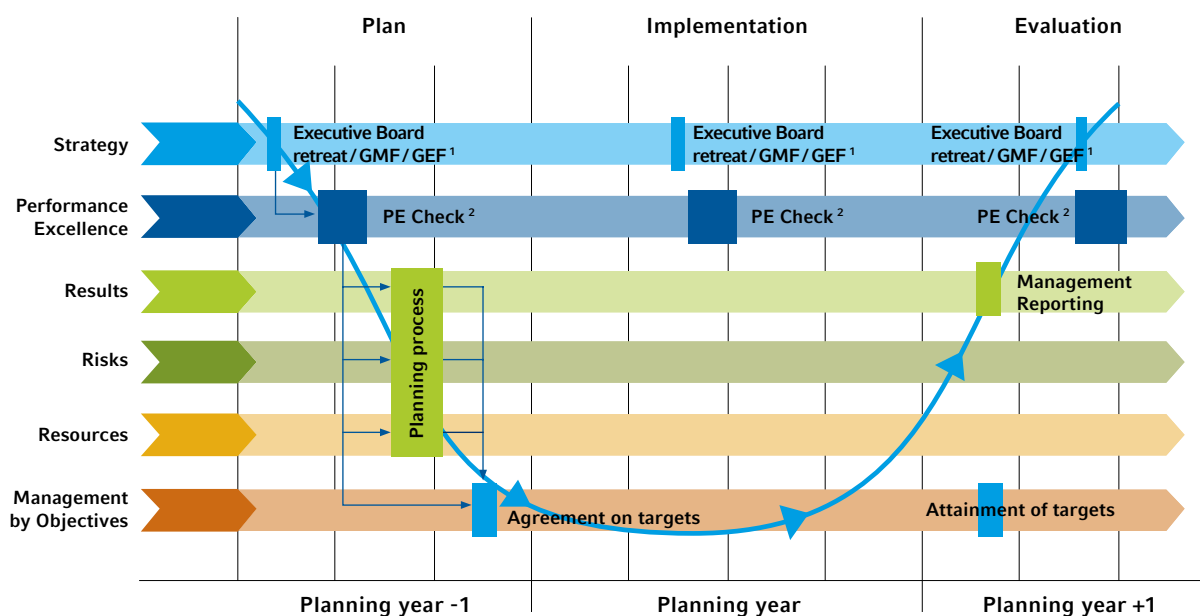
¹² Annual average growth over a three-year period

¹³ Minor differences compared to the Annual Report 2018. The figures are based on the final Solvency II year-end reporting

With our internal management system Performance Excellence (PE) we have at our disposal a consistent method Group-wide that enables us to steer the development of the company as well as to measure and hence also evaluate the extent to which we have achieved our strategic objectives. The decentralised approach used by PE is of special importance in this context: every single organisational unit defines and continuously examines its contributions to execution of the Hannover Re Group strategy and develops improvement initiatives.

**System of value-based management:
Performance Excellence (PE) combines the strategic and operational levels**

M 02



¹ The Global Management Forum (GMF) and the Global Executive Forum (GEF) bring together senior managers of the Hannover Re Group from around the world for the purpose of defining strategic orientations. The parameters developed here serve as the basis for the subsequent planning process.
² Verification and elaboration of contributions to the Group strategy

Management by Objectives

The key indicators from the target matrix are integrated into the individual agreements on objectives with managers. When it comes to the definition of objectives, the participants take into account not only standardised financial indicators but also non-financial variables derived from the strategic parameters.

Management Reporting

The annual Management Reporting presents in detail the respective degree of target attainment for each individual treaty/regional department and service unit as well as for the two business groups of Property & Casualty and Life & Health reinsurance and for the Group as a whole. On this basis appropriate performance controlling is carried out, potential scope for improvement and refinement is identified and performance-oriented remuneration components defined in the context of Management by Objectives are established.

Capital allocation

The basis of value-based management is the risk-appropriate allocation of capital to the individual business activities. This enables us to evaluate the acceptance of underwriting risks and investment risks both in light of individual risk/return aspects and against the backdrop of our overall risk appetite. Our internal capital model supplies the key parameters for this purpose. Starting out from the Group’s overall risk situation, capital is first allocated to the functional areas of underwriting and investments. We then further divide the capital within the underwriting sector, first between the business segments of property & casualty reinsurance and life & health reinsurance and then between the various reinsurance products according to risk categories/treaty types and lines. In this way, we ensure consistent adherence to our profit targets – allowing for risk, cost and return considerations – in the evaluation and pricing of our various reinsurance products.

IVC – the strategic management ratio

In order to manage the portfolios and individual treaties we apply underwriting-year-oriented measurement principles based on expected cash flows that appropriately accommodate the specific characteristics of property & casualty and life & health reinsurance. The attainment of targets in a particular financial year is also of interest – especially from the standpoint of shareholders. Based on our economic measurement according to Solvency II principles and our internal capital model, the foundation of our enterprise management, we strive to generate a profit in excess of the cost of capital. This return – which is the decisive ratio for the management of our business activities – is referred to as Intrinsic Value Creation (IVC).

With the aid of the IVC ratio it is possible to compare the value contributions of the Group as a whole, its two business groups and the individual operational units. This enables us to reliably identify value creators and value destroyers.

In this way, we can

- optimise the allocation of capital and resources,
- identify opportunities and risks and
- measure strategy contributions with an eye to our demanding profit and growth targets.

The IVC (Intrinsic Value Creation) is calculated according to the following formula:

$$\text{Adjusted economic profit} - (\text{capital allocated} \times \text{weighted cost of capital}) = \text{IVC}$$

The adjusted economic profit is comprised of two factors: the IFRS Group net income recognised after tax and the change in the balancing items for differences between economic valuations and amounts stated in the IFRS balance sheet. By way of the latter we make allowance in the value determination for changes in the fair values of assets not recognised in income under IFRS as well as for the change in economic effects in the technical Solvency II balance sheet items that are not recognised in the IFRS balance sheet. In addition, interest on hybrid capital already recognised in the IFRS Group net income and the non-controlling interest in profit and loss are included back in the calculation.

Intrinsic Value Creation and excess return on capital allocated

M 03

in EUR million	2019		2018			
	IVC	xRoCA	Reported IVC	Adjustment ¹	Final IVC	xRoCA
Property and casualty reinsurance	5.8	0.1%	459.7	(0.8)	458.9	9.0%
Life and health reinsurance	445.1	12.4%	(83.1)	6.3	(76.8)	-2.2%
Investments ²	471.4	8.2%	(7.0)	0.0	(7.0)	-0.1%
Group	922.1	6.3%	369.5	5.5	375.0	2.5%

¹ Minor differences compared to the Annual Report 2018. The figures are based on the final Solvency II year-end reporting.

² Income above risk-free interest rate after deduction of risk-appropriate cost of capital

The allocated capital consists of three components: the shareholders' equity including non-controlling interests, the balancing items for differences between economic valuations pursuant to Solvency II and amounts stated in the IFRS balance sheet and the hybrid capital. Capital is allocated to the profit centres as described above according to the risk content of the business in question. A systematic distinction is made here between the assumption of underwriting risks, on the one hand, and investment risks, on the other. Under the IVC calculation, therefore, only risk-free interest income on the generated cash flows is allocated to the business segments of property & casualty and life & health reinsurance. The investment income above and beyond risk-free is allocated in its entirety to the functional area of investments and included in the IVC after deduction of the risk-appropriate cost of capital and the administrative expenses.

In calculating the cost of capital, our assumption – based on a Capital Asset Pricing Model (CAPM) approach – is that the investor's opportunity costs are 450 basis points above the risk-free interest rate, meaning that value is created above this threshold. Our strategic return on equity target of 900 basis points above risk-free thus already contains a substantial target value creation. We allocate equity sparingly and use equity substitutes to optimise our average cost of capital, which amounted to 3.9% in 2019.

Since comparison of absolute amounts is not always meaningful, we have introduced the xRoCA (excess return on capital allocated) in addition to the IVC. This describes the IVC in relation to the allocated capital and shows us the relative excess return generated above and beyond the weighted cost of capital.

Through the close interlinking of our internal capital model with the capital allocation and value-based management, we fulfil the requirements of the Solvency II use test.

Operational management system

A number of IFRS-based financial performance indicators are also embedded in our strategic system of targets and coordinated with our parameters for value creation derived from the internal capital model. We use these indicators for operational management within the year, in part because they are available promptly and also because they already provide initial pointers as to whether we are likely to achieve our higher-order strategic objectives. These are for both business groups the growth in gross premium, for property and casualty reinsurance the combined ratio, for life and health reinsurance the EBIT growth and for the Group as a whole the return on investment. Non-financial performance indicators, on the other hand, are not used for operational management within the year.

Research and development

Exploring market trends and developing innovative products are tasks assigned to the individual market units at Hannover Re. In addition, business opportunities and innovations that cut across markets and segments are coordinated by the “Regulatory Affairs and Innovation” team and pursued by means of interdisciplinary projects in which various market and service units participate. In this way, we develop products and solutions that deliver value added both for Hannover Re and for our clients. By way of example, our move to give capital market players direct access to insurance risks as far back as the mid-1990s through our “K” transactions puts us among the industry pioneers. The intervening years have seen the subsequent evolution of a market for so-called insurance-linked securities, which is one of the fastest growing markets in the insurance sector.

Another example of Hannover Re’s development activities is our own internal model for risk management under Solvency II that caters to the requirements of various stakeholders (regulators, rating agencies, capital providers) and was one of the first in Europe to be approved by a national financial regulator (Federal Financial Supervisory Authority = BaFin). Not only that, through our active involvement and the provision of financial assistance we support scientific initiatives geared to developing products, solutions or markets that will be crucial success factors going forward in the viability of any reinsurance undertaking. Over the past four years we have launched and held two ideas competitions in which we opened up new business opportunities on both the primary and reinsurance side.

Reinsurance business is founded on the comprehensive understanding and active management of risks. Our specialists therefore continuously analyse known risks with an eye to changes in their structure and probability of occurrence, while at the same time focusing on the early detection of newly emerging risks and working to provide our clients with appropriate solutions tailored to their needs. Above and beyond this, Hannover Re makes systematic efforts to identify new business opportunities in order to achieve sustainable growth and strengthen the profitable development of the company.

Report on economic position

Macroeconomic climate and industry-specific environment

- Global economic growth lower than in the previous year
- Low interest rate environment an ongoing drag on the insurance industry
- Capital markets experiencing continued volatility
- Considerable losses again incurred from natural catastrophes

Macroeconomic climate

The **growth of the world economy** continued to lose momentum in 2019. The Kiel Institute for the World Economy (IfW) put the increase at 3.0%, a level 0.7 percentage points below that of the previous year. The decline can be attributed principally to slowing impetus in the advanced economies. In numerous emerging markets, on the other hand, economic activity returned to a more stable footing. The slowdown in growth continued to be driven by softness in industry and in world trade: the rise in industrial output virtually ground to a standstill in the course of 2019. Following on from the fourth quarter of 2018, global trade retreated for the first three quarters of 2019 in a row. Even the expansion recorded in the fourth quarter of 2019 fell far short of offsetting this contraction.

The ongoing intensification of the trade dispute between the United States and China remained a major drag on the world economy. Trade policy tensions between the US and the European Union also worsened appreciably over the course of the year.

In 2018 a sizeable cyclical gap had opened up between the advanced economies: a sharp rise in output in the United States, on the one hand, contrasted with softer expansion in the Eurozone and Japan, on the other. These differences in economic momentum narrowed during 2019. While the pace of expansion in the United States flagged, among other things as fiscal stimuli petered out, it remained stable in the Eurozone. Manufacturing in Japan and the United Kingdom ultimately even began to pick up again.

Emerging market economies saw a broadly muted development overall. One reason here was that these countries increasingly came under pressure from financial markets: international investors withdrew capital on a substantial scale, even triggering recessions in Argentina and Turkey. While the financial framework conditions improved at the end of the year, the economic slowdown in advanced economies at the same time had a restraining effect on demand.

United States

The US economy is experiencing its longest upswing in recent history. Following the vigorous increase in manufacturing output in the previous year, however, economic activity slowed appreciably in the course of the year under review. Gross domestic product grew by 2.3% according to the IfW and was thus 0.6 percentage points lower than in 2018 (2.9%). While the slowdown in capital spending was especially notable, exports also showed a softening tendency and consumer demand – which had hitherto been very robust – similarly lost momentum. Yet this did not affect domestic employment: the jobless rate retreated to 3.5% in November, the lowest level since 1969.

Europe

The decline in the Eurozone growth rate was halted in the course of 2019: according to the IfW, gross domestic product began to grow again in the third quarter thanks to reinvigorated private consumption and stronger exports. Over the year as a whole, though, growth still came in 0.7 percentage points lower than in 2018 at 1.2%. Looked at in terms of individual countries, some softening was particularly evident in the hitherto very robust economies of the EU Member States in Central and Eastern Europe. The growth rate for Poland, for example, retreated from 5.1 to 4.3%. Unemployment in the Eurozone nevertheless tended to move lower despite the muted trend in manufacturing output. Standing at 7.5% in October, it was only marginally higher than the existing all-time low of 7.3% from 2007. The increase in the harmonised index of consumer prices was down 0.5 percentage points year-on-year at 1.2%.

Overshadowed by the decline in industrial output, Germany's economy experienced a downturn in 2019. Coming on the heels of two soft quarters in the middle of the year, growth rallied only insignificantly towards year-end – as a consequence of which expansion contracted by 1.0 percentage points year-on-year to 0.5%. Exports ultimately picked up despite the protracted sluggishness of industrial output around the world, but they failed to make up for the weak spring. Overall, exports increased by 1.3% in 2019 (previous year: 2.1%). Imports similarly grew at a slower pace (2.4%) than in the previous year (3.6%). The jobless rate fell by another 0.2 percentage points year-on-year to stand at 5.0%.

Consumer prices rose by an average of 1.4% over the year as a whole (1.7%).

In a climate of uncertainty surrounding what form Brexit would take, the United Kingdom's economy grew by 1.3% – a pace that was only slightly slower than in the previous year. The UK labour market similarly proved to be exceptionally resilient: the jobless rate remained at the historically low level of 3.7%.

Asia

Gross domestic product in Asia fell short of the previous year with growth of 5.6% (6.4%); in comparative terms, however, the increase was still quite marked. In China the uncertainties associated with the trade dispute with the United States slowed growth by 0.4 percentage points to 6.2%. The Indian economy fared appreciably more poorly in 2019: the pace of growth here slumped sharply in the second and third quarters after problems emerged in the shadow banking system. This sector plays a very significant role in the financing of the Indian economy. Considered over the full twelve months, growth contracted by 1.8 percentage points compared to the previous year to stand at 5.0%.

In Japan gross domestic product again improved on the previous year's growth (0.8%) with a modest gain of 1.2%. Key drivers of the increase were the rise in consumer spending, higher government investment and a recovery in residential construction. Exports, on the other hand, were sharply lower than in the previous year.

Capital markets

The investment climate again proved to be highly volatile and challenging in the period under review owing to numerous geopolitical and economic policy issues. Among other things, ongoing tariff and trade disputes as well as the continued bumpy road towards the United Kingdom's withdrawal from the European Union were unsettling factors. All in all, it was once again striking to see how heavily influenced financial markets were by political events that exacerbated uncertainties in relation to international trade patterns. The implications of increasingly widespread instances of social unrest on a local level in the reporting period will also need to be monitored going forward.

The punitive tariffs imposed by the United States clearly left their mark on global growth and on sentiment in the manufacturing sector over the course of the year. Problems affecting the German car industry were an additional strain. The US business climate proved to be highly robust, not least due to the tax incentives put in place by the Trump administration. Despite the thoroughly solid state of the US economy, the US Federal Reserve nevertheless surprisingly pulled an abrupt about-turn from its previously restrictive policy in favour of more expansionary action. By the end of the year,

however, a renewed pause in the cycle of interest rate cuts had already been announced.

At the European Central Bank, on the other hand, there is no end in sight to the expansionary monetary policy. The ECB did not hold out any prospect of an increase in key interest rates for the foreseeable future. Such a move will only be made when inflation expectations once again clearly approach the target of just below 2%. Given the depletion of monetary policy tools and in view of the gloomy growth and inflation outlook, calls for fiscal measures are nevertheless now growing louder.

All in all, then, central bank policy in our main currency areas was inconsistent. The ECB kept the key interest rate for the Eurozone at a historically low 0.00%. The Bank of England similarly left its benchmark interest rate unchanged at 0.75% after a modest increase in 2018. The US Federal Reserve Fed trimmed the base rate for the US dollar in three increments over the course of the year to an average of 1.75%, although it stepped back from making a further cut at year-end.

Emerging economies were very heavily impacted by developments in the trade dispute between the United States and China, as also manifested in growing concern about China's continued economic growth. Yet it is important here not to overlook the fact that trade between emerging countries has now reached a very robust scale and China is well on the way to dethroning the US as the largest trading partner for the emerging economies. The somewhat fragile limbo in which the global economy finds itself was, however, also reflected here. Central banks in emerging markets thus continued to ease their monetary policy, although the pace of interest rate cuts slowed. Weak commodity prices as a consequence of the widely held rather cautious assessment of the world economy put the brakes on growth in countries geared primarily to raw material exports.

Sluggish progress towards reaching a deal between the European Union and the United Kingdom as a consequence of the British people's vote in favour of Brexit led to further uncertainty. In the year under review this was reflected not only in the volatility of pound sterling against the euro and US dollar, but also in the choppy performance of UK equity markets. Over the year as whole, though, the British pound and UK stock markets both closed with gains.

The general election held in the United Kingdom towards the end of the year has at least put an end for the time being to the protracted search for a policy direction. The looming threat of a disorderly Brexit has caused uncertainty about the final shape of future economic and trade relations between the EU and the UK and about freedom of movement for workers. This continues to have a generally detrimental effect on the economies of the remaining EU Member States because it

impacts planning reliability and the readiness of companies to invest.

Bond markets continued to be shaped by the generally low level of interest rates. The already very low level of the previous year was once again pushed significantly lower in all our main currency areas. While the US dollar area recorded particularly appreciable interest rate declines, pound sterling and euro interest rates also saw sharp decreases. Negative yields can be seen here well into the medium maturity segment. Risk premiums on European and US corporate bonds retreated sometimes markedly in virtually all rating categories. In this regard it is important to monitor the levels down to which companies will be able to comfortably service their interest obligations.

After the softer period experienced at the close of the previous year, major equity markets posted considerable gains once the year under review got underway. The policy reversal by the US Federal Reserve in favour of monetary easing provided vital impetus here. Even recurring worries about the stability of the global economy that bubbled up from the middle of the year onwards only briefly put the brakes on this soaring performance. Emerging markets equities – which had similarly come under pressure in 2018 – also rallied appreciably, but their performance fell short of that seen in the industrial nations. The trade dispute between the United States and China, the somewhat fragile state of the global economy and weaker demand for raw materials were all factors here.

The euro softened against the US dollar just as it had in the previous year, falling from USD 1.15 to USD 1.12. The euro similarly retreated against pound sterling after the strong gains posted in prior years, slipping from GBP 0.90 to GBP 0.85. The Australian dollar gained ground slightly against the euro, hardening from AUD 1.62 to AUD 1.60.

The development of the world economy remains subject to various uncertainties and risks, first and foremost of a geopolitical nature or in connection with trade policy. Varying economic trends, isolationist efforts and local flashpoints may be mentioned here as factors driving the mixed global picture. A close eye must also be kept on the policy pursued by central banks as they seek to strike a delicate balance between showing resolve and a readiness to act, on the one hand, without unsettling financial markets through overly bold actions, on the other.

For more detailed remarks on the development of Hannover Re's investments please see the "Investments" section on page 55 et seq.

Industry-specific environment

The international (re)insurance industry was once again faced with a challenging environment in 2019.

In Europe a comprehensive review of the **Solvency II** Directive by the European Commission is planned for 2020. Against this backdrop, the European Commission instructed the European Insurance and Occupational Pensions Authority (EIOPA) to review large parts of Solvency II and submit its recommendations by mid-2020. EIOPA began the review of reporting requirements in July 2019.

In November 2019 the International Association of Insurance Supervisors (IAIS) adopted a package of reforms for the effective group-wide supervision of Internationally Active Insurance Groups (IAIGs), including an **Insurance Capital Standard Version 2.0**, and for the mitigation of systemic risks in the insurance sector. A particularly significant milestone here was the implementation of the Insurance Capital Standard (ICS). The ICS is the first global, risk-based capital standard for IAIGs. It precisely specified which entities fall under the supervision and rules of the ICS; according to the BaFin, there are currently three such insurance groups in Germany and 70 worldwide.

The planned adoption of the new international accounting standard **IFRS 17** by the International Accounting Standards Board (IASB) continued to be an important concern in the year under review. IFRS 17 will replace the interim standard IFRS 4, which has been in force since 2005, and is intended to make it easier to compare insurers through a consistent worldwide basis for the recognition of insurance contracts. The new financial reporting standards will likely come into effect starting 1 January 2022, although they are only mandatory for the consolidated financial statements of capital-market-oriented insurance companies. The requirement to apply the financial instruments standard **IFRS 9** will enter into force at the same time, with the result that all insurers will have to apply IFRS 9 and IFRS 17 simultaneously from 2022 onwards.

In the United Kingdom the industry was affected in the year under review by the further change in the rate used for discounting compensation payments in connection with personal injury claims (**Ogden rate**) from minus 0.75% to the current level of minus 0.25%. Although the new discount rate is higher than the previously applicable factor, the assumption of lower annual investment returns still means larger lump sum payments have to be made. Many insurers had expected the rate to be raised to 0%–1%, and hence the increase and the improvement for insurers and reinsurers alike proved to be less significant than anticipated.

The issue of **sustainability** has increasingly come into focus for political institutions and businesses over the past few years. Back in 2017 a CSR Directive was already adopted in the European Union requiring publically traded companies as well as banks and insurers with more than 500 employees to publish a statement containing non-financial information. The disclosures cover environmental, employee and social matters as well as human rights and combating corruption. The BaFin similarly attaches increasing importance to this topic. In 2019, for example, it published a “Guidance Notice on Dealing with Sustainability Risks” in which it urges the financial sector to make conscious efforts to tackle the risks associated with climate change. More broadly speaking, it must in any case be anticipated that the financial industry within the European Union will pay much closer attention to sustainability considerations.

Business development

- Currency-adjusted growth in gross premium of 15.2% ahead of target
- Growth particularly appreciable in North America, Asia and Germany
- Major loss experience in property and casualty reinsurance above budget
- Return on investment of 3.4% beats increased minimum target of 3.2%
- Group net income of EUR 1.28 billion surpasses higher full-year target of more than EUR 1.25 billion
- Return on equity climbs to 13.3% and comfortably exceeds minimum target of 9.3%

Hannover Re, as the third-largest reinsurer in the world, has an extensive global network and considerable technical expertise. Taken together, they enable us to make advances in the area of traditional reinsurance covers and drive new business opportunities. In this context, we attach the highest priority to the profitability and quality of our business and we act accordingly. This is of special importance to our company because the markets for property and casualty reinsurance and for life and health reinsurance continue to be intensely competitive.

In 2019 major losses in excess of our expected level were once again incurred in the Property & Casualty reinsurance business group. The market is still dominated by surplus capacities for the coverage of insurance risks. Nevertheless, after years of declining prices in the various rounds of treaty renewals during each financial year, it was possible for the first time to discern a more broad-based improvement in prices and conditions for reinsurance protection. Prices remain on a low level, however, and further adjustments are therefore needed. The combined ratio deteriorated to 98.2% (previous year: 96.5%) and consequently fell short of the maximum full-year target of 97%. The main factors here were substantial losses in the third quarter, delayed claim notifications received from our clients for prior-year losses and our unchanged prudent approach to reserving.

Our Life & Health reinsurance group is similarly experiencing strong and ongoing competition. Our result benefited from steps taken in the previous year to improve the profitability of our in-force US mortality portfolio as well as from one-time income recognised from the restructuring of a participating interest in our investments.

Furthermore, the investment income on the Group level was boosted by higher ordinary income booked from fixed-income securities and sharply higher net realised gains. The return on investment of 3.4% beat our minimum target, which we had raised to 3.2% (excluding effects from ModCo derivatives) in November.

All in all, in both our business groups we find ourselves operating in an intensely competitive environment in which we are able to successfully assert our position thanks to our comparatively low administrative expenses and cost of capital. As a further factor, we enjoy good access to business thanks to our standing as one of the industry's largest and most financially robust reinsurers.

The gross premium in our total business rose by 17.8% as at 31 December 2019 to EUR 22.6 billion (EUR 19.2 billion). At constant exchange rates growth would have reached 15.2%. We thus outperformed our guidance – which we had raised in the third quarter – anticipating growth of around 10% adjusted for exchange rate effects. The level of retained premium decreased to 90.0% (90.7%). Net premium earned rose by 14.1% to EUR 19.7 billion (EUR 17.3 billion). At unchanged exchange rates the increase would have been 11.8%.

The operating profit (EBIT) improved by 16.1% to EUR 1,853.2 million (EUR 1,596.6 million). Group net income was higher than in the previous year at EUR 1,284.2 million (EUR 1,059.5 million). We thus achieved our guidance, which we had raised in the third quarter to more than EUR 1.25 billion. Earnings per share for the Hannover Re Group stood at EUR 10.65 (EUR 8.79).

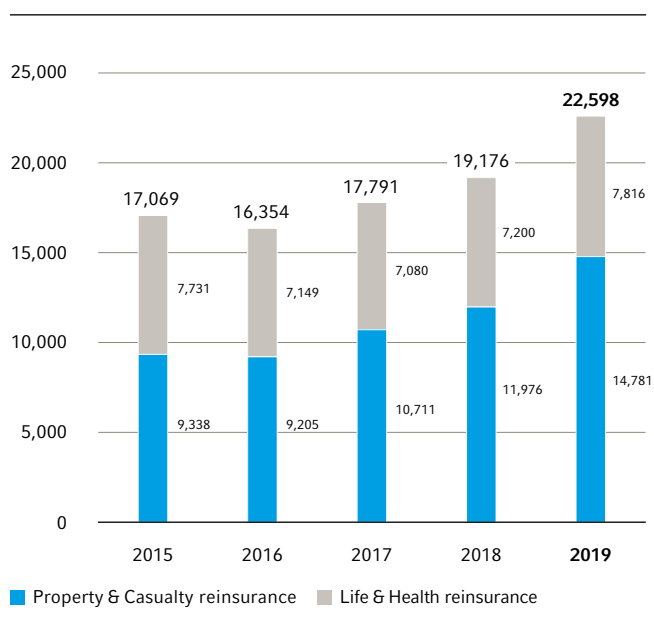
Hannover Re's equity position – which is very robust measured in terms of the solvency ratio comfortably in excess of threshold levels – was further expanded in the financial year just ended. The equity attributable to shareholders of Hannover Re rose to EUR 10.5 billion (EUR 8.8 billion) as at 31 December 2019. Despite the sharp increase in shareholders' equity, the return on equity improved again to 13.3% (12.2%). The book value per share reached EUR 87.30 (EUR 72.78). Thanks to the favourable development of our business in the year under review, we were able to achieve and in some cases even substantially outperform all the forecasts shown in the following table "Business development in the year under review".

The total policyholders' surplus, consisting of shareholders' equity, non-controlling interests and hybrid capital, amounted to EUR 13.6 billion (EUR 11.0 billion) as at 31 December 2019. The increase was supported inter alia by the issuance of a subordinated bond.

A more detailed overview of the development of our two business groups – Property & Casualty reinsurance and Life & Health reinsurance – and the performance of our investments is provided on pages 37 to 56.

Gross premium by business group
in EUR million

M 04



Business development in the year under review

M 05

	Forecast 2019	Target attainment 2019
Gross premium growth (Group)	Gross premium growth in the single-digit percentage range/of around 10% ^{1,2}	+15.2% at constant exchange rates +17.8% not adjusted for currency effects
Gross premium growth for Property & Casualty reinsurance	significant growth ¹	+20.4% at constant exchange rates +23.4% not adjusted for currency effects
Gross premium growth for Life & Health reinsurance	moderate growth ^{1,3}	+6.7% at constant exchange rates +8.6% not adjusted for currency effects
Return on investment ⁴	≥ 2.8% / ≥ 3.2% ²	3.4%
Group net income	> EUR 1.1 billion ⁵ / > EUR 1.25 billion ²	EUR 1,284.2 million

¹ At constant exchange rates

² In the context of publication of the quarterly statement as at 30 September 2019 the guidance for gross premium growth (Group) was raised to more than 10%, the expected return on investment to at least 3.2% and the expected Group net income to more than EUR 1.25 billion.

³ Organic growth only

⁴ Excluding ModCo derivatives

⁵ Assuming stable capital markets and/or major loss expenditure in 2019 that does not exceed EUR 875 million

Overall assessment of the business position

Hannover Re is highly satisfied with the development of business in 2019. On the Group level we achieved or even surpassed our targets for the year under review, just as we had in the two previous years.

After the considerable loss expenditures incurred in 2017 and 2018 in the Property&Casualty reinsurance business group, we recorded further significant major losses as well as belated claim notifications for prior-year losses in the financial year just ended. The strains from typhoons in Japan, hurricanes in the United States and the insolvency of UK travel operator Thomas Cook exceeded our large loss expectations for the full financial year. As a consequence of the sustained heavy losses, however, conditions for reinsurers improved in various markets. With prices for reinsurance protection still on a relatively low level, there is nevertheless still a need for further adjustments. What is more, the intense competition shaping the state of global reinsurance markets remains undiminished.

In our second major business group, Life & Health reinsurance, we were again able to act on promising business opportunities in international markets, for example by providing protection for longevity risks and tailored coverage solutions.

The management actions taken in the previous year to improve profitability in the in-force US mortality portfolio also had an impact.

Our investments delivered another very pleasing contribution to the Group result, supported by one-time income from the revaluation of a participating interest.

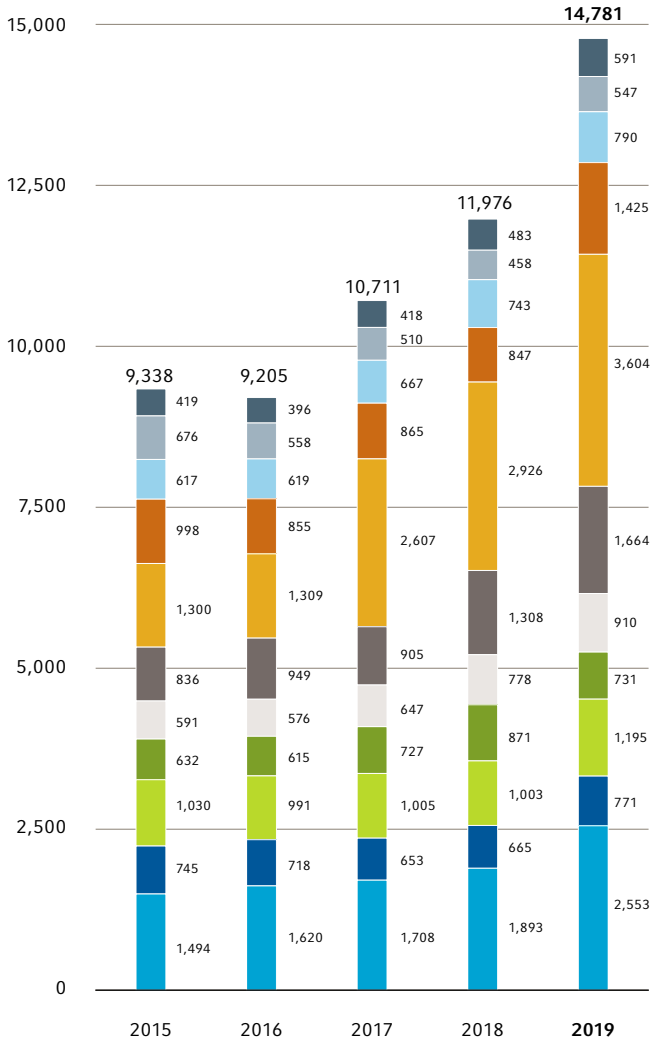
Hannover Re's shareholders' equity increased further in the course of the financial year and constitutes the foundation for our superb positioning as one of the largest and most financially robust reinsurers in the world. At the time of preparing the management report, it remains the case that both the business position of the Group and its financial strength can be assessed as very good. Within the framework of our Group strategy we determine our necessary equity resources according to the requirements of our internal capital model, solvency regulations, the expectations of rating agencies for our target rating and the expectations of our clients and shareholders. With this in mind, the Executive Board and Supervisory Board will propose to the Annual General Meeting that a dividend of EUR 5.50 per share should be paid. The distribution consists of an ordinary dividend of EUR 4.00 per share and a special dividend of EUR 1.50 per share.

Results of operations

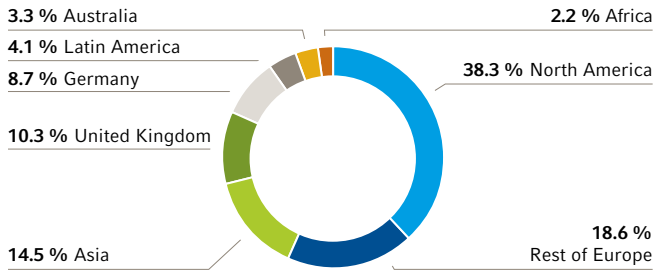
In the following sections we discuss the development of the financial year in our two strategic business groups, namely Property&Casualty reinsurance and Life & Health reinsurance, as well as the performance of our investments and the financial position and assets of our Group.

Property & Casualty reinsurance at a glance

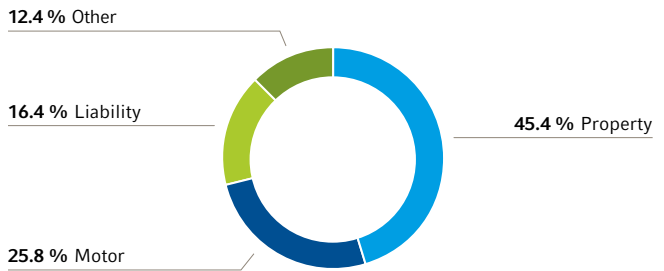
Gross premium in Property & Casualty reinsurance M 06
in EUR million



Geographical breakdown of gross premium in 2019 M 07



Gross premium by lines of business in 2019 M 08



Regional markets

- North America
- Latin America and Iberian Peninsula and Agricultural Risks
- Germany, Switzerland, Austria and Italy
- United Kingdom, Ireland and London Market
- Continental Europe and Africa
- Asia, Australia and Middle East

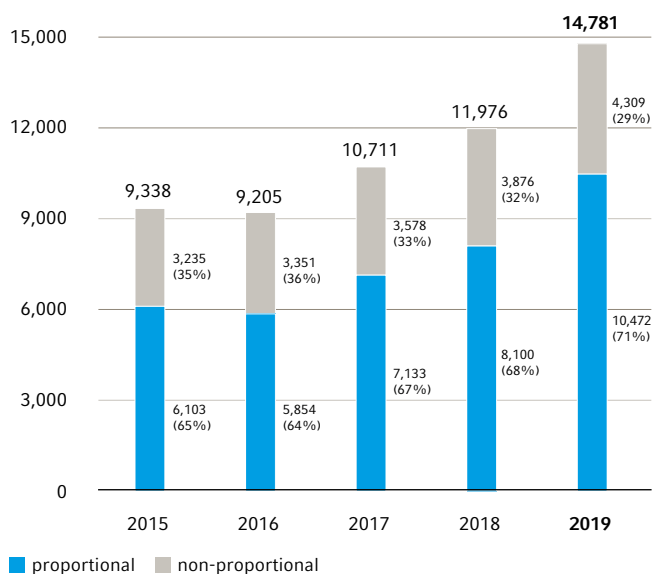
Global lines

- Structured Reinsurance and Insurance-Linked Securities
- Facultative Reinsurance and Direct Business
- Credit, Surety and Political Risks
- Aviation and Marine
- Cat XL

Breakdown of proportional and non-proportional treaties by volume

M 09

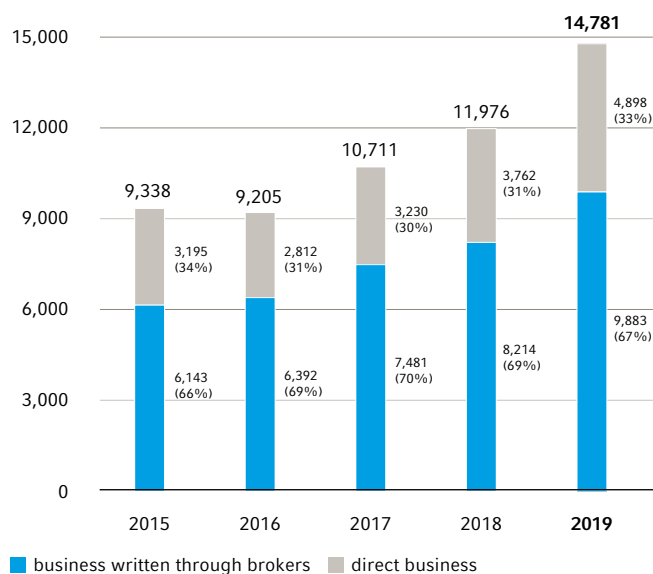
in % and in EUR million



Breakdown into business written through brokers and direct business

M 10

in % and in EUR million



Property & Casualty reinsurance

- Gross premium rises by 20.4% adjusted for exchange rate effects
- Particularly strong growth in North America, Asia, Germany and structured reinsurance
- Modest improvements in prices and conditions, in some cases also extending to loss-free lines of business
- Major loss expenditure of EUR 956 million higher than budgeted level
- Combined ratio deteriorates to 98.2%
- Segment result declines by 6.2% to EUR 871.7 million

Accounting for 65% of our total premium volume, Property & Casualty reinsurance is Hannover Re's largest business group.

The environment for property and casualty reinsurance markets around the world remained challenging in the 2019 financial year. For years now, the capital available for risk coverage has exceeded the demand for reinsurance protection. The primary factors here are, in the first place, the considerable inflows of additional alternative capital from the insurance-linked securities (ILS) market in recent years. Prices for reinsurance protection have consequently been under pressure for quite some time. Furthermore, investment income has been hampered by low interest rates, which fell again in 2019, hence necessitating rigorous discipline in technical underwriting. At the same time, substantial expenditures have been incurred in the past three years from major losses.

In the treaty renewals as at 1 January 2019 we enjoyed stronger demand from both existing and new customers and – thanks to our good position in the market – we generated pleasing growth at adequate conditions. It was at this point in the year that we renegotiated roughly 66% of our portfolio in property and casualty reinsurance (excluding facultative business and structured reinsurance).

While the price increases in January were for the most part still restricted to loss-affected programmes, in the course of subsequent renewals held during the financial year we discerned a broader-based, modest improvement in prices and conditions for reinsurance protection for the first time in years. On the primary insurance side, slight price increases could similarly be observed in many markets as the year progressed, which in some cases were similarly reflected in reinsurance business. Looked at in absolute terms, however, the

rebound effects are still muted, and hence in our assessment further adjustments are needed.

As one of the leading reinsurers in the world, Hannover Re continued to benefit in the renewal negotiations from its long-standing, stable customer relationships, its very good financial strength and the sustained trend among insurers towards consolidation of their reinsurance partners.

Unlike in the previous year, alternative capital providers from the ILS sector took a more cautious approach during 2019 against the backdrop of the loss experience seen in prior years. By the end of the 2019 financial year, the volume of available alternative capital had contracted by around 5%. Alternative capital providers nevertheless still account for a significant share of the reinsurance market, principally for risks from natural catastrophes. We continued to adhere to our existing profit-oriented underwriting policy for these covers. Our risk appetite, which we specify relative to the available economic capital, remained virtually unchanged from the previous year.

In view of the aforementioned rate increases and significant growth, especially from the regions of North America, Asia and Germany as well as from structured reinsurance, we were able to further improve our market position in the Property & Casualty reinsurance business group.

Gross written premium in the Property & Casualty reinsurance business group rose by 23.4% to EUR 14.8 billion (previous year: EUR 12.0 billion). At constant exchange rates the increase would have been 20.4%. The level of retained premium fell to 90.3% (90.7%). Net premium earned grew by 18.5% to EUR 12.8 billion (EUR 10.8 billion); adjusted for exchange rate effects, growth would have amounted to 15.8%.

The 2019 financial year, in common with the two previous years, was impacted by major losses that exceeded our expectations. While the large loss experience in the first six months was again thoroughly moderate, loss expenditure in the second half of the year was significantly higher than anticipated.

The most expensive catastrophe loss in the year under review was hurricane Dorian, for which we have paid or reserved a net amount of EUR 194.7 million for our clients. A net strain of EUR 183.8 million is anticipated for typhoon Hagibis in Japan, while typhoon Faxai is likely to cost EUR 83.8 million for our account. We expect to incur a net loss of roughly EUR 85.7 million in connection with the insolvency of UK travel operator Thomas Cook. Our total net major loss expenditure thus came to EUR 956.1 million (EUR 849.8 million) and exceeded our large loss budget of EUR 875 million. For a detailed list of our large losses please see page 105.

The underwriting result including interest and expenses on funds withheld and contract deposits decreased to EUR 235.4 million (EUR 372.8 million). The combined ratio deteriorated to 98.2% (96.5%) and was thus higher than our maximum target of 97% for the financial year. The primary factors here were the considerable losses incurred in the financial year and belated claim notifications received for prior-year losses.

The investment income booked for the Property & Casualty reinsurance business group was pleasing. It improved by 3.3% to EUR 1,069.4 million (EUR 1,035.1 million). The operating profit (EBIT) contracted by 2.8% to EUR 1,285.8 million (EUR 1,322.6 million). The EBIT margin decreased to 10.0% (12.2%). We thus achieved our minimum target for the EBIT margin of 10%. The contribution made by property and casualty reinsurance to Group net income deteriorated by 6.2% to EUR 871.7 million (EUR 929.1 million).

On the following pages we report in detail on developments in our Property & Casualty reinsurance business group. This is split into a number of reporting categories, which are grouped together thematically and in each case allocated to one member of our Executive Board. By way of example, our company allocates Spain to the reporting category of Latin America. Given that we write the bulk of our agricultural covers in Latin America, we similarly allocate such business to this reporting category.

Key figures for Property & Casualty reinsurance
M 11

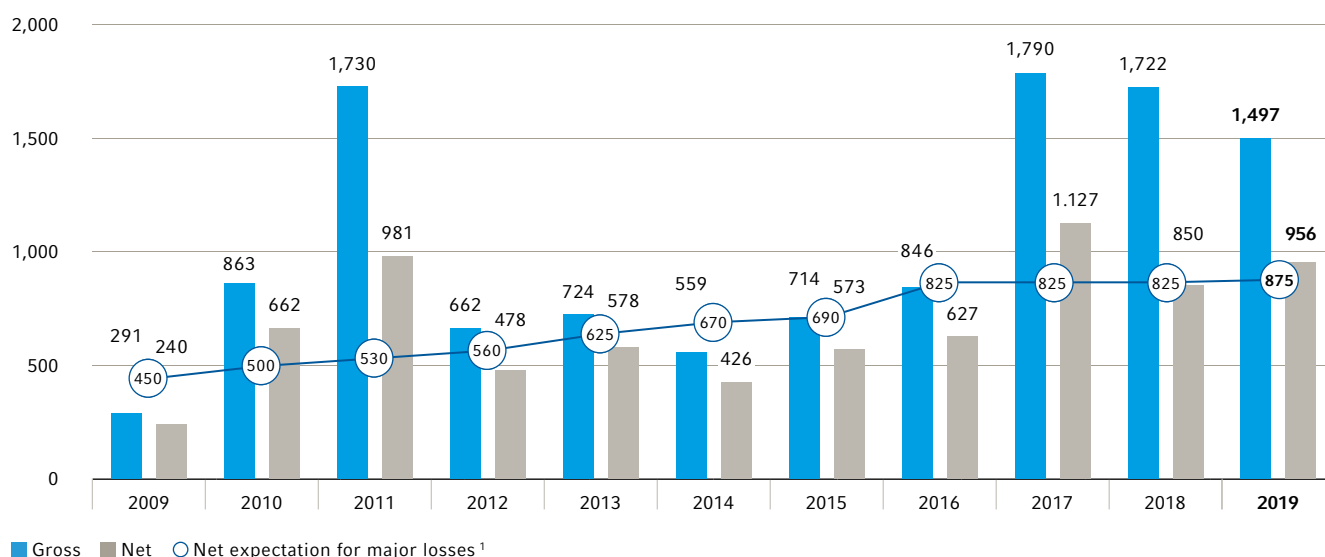
	2019	+/- previous year	2018	2017	2016	2015
in EUR million						
Gross written premium	14,781.3	+23.4%	11,976.0	10,710.9	9,204.6	9,338.0
Net premium earned	12,797.6	+18.5%	10,804.2	9,158.7	7,985.0	8,099.7
Underwriting result ²	235.4	-36.9%	372.8	15.5	503.1	452.4
Net investment income	1,069.4	+3.3%	1,035.1	1,209.3	900.9	945.0
Operating result (EBIT)	1,285.8	-2.8%	1,322.6	1,120.2	1,340.3	1,341.3
Group net income	871.7	-6.2%	929.1	837.3	949.9	914.7
Earnings per share in EUR	7.23	-6.2%	7.70	6.94	7.88	7.58
EBIT margin ¹	10.0%		12.2%	12.2%	16.8%	16.6%
Retention	90.3%		90.7%	89.7%	88.5%	89.3%
Combined ratio ²	98.2%		96.5%	99.8%	93.7%	94.4%

¹ Operating result (EBIT)/net premium earned

² Including expenses on funds withheld and contract deposits

Property & Casualty reinsurance: Major loss trend¹
in EUR million

M 12



¹ Natural catastrophes and other major losses in excess of EUR 10 million gross (until 31 December 2011: in excess of EUR 5 million gross)

Property & Casualty reinsurance: Key figures for individual markets and lines in 2019

M 13

	Gross premium 2019 in EUR million	Change in gross premium relative to previous year	Gross premium in 2018 in EUR million	EBIT 2019 in EUR million	Combined ratio 2019	Target combined ratio 2019	EBIT 2018 in EUR million	Combined ratio 2018
Regional markets	7,824.9	20.0%	6,518.5	748.9	99.6%	96.7%	739.9	99.1%
North America	2,553.3	34.9%	1,893.2	157.4	105.8%	95.9%	227.2	102.5%
Latin America, Iberian Peninsula and Agricultural Risks	771.3	16.0%	665.0	34.3	101.8%	95.3%	119.0	87.0%
Germany, Switzerland, Austria and Italy	1,195.2	19.2%	1,002.8	209.0	88.8%	95.3%	38.1	103.5%
United Kingdom, Ireland and London Market	731.0	-16.1%	871.5	48.4	104.3%	96.7%	30.3	111.5%
Continental Europe and Africa	910.0	17.0%	777.9	125.3	97.2%	98.4%	170.3	88.8%
Asia, Australia and the Middle East	1,664.0	27.2%	1,308.1	174.4	96.4%	98.8%	155.0	94.9%
Global lines	6,956.3	27.5%	5,457.5	536.9	96.2%	97.6%	582.7	93.5%
Structured Reinsurance and Insurance-Linked Securities	3,603.7	23.2%	2,926.1	104.0	98.3%	99.1%	129.3	97.7%
Facultative Reinsurance and Direct Business	1,424.5	68.2%	846.8	140.1	97.1%	97.2%	34.1	103.2%
Credit, Surety and Political Risks	789.6	6.2%	743.2	104.6	93.8%	95.4%	155.0	85.8%
Aviation and Marine	547.5	19.5%	458.0	151.9	75.0%	95.9%	201.7	53.6%
Catastrophe XL (Cat XL)	591.0	22.3%	483.4	36.2	105.0%	90.7%	62.5	92.7%

Regional markets

North America

The North American (re)insurance market is the largest single market in the world. Within our business group of Property & Casualty reinsurance **North America** is also our highest-volume region. Our business here is written largely through brokers.

The healthy sustained growth enjoyed by the US economy in 2019 had positive implications for the premium growth booked by primary insurers. Altogether, the increase in premium was in the mid-single-digit percentage range.

The most appreciable rate increases in the primary market were seen in industrial property business. Nevertheless, lines that had performed particularly inadequately in recent years – such as general liability, motor liability or directors' and officers' insurance – also showed positive tendencies in the year under review. At the end of the year, the rates for loss-affected treaties moved significantly higher in light of further natural disasters such as hurricane Dorian and a fresh outbreak of wildfires in California.

The renewals in North America passed off especially successfully for our company. The rate level here rose by at least single digits in all lines except for workers compensation, with clear double-digit percentage increases recorded in areas that had suffered losses.

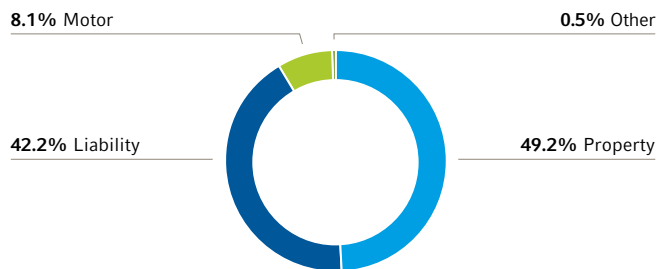
The bulk of our activities in North America are conducted in liability and property business. In liability business we secured further rate increases, enabling us to expand our business volume. Selective growth was also booked again in the area of cyber covers, where growing demand was evident in response to loss events and regulatory changes.

Expenditure on catastrophe losses in North America was lower in 2019 than in the previous year. A range of different events nevertheless caused losses that were modestly higher than we had anticipated. Thanks to our prudent underwriting policy and our retrocession strategy, however, the net impact of these expenditures on our company was less appreciable than the strain for gross account.

All in all, we were satisfied with our results in the North American market. Based on our expertise and our robust financial strength we continue to be seen as a valued partner. On this basis, we were able to acquire new clients while at the same time expanding long-standing customer relationships and further extending our market footprint.

Property & Casualty reinsurance: Gross premium in North America by lines of business

M 14



Building on the good growth already recorded in 2018, the premium volume in North America increased sharply again in the year under review by 34.9% to EUR 2,553.3 million (EUR 1,893.2 million). The combined ratio deteriorated to 105.8% (102.5%). The operating profit (EBIT) contracted by 30.7% to EUR 157.4 million (EUR 227.2 million).

Latin America, Iberian Peninsula and Agricultural Risks

The region of **Latin America** experienced considerable unrest in the second half of the year affecting Chile as well as countries such as Ecuador, Bolivia and Colombia. Not only did this lead to significant losses on both the primary and reinsurance side in countries that had previously enjoyed political stability, it also resulted in a slowdown in economic growth. In view of the increased exposure associated with risks that were not to date a central concern for reinsurers, there is now a need for substantial adjustments in the (re)insurance sector – especially when it comes to the assessment of political risks and the pricing of corresponding covers.

In the area of natural catastrophe risks, too, it is imperative to secure continuous improvements in conditions for the reinsurance market. As one of the leading providers in Latin America, we are aware of this challenge and we shall act in close cooperation with our local customers.

Demand for natural catastrophe covers remained strong owing to various losses in the region and continues to grow.

We are also seeing a sharp surge in demand for innovative coverage concepts based on parametric indices. These are particularly well suited to countries with a lower insurance density. In addition, governments or indeed aid organisations can use these solutions to improve disaster protection for their population. We are actively involved in projects in the Caribbean, Mexico, Peru and Colombia.

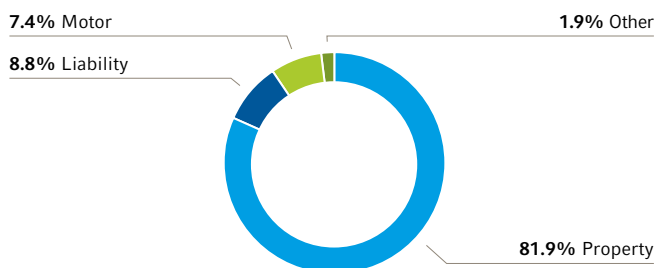
Even though we anticipate slower economic growth due to the unrest in this region, demand will continue to rise over the long term – especially in the case of catastrophe-exposed business. Hurricane Dorian caused considerable losses and

damage in the Caribbean in 2019. Taken together with the series of windstorm events in the preceding two years, natural disasters such as these underscore the necessity of rate adjustments on the (re)insurance market.

We include **agricultural risks** in the reporting category of Latin America and the Iberian Peninsula owing to their geographical concentration in this region. We successfully expanded our market position in this business. Particularly in emerging and developing countries, the growing need for agricultural commodities and foodstuffs combined with the increased prevalence of extreme weather events are generating stronger demand for insurance and reinsurance solutions.

The increasingly widespread implementation of public-private partnerships, not only in emerging and developing economies, presents new opportunities for our company to write profitable business in markets that have still to mature. In Europe, too, the unusually dry summers of 2018 and 2019 prompted new discussions around the subject of crop insurance. Among other things, there has been talk of government-funded drought insurance. By drawing on our technical know-how we assist our customers around the world with the development and implementation of innovative insurance products.

Property & Casualty reinsurance: Gross premium in Latin America, Iberian Peninsula and Agricultural Risks by lines of business M 15



The gross premium volume in the reporting category Latin America, Iberian Peninsula and Agricultural Risks rose by 16.0% to EUR 771.3 million (EUR 665.0 million). The combined ratio amounted to 101.8% (87.0%). The operating profit (EBIT) decreased to EUR 34.3 million (EUR 119.0 million).

Germany, Switzerland, Austria and Italy

Responsibility for the **German** market within the Hannover Re Group is assigned to our subsidiary E+S Rückversicherung AG. As the “dedicated reinsurer for Germany”, E+S Rück is a sought-after partner thanks to its very good rating and the continuity of its business relationships and it is one of the market leaders in property and casualty reinsurance in its domestic market.

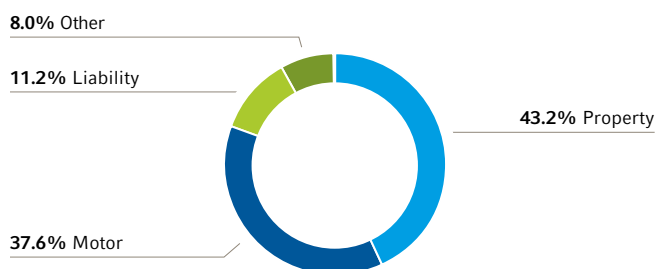
In the German primary insurance market, the highest-volume property insurance lines – namely homeowners’ insurance and industrial lines – continued to deliver above-average premium growth, driven in particular by ongoing rehabilitation efforts in the market. Particularly in homeowners’ insurance, product enhancements and product innovations also boosted profitability. On the claims side, the forecast reduction in the combined ratio of 8.2 percentage points pointed to a positive underwriting result and hence significant improvement.

The need for remedial action in industrial lines was increasingly met through adjustments to the scope of coverage and premium increases. In motor insurance the premium adjustments made to date were not sufficient to offset the rising costs of spare parts and repairs; at the same time, though, we noted a further decline in claims frequencies, as a consequence of which expenditures for claims remained broadly unchanged.

E+S Rück estimates that the original market for property and casualty insurance grew by around 3% in the financial year just ended, hence keeping up the pace of the previous year.

The year had barely begun when the market for the reinsurance of natural catastrophe risks incurred losses from winter storm Eberhard. Low pressure system Jörn, which impacted Germany on Whit Monday, resulted in a loss of EUR 13.7 million for E+S Rück. In Italy, too, numerous severe storms led to further sizeable losses in the year under review. These events repeatedly underscore the importance of coverage for extended natural perils.

Property & Casualty reinsurance: Gross premium in Germany, Switzerland, Austria and Italy by lines of business M 16



The gross premium volume in the reporting category Germany, Switzerland, Austria and Italy climbed by 19.2% to EUR 1,195.2 million (EUR 1,002.8 million). The combined ratio stood at 88.8% (103.5%). The operating profit (EBIT) improved to EUR 209.0 million (EUR 38.1 million).

United Kingdom, Ireland and London Market

In the reporting category **United Kingdom, Ireland and London Market** the results delivered by our property and casualty reinsurance business showed varying degrees of success in 2019. In contrast to the previous year, property reinsurance saw a smaller number of large losses from natural perils. In some cases, however, we noted adjustments to prior-year reserves on the customer side, with implications in particular for proportional acceptances in previous years. On the whole, though, the business development was satisfactory, in part also due to our below-average share in natural catastrophe events and industrial losses. Profitability in liability business proved more challenging: an increased number of losses from past years were recorded here, impacting our reinsurance covers.

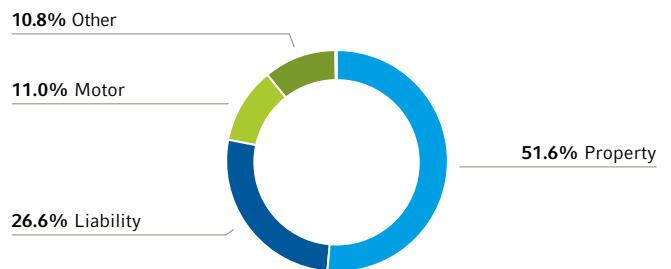
The further change in the discount rate used to calculate lump-sum compensation payments for personal injuries (“Ogden rate”) posed a special challenge. Although the new discount rate was raised relative to the previously applicable factor, it was still negative. The assumption of lower annual investment returns means larger lump sum payments have to be made in the event of a claim. Not only that, the increase was less than had been anticipated by insurers and reinsurers. Prior to the adjustment in the third quarter reinsurance programmes with coverage for personal injuries had seen stable prices or in some instances modest rate reductions because many market players had expected a more substantial increase in the Ogden rate.

The initiative launched by the Lloyd’s insurance market in 2018 to restore loss-making business to profitability had favourable effects on the state of the market in almost all lines. Appreciable double-digit rate increases were increasingly prevalent in primary insurance business. All in all, this resulted in a more pleasing profit outlook on the London Market than had been seen in previous years.

Our portfolio remained largely stable in 2019. The reinsurance renewals, which for the most part came up in the first quarter, took place on a stable price level with unchanged conditions. In motor business we were not willing to make pre-emptive concessions in anticipation of an adjustment to the Ogden rate. In other business, too, depending on the profitability of the treaty relationship we were only prepared to renew our shares at stable or improved prices.

Property & Casualty reinsurance:
Gross premium in United Kingdom, Ireland and London Market by lines of business

M 17



The gross premium volume for the United Kingdom, Ireland and London Market fell by 16.1% to EUR 731.0 million (EUR 871.5 million). The combined ratio amounted to 104.3% (111.5%). The operating profit (EBIT) rose to EUR 48.4 million (EUR 30.3 million).

Continental Europe and Africa

In the reporting category **Continental Europe and Africa** we bring together France, Benelux, the Nordic countries, Eastern Europe, Israel, Turkey, Greece and Cyprus, Malta, the Maghreb countries and French-speaking sub-Saharan Africa.

It was apparent here in the financial year just ended that industrial insurers were concentrating more heavily on covers for smaller and mid-sized enterprises. Where primary insurance covers for large customers were concerned, on the other hand, a sharper focus on technical income took hold in the market. In general terms, significant competitive pressure and sustained modest growth in gross premium could be observed both in the insurance of small and mid-sized companies and in retail business.

On the reinsurance side the further exacerbation of the low interest rate environment and an accumulation of mid-sized losses across the entire region prompted a rethink on the market, which should increasingly make itself felt in the prices for reinsurance covers going forward. We continued to see brisk demand for tailored reinsurance solutions designed to deliver solvency relief.

In Western Europe we further expanded our market share at stable rates that were commensurate with the risks. Growth was spread across various lines, including for example long-tail liability and accident business. Thanks to its leading role in builder’s risk insurance Hannover Re continued to profit from the recovery of this sector.

Growth rates in the countries of Central, Eastern and Southern Europe were still stronger than the European average. This was true of both the primary and reinsurance market. Business on the reinsurance side continued to be shaped by

surplus capacities, as a consequence of which these markets remained intensely competitive – especially in the key motor and fire/industrial lines. The major earthquakes in Albania once again highlighted the fact that even in Europe sometimes considerable protection gaps still exist.

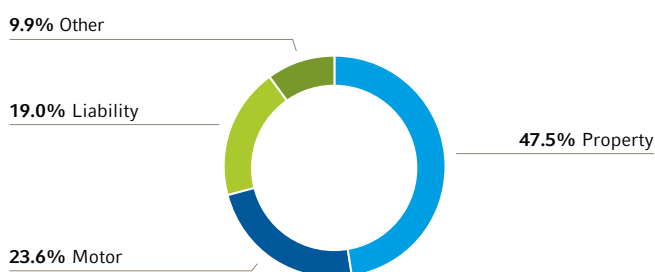
In Northern Europe we further cemented our position through our local presence despite a difficult market climate. Here, too, we noted a slightly increased frequency of mid-sized losses.

On the whole, we were not entirely satisfied with the premium development and rate movements in Continental European markets. By building on long-established customer relationships with both larger and smaller companies, we were nevertheless able to selectively expand our position in the market.

The **South African** economy suffered under extremely minimal growth in the year under review. The power supply crisis that worsened dramatically towards the end of 2019 was an additional factor here. This climate is also taking a toll on insurers and reinsurers, especially when it comes to growth and dealing with fraudulent claims. In the context of this challenging landscape our result was highly satisfactory.

Our participations in insurance start-ups in South Africa gave continuing grounds for satisfaction in the year under review. InvestSure, a company which our participating interest Lireas holds in its portfolio, was chosen as one of the 100 most promising insurtechs in the world and will expand into international markets in 2020. InvestSure protects private investors by insuring their listed shares against losses arising out of the deceptive or misleading acts of a company’s management.

Property & Casualty reinsurance: Gross premium in Continental Europe and Africa by lines of business M 18



The gross premium volume in Continental Europe and Africa grew by 17.0% to EUR 910.0 million (EUR 777.9 million). The combined ratio was 97.2% (88.8%). The operating profit (EBIT) contracted to EUR 125.3 million (EUR 170.3 million).

Asia, Australia and the Middle East

Insurance and reinsurance markets alike in the **Asia-Pacific** region were impacted by windstorm events with devastating losses in some instances. Most notably, typhoons Hagibis and Faxai caused extensive insured storm and flood damage in Japan. The large losses of prior years and substantial additional reserves that had to be set aside in some cases, especially for typhoon Jebi, have already had appreciable effects on demand for reinsurance capacities. We modestly expanded our market position in Japan in light of the general environment described above.

In general terms, it is our expectation that the focus of global insurance markets will shift towards Asia on account of the above-average growth rates.

In response to this development we are stepping up our involvement in Asia. To this end, we are supporting our clients and helping them to tackle the challenges of the coming years. Both tailor-made concepts for capital support and traditional reinsurance are potential options in this regard.

Our short decision channels and local branches equipped with appropriate decision-making powers constitute the basis for successfully expanding our market shares in the region. We remain committed to profit-oriented growth in this fiercely competitive part of the world.

Our Asia initiative is focused primarily on the markets of China and Southeast Asia as well as India. In Asia’s two most populous countries we anticipate significantly stronger demand for insurance covers in the coming years. What is more, the continuing inadequate supply of insurance protection in Asia’s emerging markets offers both insurers and reinsurers alike a tremendous opportunity to reduce this protection gap through innovative products and thereby underscore the industry’s social relevance.

In China we were able to significantly expand our market position among the major local reinsurers thanks to our very good customer relationships and our innovative market presence – including but not restricted to tailored covers. This is all the more gratifying in view of the protracted intense competition.

Along with China, Southeast Asia and South Asia continue to be the engine of growth in the Asia-Pacific region. While we succeeded in generating consistently good results here, it was again evident that profitable growth in the primary market does not necessarily carry over to the reinsurance markets.

In India we operate as a local reinsurer and continued to share in the promising growth opportunities offered by this country. Outside of agricultural insurance, however, business on the Indian subcontinent remained difficult.

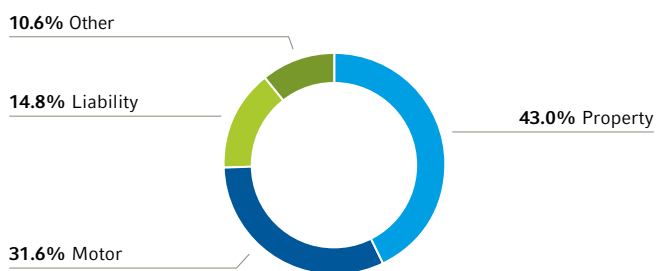
In **Australia and New Zealand** our standing as a reinsurer with a very good rating, coupled with our extensive expertise and excellent business relationships, again enabled us to obtain attractive prices. This was especially true of Australia. Despite the intense competition prevailing here, we generated strong profitable growth based on our positioning – especially in the area of multi-line covers.

Insurance markets in the **Middle East** continued to post dynamic growth rates. Government spending and the price of oil were significant factors influencing the market as a whole. The marked improvement in the region’s regulatory environment had a positive effect. This will likely drive the spread of insurance covers and open up a wide range of opportunities for the broader reinsurance market. While the inflow of international underwriting capacities continued unabated, the growing political tensions in the region affected business indirectly and put the brakes on economic growth.

Hannover Re is well placed in the Middle East because we are able to offer business both on a traditional basis and in the form of **retakaful business**. In principle, we write retakaful business, i. e. reinsurance transacted in accordance with Islamic law, worldwide. Our focus on the Middle East, North Africa and Southeast Asia remains unchanged. In retakaful business the competition with traditional reinsurance continued to prove challenging. Bearing in mind the strained state of the market, we maintained our focus on a disciplined underwriting policy and robust customer relationships in this region.

**Property & Casualty reinsurance:
Gross premium in Asia, Australia and
the Middle East by lines of business**

M 19



The gross premium volume in Asia, Australia and the Middle East surged by a substantial 27.2% to reach EUR 1,664.0 million (EUR 1,308.1 million). The combined ratio amounted to 96.4% (94.9%). The operating profit (EBIT) grew to EUR 174.4 million (EUR 155.0 million).

Global lines

Structured Reinsurance and Insurance-Linked Securities

In the Structured Reinsurance and ILS reporting category we combine our business involving tailor-made property and casualty reinsurance solutions and insurance-linked securities (ILS).

In **structured reinsurance** we rank as one of the largest providers in the world. In this area we assist our clients with their capital management and offer innovative tailored reinsurance solutions. These provide solvency relief and thus have a positive effect on the client’s rating or protect against the strain of frequency losses.

Even though the premium volume has now reached a very high level, we posted further moderate growth in the financial year just ended. In total, more than half of our premium income derives from the United States and roughly a third from Europe.

We see further opportunities to grow this business not only in North America and Europe but also in Asia. The purchasing habits of many customers have shifted quite recently towards holistic reinsurance solutions. This trend shows no signs of easing and will result in more and more clients seeking complex structured contractual arrangements. Given that this business is generally based on large-volume transactions, premium income in structured reinsurance can fluctuate sharply.

After years of rising demand for insurance and reinsurance risks on the capital market, the **insurance-linked securities (ILS)** market showed some slight softening in 2019. The losses incurred in 2017 and 2018, combined with the fact that liquidity was curtailed by the need to post collateral for losses still in run-off, prompted a certain restraint among market players.

Altogether, around 5% less alternative capital was available in 2019 than in the year before. The worldwide volume of newly issued catastrophe bonds similarly contracted somewhat year-on-year. The capacity of the entire ILS market was put at some USD 90 billion in the year under review. According to our estimates, roughly two-thirds of this amount derives from collateralised reinsurance, under which insurers and investors conclude private risk transfer agreements which are secured by collateral held in trust accounts. We support these transactions through so-called fronting arrangements.

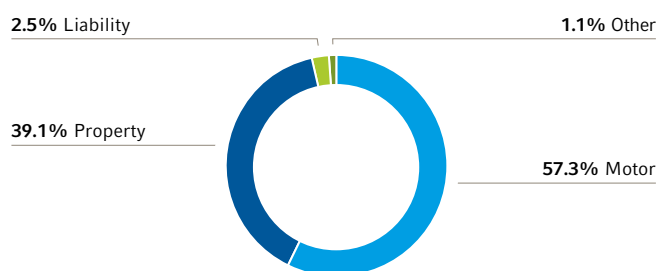
Hannover Re leverages the entire spectrum of opportunities offered by the insurance-linked securities market. On the one hand, we take out reinsurance with ILS investors, while at the same time we transfer risks for our customers to the capital market as a service. This is done in the form of catastrophe bonds or through collateralised reinsurance, under which our partners on the investment side are primarily specialised ILS funds. We also invest ourselves in catastrophe bonds.

In 2019 the volume of new exposures that we transferred to the capital market in the form of catastrophe bonds was in the region of USD 1.1 billion. The largest transaction in the year under review was a USD 450 million catastrophe bond for the North Carolina Insurance Underwriting Association to protect against windstorm risks in North Carolina.

In collateralised reinsurance business we continued to step up our cooperation with selected fund managers and in so doing generated attractive margins. In addition, we were able to substantially expand the transfer of life reinsurance risks to the capital market.

The importance of the capital market in our purchasing of retrocession protection remains unchanged. Thus, for example, we were able to renew the protection cover for Hannover Re known as the “K quota share” at an increased level of roughly USD 680 million (USD 640 million) for 2020. This is a modelled quota share cession consisting of non-proportional reinsurance treaties in the property, catastrophe, aviation and marine (including offshore) lines that has been placed inter alia on the ILS market since 1994. In addition to the K quota share we use the ILS market for other protection covers as well.

Property & Casualty reinsurance: M 20
Gross premium in Structured Reinsurance and ILS
by lines of business



The gross premium volume in the Structured Reinsurance and ILS reporting category grew by 23.2% to EUR 3,603.7 million (EUR 2,926.1 million). The combined ratio was 98.3% (97.7%). The operating profit (EBIT) retreated to EUR 104.0 million (EUR 129.3 million).

Facultative Reinsurance and Direct Business

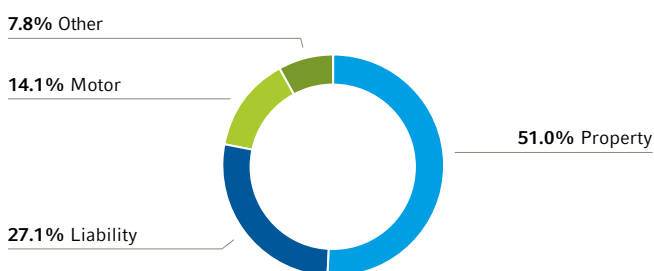
In contrast to obligatory reinsurance, individual risks are primarily written in **facultative reinsurance**. The general environment for both types of reinsurance in the various markets is, however, for the most part comparable and hence there is a corresponding correlation between them.

The heavy natural catastrophe losses of 2017, 2018 and 2019, an adverse development affecting individual large losses from older underwriting years and a sizeable number of man-made losses led to substantial capacity shortages in the course of 2019. This went hand-in-hand with significant improvements in conditions. Demand for facultative reinsurance solutions increased appreciably in the year under review – a trend which could be observed globally and encompassed virtually all lines of business.

This marked turnaround opened up attractive business and growth opportunities for our company that we acted on in keeping with our technical underwriting approach and risk appetite.

The greater decentralisation of our underwriting activities in recent years has enabled us to significantly strengthen our customer relationships. Hannover Re is increasingly and actively sought after as a reinsurance partner.

Property & Casualty reinsurance: M 21
Gross premium in Facultative Reinsurance and
Direct Business by lines of business



The gross premium volume in our reporting category Facultative Reinsurance and Direct Business climbed sharply by 68.2% to EUR 1,424.5 million (EUR 846.8 million). The combined ratio stood at 97.1% (103.2%). The operating profit (EBIT) surged to EUR 140.1 million (EUR 34.1 million).

Credit, Surety and Political Risks

In **credit, surety and political risk** business the need for protection grew against the backdrop of the continuing economic slowdown. As a result, modest growth was recorded in the primary insurance market. Reinsurance cessions remained generally stable, with a slight increase observed only in the area of political risks.

The loss experience was characterised by a marginally higher claims frequency and moderately increased loss amounts for individual claims. Against this backdrop, prices nudged higher on both the insurance and reinsurance side.

The gross premium for the Credit, Surety and Political Risks reporting category increased in the financial year by 6.2% to EUR 789.6 million (EUR 743.2 million). The combined ratio amounted to 93.8% (85.8%). The operating profit (EBIT) fell to EUR 104.6 million (EUR 155.0 million).

Aviation and Marine

In the market for **aviation** covers the positive rate movements witnessed of late on the primary side were sustained. After more than a decade of continuously declining prices, however, the market has not yet reached an adequate level – something that is particularly true of the three segments airline, general aviation and product liability. Appreciable price increases were similarly observed in space insurance.

The positive tendencies on the reinsurance side actually gained added impetus from mid-2019 onwards. This was primarily driven by the significant strains on proportional and especially no-proportional reinsurance treaties from two crashes in 2018 and 2019. Particularly in the case of loss-affected non-proportional treaties, it was possible to obtain substantial price increases. Despite these improvements, the excess-of-loss market has still to find an adequate level overall and consequently prices still to be adjusted higher. With this in mind, Hannover Re continues to adhere to its disciplined underwriting policy.

The market for covers in **marine** business appears at least to some extent to have bottomed out in 2019 after several years of intensified competition. A notable feature of marine business in the year under review was the significantly increased influence exerted by the Lloyd's insurance market. Responding to the consistent deficits posted in some marine lines, Lloyd's set growth limits for individual members or reduced their underwriting capacity. In some instances this resulted in closures in certain segments or indeed of specialised syndicates, giving rise to capacity shortages and a hardening of primary insurance conditions. This was especially striking in cargo insurance and yacht business.

The aforementioned changes on one of the most important international marketplaces for marine insurance led to risks being placed at higher prices and with more restrictive coverage or prompted the affected customers to purchase insurance protection in local markets.

Offshore energy business experienced another year of below-average losses. Substantial surplus capacities were still a hallmark of the segment.

On the reinsurance side competition remained intense and there was no change in the abundant supply of capacity provided both by traditional reinsurance markets and alternative capital. This had the effect of preventing us from pushing through price increases to the full extent. On the whole, marine reinsurance recorded below-average loss expenditure in 2019, as had been the case in 2018. As far as the Japanese marine market is concerned, the considerable losses caused by typhoon Jebi in 2018 prompted significant price increases and in general brought greater stability to the Asian market climate in the April 2019 round of renewals.

In view of our market position as one of the world's leading marine reinsurers, we were successful in expanding existing customer relationships and acquiring new clients despite the challenging environment. In a parallel move, we scaled back loss-making business, giving rise to a solid and profitable core portfolio overall.

The premium volume for our Aviation and Marine reporting category rose to EUR 547.5 million (EUR 458.0 million). The combined ratio amounted to 75.0% (53.6%). The operating profit (EBIT) fell to EUR 151.9 million (EUR 201.7 million).

Catastrophe XL (Cat XL)

We write the bulk of our non-proportional **catastrophe business** in Bermuda, the worldwide centre of competence for this segment. In the interest of diversifying the portfolio, our subsidiary Hannover Re (Bermuda) Ltd. also writes risks in some specialty lines.

After the historically high windstorm losses of 2017 as well as the devastating typhoons in Japan and the California wildfires in 2018, natural catastrophe reinsurance once again recorded numerous major losses in the year under review. The accumulation of large losses also left its mark on the balance sheets of reinsurers and providers of catastrophe bonds, prompting price increases overall in catastrophe XL business.

Loss-impacted programmes again saw the most marked adjustments. A trend towards price stabilisation could also be observed, above all in North America but also in other segments.

Even though some providers of reinsurance coverage from the ILS markets have shown more restraint of late in making their capacities available, the supply of catastrophe coverage still far outstripped demand. As a consequence of the continuing heavy losses caused by typhoons it was possible to secure appreciably higher prices for catastrophe covers, most notably in Japan.

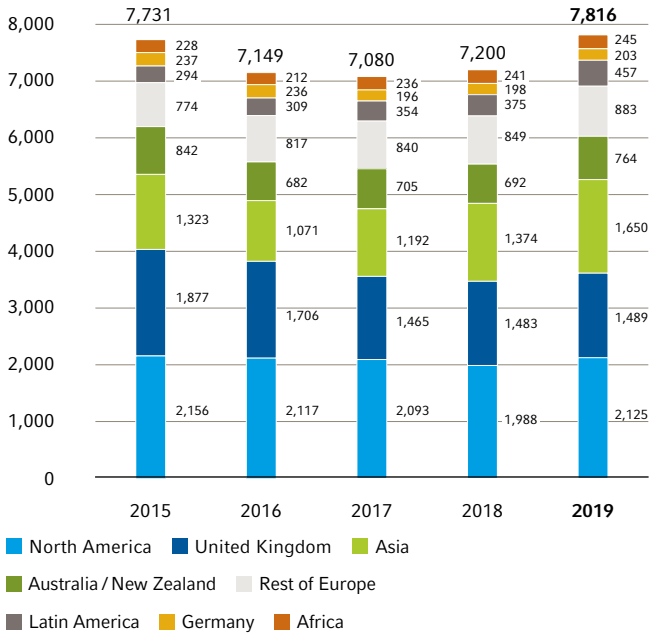
While our major loss expenditures in the first six months came in below our expectations, the second half of the year brought another accumulation of costly catastrophic events. In addition to losses caused by typhoons in Japan and hurricanes in the Caribbean and United States, the industry was impacted by increasing costs for prior-year losses – in particular for typhoon Jebi and for hurricane losses in Florida.

The gross premium volume for our global catastrophe business grew by 22.3% to EUR 591.0 million (EUR 483.4 million). The combined ratio deteriorated to 105.0% (92.7%). The operating profit (EBIT) declined to EUR 36.2 million (EUR 62.5 million).

Life & Health reinsurance at a glance

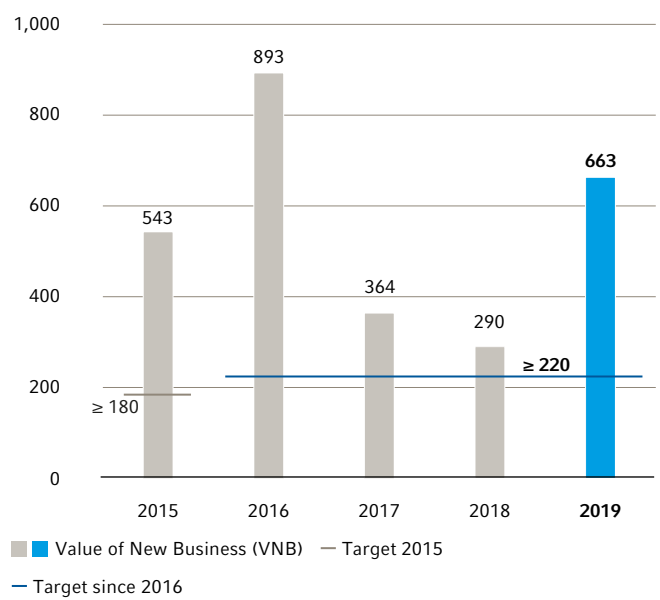
Breakdown of gross premium by markets
in EUR million

M 22



Value of New Business (VNB) growth¹
in EUR million

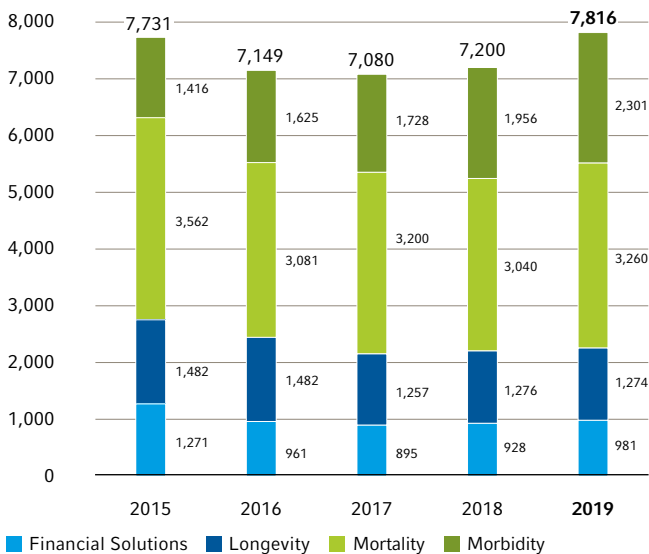
M 23



¹ Since 2016 based on Solvency II principles and pre-tax reporting; 2015 based on MCEV principles with 6% cost of capital and post-tax reporting

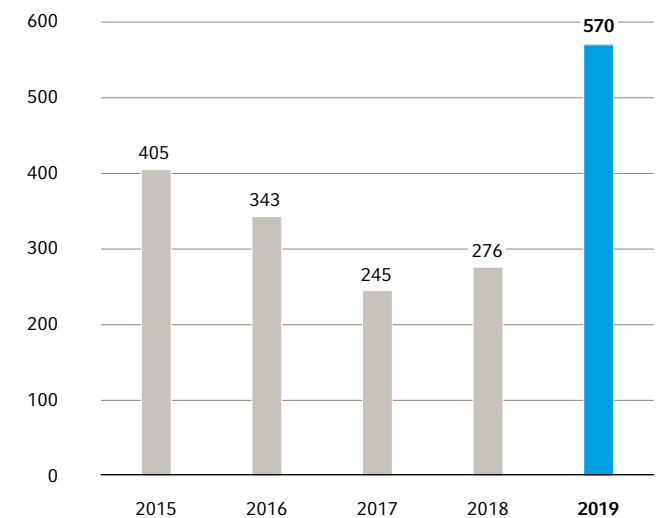
Breakdown of gross written premium by reporting categories
in EUR million

M 24



EBIT performance
in EUR million

M 25



Life & Health reinsurance

- Gross premium volume rises by 6.7% adjusted for exchange rate effects
- Sustained strong worldwide demand for financial solutions
- Growing international interest in longevity solutions
- Improved profitability in legacy US mortality portfolio after steps taken in previous year
- Extraordinary investment income booked from revaluation of a participation
- Segment result improves substantially to EUR 471.6 million

Life and health reinsurance contributed a 35% share of our Group gross premium in the year under review and is thus Hannover Re's second-largest business group.

Global life and health reinsurance markets remain intensely competitive and are shaped by a low interest rate environment, which in many regions became even more challenging in the year under review. Above all in Europe and North America, interest rates came under renewed pressure over the course of the reporting period. This had implications – albeit only to a moderate extent – for the investment results generated by insurers and reinsurers. As a further factor, the interest rate development adversely affected the profitability of underlying life insurance products in certain cases. At the same time, though, this sometimes opened up additional opportunities for financially robust reinsurers such as Hannover Re – for example in the area of financial solutions, where we offer our customers bespoke reinsurance solutions designed to improve their solvency, liquidity and capital position.

Key figures for Life & Health reinsurance

M 26

in EUR million	2019	+/- previous year	2018	2017	2016 ¹	2015
Gross written premium	7,816.4	+8.6%	7,200.4	7,079.6	7,149.0	7,730.9
Net premium earned	6,931.9	+6.9%	6,484.8	6,472.8	6,425.0	6,492.4
Investment income	684.5	+39.2%	491.8	560.6	638.9	709.2
Claims and claims expenses	5,817.5	+8.9%	5,341.6	5,666.8	5,480.3	5,459.0
Change in benefit reserve	(10.8)	-78.8%	(50.8)	0.6	(83.0)	101.1
Commissions	1,254.8	-0.7%	1,263.6	1,081.8	1,020.4	1,075.1
Own administrative expenses	255.7	+17.9%	216.9	210.7	202.0	197.3
Other income/expenses	289.0	+68.0%	172.1	170.6	67.1	35.9
Operating result (EBIT)	569.9	+106.6%	275.9	245.2	343.3	405.1
Net income after tax	471.6	+153.7%	185.9	172.6	252.9	289.6
Earnings per share in EUR	3.91	+153.7%	1.54	1.43	2.10	2.40
Retention	89.5%		90.7%	91.7%	90.4%	84.2%
EBIT margin ²	8.2%		4.3%	3.8%	5.3%	6.2%

¹ Restated pursuant to IAS 8

² Operating result (EBIT)/net premium earned

The performance of our longevity business, among other lines, was thoroughly pleasing. From a global perspective, the high level of demand here for appropriate reinsurance solutions remained unchanged. The exacting capital requirements placed on primary insurers and pension funds in connection with such business were a key driver here.

As part of our strategy, we cooperate with insurtechs and other start-ups to jointly develop new approaches and solutions with our primary insurance customers. With a view to facilitating their access to innovative solutions we launched the innovation platform “hr|equarium” in February. On the one hand, this enables our cedants to access a wide range of insurance-specific products and solutions. At the same time, insurtechs and other start-ups benefit from access to our global network of clients.

Total gross written premium in the Life & Health reinsurance business group climbed by 8.6% to EUR 7,816.4 million (previous year: EUR 7,200.4 million); at constant exchange rates the increase would have been 6.7%, coming in slightly ahead of our anticipated growth in the range of 3% to 5%. The level of retained premium stood at 89.5% (90.7%). Net premium earned increased by 6.9% to EUR 6,931.9 million (EUR 6,484.8 million), corresponding to growth of 5.1% adjusted for exchange rate effects.

The underwriting result including interest and expenses on funds withheld and contract deposits deteriorated to EUR -244.7 million (EUR -215.8 million). Key factors here, among others, were the Australian disability income portfolio and effects in financing business. Investment income, on the other hand, delivered a highly gratifying performance. This was boosted by one-time earnings of EUR 99.5 million booked from the release of hidden reserves to income which had been necessitated by restructuring of our participating interest in the Viridium Group. In this connection, the share held by Hannover Re remained unchanged. Altogether, the investment income for the business group grew by 39.2% to EUR 684.5 million (EUR 491.8 million).

The operating result (EBIT) doubled to EUR 569.9 million (EUR 275.9 million). The contribution made by life and health reinsurance to Group net income improved substantially to EUR 471.6 million (EUR 185.9 million).

We provide below a more detailed discussion of developments in the individual reporting categories of “Financial Solutions”, “Longevity Solutions” and “Mortality and Morbidity Solutions” as well as an overview of the extensive support that we provide as part of our “Underwriting Services”.

Financial Solutions

In the **Financial Solutions** reporting category, we concentrate on reinsurance solutions geared to optimising the solvency, liquidity and capital position of our customers. Our reinsurance solutions in this segment are highly diverse and individually structured because they are always tailored to the customer’s specific needs. Given that the customer’s primary motivation here is not exclusively to secure coverage for biometric risks, a hallmark of such solutions is that they also seek to deliver financial and regulatory benefits.

The United States has traditionally been an exceptionally important insurance market for our financial solutions business. Our US business in this segment developed favourably in the year under review and played a considerable part in the total result.

In Germany as indeed across Europe in general – against a backdrop of further significant cuts in interest rates – we noted growing interest among primary insurers in support for issues such as the funding of the additional interest rate reserve (“Zinszusatzreserve”) or the fulfilment of solvency requirements. Going forward, we expect to see a further surge in demand in these areas.

As in the previous years, lively demand for our financial solutions offerings could be observed in Asia – above all China and Japan – and this was reflected in part in new business written. In India we similarly noted growing interest in such covers.

Gross premium income in the Financial Solutions reporting category climbed by 5.7% to EUR 980.9 million (EUR 928.2 million), accounting for a share of 12.5% of total gross premium in life and health reinsurance. The operating result (EBIT) increased by 24.3% to EUR 397.0 million (EUR 319.4 million). Furthermore, financial solutions delivered another appreciable EBIT contribution from contracts with a reduced risk transfer. This good development is not reflected in gross premium growth because no premium is booked owing to the minimal risk transfer. The income generated from such contracts in an amount of EUR 287.5 million (EUR 198.0 million) is recognised in other income/expenses.

Longevity Solutions

In the **Longevity Solutions** reporting category, we group together all reinsurance business where the primary risk covered is the longevity risk. We develop innovative annuity products tailored to the individual needs of policyholders in various life situations. The bulk of our longevity solutions consists of traditional annuity policies, pensions blocks taken out for new business and enhanced annuities – under which pensioners with a pre-existing condition are guaranteed a higher annuity payment for their remaining shortened life expectancy. The United Kingdom continues to be our largest and most mature market for protection against longevity risks.

In the area of longevity solutions we have benefited from a sustained positive development in the United Kingdom, but we also succeeded in acquiring new business in other markets such as Canada and the Netherlands. Furthermore, we were able to write our first significant longevity cover in Germany.

More exacting requirements set by prudential regimes around the world for the solvency capital of primary insurers also had a favourable effect on demand for appropriate covers. Where longevity risks are involved, insurers need to hold considerable reserves as collateral for their pension and annuity commitments which are often still in the distant future. This meant that in some instances it was also possible to offer financial solutions arrangements in such scenarios.

In total, the gross premium for Longevity Solutions remained virtually unchanged at EUR 1,274.2 million (EUR 1,276.1 million). The operating result (EBIT) improved to EUR 29.0 million (EUR 5.6 million).

Mortality und Morbidity Solutions

In the global (re)insurance industry it is standard practice for mortality and morbidity risks to form a common element of one and the same business relationship, and in some cases both risks are even covered under one reinsurance treaty. In our reporting we therefore consolidate the profit contributions of these two reporting categories, but nevertheless provide below a separate overview of significant developments in the financial year just ended.

Mortality Solutions

Mortality-exposed business – i. e. **mortality solutions** – forms the core of traditional life and health reinsurance and, in terms of premium volume, accounts for the bulk of the total premium income in our Life & Health reinsurance business group. The business discussed in this reporting category consists of covers that provide reinsurance protection for our customers against the risk that insureds do not live as long as anticipated and hence the actual mortality negatively diverges from the originally expected mortality.

Our mortality solutions business in the United States performed better than expected and delivered a strong contribution to the improved result. The management actions taken in the previous year to enhance the profitability of our in-force US mortality portfolio played an important part in this development. In 2018 a one-time charge of EUR 185.4 million, allowing for the release of an expense reserve, had been incurred as a consequence of treaty recaptures. Markets in Europe experienced dynamic growth, as reflected both in the renewal of existing treaties and in the successful acquisition of new business.

The gross premium in the Mortality Solutions reporting category rose by 7.3% to EUR 3,260.3 million (EUR 3,039.5 million). Altogether, it therefore contributed 41.7% of the total gross premium income booked in life and health reinsurance.

Morbidity Solutions

Within the **Morbidity Solutions** reporting category, we cover business centred around the risk of deterioration in a person's state of health due to disease, injury or infirmity. A hallmark of this business is the wide range of possible combinations of different covered risks, including for example strict (any occupation) disability, occupational disability and various forms of long-term care insurance.

Interest in the issue of long-term care insurance in old age continues to grow in many industrial nations. In Germany, for example, we are consistently expanding our range of solutions as part of an ongoing dialogue with our customers. Our morbidity business also fared exceptionally well in Asia, with China once again the most dynamic growth market in the year under review. Most notably, we were able to substantially expand our critical illness business.

In Australia, on the other hand, a temporary market-wide deterioration in disability income insurance adversely affected profits across the entire industry. Our company, too, incurred higher-than-expected losses here.

The gross premium for Morbidity Solutions business grew by 17.6% in the financial year to EUR 2,301.0 million (EUR 1,956.5 million).

The gross premium for our total Mortality and Morbidity Solutions business rose by 11.3% to EUR 5,561.3 million (EUR 4,996.0 million). The operating result (EBIT) for the two reporting categories improved to EUR 144.0 million (EUR -49.1 million).

Underwriting Services

Under the heading of **Underwriting Services** we report on the activities and services that we perform for our customers above and beyond pure risk transfer. Our automated underwriting systems under the “hr|ReFlex” and “hr|Quirc” brands and the associated process automation for our customers are a major feature in this regard.

We take the view that the provision of state-of-the-art and scalable systems for process automation gives us a key competitive edge that supports our customers in their own automation projects and helps us to build lasting business relationships. Our expectations for the development and take-up rate of our underwriting systems were once again clearly surpassed in the year under review.

In the financial year just ended, we successfully implemented our hr|ReFlex underwriting system at customers in Scandinavia, France, Germany and the United States.

The roll-out of our innovation platform “hr|equarium” also got off to an extremely successful start. On the one hand, this online platform enables our customers to access a wide range of insurance-specific products and solutions. At the same time, it opens up access for providers – frequently insurtechs and other start-ups – to our global client network. At this stage we have brought together more than 1,100 users on the platform as well as some 100 solutions – ranging from a digital health platform through applications based on artificial intelligence and real-time flood models to a software protocol for data verification.

Investments

- Another very good investment performance with stable ordinary income despite the challenging environment
- Net realised gains supported by release of hidden reserves in connection with a participating interest
- Income further boosted by alternative investments and real estate
- Income from assets under own management rises by 17.3%
- Return on investment reaches 3.4% and clearly beats target

We are thoroughly satisfied with the development of our investments. While 2019 once again proved to be a challenging year in view of continued low interest rates and global economic movements driven by a range of uncertainties and risks, we were able to outperform our targets despite choppy capital markets. Nor were we held back by the turbulent Brexit process and the very low interest rate level overall.

The low interest rates will, however, make it more difficult to (re)invest in fixed-income securities at adequate returns going forward. In the year under review the further – in some cases marked – decline in interest rates and risk premiums on corporate bonds in our main currency areas nevertheless led to a sizeable increase in the hidden reserves on fixed-income securities.

Our exposures to emerging markets were rewarded with a broadly favourable performance and healthy profit contributions. Reflecting a slightly heavier weighting in the portfolio, the asset classes of private equity and real estate also helped to push our ordinary investment income (excluding interest on funds withheld and contract deposits) to a very pleasing EUR 1,380.8 million, a level slightly above that of the previous year (previous year: EUR 1,321.7 million).

Net realised gains on disposals totalled EUR 273.7 million (EUR 127.7 million) and derived in large measure from the release to income of hidden reserves triggered by restructuring of a participation. An additional factor was the sale of two individual properties, the valuation of which had risen sharply. We report further on this in the following section “Financial position and net assets” under the subsection “Investments” on page 58 et seq.

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 year under review gave rise to positive fair value changes recognised in income of EUR 8.1 million (negative changes of EUR 11.9 million). Altogether, the positive changes in the fair values of our financial assets recognised at fair value through profit or loss amounted to EUR 72.9 million (EUR 31.2 million). The principal items recognised here are various derivative financial instruments relating to the technical account or taken out as currency or interest rate hedges as well as fixed-income assets for which the fair value option provided by IAS 39 was applied.

Impairments and depreciation totalling EUR 80.6 million (EUR 52.7 million) were taken. An impairment loss was recognised on alternative investments in the amount of EUR 23.9 million (EUR 15.3 million) and on directly held real estate in the amount of EUR 8.5 million (EUR 0.3 million). Write-downs on fixed-income securities amounted to just EUR 0.1 million (EUR 0.5 million) together with a further EUR 6.9 million for a loan. Depreciation on directly held real estate increased to EUR 36.7 million (EUR 34.0 million), reflecting the further expansion of our involvement in this sector. These write-downs were not opposed by any write-ups (EUR 3.6 million).

Investment income

M 27

in EUR million	2019	+/- previous year	2018	2017	2016	2015
Ordinary investment income ¹	1,380.8	+4.5%	1,321.7	1,289.0	1,162.0	1,253.4
Result from participations in associated companies	26.4		5.0	16.0	9.1	19.2
Realised gains/losses	273.7	+114.4%	127.7	377.1	206.3	135.8
Appreciation	–		3.6	0.9	0.3	0.6
Depreciation, amortisation, impairments ²	80.6	+52.9%	52.7	71.9	76.0	38.7
Change in fair value of financial instruments ³	72.9	+133.8%	31.2	38.6	26.1	0.9
Investment expenses	122.5	+7.1%	114.3	110.8	109.1	101.2
Net investment income from assets under own management	1,550.6	+17.3%	1,322.0	1,539.0	1,218.3	1,270.1
Net investment income from funds withheld and contract deposits	206.4	-0.7%	208.0	234.9	332.1	395.0
Total investment income	1,757.1	+14.8%	1,530.0	1,773.9	1,550.4	1,665.1

¹ Excluding income and expenses on funds withheld and contract deposits

² Including depreciation/impairments on real estate

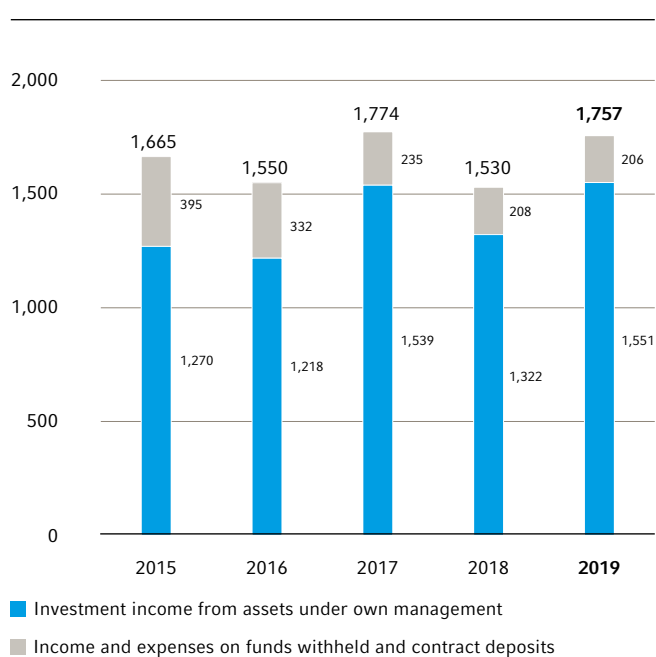
³ Portfolio at fair value through profit or loss and trading

Despite somewhat higher write-downs, we were thus able to generate investment income of EUR 1,757.1 million (EUR 1,530.0 million). The key drivers here were slightly higher ordinary income from fixed-income securities as well as the earnings from real estate and private equity, but above all the very significant increase in net realised gains. Income from assets under own management accounted for EUR 1,550.6 million (EUR 1,322.0 million), producing an average return of 3.4%. We thus comfortably outperformed our originally anticipated full-year target of at least 2.8%, which we had raised in November to at least 3.2%.

Development of investment income

M 28

in EUR million



Financial position and net assets

- Risk-commensurate investment policy
- Highly diversified investment portfolio
- Equity base remains robust

Investment policy

Hannover Re's investment policy continues to be guided by the following core principles:

- generation of stable and risk-commensurate returns while at the same time maintaining the high quality standard of the portfolio
- ensuring liquidity and solvency at all times
- high diversification of risks
- limitation of currency exposure and maturity risks through matching currencies and maturities

With these goals in mind we engage in active risk management based on balanced risk/return analyses. To this end we adhere to centrally implemented investment guidelines and incorporate insights gained from dynamic financial analysis. They form the basis for investment ranges which are specified in light of the prevailing state of the market and the requirements on the liabilities side and within which operational management of the portfolio takes place. These measures are intended to safeguard the generation of an appropriate level of return. In so doing, we pay strict attention to compliance with our clearly defined risk appetite, which is reflected in the risk capital allocated to the investments and constitutes

the foundation for the asset allocation of the entire Hannover Re Group and the individual portfolios. Our ability to meet our payment obligations at all times is also ensured in this way. Within the scope of our asset/liability management (ALM) the allocation of investments by currencies and maturities is determined by the technical liabilities. The modified duration of our bond portfolio is geared largely to the technical liabilities.

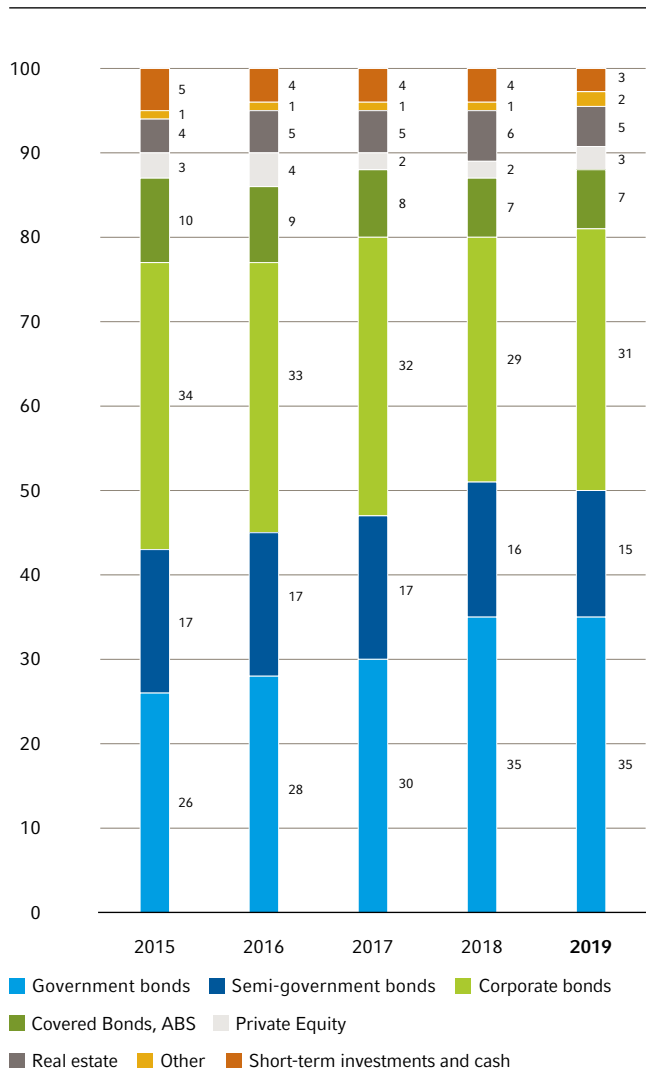
By adjusting the maturity pattern of our fixed-income securities to the expected payment patterns of our liabilities we reduce the economic exposure to the interest rate risk. In the current reporting period this gave rise to a broadly neutral modified duration of our bond portfolio, which stood at 5.7 (previous year: 4.8) as at 31 December 2019. Through active and regular management of the currency spread in our fixed-income portfolio we also bring about extensive matching of currencies on the assets and liabilities sides of the balance sheet, as a consequence of which fluctuations in exchange rates have only a limited effect on our result. As at year-end 2019 we held 29.7% (30.1%) of our investments in euros, 44.0% (45.8%) in US dollars, 8.2% (7.7%) in pound sterling and 5.6% (5.9%) in Australian dollars.

Investment portfolio

M 29

in EUR million	2019	2018	2017	2016	2015
Funds withheld	11,273.8	10,864.6	10,902.9	11,843.8	13,990.4
Investments under own management	47,629.4	42,197.3	40,057.5	41,793.5	39,346.9
Total	58,903.2	53,061.9	50,960.4	53,637.3	53,337.3

Breakdown of investments under own management M 30
in %



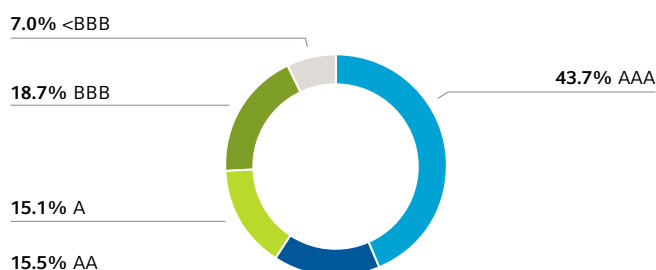
Investments

Our portfolio of assets under own management amounted to EUR 47.6 billion, a level significantly higher than at the end of the previous year (31 December 2018: EUR 42.2 billion). Along with the positive operating cash flow, this reflects the issuance of a bond in the third quarter and above all the sharp valuation increases on fixed-income securities as a consequence of lower interest rates and risk premiums on corporate bonds. We adjusted the allocation of our investments to the individual classes of securities in the reporting period in that we expanded the portfolio of bonds from the emerging markets sector. We also increased our holdings of high-yield and covered bonds. In this way we are responding to the ever more challenging search for an adequate risk/reward ratio in our reinvestment activities and when making new investments.

We further boosted our real estate portfolio as part of the strategic expansion of this asset category by acquiring four properties in the United States and Asia. In Eastern Europe we also acted on very attractive market opportunities to sell two properties. While our real estate portfolio thus increased slightly in volume overall, the real estate allocation dropped from 5.6% to 5.3% due to the larger total investment portfolio. In all other asset classes we made only minimal changes in the context of regular portfolio maintenance.

The portfolio of fixed-income securities excluding short-term assets rose to EUR 41.1 billion (EUR 36.5 billion). This increase can similarly be attributed not only to the positive operating cash flow but also to the issuance of a bond in the third quarter and above all the sharp valuation increases on fixed-income securities as a consequence of lower interest rates and risk premiums on corporate bonds. Hidden reserves for available-for-sale fixed-income securities, which are included in shareholders' equity, totalled EUR 1,356.4 million (EUR 91.4 million). This increase also reflects the declining yields on government bonds and lower risk premiums on corporate bonds observed over the course of the reporting period. As to the quality of the bonds measured in terms of rating categories, the proportion of securities rated "A" or better remained on a consistently high level and stood at 74.3% (78.4%) as at year-end.

Rating of fixed-income securities M 31



Holdings of alternative investment funds increased slightly overall. As at 31 December 2019 an amount of EUR 1,177.7 million (EUR 896.8 million) was invested in private equity funds; a further EUR 746.0 million (EUR 675.3 million) was attributable predominantly to investments in high-yield bonds and in the credit sector. In addition, altogether EUR 534.7 million (EUR 433.9 million) was invested in structured real estate investments. The uncalled capital with respect to the aforementioned alternative investments totalled EUR 1,429.9 million (EUR 1,326.4 million).

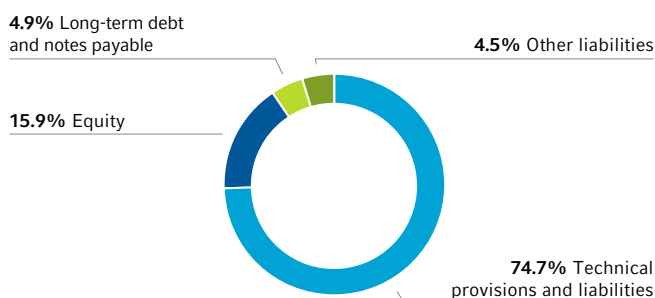
At the end of the year under review we held a total amount of EUR 1.6 billion (EUR 1.5 billion) in short-term investments and cash. Funds withheld amounted to EUR 11.3 billion (EUR 10.9 billion).

Analysis of the capital structure

The technical provisions and liabilities are of course by far the most significant item in our balance sheet. Further elements are equity and equity substitutes, which help to substantially strengthen our financial base and optimise our cost of capital. The following chart shows our capital structure as at 31 December 2019, broken down into percentages of the balance sheet total.

Capital structure as at 31 December 2019

M 32



The technical provisions and liabilities shown above, which include funds withheld/contract deposits and reinsurance payable, make up 74.7% (73.5%) of the balance sheet total and are more than covered by our investments, (assets-side) funds withheld/contract deposits, accounts receivable and reinsurance recoverables.

The equity including non-controlling interests at 15.9% (14.8%) of the balance sheet total as well as the long-term debt and – especially – notes payable at altogether 4.9% (4.0%) of the balance sheet total represent our most important sources of funds.

We ensure that our business is sufficiently capitalised at all times through continuous monitoring and by taking appropriate steering actions as necessary.

Management of policyholders' surplus

A key strategic objective of Hannover Re is long-term capital preservation. We issued hybrid capital as an equity substitute in order to keep the cost of capital on a low level. The policyholders' surplus is an important management ratio in the context of Hannover Re's comprehensive capital management. The total policyholders' surplus is defined as follows:

- shareholders' equity excluding non-controlling interests, composed of the common shares, additional paid-in capital, other comprehensive income and retained earnings,
- non-controlling interests and
- hybrid capital used as an equity substitute, which takes the form of subordinated bonds.

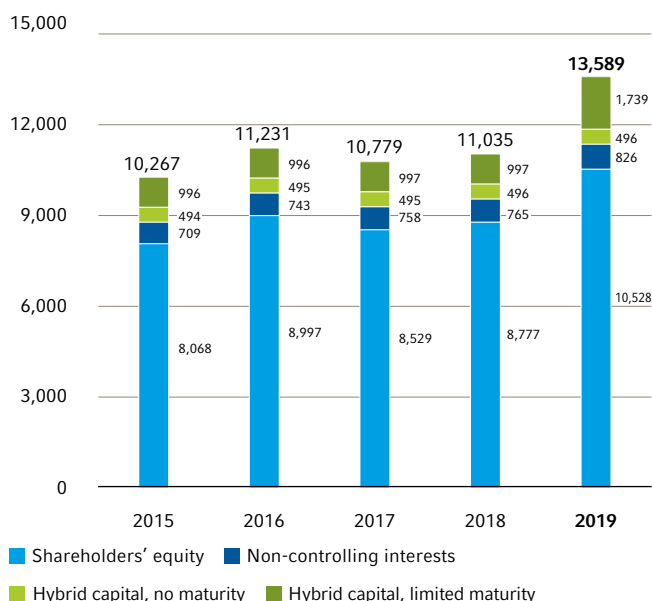
The policyholders' surplus totalled EUR 13,588.9 million (EUR 11,035.1 million) as at the balance sheet date, an increase of 23.1%. Retained earnings rose by EUR 636.8 million to EUR 8,077.1 million (EUR 7,440.3 million) on the back of the good Group net income booked in the year under review. In addition, the foreign currency gains and losses and the net gains on investments recognised in equity were higher by altogether EUR 1,125.2 million. Lastly, the issuance of a subordinated bond in a nominal amount of EUR 750.0 million contributed to the increase in the policyholders' surplus.

Hannover Re uses "Intrinsic Value Creation" (IVC) as its central value-based management tool. As part of this methodology, we apply the principles of economic allocation of equity and efficient use of debt as an equity substitute in order to achieve an attractive weighted cost of capital. This concept as well as the objectives and principles in accordance with which we conduct our enterprise management and capital management are described in greater detail in our remarks on value-based management on page 26 et seq. of this report.

Development of policyholders' surplus
in EUR million

M 33

Group shareholders' equity



In its capital management Hannover Re is guided by the requirements and expectations of the rating agencies with an eye to its targeted rating. Furthermore, while making appropriate allowance for business policy considerations and factors that influence market presence, the allocation of capital to the Group's operational companies is based upon the economic risk content of the business group in question. The Group companies are also subject to national capital and solvency requirements. All Group companies met the applicable local minimum capital requirements in the year under review. Adherence to these capital requirements is continuously monitored by the responsible organisational units on the basis of the latest actual figures as well as the corresponding planned and forecast figures. From the Group perspective we manage Hannover Re's solvency extensively using our internal capital model (cf. "Opportunity and risk report", page 92 et seq.).

Compared to the position as at 31 December 2018, Group shareholders' equity increased in the year under review by EUR 1,812.5 million, equivalent to 19.0%, to EUR 11,354.5 million. After adjustment for non-controlling interests, it rose by EUR 1,751.2 million to EUR 10,528.0 million. The book value per share increased accordingly by 20.0% to EUR 87.30. The changes in shareholders' equity were shaped chiefly by the following developments:

The foreign currency gains and losses grew by EUR 183.8 million from EUR 201.4 million to EUR 385.2 as a consequence of exchange rate movements of foreign currencies against the euro in the financial year. The rise in the reserve for currency translation adjustments resulted principally from the appreciation of the US dollar and translation of the shareholders' equity of those subsidiaries whose equity is denominated in USD.

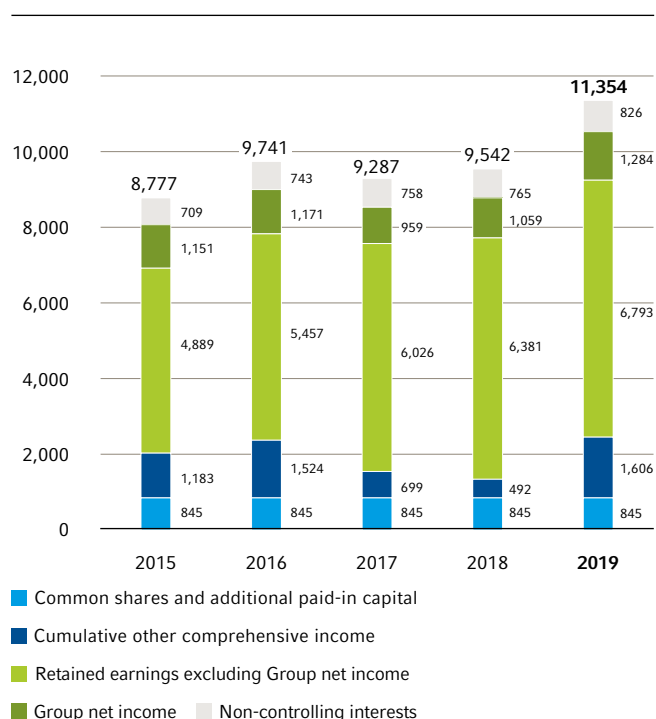
Net unrealised gains on investments stood at EUR 1,287.9 million, an increase of EUR 941.4 million compared to the beginning of the year under review. This reflects the declines observed in the course of the reporting period both in risk premiums and in the risk-free interest rate.

Non-controlling interests in shareholders' equity increased by EUR 61.3 million to EUR 826.5 million as at 31 December 2019. The bulk of this – in an amount of EUR 745.4 million – is attributable to the non-controlling interests in E+S Rückversicherung AG.

The Group net income for 2019 attributable to the shareholders' equity of the Hannover Re Group amounted to EUR 1,284.2 million (EUR 1,059.5 million). The non-controlling interest in the profit generated in the year under review totalled EUR 89.2 million (EUR 86.0 million).

Development of Group shareholders' equity in EUR million

M 34



Financing and Group debt

In addition to the financing effect of the changes in shareholders' equity described above, debt financing on the capital market is a significant component of Hannover Re's financing. It was essentially composed of bonds issued to ensure lasting protection of our capital base – in part also in observance of rating requirements. The total volume of long-term debt and notes payable stood at EUR 3,372.8 million (EUR 2,558.9 million) as at the balance sheet date.

Our bonds supplement our equity resources with the aim of reducing the cost of capital and also help to ensure liquidity at all times. As at the balance sheet date altogether five bonds had been placed on the European capital market through Hannover Rück SE and Hannover Finance (Luxembourg) S. A.

The following table presents an overview of the amortised cost of the issued bonds.

Amortised cost of our bonds

M 35

in EUR million	Issue date	Coupon in %	2019	2018
Hannover Finance (Luxembourg) S. A. subordinated debt, EUR 500 million; 2010/2040	14.9.2010	5.75	499.6	499.3
Hannover Finance (Luxembourg) S. A. subordinated debt, EUR 500 million; 2012/2043	20.11.2012	5.00	498.5	498.2
Hannover Rück SE, subordinated debt, EUR 500 million; 2014/undated	15.9.2014	3.375	496.2	495.6
Hannover Rück SE, senior bond, EUR 750 million; 2018/2028	18.4.2018	1.125	743.3	742.5
Hannover Rück SE, subordinated bond, EUR 750 million; 2019/2039	9.10.2019	1.125	740.0	–
Total			2,977.7	2,235.6

Several Group companies have also taken up long-term debt – principally in the form of mortgage loans – amounting to EUR 395.0 million (EUR 323.2 million).

For further explanatory information please see our remarks in the notes to this report, section 6.12 “Long-term debt and notes payable”, page 238 et seq., and section 6.13 “Shareholders' equity and treasury shares”, page 240 et seq.

Various financial institutions have provided us with letters of credit for the collateralisation of technical liabilities. We report in detail on existing contingent liabilities in the notes, section 8.7 “Contingent liabilities and commitments”, page 264 et seq.

Analysis of the consolidated cash flow statement

Liquidity

We generate liquidity from our operational reinsurance business, investing activities and financing measures. Through regular liquidity planning and by managing the fungibility of our investments, we ensure that Hannover Re is able to make the necessary payments at all times. Hannover Re's cash flow is shown in the consolidated cash flow statement on page 164 et seq.

Hannover Re does not conduct any automated internal cash pooling within the Group. Liquidity surpluses are managed and created by the Group companies. Various loan relationships exist within the Hannover Re Group for the optimal structuring and flexible management of the short- or long-term allocation of liquidity and capital.

Consolidated cash flow statement

M 36

in EUR million	2019	2018
Cash flow from operating activities	2,509.2	2,224.6
Cash flow from investing activities	(2,709.4)	(2,075.2)
Cash flow from financing activities	108.3	149.5
Exchange rate differences on cash	31.3	16.9
Change in cash and cash equivalents	(60.7)	315.8
Cash and cash equivalents at the beginning of the period	1,151.5	835.7
Change in cash and cash equivalents according to cash flow statement	(60.6)	315.8
Cash and cash equivalents at the end of the period	1,090.9	1,151.5
Thereof cash and cash equivalents from IFRS 5	0.0	78.6
Thereof cash and cash equivalents at the end of the period excluding disposal group	1,090.9	1,072.9

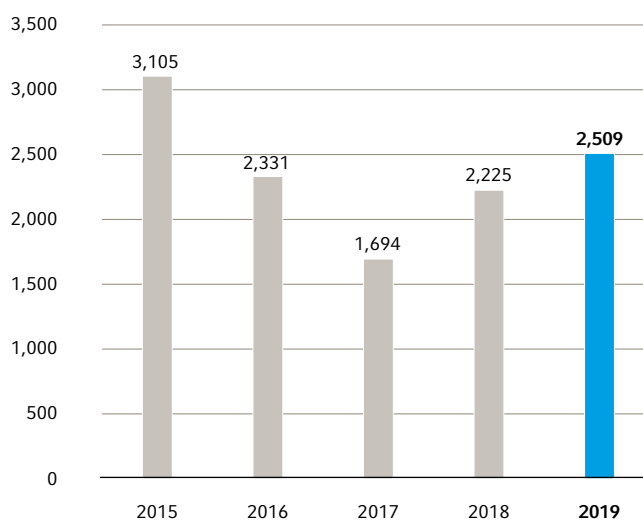
Cash flow from operating activities

The cash flow from operating activities, which also includes inflows from interest received and dividend receipts, amounted to EUR 2,509.2 million in the year under review as opposed to EUR 2,224.6 million in the previous year. The increase of altogether EUR 284.6 million was due to the positive development of operational business.

Cash flow from operating activities

in EUR million

M 37



Cash flow from investing activities

The balance of cash inflows and outflows from operating activities and investing activities in an amount of EUR -2,709.4 million (EUR -2,075.2 million) was invested in accordance with the company's investment policy, giving particular consideration to the matching of currencies and maturities on the liabilities side of the technical account. Regarding the development of the investment portfolio please see also our remarks at the beginning of this section.

Cash flow from financing activities

The cash inflow from financing activities amounted to EUR 108.3 million (EUR 149.5 million) in the year under review. This item includes primarily the dividends paid out by Group companies in the financial year totalling EUR 687.3 million (EUR 657.7 million) and the receipts from issuance of a subordinated bond in a nominal amount of EUR 750.0 million.

Overall, the cash and cash equivalents therefore decreased year-on-year by EUR 60.6 million to EUR 1,090.9 million.

For further information on our liquidity management please see page 92 et seq. of the risk report.

Financial strength ratings

A.M. Best and Standard & Poor's, the rating agencies of particular relevance to the insurance industry, assess the financial strength of Hannover Re on the basis of an interactive rating process and have awarded it very good ratings. The rating agencies highlight in particular the strength of the Hannover Re Group's competitive position, its capitalisation and its risk management.

Financial strength ratings of the Hannover Re Group M 38

	Standard & Poor's	A.M. Best
Rating	AA- (Very Strong)	A+ (Superior)
Outlook	stable	stable

Financial strength ratings of subsidiaries M 39

	Standard & Poor's	A.M. Best
E+S Rückversicherung AG	AA-	A+
Hannover Life Reassurance Africa Ltd. ¹	AA-	-
Hannover Life Reassurance Bermuda Ltd.	AA-	A+
Hannover Life Reassurance Company of America	AA-	A+
Hannover Life Reassurance Company of America (Bermuda) Ltd.	AA-	A+
Hannover Life Re of Australasia Ltd.	AA-	-
Hannover Reinsurance Africa Ltd. ¹	AA-	-
Hannover Re (Ireland) Designated Activity Company	AA-	A+
Hannover Re (Bermuda) Ltd.	AA-	A+
Hannover ReTakaful B.S.C. (c)	A+	-
Glencar Insurance Company	-	A+

¹ Hannover Reinsurance Africa Ltd. (HR SA) and Hannover Life Reassurance Africa Ltd. (HLR SA) benefit from parental guarantees issued by Hannover Rück SE (the "Guarantor"). The guarantees cover all of the payment obligations of HR SA and HLR SA in respect of insurance and reinsurance contracts issued by them. The guarantees are unconditional and continuing and shall be binding upon the Guarantor. The owners of the insurance and reinsurance contracts issued by these subsidiaries are express third party beneficiaries of these guarantees. The obligations of the Guarantor under these guarantees rank pari passu with all other unsecured indebtedness of such Guarantor.

Issue ratings of notes payable

As part of the process of rating Hannover Re the rating agencies also assess the debt issued by the Hannover Re Group.

Issue ratings of notes payable M 40

	Standard & Poor's	A.M. Best
Hannover Rück SE subordinated debt, EUR 750 million; 2019/2039	A	-
Hannover Rück SE senior bond, EUR 750 million; 2018/2028	AA-	-
Hannover Rück SE subordinated debt, EUR 500 million; 2014/undated	A	a+
Hannover Finance (Luxembourg) S. A. subordinated debt, EUR 500 million; 2012/2043	A	aa-
Hannover Finance (Luxembourg) S. A. subordinated debt, EUR 500 million; 2010/2040	A	aa-

Information pursuant to § 315a Para. 1 German Commercial Code (HGB)

The common shares (share capital) of Hannover Rück SE amount to EUR 120,597,134.00. They are divided into 120,597,134 registered no-par shares.

The Executive Board of the company is not aware of any restrictions relating to voting rights or the transfer of shares, including cases where these may arise out of agreements between shareholders.

The following companies hold direct or indirect capital participations that exceed 10% of the voting rights: Talanx AG, Hannover, directly holds 50.2% (rounded) of the company's voting rights. HDI-Haftpflichtverband der Deutschen Industrie Versicherungsverein auf Gegenseitigkeit, Hannover, which holds a stake of 79.0% in Talanx AG, therefore indirectly holds 39.7% (rounded) of the voting rights in the company.

There are no shares with special rights granting their holders powers of control, nor is there any specially structured voting control for employees who have capital participations and do not directly exercise their rights of control.

The appointment and recall of members of the Executive Board are determined by §§ 84 et seq. Stock Corporation Act. Amendment of the Articles of Association is governed by §§ 179 et seq. Stock Corporation Act in conjunction with § 18 (2) of the Articles of Association of Hannover Rück SE.

The powers of the Executive Board with respect to the issue and repurchase of shares are defined in the Articles of Association of Hannover Rück SE (§ 6 “Contingent capital” and § 7 “Authorised capital”) as well as in §§ 71 et seq. Stock Corporation Act. In this connection the Annual General Meeting authorised the Executive Board on 6 May 2015 pursuant to § 71 Para. 1 Number 8 Stock Corporation Act to acquire treasury shares on certain conditions for a period of five years, ending on 5 May 2020.

The following paragraphs explain major agreements concluded by the company that are subject to reservation in the event of a change of control, inter alia following a takeover bid, and describe the resulting effects. Some letter of credit lines extended to Hannover Rück SE contain standard market change-of-control clauses that entitle the banks to early termination of a credit facility if Talanx AG loses its majority interest or drops below the threshold of a 25% participation or if a third party acquires the majority interest in Hannover Rück SE.

In addition, retrocession covers in property & casualty and life & health business contain standard market change-of-control clauses which in each case grant the other contracting party a right of termination if a significant change occurs in the ownership structure and participation ratios of the affected contracting party.

The company has not concluded any compensation agreements with the members of the Executive Board or with employees in the event of a takeover bid being made.

Information on Hannover Rück SE

(condensed version in accordance with the German Commercial Code (HGB))

Hannover Re exercises the option to present a combined Group and company management report pursuant to § 315 Para. 3 of the German Commercial Code (HGB) in conjunction with § 298 Para. 3 of the German Commercial Code (HGB). Supplementary to the reporting on the Hannover Re Group, we discuss below the development of Hannover Rück SE.

The annual financial statement of Hannover Rück SE is drawn up in accordance with German accounting principles (HGB). The consolidated financial statement, on the other hand, conforms to International Financial Reporting Standards (IFRS). This gives rise to various divergences in accounting policies affecting, above all, intangible assets, investments, technical assets and liabilities, financial instruments and deferred taxes.

The annual financial statement of Hannover Rück SE – from which the balance sheet and profit and loss account in particular are reproduced here in condensed form – is submitted to the operator of the electronic Federal Gazette and can be

accessed via the webpage of the Companies Register. This annual financial statement can also be accessed on the company's website (www.hannover-re.com) and may be requested from Hannover Rück SE, Karl-Wiechert-Allee 50, 30625 Hannover, Germany.

Hannover Rück SE transacts reinsurance business in the business groups of Property & Casualty and Life & Health reinsurance. Through its global presence and activities in all lines of reinsurance, the company achieves extensive risk diversification.

Since 1 January 1997 Hannover Rück SE has written active reinsurance for the Group – with few exceptions – solely in foreign markets. Responsibility within the Hannover Re Group for German business rests with the subsidiary E+S Rückversicherung AG.

Results of operations

The 2019 financial year was a pleasing one for Hannover Rück SE. The gross premium in total business increased by 23.4% to EUR 18.1 billion (previous year: EUR 14.6 billion). The level of retained premium dropped from 71.8% to 69.7%. Net premium earned grew by 17.4% to EUR 12.2 billion (EUR 10.4 billion).

Condensed profit and loss account of Hannover Rück SE

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in EUR thousand	2019	2018
Earned premiums, net of retrocession	12,226,552	10,412,941
Allocated investment return transferred from the non-technical account, net of retrocession	137,460	203,602
Other technical income, net of retrocession	0	174
Claims incurred, net of retrocession	9,080,560	7,787,352
Changes in other technical provisions, net of retrocession	(177,722)	(144,470)
Bonuses and rebates, net of retrocession	40	(50)
Operating expenses, net of retrocession	3,128,749	2,685,118
Other technical charges, net of retrocession	86	23
Subtotal	(23,145)	(196)
Change in the equalisation reserve and similar provisions	(210,561)	25,270
Net technical result	(233,706)	25,074
Investment income	1,412,657	1,450,018
Investment charges	86,836	218,338
Allocated investment return transferred to the technical account	(143,457)	(204,465)
Other income	142,359	162,730
Other charges	291,263	345,311
Profit or loss on ordinary activities before tax	799,754	869,708
Taxes on profit and income and other taxes	125,261	204,353
Profit for the financial year	674,493	665,355
Profit brought forward from previous year	702,865	671,014
Allocations to other retained earnings	358	369
Disposable profit	1,377,000	1,336,000

The underwriting result (before changes in the equalisation reserve) decreased in the year under review from EUR -0.2 million to EUR -23.1 million. Following a withdrawal of EUR 25.3 million in the previous year, an amount of EUR 210.6 million was allocated to the equalisation reserve and similar provisions in the year under review.

The 2019 financial year, just like the two previous years, was adversely impacted by large losses that exceeded our expectations. While the first six months again recorded a thoroughly moderate major loss experience, the volume of losses incurred in the second half of the year was significantly higher than anticipated. The total net expenditure on major losses for Hannover Rück SE amounted to EUR 606.3 million (EUR 536.6 million).

Ordinary investment income including deposit interest fell short of the previous year's level at EUR 1,110.0 million (EUR 1,234.0 million), primarily due to reduced distributions from our investment holding companies. To some extent this was offset by stronger ordinary income from fixed-income securities. Driven by the substantial asset volume, the latter rose to a pleasing EUR 508.2 million (EUR 458.6 million) despite the

continued low level of interest rates. Net gains of EUR 220.9 million (EUR 140.9 million) were realised on disposals. The sharp increase here derived in large measure from the release to income of hidden reserves that resulted from restructuring of a participating interest. The gains realised on investment fund certificates were, however, lower than the comparatively strong earnings booked in the previous year. Write-downs of EUR 11.4 million (EUR 88.4 million) were taken on investments, for the most part on bearer debt securities held as current assets. The write-downs contrasted with write-ups of EUR 50.3 million (EUR 1.2 million) that were made on assets written down in previous periods in order to reflect increased fair values.

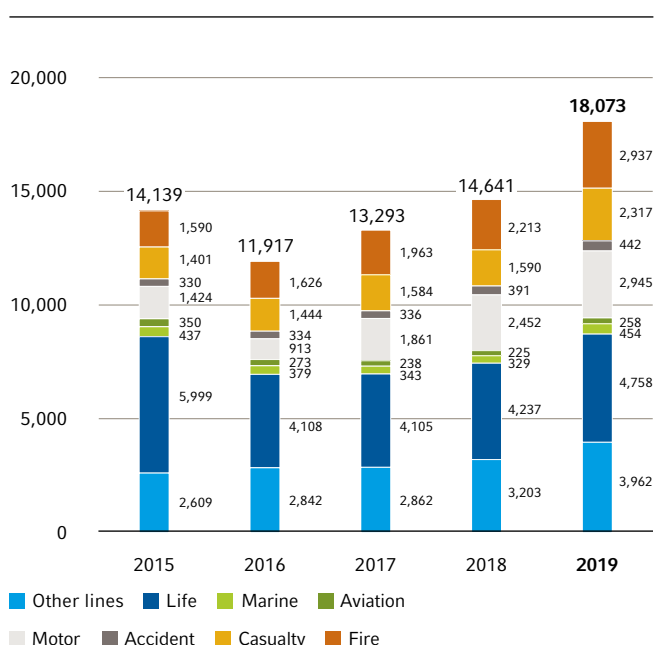
All in all, the net investment result increased to EUR 1,325.8 million (EUR 1,231.7 million). The balance of other income and charges changed from EUR -182.6 million to EUR -148.9 million.

The profit on ordinary activities contracted to EUR 799.8 million (EUR 869.7 million). The year under review closed with a profit for the year of EUR 674.5 million (EUR 665.4 million).

Development of the individual lines of business

The following section describes the development of the various lines of business. The cooperation and exchange of business between Hannover Rück SE and E+S Rückversicherung AG was reorganised with effect from the beginning of the 2014 financial year and slightly adjusted in the 2019 financial year. In this context a quota share retrocession from Hannover Rück SE to E+S Rückversicherung AG has since been maintained in property and casualty reinsurance.

Hannover Rück SE: Breakdown of gross premium by individual lines of business M 42
in EUR million



Fire

Gross premium income for the fire line climbed by 32.7% in the 2019 financial year to EUR 2,937.3 million (EUR 2,213.3 million). The net loss ratio was slightly higher at 76.8% (75.2%). The underwriting result closed at EUR -141.6 million (EUR -56.5 million). An amount of EUR 120.1 million (EUR 54.1 million) was withdrawn from the equalisation reserve and similar provisions.

Casualty

Gross premium in casualty business rose by 45.7% to EUR 2,316.8 million (EUR 1,590.1 million). The loss ratio decreased to 70.6% (91.9%). The underwriting result improved in the year under review to EUR -6.6 million (EUR -195.1 million). After a withdrawal of EUR 64.4 million in the previous year, an amount of EUR 191.2 million was allocated to the equalisation reserve and similar provisions.

Accident

Gross premium income for the accident line grew by 13.0% in the year under review to EUR 442.0 million (EUR 391.1 million). The net loss ratio rose to 54.5% (48.9%). The underwriting result came in at EUR 43.8 million (EUR 34.7 million). An allocation of EUR 9.1 million (EUR 13.3 million) was made to the equalisation reserve and similar provisions.

Motor

Gross premium for the motor line increased by 20.1% to EUR 2,945.2 million (EUR 2,452.3 million). The loss ratio retreated from 78.4% to 73.5%. The underwriting result closed at EUR -45.3 million (EUR -176.5 million). An amount of EUR 111.0 million was allocated to the equalisation reserve and similar provisions, after an allocation of EUR 27.5 million in the previous year.

Aviation

The gross premium volume grew by 14.3% to EUR 257.7 million (EUR 225.4 million). The loss ratio decreased to 45.8% (63.1%). The underwriting result came in at EUR 47.8 million (EUR 18.6 million). An amount of EUR 37.6 million (EUR 3.3 million) was allocated to the equalisation reserve and similar provisions in the year under review.

Marine

Gross premium income for the marine line increased in the year under review by 37.7% to EUR 453.5 million (EUR 329.3 million). The net loss ratio fell from 37.9% to 31.0%. The underwriting result improved to EUR 103.7 million (EUR 75.8 million). An amount of EUR 36.4 million was withdrawn from the equalisation reserve and similar provisions, following an allocation of EUR 9.8 million in the previous year.

Life

Gross premium income in the life line totalled EUR 4,757.9 million (EUR 4,236.5 million) in the period under review. Life and health reinsurance business has a clear international focus. We write our business on all continents and in many instances we are directly available as a local point of contact thanks to our extensive network. In addition to traditional mortality-oriented life reinsurance, we write financial solutions business as well as health and longevity risks on a worldwide basis. The increase is attributable largely to an improvement in the in-force Australian business as well as growth in Asia.

The underwriting result in life business amounted to altogether EUR 94.6 million (EUR 29.6 million) for the reporting period.

Other lines

The lines of health, credit and surety, other indemnity insurance and other property insurance are reported together under other lines. Other property insurance consists of the extended coverage, comprehensive householder's (contents), comprehensive householder's (buildings), burglary and robbery, water damage, plate glass, engineering, loss of profits, hail, livestock and windstorm lines. Other indemnity insurance encompasses legal protection, fidelity as well as other pure financial losses and property damage.

Gross premium income in the other lines grew by 23.7% to EUR 3,962.4 million (EUR 3,202.8 million). The net loss ratio increased from 65.6% to 73.7%. The underwriting result came in at EUR -119.5 million after EUR 269.3 million in the previous year. An amount of EUR 18.1 million (EUR 39.4 million) was allocated to the equalisation reserve and similar provisions.

Assets and financial position

Balance sheet structure of Hannover Rück SE

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in EUR thousand	2019	2018
Assets		
Intangible assets	61,751	65,655
Investments	40,597,263	36,874,145
Receivables	4,207,415	3,294,186
Other assets	414,329	417,488
Prepayments and accrued income	196,573	180,444
Total assets	45,477,331	40,831,918
Liabilities		
Subscribed capital	120,597	120,597
Capital reserve	880,608	880,608
Retained earnings	630,511	630,511
Disposable profit	1,377,000	1,336,000
Capital and reserves	3,008,716	2,967,716
Subordinated liabilities	2,250,000	1,500,000
Technical provisions	33,999,219	31,543,107
Provisions for other risks and charges	345,582	402,140
Deposits received from retrocessionaires	3,203,822	2,246,672
Other liabilities	2,669,992	2,172,283
Total liabilities	45,477,331	40,831,918

Our portfolio of assets under own management grew in the year under review to EUR 31.8 billion (EUR 28.7 billion), equivalent to an increase of 10.8%. Along with the positive operating cash flow, this reflects the issuance of a bond in the third quarter. The balance of unrealised gains on fixed-income securities and bond funds increased to EUR 1,001.2 million (EUR 366.6 million). Marked valuation increases as a consequence of lower interest rates and risk premiums on corporate bonds were key factors here.

Deposits with ceding companies, which are shown under the investments, climbed to EUR 8.8 billion (EUR 8.1 billion) in the year under review.

Our capital and reserves – excluding the disposable profit – stood at EUR 1,631.7 million (EUR 1,631.7 million). The total capital, reserves and technical provisions – comprised of the capital and reserves excluding disposable profit, the subordinated liabilities, the equalisation reserve and similar provisions as well as the net technical provisions – increased during the year under review to EUR 37,880.9 million (EUR 34,674.8 million). The balance sheet total of Hannover Rück SE grew to EUR 45.5 billion (EUR 40.8 billion).

A dividend of EUR 3.75 plus a special dividend of EUR 1.50 per share, equivalent to EUR 633.1 million (EUR 603.0 million), was paid out in the year under review for the 2018 financial year.

It will be proposed to the Annual General Meeting on 6 May 2020 that a dividend of EUR 4.00 plus a special dividend of EUR 1.50 per share should be paid for the 2019 financial year. This corresponds to a total distribution of EUR 663.3 million. The dividend proposal does not form part of this consolidated financial statement.

Risks and opportunities

The business development of Hannover Rück SE is essentially subject to the same risks and opportunities as that of the Hannover Re Group. As a general principle, Hannover Rück SE shares in the risks of participating interests and subsidiaries according to the amount of its respective holding; these risks are described in the risk report. The relations with participating interests of Hannover Rück SE may give rise to losses from legal or contractual contingent liabilities (particularly novation clauses and guarantees). Please see our explanatory remarks in the notes to this report.

Other information

We received an adequate consideration for all transactions with affiliated companies according to the circumstances of which we were aware at the time when the transactions were effected. We incurred no disadvantages as defined by § 311 Stock Corporation Act (AktG).

Hannover Rück SE maintains branches in Australia, Bahrain, Canada, China, France, Hong Kong, India, Korea, Malaysia, Sweden and the United Kingdom.

Outlook

In view of the interrelations between the parent company and the Group companies and the former's large share of business within the Group, we would refer here to our remarks contained in the section entitled "Outlook for 2020" on page 147 et seq., which also reflect the expectations for Hannover Rück SE.

Combined non-financial information statement

The combined non-financial information statement is a section of the report that the legislator has expressly exempted from the audit of the financial statements (§ 317 (2) Sentence 6 and Sentence 4 German Commercial Code (HGB); unaudited information). The combined non-financial information statement presented here has, however, been audited with limited assurance by the auditing firm of PricewaterhouseCoopers in accordance with the audit standard ISAE 3000 (Revised) (see here the Independent Auditor's Report on page 276 et seq.).

Introduction

The present combined non-financial information statement was drawn up in accordance with §§ 315c in conjunction with 289b to 289e German Commercial Code (HGB). It combines the disclosures for the Group and the parent company Hannover Rück SE. Unless presented separately, the disclosures are equally applicable to the Group and the parent company. The combined non-financial information statement contains the legally required information relating to significant environmental matters, employee matters, social matters, respect for human rights and combating corruption and bribery. Within these individual aspects, the underlying concepts and due diligence processes are discussed and available findings are reported. In addition, the combined non-financial information statement is to be used to report on material risks pursuant to § 289c (3) No. 3 and 4 German Commercial Code (HGB) to the extent necessary for an understanding of the business development, business result, position of Hannover Rück SE and the Group as well as of the implications for non-financial matters. In view of the fact that Hannover Re purposefully enters into numerous risks in the context of its business operations, it has put in place an extensive and effective risk management system. For a description of the risk management system please see the "Risk report" section under "Opportunity and risk report" in the combined management report.

Within the Hannover Re Group risks are evaluated after consideration of risk-mitigating measures. Neither the organisation established for sustainability management nor the risk management organisation were able to identify any material

non-financial risks that are linked to our own business activities or the company's business relations, products or services, are very likely to materialise and have or will have serious adverse implications for non-financial matters. Emerging risks, the content of which cannot yet be evaluated with any certainty, are monitored in the context of Group-wide risk management.

Hannover Re has defined exclusively financial management ratios and key performance indicators. For this reason, no non-financial performance indicators pursuant to § 289c (3) No. 5 German Commercial Code (HGB) are available that are relevant to the management of the Hannover Re Group's business.

Pursuant to § 315b (1) Sentence 3 German Commercial Code (HGB), reference is also made to non-financial disclosures provided elsewhere in the combined management report with respect to certain aspects. Unless otherwise stated, all disclosures refer to the Hannover Re Group.

References to information outside the combined management report and the consolidated and individual financial statement do not form part of the combined non-financial information statement.

The combined non-financial information statement is guided in the description of material contents by the internationally accepted framework of the Global Reporting Initiative (GRI) and reflects both the materiality definition of the GRI and that of the German Commercial Code (HGB). For information on the definition of materiality we would refer to the section entitled "Materiality analysis".

A detailed description of Hannover Re's sustainability efforts, which go above and beyond the legal requirements of the combined non-financial information statement, is provided in a separate sustainability report compiled annually by the Group on a voluntary basis in accordance with the GRI Standards.

Description of the business model

The description of the business model is provided in the section "Business model" under "Foundations of the Group" in the combined management report.

Strategic orientation

Our Group strategy encompasses ten strategic principles that apply to all business units and help to ensure realisation of our vision for the strategy cycle 2018 to 2020 “Creating value through reinsurance”. The objectives of our Group strategy are pursued in accordance with our holistic management system Performance Excellence 2.0. Based on the Excellence Model of the European Foundation for Quality Management (EFQM), this requires each organisational unit of our Group to explore and define its contribution to the Group strategy. In this way, we ensure that all initiatives and measures within our Group are rigorously linked to the Group strategy. Indicators for the status of target attainment are mapped centrally in our Target Matrix. For further details please see the section “Value-based management” in the combined management report.

Group strategy 2018–2020

1. We have ambitious economic growth targets
 - Generate a profit in excess of the cost of capital
 - Grow the premium volume (by more than the market average)
 - Generate an IFRS return on equity of at least 900 basis points above the risk-free interest rate
 - Outperform the Global Reinsurance Index (GloRe) over a three-year period
 - Consistently pay an attractive dividend
2. We are a preferred business partner
 - Enhance the commercial success of our clients through our risk solutions and services (attractive value proposition)
 - Maintain excellent ratings from the rating agencies most relevant to our industry
3. We aim for successful employees
 - Harmonise the size and skills of our workforce with the current and future requirements of our global market presence as well as with the requirements of increasing digitalisation
 - Foster motivation, dedication and teamwork through excellent leadership practices
 - Facilitate the greatest possible delegation of tasks, responsibilities and authority
 - Increase the proportion of women on all levels of management
4. We strive for an optimal balance between stability and yield of our investments
 - Achieve the target return – risk-free interest rate plus cost of capital
5. We manage risks actively
 - Ensure protection of capital through quantitative and qualitative risk management
6. We maintain an adequate level of capitalisation
 - Ensure that requirements for equity resources (economic capital model, solvency regulations etc.) are met
 - Optimise the overall cost of capital
 - Use special dividends to balance equity growth with profit growth
7. We conduct our business with lower costs than our competitors due to our high efficiency
 - Ensure a lower expense ratio than our competitors through an effective and efficient organisation
8. We support our business through efficient information technology and take advantage of digitalisation and automation
 - Develop new business opportunities on the basis of digitalisation and automation
 - Optimise internal processes and shape the interaction with our clients as efficiently as possible
9. We are committed to sustainability, integrity and compliance
 - Ensure conformity with all legal requirements, our own corporate policies and high ethical standards
 - Support social objectives particularly in the area of qualified training, not only within but also outside the company
 - Encourage sustainability in the transaction of our business, with a special focus on the avoidance of adverse impacts on the environment
10. We strive for Performance Excellence and continuous improvement
 - Ensure the rigorous derivation of strategic objectives across all areas of the company

As a company operating in the insurance industry, we are faced with a wide range of risks. We define our approach to these risks in our risk strategy, which is derived from the corporate strategy. Our risk management organisation is charged with implementation of the risk strategy. For a detailed description of our risk management please see the section “Risk report” on page 92 et seq. of the combined management report.

In response to the progressive digital transformation in the world of business over the coming years, we have developed an additional digitalisation strategy for the strategy cycle 2018-2020. This considers in detail the opportunities and risks associated with digitalisation – with an eye to both our business processes and our work as a reinsurer.

Sustainability also forms an integral part of our actions. Our goal is to harmonise our business operations with environmental and social requirements. To do this, we have refined our sustainability strategy as a complement to the guiding model of our Group strategy. This defines four action fields (Governance and Dialogue, Product Responsibility, Employees, Environment and Society) as well as concrete goals and measures, while also taking into account the main needs and interests of our stakeholders. Of particular relevance here are our customers, our investors and our employees.

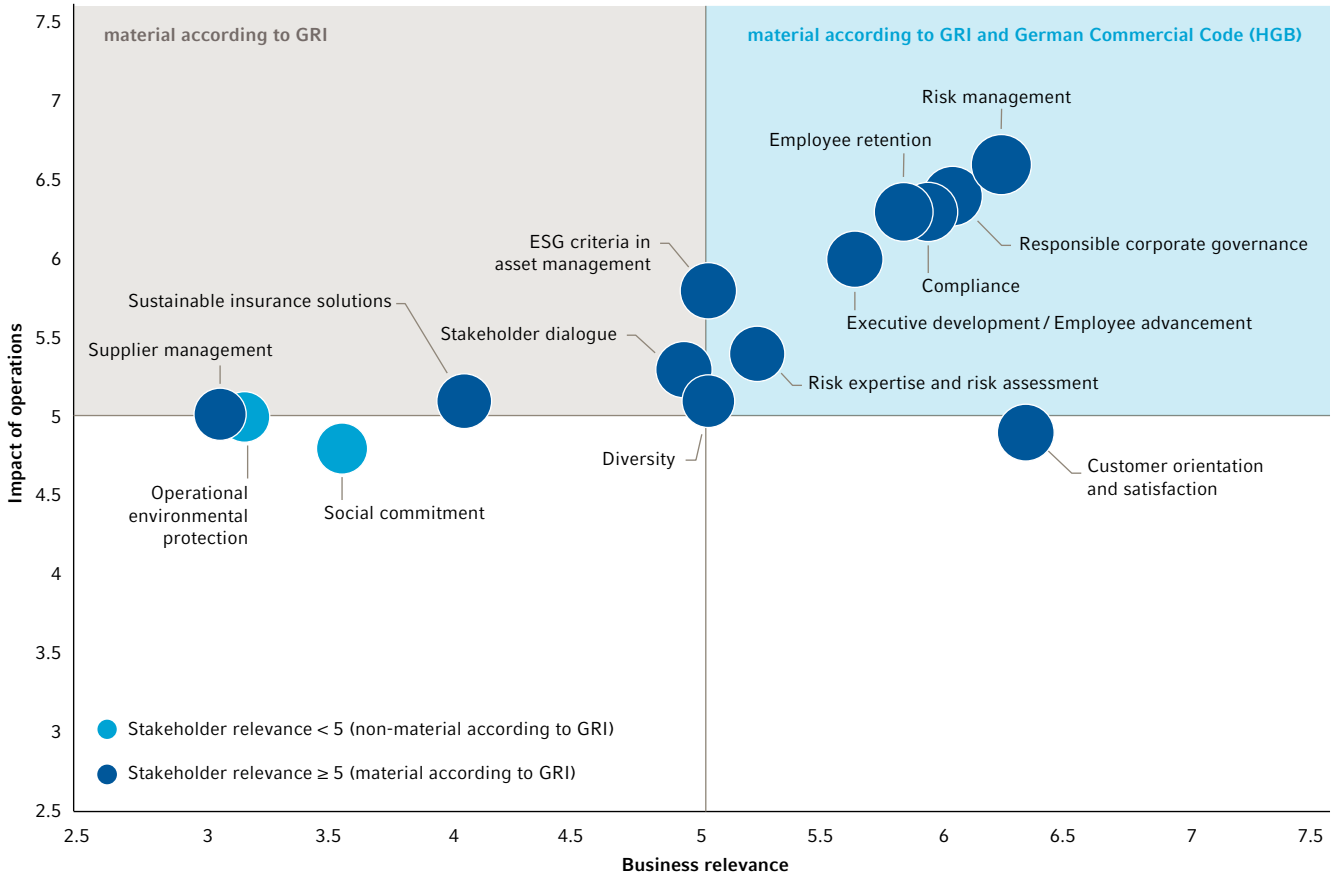
The sustainability strategy, goals and measures are examined, approved and regularly reviewed by the Executive Board. Sustainability measures are implemented on a decentralised basis in the various specialist and service departments. The coordination of strategic goals and measures as well as the collection of data for reporting purposes are handled by an interdisciplinary team composed of representatives of all relevant business units.

Materiality analysis

For the purpose of identifying material non-financial topics, we conducted a stakeholder survey and a materiality analysis most recently in 2018. These were carried over unchanged in the 2019 financial year as the basis for the present reporting. Representatives of the stakeholder groups comprised of customers, brokers, the capital market, employees, non-governmental organisations (NGOs) and the public sector were surveyed by means of an online questionnaire and telephone interviews. On this basis, our already existing materiality analysis was reviewed and adjusted in 2018. In this context, we took into account the various materiality approaches of the GRI, which constitutes the basis for our extensive annual sustainability report, and the German Commercial Code (HGB), on which this combined non-financial information statement is based. As a first step, we identified potential issues using internal sources and already received stakeholder feedback as well as information obtained from media analysis, a peer comparison and global standards. The issues were then categorised according to our four action fields in the context of the sustainability strategy. While the external survey developed on this basis focused on the relevance of these issues, the internal survey carried out among our employees included the additional dimensions “business relevance” and “impact of operations”. All three dimensions were rated on a scale of 1 to 7, with the lowest figure indicating very low relevance and the highest reflecting a very high degree of relevance. We considered issues rated 5.0 and higher to be material for our company within the meaning of this legislation. The survey findings were discussed and approved at an internal workshop attended by representatives of various specialist units and management.

In total, we thus identified 13 material sustainability aspects in 2018 in accordance with the German Commercial Code (HGB) and the GRI, which we discuss below in our combined non-financial information statement. The issues “Operational environmental protection”, “Customer orientation and satisfaction”, “Supplier management” and “Sustainable insurance solutions” are matters identified as non-material according to the dimensions of the German Commercial Code (HGB). They are, however, of considerable relevance to our stakeholders. For this reason, we also report on these aspects as part of this non-financial information statement on a voluntary basis and in conformity with the materiality approach of the GRI.

In addition, we report on the issues identified as material annually on a voluntary basis in our sustainability report compiled in accordance with the GRI.



Responsible corporate governance

As an internationally operating company, Hannover Re bears responsibility in various senses. This is true of compliance with relevant laws and regulations, but also applies to the relationship with staff, shareholders, the public at large and the cultures within which the company operates.

The material issue of “Responsible corporate governance” has a special connection to the aspect “Combating corruption and bribery”, which we expand to include aspects of corporate governance.

As a listed European company (Societas Europaea – SE) based in Germany, the formal framework that shapes Hannover Re’s corporate governance is determined by national law. The fundamental hallmarks of this corporate governance structure are a two-tier system with its transparent and effective split into management (Executive Board) and its oversight (Supervisory Board), the appointment of shareholder and employee representatives to the Supervisory Board and the rights of co-administration and supervision exercised by shareholders at the General Meeting. The interplay between these bodies is regulated by German stock corporation law and by the company’s Articles of Association. Furthermore, our Group Strategy, the Corporate Governance principles and our Code of Conduct form the basis of our enterprise management.

In addition to our continuous engagement with the changing general legal framework, since 2003 we have provided an annual Declaration of Conformity with the currently valid version of the German Corporate Governance Code (DCGK) as amended, which is published on our company’s website and reproduced in the present combined management report from page 120 et seq. onwards. The Corporate Governance principles of Hannover Rück SE are also subject to regular

review and fulfil the recommendations of the currently valid version of the German Corporate Governance Code as amended. The Corporate Governance principles of Hannover Rück SE applicable to the 2019 reporting year were approved by the Executive Board and Supervisory Board on 7 November 2017.

The basic principles governing the remuneration of members of the Executive Board and Supervisory Board as well as other incentive systems constitute important elements of responsible corporate governance. A detailed description of the remuneration scheme for both the Executive Board and Supervisory Board is provided in the “Remuneration report” on page 126 et seq. of the combined management report.

Given that the trust of our various stakeholder groups and an immaculate reputation advance the success of our company, we make every effort to continuously maintain an active dialogue with our stakeholders. For more information on the dialogue with stakeholders we would refer to the corresponding section. In our annually published sustainability report we provide regular updates on our achievements as a responsible enterprise. In so doing, we follow the currently applicable and internationally recognised guidelines of the GRI. In our sustainability communication we also fulfil the transparency requirements of environmental, social and governance (ESG) rating agencies, as reflected in the favourable evaluations of our company. Hannover Re is rated by the following rating agencies specialising in sustainability: FTSE4Good, Robeco SAM, ISS-oekom, Sustainalytics, Vigeo Eiris, CDP and MSCI. In addition, we are included in the FTSE4Good Index, the Global Challenges Index initiated by the Hannover Stock Exchange parent company BÖAG Börsen AG as well as in major STOXX indices.

The Sustainability Strategy 2018-2020 defines the following goals and measures with regard to this issue:

**Goal to be achieved by 2020:
Responsible corporate governance**

Goals	Measures	Status	Goal achievement/Outlook
Optimisation of sustainability management	Regular review and improvement of sustainability management	Ongoing process 2019: Peer comparison, tracking of new developments, processing of internal and external feedback	Stage completed in 2019 Achievement by 2020 realistic
	Implementation of a Web-based database for central recording of sustainability information	2019: Contract taken out and beginning of implementation	Stage completed in 2019 Achievement by 2020 realistic
Raising employee awareness of the topic of sustainability by expanding internal communication and developing a training concept	Maintaining the intranet and corporate website	Ongoing process 2019: Regular updating and provision of information	Stage completed in 2019 Achievement by 2020 realistic
	Provision of further information on sustainability	2019: Updating of the CSR fact sheet	Done
	Development of a training concept	2019: Elaboration of the training concept currently dormant	Stage not completed in 2019 Achievement by 2020 realistic
Enhancing our appeal in the eyes of ethical and sustainability-minded investors by participating in major sustainability ratings	Ongoing dialogue with rating agencies	Ongoing process 2019: Regular dialogue in connection with sustainability ratings (CDP, FTSE4Good, Sustainalytics, Vigeo Eiris, MSCI, ISS-oekom)	Stage completed in 2019 Achievement by 2020 realistic
	Inclusion in at least one sustainability index	2019: Continued listing in the FTSE4Good index 2019: Continued listing in the STOXX Index family	Stage completed in 2019 Achievement by 2020 realistic
Refinement and optimisation of reporting on sustainability topics in accordance with the GRI Standards	Publication of a sustainability report in accordance with the GRI Standards	2019: Publication of the sustainability report in accordance with the GRI Standards	Stage completed in 2019 Achievement by 2020 realistic
	Perform GAP analysis to identify and close gaps in content	2019: Revision of the management approaches, the presentation of material issues and the table of goals in the context of the Sustainability Report 2018	Done

Compliance

Any form of corrupt or unlawful behaviour causes considerable harm to society. Responsible corporate governance therefore also includes compliance with laws and ethical standards, promoting integrity, implementing risk and prevention systems as well as making ongoing efforts to raise awareness among employees and keep them informed.

We define “compliance” as the totality of all content-related and organisational safeguards that ensure lawful conduct on the part of the Hannover Re companies, the members of their governing bodies and their employees with regard to all legal and regulatory standards as well as the internal corporate policies in the respective areas of the organisation and operating processes.

The material issue of “Compliance” has a special connection to the aspects “Respect for human rights” and “Combating corruption and bribery”, which we expand to include compliance with legal and regulatory requirements.

Legally correct and responsible actions constitute the fundamental precondition for trust in our Group and its competitiveness. Our compliance management plays a pivotal role in this regard. The compliance function is one of the four key functions of the system of governance pursuant to the Solvency II Directive and an important element of the internal control system under the various rules and regulations governing European insurers and reinsurers. These include, for example, laws and regulations relating to environmental issues, fighting corruption, data privacy, information security and tax compliance as well as the Market Abuse Directive, the Solvency II Directive, the Insurance Supervision Act (VAG), the Securities Acquisition and Takeover Act (WpÜG), the Stock Corporation Act (AktG) and the Securities Trading Act (WpHG).

In addition, our company has its own Code of Conduct. Along with the Group Strategy and Corporate Governance Principles, this sets out rules for how our employees are to conduct themselves with integrity. It is reviewed both at regular intervals and if a concrete need arises and is approved by the Executive Board. The Code of Conduct is accepted by our employees as an integral component of their employment contract and hence has binding effect. It encompasses, among other things, specific rules of conduct in the form of instructions for the avoidance and disclosure of conflicts of interest, for the granting and acceptance of benefits, gifts and invitations, for the arrangement of donations and sponsorships as well as with respect to sideline activities and involvement in other companies and business transactions; furthermore, it makes specific reference to the prohibition of money laundering and the prohibition of other criminal acts.

The Corporate Compliance Organisational Manual summarises the major activities and defines the responsibilities within our company, the interfaces and the elements of the compliance organisation. Our compliance structure was reviewed most recently in 2015 against the backdrop of the compliance requirements associated with Solvency II; the Compliance Manual was modified most recently in the 2019 reporting year.

The Chief Compliance Officer works to ensure compliance with internal corporate policies by cooperating with other departments, including Group Auditing. A worldwide network of compliance officers reports to and supports the Chief Compliance Officer in his duties. With a view to improving cooperation within the compliance network on the European level, an annual gathering of European compliance officers is held. Conference calls also take place on a regular basis with the compliance officers at the international locations.

A web-based whistleblower system for the notification of possible violations is also in place for the companies within the Group. This enables employees, customers and third parties to report compliance violations anonymously in their local language or in English. Relevant tips and the countermeasures initiated are included in the annual compliance report. Tips that are brought directly to the attention of the compliance officers or submitted through the whistleblower system are analysed and steps are taken as necessary.

No lawsuits were filed against our company in the reporting period on grounds of anti-competitive behaviour, anti-trust or monopoly practices. Similarly, we were not required to pay any significant fines in the period under review due to violations of legal provisions; nor were any non-monetary sanctions imposed on our company.

The compliance officers verify observance of compliance standards on an ongoing basis and evaluate identified risks using a compliance risk matrix. The adequacy and effectiveness of the mitigating measures implemented for specific risks are reviewed in the context of monitoring procedures and steps are taken to optimise them when needed. The compliance officer must also be notified by staff of all suspicious cases.

Staff awareness is raised using various tools. As a general principle, all new employees receive compliance training when they join the Group. In the 2019 reporting year, four training activities were held for altogether 113 employees. The Compliance department and the Chief Compliance Officer keep employees informed of changes in legislation, insofar as they affect their work. In addition, traditional communication channels including intranet portals and online newsletters are used to keep staff updated on compliance-related issues. As a listed company, our employees are also required to respect rules on insider trading. The compliance

team makes staff aware of these rules and points out blocking periods during which shares may not be traded.

Generally speaking, the risk of human rights violations – another non-financial aspect – in connection with our business operations is minimal. We have nevertheless put special emphasis on respect for human rights within the supply chain. For further information we would refer to the section “Supplier management”.

With the aid of our Tax Guideline, which applies throughout the Group, a Tax Compliance System that is currently under development and the associated review of all relevant task areas, processes and responsibilities, we want to ensure – going forward, as in the past – that despite growing complexity we satisfy tax liabilities arising out of our international business operations in accordance with the respective national legal requirements.

Data privacy and security

As part of our business activities we process and store personal data. The data are required primarily in the context of underwriting, for providing customer and contract-related services as well as in claims and benefit management. Furthermore, personal data are collected, processed and stored in connection with, among other things, human resources management and shareholder administration. We also process personal data in order to assert our own legitimate interests or those of third parties. In particular, this may be necessary in order to safeguard IT security and IT operations and to meet official requirements.

It is incumbent on the Hannover Re Group to uphold the statutory data privacy rights of data subjects, and we have implemented appropriate policies and procedures for this purpose. This includes the requirement that personal data may only be collected, processed and stored by Group employees to the extent that this is necessary for a precisely defined purpose as part of their lawful task fulfilment or a corresponding basis exists in law.

We make use of external service providers to some extent in order to perform our contractual and statutory duties. These external data recipients are to be viewed as part of the data processing operations, as is the case with brokers, outside experts, business partners etc. All external recipients are contractually bound to comply with statutory data protection requirements and are checked in this regard.

The EU General Data Protection Regulation (GDPR) does not directly affect all Hannover Re companies if their registered office is located outside the European Union or European Economic Area. The respective national legal frameworks are primarily determinative for these companies.

The existing structures of the established compliance organisation are used to implement the minimum standards required by data privacy law. Irrespective of the scope of application of the GDPR, the designated compliance officers and contact persons are responsible for local data protection requirements. As necessary, they draw up additional local data privacy guidelines and serve as the interface to the Data Protection Officer at Hannover Re in Germany.

The Data Protection Officer coordinates overarching aspects of the data privacy management system installed within the Hannover Re Group. He gives advice on how to resolve specific data privacy issues and monitors compliance with the GDPR and other data protection standards.

In this context, the monitoring of data privacy requirements takes place in close coordination with Group Auditing. The findings of the separate reporting on data protection are integrated into the compliance report. No complaints were made about privacy breaches affecting personal data or the loss of such data during the period under review. There was therefore no requirement to fulfil the duty to notify data breaches pursuant to Articles 33 and 34 of the GDPR.

An information security management system geared to ISO 27001 has been set up Group-wide for operational assurance of the protection requirements under data privacy law as well as for ensuring the security of all other sensitive information within the company. In organisational terms, information security management is coordinated centrally by the Group Information Security function and incorporates all other relevant functions, including for example Group IT for matters of IT security or Facility Management with respect to building security. In addition, awareness among our employees of such security risks is raised through practically oriented assistance measures, training activities and information provided to staff.

Our employees regularly undergo training sessions in matters of data protection and information security, including in the form of Web-based training and face-to-face instruction. The latest information on these topics is also made available to staff through internal company media on a regular basis.

In addition, we participate in various cooperative projects undertaken by our industry and engage in a regular dialogue with advocacy groups such as the Bundesverband der IT-Anwender e.V. in the context of the Cyber Security Competence Center.

Observance of sanctions regulations

Observance of applicable sanctions regulations plays a central role for us on account of our international orientation. We have enshrined compliance with relevant sanctions provisions in our Code of Conduct and Underwriting Guidelines. In addition, a Sanctions Guideline is in place, stipulating when members of staff must perform sanctions screening with respect to the initiation of contracts and/or the payment of claims. A software-supported check continuously verifies whether the company's data inventories include the names of persons who are subject to sanctions and hence with whom no business may be transacted. Each working day staff in Group Legal Services check the Official Journal of the Euro-

pean Union for changes in sanctions law on the EU level and publicise relevant changes Group-wide without delay.

The compliance training given to new members of staff also includes basic instruction in sanctions law. New underwriters and claims managers receive additional training in the use of the screening software as well as in the scenarios in which a sanctions check must be made. In addition, all underwriting and accounting departments received training in the topic of trade embargos in the year under review.

The Sustainability Strategy 2018-2020 defines the following goals and measures with regard to this issue:

Goal to be achieved by 2020: Compliance

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Goals	Measures	Status	Goal achievement/Outlook
Optimisation of compliance management	Revision of the Compliance Manual	2019: Revised and approved by the Executive Board	Done
	Optimised classification of compliance risks	2019: Revision of the compliance risk matrix used to evaluate identified compliance risks	Done
		Ongoing process	Ongoing
		The adequacy and effectiveness of the mitigating measures geared to each risk is subject to continuous analysis. The optimisations identified in the context of these monitoring procedures were implemented	
	Deployment of a Group-wide compliance plan	2019: Roll-out of the Group-wide compliance plan, which is to be deployed for the first time in 2020	Stage completed in 2019 Achievement by 2020 realistic
	Closer cooperation with the compliance officers at the international locations	Ongoing process	Stage completed in 2019
		Exchange of views in the context of the European Compliance Officer meetings and regular teleconferences	Achievement by 2020 realistic
		Stepping up of cooperation between compliance officers at the Local Offices and their contacts in the compliance function at the Group's head office	

Risk management

Our business model has a long-term orientation. Many of the risks that we enter into in the course of our business activities exist over years or even decades. Our customers in the primary insurance sectors rely on us to conduct our business sustainably and with a focus on risk in order to ensure that we are able to meet the payment commitments that we have given over the long term with a high degree of assurance.

Risk management is a vital tool for safeguarding our company's enduring financial and economic stability. It involves monitoring and steering all financial and entrepreneurial risks that we take on in the context of our business operations. A detailed description is provided in the section "Risk report" on page 92 et seq. of the combined management report.

Stakeholder dialogue

The trust of our stakeholders and an immaculate reputation support the success of our company. At the same time, we strive for full and transparent communication in the interest of good corporate governance. With this in mind, we consistently make every effort to cultivate an active dialogue with our stakeholders. By sharing information and opinions with the company's various stakeholder groups, we are able to integrate, as far as possible, their expectations and aspirations into our business operations. Furthermore, this dialogue helps us to identify risks and opportunities at an early stage and serves to build trust.

The material issue of "Stakeholder dialogue" has a special connection with all aspects because we communicate about all issues with various stakeholders.

We maintain an open and ongoing dialogue with our stakeholders. Key stakeholders are determined by our business operations and our geographical presence. The following stakeholder groups are particularly relevant to us: our clients, our employees, the capital market, the public sector and non-governmental organisations (NGOs).

Through conferences, roadshows and one-to-one meetings, we stay in contact with representatives of the capital market, financial and ESG rating agencies and private investors. In addition, analysts and institutional investors use our annual Investors' Day and the analysts' conference to participate in an intensive exchange with management. Our employees engage with our worldwide customers through direct, face-to-face discussions. For further information we would refer to the section "Customer orientation and satisfaction".

We similarly engage in an ongoing dialogue with political decision-makers, supervisory authorities and insurance industry associations – mostly in relation to topical issues in insurance supervision and financial market regulation in Germany, the EU and on the wider international level.

Furthermore, we take part in various initiatives that address the financial costs of natural disasters in developing and emerging countries due to underinsurance. To this end, we engage in an exchange with state actors such as the Federal Ministry for Economic Cooperation and Development and we work with the German Corporation for International Cooperation (GIZ). In addition, we participate in the Munich Climate Insurance Initiative (MCII) and we are a member of the Insurance Development Forum, the CRO Forum and the "Extreme Events and Climate Risks" working group of the Geneva Association.

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

Goal to be achieved by 2020: Stakeholder dialogue

M 47

Goals	Measures	Status	Goal achievement/Outlook
Intensification of the stakeholder dialogue	Regular dialogue with stakeholders	Ongoing process	Stage completed in 2019
		2019: Further continuous exchange of views with our stakeholders	Achievement by 2020 realistic
		Holding of an Investors' Day and an analysts' conference, participation in capital market conferences, organisation of roadshows as well as numerous one-to-one conference calls with investors	

Risk expertise and risk assessment

As a reinsurance undertaking, we knowingly enter into a broad range of risks in the context of our business operations. Our commercial success is crucially dependent on the correct assessment, management and monitoring of these risks. The risk assessment process entails the constant monitoring and analysis of new and emerging risks, trends and future-related factors. Sustainability aspects traditionally play a role here. Both in our investing activities and in our insurance business we rely upon our ability to evaluate and assure the lasting

intrinsic value of the business relationship. Essentially, then, sustainability and our risk management share a similar goal.

Our activities relating to the material issue of “Risk expertise and risk assessment” have particular implications for the aspects “Environmental matters” and “Social matters”, since in this respect we offer relevant services and provide insurance solutions and expert know-how.

The Sustainability Strategy 2018-2020 defines the following goals and measures with regard to this issue:

Goal to be achieved by 2020:

Risk expertise and risk assessment

M 48

Goals	Measures	Status	Goal achievement/Outlook
Refinement of risk management, including in relation to ESG risks	Intensification of internal communication and expansion of expertise	Ongoing process, raising of awareness about ESG risks in regular internal risk reporting Provision of comprehensive information on emerging risks that is accessible to all employees. Regular updating of the contents 2019: Release of the position paper on emerging risks entitled “Advances in Medicine” Internal study carried out into the risks posed by climate change	Stage completed in 2019 Achievement by 2020 realistic
Intensification of knowledge sharing about emerging risks with our customers, partners, universities and research institutes	Active involvement in various working groups and participation in conferences	Active member of the Risk Management Steering Group of the Insurance Development Forum (IDF) Sponsorship of the Global Earthquake Model Foundation 2019: Publication of 15 earthquake models completed, finalisation and publication of all GEM EQ models planned for 2020 Support for the development of research programmes, regular publications and organisation of international meetings as a member of the Geneva Association Working Group on “Climate Change and Emerging Environmental Topics” 2019: Support for the further refinement of catastrophe models to assess the effects of climate change	Stage completed in 2019 Achievement by 2020 realistic
	Knowledge sharing through publications	Support for publications of the CRO Forum and research into climate-related risks	Stage completed in 2019 Achievement by 2020 realistic

Sustainable insurance solutions

The consideration given to sustainability in our business operations relates principally to our reinsurance products and services as well as the management of our investments; it is taking on added importance given the growing awareness among the general public of sustainability issues. At its very heart, the business of insurance involves cushioning the burden caused by loss events and providing financial protection for companies and private individuals alike through the transfer and spreading of risks. In this way, we are able to prevent risks adversely impacting society and our company.

Our activities relating to the material issue of “Sustainable insurance solutions” have particular implications for the aspects “Environmental matters” and “Social matters”, since in this respect we offer relevant services and provide insurance solutions and expert know-how.

Our business activities do not give rise to any direct negative impacts on society or the environment. Rather, our reinsurance services help to ensure that societal and environmental risks can be adequately insured and that the effects in the event of loss or damage can be rectified or mitigated. Often, it is only the backing of internationally operating reinsurers such as Hannover Re that enables primary insurers to cover large individual risks and the risks associated with natural perils. We thereby help to increase insurance density, especially in emerging and developing countries, and promote social and financial inclusion. Furthermore, by offering reinsurance solutions and supporting primary insurance solutions, we are able to respond to the opportunities and risks associated with these issues and come up with innovations. Consequently, we support sustainable insurance and reinsurance solutions that are designed to minimise negative environmental and social repercussions. It is also important to bear in mind the potential indirect environmental and social effects of reinsurance business. Extensive exclusions, on the other hand, can actually cause the protection gap to grow inasmuch as risks are no longer adequately covered in the future. It is therefore vital to consider possible implications from a range of perspectives.

In property and casualty reinsurance we support the increased use of renewable energy sources, ranging from wind power generated both onshore and offshore to photovoltaic and geothermal energy. Insurance protection begins with plant construction and accompanies the customer through many years of operation. Furthermore, we encourage the expansion of products in response to climate change, such as weather insurance and coverage for energy-saving warranties, and by delivering insurance solutions in areas such as microinsurance and agricultural risks we also play a part in the societal development of more structurally deprived regions. In this way, we enable people with scant financial means to protect themselves against fundamental risks such as illness, disability, impacts of natural disasters or crop failures. We are also taking an active part in the development of index-based disaster finance concepts that guarantee rapid financial assistance for countries in South America and Asia in the event of natural disasters.

At the same time, we play our part in minimising adverse impacts. Our underwriting guidelines are revised regularly to reflect the latest developments. In April 2019 we took a conscious decision with respect to stand-alone risks that – as a general principle – we will no longer provide reinsurance coverage for any planned new coal-fired power plants or thermal coal mines. Furthermore, we are aiming for a phased exit such that by the year 2038 we no longer cover any coal-based risks in connection with mining or power generation in our entire property and casualty reinsurance portfolio.

In life and health reinsurance, demographic changes around the world are leading to stronger demand for the reinsurance of longevity risks. We are also seeing rising demand for so-called lifestyle products, which principally involve insurance solutions under which the premium is linked to an insured’s healthy lifestyle (e.g. fitness and nutritional habits).

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

**Goal to be achieved by 2020:
Sustainable insurance solutions**

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Goals	Measures	Status	Goal achievement/Outlook	
Supporting, developing and expanding sustainable insurance solutions	Reduction of exposure to fossil fuels	2019: Policy decision in relation to individual risks (facultative reinsurance) to stop reinsuring any planned new coal-fired power plants or thermal coal mines with immediate effect. In addition, no further reinsurance of coal-related risks in the entire property and casualty reinsurance portfolio in connection with coal mining and coal-fired power generation (phased withdrawal by 2038 targeted)	Stage completed in 2019	
	Increased involvement in renewable energy	Additional staffing in the relevant market department and associated increase in written treaties Support for our Asian clients in offshore wind business	Stage completed in 2019 Achievement by 2020 realistic	
	Support for various sustainable initiatives, including in developing and emerging countries	Ongoing 2019: Cooperation with the Federal Ministry for Economic Cooperation and Development and the UK Department for International Development on the launch of a Natural Disaster Fund (NDF) to further reduce the protection gap in emerging and developing countries through a parametric cover to protect against the impacts of climate change and other natural disasters 2019: Continued support for weather-related products as well as insurance solutions for renewable energy sources such as solar, hydro and wind	Stage completed in 2019 Achievement by 2020 realistic	
	Expansion of sustainable insurance solutions in the Life & Health sector	Further development of "Parents Pocket Money Protection" solution for the South African market; product implementation at multiple customers		Stage completed in 2019 Achievement by 2020 realistic
		Information seminars for customers in Asia on the subject of longevity protection (to help combat poverty among the elderly)		
Expansion of critical illness solutions, especially in China				
		Expansion of microinsurance solutions, especially in Latin America		

ESG criteria in asset management

Along with our direct impacts on the environment and society, we are able to make a positive contribution to sustainable development through our investing activities by pursuing an investment policy that avoids companies which engage in unethical behaviour or fail to live up to environmental and social standards.

In accordance with our investment policy, we strive for stable, fair market returns in order to be able to meet our underwriting commitments and liquidity requirements at all times while preserving a balanced risk/return profile and broad

diversification. Furthermore, we attach considerable importance to our sustainability approach by incorporating environmental, social and governance aspects (ESG criteria).

Our activities relating to the material issue of "ESG criteria in asset management" have implications for all aspects.

Since as long ago as 2011 we have been applying sustainability criteria in the investment sector; they are continuously refined and set out in writing in our "Responsible Investment Policy". An ESG officer on the investment team ensures the development and application of ESG criteria and implementation of the policy. The investment team reports major con-

tents and results of the sustainability approach as well as any changes directly to the Chief Financial Officer, and they are discussed and approved by the Investment Committee or the full Executive Board. Two members of the Executive Board sit on the Investment Committee.

Within our portfolio of assets under own management, the fixed-income securities (government and semi-government bonds, corporate bonds and covered bonds) and listed equities have been subject to half-yearly negative screening since 2012. As at the reference date of 31 December 2019 these investment classes accounted for roughly 86% of our asset portfolio. The ten principles of the United Nations Global Compact are a decisive factor in guiding our reviews. Companies that fail to respect human rights or are complicit in human rights abuses are in violation of fundamental principles of the United Nations. Instruments issued by such entities are ruled out for our investment purposes, as are issuers that disregard basic labour standards and environmental protection considerations. Lastly, exposures to companies that have been noted for their use of compulsory/child labour or their involvement in discrimination or corruption are also excluded. In our review of government issuers, the focus is on whether they are currently subject to sanctions imposed by the United Nations or the European Union.

The qualitative evaluation of our investments is additionally based on individual ESG criteria that we have developed and continuously review in cooperation with a financial services provider specialising in sustainability. Securities of issuers identified as “non-adequate” are actively scaled back. In addition, potential new investments are checked in advance to see whether the issuers violate the defined ESG criteria. Such exposure is rejected if this is found to be the case.

As to the criterion of “controversial weapons”, we rule out issuers who are involved in the development and proliferation of particularly cruel weapons. In the fossil fuels sector the exclusion criterion applies to issuers who generate 25% or more of their turnover from coal mining, coal-based energy generation or oil sands extraction.

Only around 10 percent of our total asset portfolio cannot be classified according to the aforementioned methodology and criteria. This includes, most notably, investments in real estate and private equity, which given their nature or structure can scarcely be measured reliably according to the ESG criteria that we use as a basis. In some instances, however, these assets also contribute to sustainable development; this is the case, for example, with real estate that has relevant certifications, sustainable products in the infrastructure sector or indeed impact investments.

Implementation of the best-in-class investment approach was completed in the year under review. Through regular measurement of the asset’s portfolio’s sustainability quality, we

will be able going forward to structure the portfolio more sustainably with a focus on corporate bonds and minimise ESG risks.

We are increasingly supplementing the aforementioned measures in the existing asset portfolio with active participations in sustainable investments. With this in mind, a budget was created in 2019 for investment in impact investment funds. The explicit objective here is to achieve appreciable improvements through the broadest possible coverage of the United Nations Social Development Goals (SDGs), inter alia in the fields of food security and nutrition, education, health and well-being, ending poverty, climate action etc. In the course of 2019 we already subscribed to six impact funds.

In addition, we invest in renewables both through funds and directly in the infrastructure sector as well as in sustainable forest and agriculture funds.

Given that the proportion of listed equities in our asset portfolio currently accounts for less than 1% of our investments under own management, we have not adopted any voting guidelines to date on environmental and social issues in connection with the sustainable orientation of our investments, nor have we defined any corresponding processes or measures. Should the proportion of listed equities in our portfolio increase significantly, we shall revisit the topic of active ownership.

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

**Goal to be achieved by 2020:
ESG criteria in asset management**

Goals	Measures	Status	Goal achievement/Outlook
Refinement of the sustainability approach in asset management	Use of exclusion criteria	Ongoing: Exclusion of issuers that violate the principles of the UN Global Compact	Stage completed in 2019
		Ongoing: Exclusion of issuers that generate 25% or more of their turnover from coal mining, coal-fired power generation or oil sands extraction	Achievement by 2020 realistic
		Ongoing: Exclusion of issuers involved in the development and proliferation of controversial weapons	
	Negative screening	Ongoing: Half-yearly negative screening of our fixed-income securities (government and semi-government bonds, corporate bonds and covered bonds) as well as listed equities	Stage completed in 2019 Achievement by 2020 realistic
	Application of a best-in-class approach	Ongoing: Since 2019 half-yearly positive screening and evaluation of the sustainability quality of the investment portfolio	Stage completed in 2019 Achievement by 2020 realistic

Customer orientation and satisfaction

It is crucial to our company's success that we are perceived by our customers as a preferred business partner. If we are to achieve this, we must offer prices commensurate with the risks, adequate capacities and a reliable value proposition. In addition, we foster an active dialogue with our clients. In the context of customer events we initiate an exchange of knowledge on current insurance topics and developments and we enable our customers to give feedback on our products and services in face-to-face discussions.

The issue of "Customer orientation and satisfaction" does not have implications for the aspects pursuant to the German Commercial Code (HGB). We therefore consider and report on the topic voluntarily in view of its strategic relevance.

Customer relationships at our company are normally managed on the level of individual divisions. In property and casualty reinsurance we cultivate our customer relationships both through reinsurance brokers and directly by making regular business trips or holding videoconferences. Furthermore, our employees attend trade fairs and expert conferences worldwide. In life and health reinsurance we have a direct local presence in most markets due to our decentralised approach and are thus able to quickly engage with our customers. In addition to business trips to visit individual clients, we also organise seminars – usually on specific topics – and training workshops in the markets where we operate so as to keep our customers informed about the latest issues and developments relating to life and health reinsurance as well as underwriting.

We conduct regular surveys to measure the satisfaction of our customers – not only independently but also with the support of external market research institutes when it comes to certain markets. In view of the importance that we attach to accommodating the specific features of individual markets, we consciously do not carry out any general uniform survey of customer satisfaction on a global basis across all our divisions. We process the results of our customer surveys and studies in-house so as to identify potential action fields. The steps taken have not only served to improve the perception of our brand, they have also made our services and products stronger. In recent years, for example, we have enhanced our automated underwriting systems according to the wishes of our customers and we have brought new product ideas to market.

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

**Goal to be achieved by 2020:
Customer orientation and satisfaction**

M 51

Goals	Measures	Status	Goal achievement/Outlook
Fostering customer dialogue, including on ESG-related topics	Sharing knowledge about ESG topics	Ongoing, active knowledge sharing with our customers by way of product- and/or market-specific seminars and workshops (see "Sustainable insurance solutions")	Stage completed in 2019 Achievement by 2020 realistic

Employees

The success of any company is directly dependent on the successful work of its employees. For its part, too, Hannover Re makes systematic efforts to support the professional development, personal growth and wellness of its staff, an approach that it enshrines in strategic principles governing human resources management. Just like other companies, however, we currently face a range of challenges. For some time now, for example, the shortage of skilled workers has been worsening – along with the competition to recruit the best people. This goes hand-in-hand with the fact that employees base their decision to join an employer not only on purely monetary aspects but also on other factors including, for example, the company's reputation, the availability of development opportunities and fringe benefits. Issues such as demographic change, the rapid transformation of the working world as well as the digitalisation and automation of work processes are also increasingly shaping human resources management.

In the context of our materiality process we have identified issues in the areas of executive development/employee advancement, employee retention and diversity as material. These have a special connection with the aspects "Employee matters" and "Respect for human rights".

Executive development/ Employee advancement

We pay particularly close attention to the qualifications, experience and commitment of our staff. Our strategic human resources planning enables us to harmonise the size and skills of our workforce with the current and future requirements of our global market presence as well as with the requirements of increasing digitalisation.

We employed 3,083 staff (previous year: 3,317) Group-wide as at the end of the year under review. Hannover Re continued to expand its workforce in the reporting period. The reported decrease in the number of employees was due to a change in the consolidated group resulting from the transfer

of International Insurance Company of Hannover Ltd. (IICH SE) with altogether 206 staff as well as of Svedea AB with 147 staff to HDI Global Specialty.

Number of employees by country

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Country	2019	2018
Germany	1,396	1,426
South Africa	466	479
United Kingdom	329	371
United States	283	293
Australia	117	113
China	93	86
Malaysia	81	74
France	67	56
Ireland	52	46
Sweden	47	227
Bermuda	47	44
Bahrain	45	46
India	25	18
Canada	24	27
Korea	9	9
Luxembourg	2	2
Total	3,083	3,317

Breakdown of employees by country and gender

M 53

Country	2019		2018	
	Men	Women	Men	Women
Germany	47.7%	52.3%	47.1%	52.9%
South Africa	29.0%	71.0%	29.0%	71.0%
United Kingdom	59.3%	40.7%	59.6%	40.4%
United States	52.3%	47.7%	51.5%	48.5%
Sweden	34.0%	66.0%	51.1%	48.9%
Australia	43.6%	56.4%	48.7%	51.3%
China	49.5%	50.5%	50.0%	50.0%
Malaysia	43.2%	56.8%	39.2%	60.8%
France	46.3%	53.7%	48.2%	51.8%
Bahrain	53.3%	46.7%	54.3%	45.7%
Ireland	46.2%	53.8%	43.5%	56.5%
Bermuda	59.6%	40.4%	59.1%	40.9%
Canada	41.7%	58.3%	51.9%	48.1%
India	72.0%	28.0%	66.7%	33.3%
Korea	77.8%	22.2%	77.8%	22.2%
Luxembourg	50.0%	50.0%	50.0%	50.0%
Total	46.5%	53.5%	47.0%	53.0%

As a global entity, we are able to offer our employees an attractive workplace that fosters motivation, dedication and teamwork. Our attractiveness as an employer is further reinforced by systematic career development programmes.

The basis of our common corporate culture is the greatest possible delegation of tasks, responsibilities and authority. In this way we ensure that our employees are able to act in a quick and flexible manner. We support this with leadership according to management principles and through management by objectives, and we expect our managers to instil a sense of individual accountability in their staff. Our managers therefore play a particularly important role.

Where qualifications are equivalent, vacant management posts are filled whenever possible from within our own ranks, and we therefore consider leadership potential even at the recruitment stage. As part of a standardised process that takes place every other year at the Hannover location, all positions from management level (General Manager/Director) upwards are reviewed at corporate headquarters and at selected international entities. With a view to achieving a better gender balance we strive for an increasing proportion of women on all levels of management.

When it comes to expanding and establishing our personnel development measures, we set particularly great store by a range of activities tailored to specific needs and target groups. Our programme of further training, which is open to all em-

ployees, encompasses above all offerings in the fields of reinsurance, information technology, social and methodological skills as well as language courses. The programme is continuously reviewed and extended.

In the financial year just ended we continued to focus in particular on the changing world of work. Our executives took the opportunity to explore change management and agility through various formats in order to apply relevant aspects in their daily working life where it makes sense to do so. Basic knowledge was communicated in a popular two-day seminar; the scope for application could be explored in all its facets – along with other topics – in the context of our tried and trusted, needs-based “practical training days” or examined in concrete terms by way of department-specific workshops. We also continued to cover the subject of “Wellness - Management Task and Individual Responsibility” and we offered workshops on issues in employment law with a bearing on management.

The sustained demand for appropriate seminars and workshops geared to enhancing resilience and relaxation skills is a testament to the need for our preventive wellness measures among managers and staff alike. They continued to be complemented by our Employee Assistance Programme offering external and anonymous immediate counselling on personal, professional and health concerns as well as access to a service for families.

Furthermore, our communication seminars such as “International negotiations”, “Intercultural skills” and “Mastering difficult dialogue situations” as well as the topically entitled “Dealing with complexity” stimulated lively interest among the workforce. This gives us added motivation to keep addressing topical issues within the company and thereby also to fulfil the requirements placed not only on insurers but also on reinsurance undertakings by the Insurance Distribution Directive.

Staff at our Hannover head office also enjoy access to an extensive range of fitness opportunities, including company sports groups dedicated to various types of sport and cooperation arrangements with fitness studios. When it comes to individual workstations, we take care to provide an optimal room layout and ergonomic furnishings.

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

Goal to be achieved by 2020:

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Executive development/Employee advancement

Goals	Measures	Status	Goal achievement/Outlook
Optimisation of further training measures for specialist staff and executives	Encouraging all staff to participate in training activities	2018: The average number of training days per employee at the Hannover location was 4.4. The number of training days per employee for the 2019 financial year had not yet been fully recorded as at the balance sheet date. An adequate basis is not currently available for the collection of valid figures and statements regarding the average number of training days Group-wide, which means that this figure cannot be reliably established	–
	Review and refinement of the range of training opportunities for all employees	Ongoing, 2019: Continuing offer of an Employee Assistance Programme 2019: Preventive seminars geared to enhancing resilience and relaxation skills offered and well attended on multiple occasions 2019: Continuation of the workshop “Fit for changes” in response to the changing world of work	Stage completed in 2019 Achievement by 2020 realistic

Employee retention

We set great store by enabling our employees to strike a healthy balance between their professional and private life. With this in mind, we offer part-time and teleworking models that can be individually structured and flexible working-time arrangements without core hours. Through this flexibility we want to make it easier for our employees to organise everyday life in phases such as starting a family or preparing for the end of their professional career, e.g. through partial retirement arrangements. These benefits are reflected in a low staff turnover rate and the long periods of time that our employees stay with the Group.

Starting in 2019, we began to offer employees another option for improving the flexibility of their working world – both in terms of time and location – in the form of “mobile working”. Mobile working refers to the possibility of performing work – outside of formal teleworking models – at a location other than the company workplace as warranted and on a time-limited basis. All that is required is mutual agreement between the supervisor and the employee. We also operate our own

company daycare centre at the Hannover location that provides all-day care for infants up to the age of three. In this regard we conducted another supply and demand analysis in 2019 and decided to explore how this offer can be expanded – a project that is to be continued in 2020. We attach great importance to the satisfaction of our employees in order to remain a consistently attractive employer. With this in mind, we carried out another international employee survey in 2019, the so-called “Organizational Health Check”. Both the good rate of participation – at altogether 64% of all managers and staff – and the positive survey results virtually across the board gave grounds for satisfaction. Nevertheless, this employee survey will once again prompt us to devise measures to bring about further improvement in the identified action fields.

Our employees are paid according to their specific tasks, their skills and qualifications and their performance. At the same time, employees in Germany benefit from the security and advantages of the collective agreement for the private insurance industry. 94% of our employees at the Hannover location are covered by the collective bargaining agreement.

The remaining 6% can be attributed to some non-collective agreements with managers.

Furthermore, we offer our employees a number of additional voluntary benefits. All members of our staff are granted the same benefits in proportion to their working hours.

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

**Goal to be achieved by 2020:
Employee retention**

M 55

Goals	Measures	Status	Goal achievement/Outlook
Maintaining strong employee affinity	Ongoing employee retention management	Ongoing: Measures such as those to enable more flexible working in terms of time and place, promoting a work/life balance, fair remuneration, fringe benefits 2019: Staff turnover rate at the Hannover location 2.7% (target: 3-5%)	Stage completed in 2019 Achievement by 2020 realistic
Holding of Group-wide employee surveys on a recurring basis	Conducting employee surveys	2019: Group-wide employee survey conducted as part of the Organizational Health Check with a participation rate of 64% (target for employee surveys: 60%)	Stage completed in 2019 Achievement by 2020 realistic

Diversity

One of the cornerstones of our successful business activities, along with our employees' skills and commitment, is a considerable degree of diversity in the workforce. At our Hannover location, for example, the members of staff came from altogether 44 different nations as at 31 December 2019 – a reflection of the international dimension of our operations. Our worldwide Code of Conduct stipulates that nobody may be disadvantaged on grounds of his or her gender, ethnic origin, religion or ideology, disability, age or sexual persuasion. Salary increases and promotions follow a clearly defined process. Our employees are paid according to their specific tasks, their skills and qualifications and their performance.

Diversity and the advancement of women are topics that have come under increasing public scrutiny in recent years. Within the Hannover Re Group, too, it is evident that women are under-represented in the company's higher hierarchical levels. In 2019 we therefore launched another implementation round of our in-house mentoring programme for women at the Hannover location. The specific focus of the internal mentoring programme on a purely female group of participants is part of our initiative to give targeted support to promising junior female managers by raising their profile in the organisation and fostering their abilities on an individual basis. The number of participants was expanded to nine mentoring tandems. Female employees (mentees) are paired with senior managers (mentors) for a period of twelve months to engage in a targeted, regular dialogue. In the course of the mentoring programme the mentees are encouraged to reflect on their professional development to date and to take steps to actively shape their future career. They also gain insights into new

fields of work and are able to learn from their mentor's experience. Three members of our company's Executive Board were among the mentors participating in this round of the programme.

With the appointment of Ms. Sehm as a full member of the Executive Board in March 2019, we achieved the target quota for women on the Executive Board set at 14% by the year 2022 in the context of our diversity concept. Our Supervisory Board was comprised of five female and four male members as at 31 December 2019.

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

**Goal to be achieved by 2020:
Diversity**

Goals	Measures	Status	Goal achievement/Outlook
Promoting diversity and equal opportunities	Promoting a work environment free of discrimination; part of the Code of Conduct	Ongoing: Zero tolerance policy for discrimination based on race, colour, gender, age, ethnic origin, religion, sexual orientation, gender identity or expression, relationship/family status, citizenship, disability, medical condition or any other legally protected factor Ongoing: Whistleblower system for reporting any incidents 2019: No instances of discrimination that would have had consequences under labour law were reported	Stage completed in 2019 Achievement by 2020 realistic
	Fostering women in management positions	2019: The proportions of women on the second and third levels of management amounted to 17.4% (target: 18%) at the Hannover location and 17.1% Group-wide as at 31 December 2019 Ongoing: Cultivation of a Group-wide women's network	Stage completed in 2019 Achievement by 2020 realistic
	Implementation of mentoring programmes for the advancement of women	2019: Launch of a new implementation round with nine tandems	Stage completed in 2019 Achievement by 2020 realistic
Improving the conditions needed to ensure a healthy work/life balance for our employees	Promotion of measures for a healthy work/life balance by the employer	Ongoing, various support offers again available in 2019 including part-time and teleworking models, flexi-time arrangements and an in-house infant daycare centre 2019: Launch of mobile working option	Stage completed in 2019 Achievement by 2020 realistic

Operational environmental protection

The environmental impacts of our operations are comparatively slight, deriving principally from business trips taken by our employees and their commuting to and from work as well as the operation of our office premises. Nevertheless, we take our responsibility for the environment very seriously. In our Sustainability Strategy we regularly define concrete targets and measures for protecting the environment and conserving resources.

The issue of “Operational environmental protection” has a particular connection with the aspect “Environmental matters”.

As a service company, our activities in this regard do not entail any special risks. The issue is nevertheless of considerable importance to us and is reported accordingly.

Back in 2012 we put in place standard processes at the Hannover location to address environmental protection and we specified concrete measures in our environmental programme. Our environmental management system has since

been recertified annually, from 2016 onwards according to the revised standard DIN EN ISO 14001:2015. The recertification completed in 2019 is valid until 9 January 2023. Since 2016 we have also published annually a validated EMAS III Environmental Statement in fulfilment of the Europe-wide legal requirement to perform energy audits. The environmental management system records the consumption and emissions data for the Hannover sites of Hannover Rück SE, E+S Rückversicherung AG and HDI Specialty Group SE (formerly Inter Hannover) as well as the associated infant daycare centre and hence covers roughly 45% of the global workforce.

The focus of our efforts to conserve the environment is on reducing CO₂ emissions caused by the supply of electricity and heat to our premises as well as those resulting from our business travel. We have operated with a net zero carbon footprint at the Hannover location since 2016. The changeover to renewable energy and the offsetting of greenhouse gas emissions caused by air travel through payments to the climate protection organisation atmosfair were key factors in this achievement. In 2018 we began to record and offset the emissions due to air travel at several locations in the Asia-Pacific region.

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

Goal to be achieved by 2020:

Operational environmental protection

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Goals	Measures	Status	Goal achievement/Outlook
Continuous refinement of environmental management	Push towards a net zero carbon footprint for company locations	Review offsetting of CO ₂ emissions caused by air travel in the APAC region	Stage completed in 2019 Achievement by 2020 realistic
	(Re)certification of environmental management	Recertification completed in 2019 EMAS III Environmental Statements drawn up annually	Stage completed in 2019 Achievement by 2020 realistic

Supplier management

As a provider of insurance services, we do not have a traditional upstream or downstream supply chain of raw and auxiliary materials or produced goods as is the case with manufacturing companies. Nevertheless, we too source a broad range of goods and services. They include, among other things, IT hardware and software, Cloud services, consulting and development services, building and office equipment, electricity, heat and water, services relating to logistics, building management and technology as well as food for our staff catering. Altogether, we procure goods for IT, the operation of our premises and the conduct of our business from some 360 suppliers. Roughly two-thirds of these suppliers are based in Germany or indeed the Greater Hannover region. Above and beyond this, we source IT products primarily from the European Union and the United States. Our activities relating to the material issue of “Supplier management” have implications for all aspects.

Due to our supplier structure, our activities do not entail any special risks. We nevertheless consider it important to report accordingly on the issue.

Since mid-2012 our Code of Conduct for Suppliers has been applied throughout large parts of the company at the Hannover location. Reviewed on a regular basis and adjusted as necessary, it obliges all main suppliers and subcontractors to fulfil sustainability criteria, inter alia respect for human rights and observance of the core labour standards of the International Labour Organisation (ILO).

We rate new suppliers based on self-reporting and using an application-supported process; those that are assessed critically in an ESG risk category are assigned to a blacklist, as a consequence of which no further orders are placed with them. The process is used as warranted by Facility Management and IT at the Hannover location.

The Sustainability Strategy 2018-2020 defines the following goals with regard to this issue:

Goal to be achieved by 2020:

Supplier management

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Goals	Measures	Status	Goal achievement/Outlook
Ongoing evaluation of ~90% of suppliers (measured by purchasing volume) according to environmental and social standards	Evaluation of suppliers	Ongoing, 2019: Evaluation of 85% of the purchasing volume in Facility Management and 100% of the purchasing volume in the IT sector according to ESG criteria	Stage completed in 2019 Achievement by 2020 realistic
		All new and core suppliers are required to respect a Code of Conduct in which they undertake, among other things, to comply with environmental and social standards 89% of category A and B IT vendors undertake to comply with the Code of Conduct for Suppliers	

Opportunity and risk report

Risk report

- Hannover Re has very good capital resources in excess of the defined strategic thresholds. The capital position 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.

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.

Our risk strategy is derived from the corporate strategy. The following principles of the corporate strategy constitute the key strategic points of departure for our Group-wide risk management:

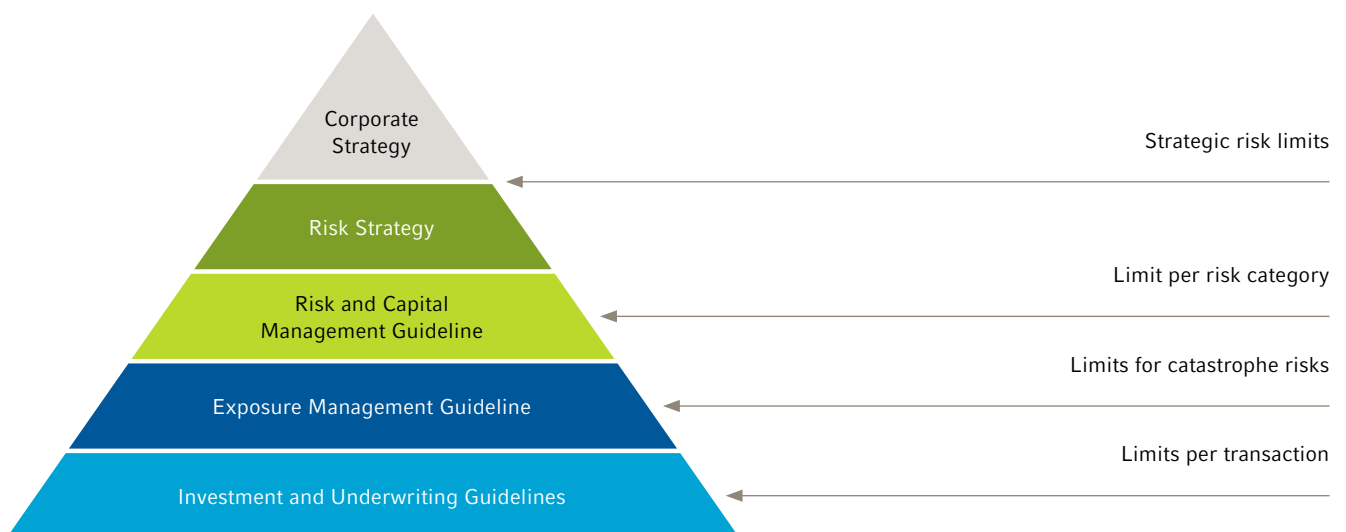
- We manage risks actively.
- We maintain an adequate level of capitalisation.
- We are committed to sustainability, integrity and compliance.

The risk strategy is the core element in our handling of opportunities and risks. It 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.

Risk management through multiple levels of limits

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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. Our solvency ratio must amount to at least 180%, although 200% is already considered to be a threshold; countermeasures would be triggered if the solvency ratio were to fall below this threshold. 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 risk 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.

Strategic targets for the risk position M 60

in EUR million	Limit	Indicator as at 31.12.2019
Probability of positive net income under IFRS	> 90%	93.9%
Probability of loss of shareholders' equity under IFRS	< 0.03%	0.02%
Probability of loss of economic equity	< 0.03%	0.02%

Major external factors influencing risk management

This section describes external factors that were particularly relevant in 2019 and could continue to influence risk management in subsequent years.

Regulatory developments: A review of selected aspects of Solvency II commenced in the reporting period at the instigation of the European Commission. In this regard the European Insurance and Occupational Pensions Authority (EIOPA) opened up its recommendations to the insurance industry for comment. Implementation of the new rules is still pending.

Both the Hannover Re Group and the specified individual companies calculate their capital requirements under Solvency II on the basis of a full internal model. Hannover Re received approval from the Federal Financial Supervisory Authority (BaFin) for the end of 2018 to use volatility adjust-

ments pursuant to § 82 Insurance Supervision Act (VAG). This is intended to mitigate the effect of value fluctuations on the bond market. An application has now been submitted to the BaFin for a modification that includes dynamic modelling of the volatility adjustment in order to better capture the effect of the volatility adjustment in the calculation of the risk-based capital as well.

Parallel to the regulatory developments in Europe, we are seeing adjustments worldwide to the regulation of (re)insurance undertakings.

The Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame), which was adopted on 14 November 2019 by the International Association of Insurance Supervisors (IAIS), establishes supervisory standards and provides guidance focusing on the effective group-wide supervision of Internationally Active Insurance Groups (IAIGs). The Insurance Core Principles adopted by the IAIS contain requirements for the supervision of all insurers and insurance groups, irrespective of their size and the international scope of their operations. With ComFrame the IAIS has developed a framework designed specifically for the supervision of IAIGs, with the emphasis placed on effective group supervision. In view of the need to make corresponding legislative changes and/or modify supervisory practices, the IAIS will continue to explore the details of the timeline and the form of implementation review over the course of 2020. An integral element of the ComFrame is the Insurance Capital Standard (ICS), which was similarly adopted by the IAIS on 14 November 2019. The ICS is the first global, risk-based capital standard for IAIGs. According to the BaFin, there were three insurance groups in Germany (also including Talanx AG, the parent company of Hannover Rück SE) and 70 worldwide considered to be IAIGs. The qualification process for identifying IAIGs is currently under review by the responsible supervisory authorities. ICS version 2.0 opens up the possibility of globally comparable results. This requires the use of consistent approaches, including for example the market- and risk-appropriate measurement of investments and liabilities. Roll-out of ICS 2.0 will start in 2020, initially with a monitoring phase. During this test run information is to be collected for purposes of improvement and further refinement in the run-up to final implementation in 2025.

Capital market environment: The protracted low level of interest rates is a major external factor influencing the return that can be generated on our investments. Interest rate declines – which in some instances were very marked – affected both euro-denominated bonds as well as the US dollar and sterling markets over the course of the year. Negative yields are now being seen on euro area government bonds extending beyond the 10-year maturity point. The uncertain signals coming from policy makers and indications of softening fundamentals led to greater volatility overall on the mar-

kets. The tense geopolitical situation and global trade disputes were also reflected in fluctuations in gold and oil price movements. At the same time, muted expectations for global growth are making themselves felt here. The continued surprising confusion in the process surrounding the United Kingdom's withdrawal from the European Union – despite the already lengthy period of acclimatisation – offered little support; the same was true of the cautious moves made by central banks, which documented the persistent lack of market stability despite the buoyant state of equity markets. Even while the US economy showed itself to be in a thoroughly robust condition, the US Federal Reserve surprisingly pulled an abrupt about-turn from its previously restrictive policy in favour of more expansionary action. As indications of declining growth began to emerge at the end of the period under review, the Fed announced a pause in the cycle of interest rate adjustments that it had initiated. At the European Central Bank, on the other hand, there is no end in sight to the expansionary monetary policy. Given the depletion of monetary policy tools and in view of the gloomy growth and inflation outlook, calls for fiscal measures are growing louder. As far as the risk premiums on corporate bonds were concerned, sharp decreases reflected a levelling off in the nervousness observed at the end of the previous year, as a result of which they were considerably lower year-on-year at the close of 2019. We continue to have exposure to the private equity market. Fair value changes here tend to be less influenced by general market conditions and more by company-specific evaluations. The risks are therefore primarily associated with the business model and profitability and to a lesser extent with the interest rate component in a consideration of cash flow forecasts. In the period under review, for example, we see the need to take somewhat higher write-downs not as a reflection of an elevated risk in the market, but rather in the context of the risk profile specific to this asset class. The significance of real estate risks has continued to grow owing to our consistent participation in this sector. We spread these risks through broadly diversified investments in high-quality markets around the world, with each investment decision being preceded by extensive analyses of the relevant property, manager and market.

As far as our investments are concerned, we anticipate continuing elevated volatility on global capital markets in the immediate future, although we also see this as an opportunity and believe that we are appropriately prepared with the current posture of our asset portfolio. For further information please see the “Investments” section of the management report on page 55 et seq.

Brexit: Despite the United Kingdom's withdrawal from the European Union on 31 January 2020, the long-term relations between the UK and the EU have still to be determined. The Hannover Re Group has prepared for all other scenarios. A Group-wide working group has analysed the impacts on each

affected entity as well as the status of their planning and preparations.

Argenta Holdings Limited is a wholly owned subsidiary of Hannover Re that operates on a stand-alone basis in the United Kingdom and as a member of Lloyd's it focuses on the solutions offered by the Lloyd's market. The operating model envisaged for the Life & Health branch in the UK after Brexit is transformation into a so-called third-country branch. We also write reinsurance business in the United Kingdom through Group companies in Hannover and Ireland. Changes in the operating models are not anticipated at this point in time.

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

Risks from the cyber environment: Recent years have seen the increasing emergence of cyber risks affecting electronic systems. Hannover Re, in common with other companies, is at risk of outside 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 for the assessment of such risks. The mapping of cyber risks in the internal capital model was improved in the course of 2019, with the result that more detailed risk management encompassing both our cyber portfolio and our “silent cyber” exposure is now possible, insofar as the relevant portfolios have already been analysed.

Natural catastrophe risks and climate change: It is likely that the increased storm activity of recent years is due in part to progressive global warming. Hannover Re works together with partners to closely monitor the implications of global warming for extreme weather events so as to be able to factor the insights gained into the models and the management of risks.

The 2019 financial year was once again impacted by natural catastrophe events that caused market losses in excess of USD 100 billion. In common with other market players, Hannover Re was among those affected – principally by hurricane Dorian and typhoon Hagibis. Given that the amounts will be paid out over the next few years, an element of uncertainty in the remaining anticipated loss payments has been allowed for as part of the estimated technical reserves.

Ogden rate: In 2017 a change (i.e. reduction) was made in the so-called Ogden rate – primarily affecting UK motor insurance – which is used to calculate personal injury compensation payments. A massive cut in the rate led to a rise in the expected loss costs. These increased amounts have since been reflected in the technical reserves for the relevant lines.

The UK government changed the rate from -0.75% to -0.25% effective 5 August 2019. The decision on the rate change is appropriately reflected in the technical reserves. The future payment patterns for these claims nevertheless remain subject to uncertainty because a better run-off result is normally expected at the time of settlement.

Joint investment in specialty business with HDI Global SE:

Back in 2018 Hannover Rück SE had already begun making preparations with HDI Global SE, under the umbrella of Talanx AG, for the launch of a joint initiative in worldwide specialty business. Since January 2019 the specialty insurer HDI Global Specialty SE has offered, as a joint venture of HDI Global and Hannover Re, tailored insurance solutions for agency and specialty business in lines including professional indemnity, directors' & officers' liability, legal expenses, sports and entertainment, aviation, offshore energy and pet and farm pack.

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. The internal capital model – a stochastic enterprise model – is a central tool in this context. 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 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 exclusive industry data and 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 a limit of 180% and a threshold of 200% for the capital adequacy ratio.

The mandatory capitalisation indicated in accordance with regulatory requirements diverges from the capitalisation in accordance with the Hannover Re Group's internal capital model. Since approval was given to use the model for operational risks, the difference now rests solely in the Solvency II requirements that non-controlling interests are to be treated as partially ineligible. The capital adequacy ratio calculated according to the internal capital model stood at 262.9% as at 31 December 2019 (the indicator includes information that has not been audited by the independent auditor). The key risk indicators shown for the Hannover Re Group and Hannover Rück SE as at 31 December 2019 allow for the dynamic volatility adjustment of the yield curves. In contrast, the figures for the previous year as at 31 December 2018 include the static volatility adjustment of the yield curves.

Hannover Re is thus well capitalised and our available capital comfortably exceeds the required capital, both from the economic and the regulatory perspective:

Own funds and required risk capital

M 61

in EUR million	31.12.2019 ¹	31.12.2018 ²
Available economic capital	15,034.9	13,340.0
Eligible own funds	14,399.1	12,634.6
Solvency Capital Requirement/ Required risk capital at the confidence level of 99.5%	5,719.1	5,135.4
Excess capital (Solvency II)	8,680.0	7,499.2
Capital adequacy ratio (Solvency II)	251.8%	246.0%

¹ The figures were calculated on the basis of the Solvency II reporting as at 31 December 2019. This table includes information that has not been audited by the independent auditor. The calculation of the Solvency Capital Requirement allows for the dynamic volatility adjustment which is subject to the BaFin approval process at the reporting date.

² Minor differences for 31 December 2018 compared to the Annual Report 2018. The figures are based on the final Solvency II year-end reporting as presented in the Solvency and Financial Condition Report.

The capital adequacy ratio at the confidence level of 99.97% amounted to 125.0% as at 31 December 2019 (the indicator includes information that has not been audited by the independent auditor). In the context of the internal measurement of capital adequacy, the entire available economic capital is recognised irrespective of restrictions on eligibility under Solvency II.

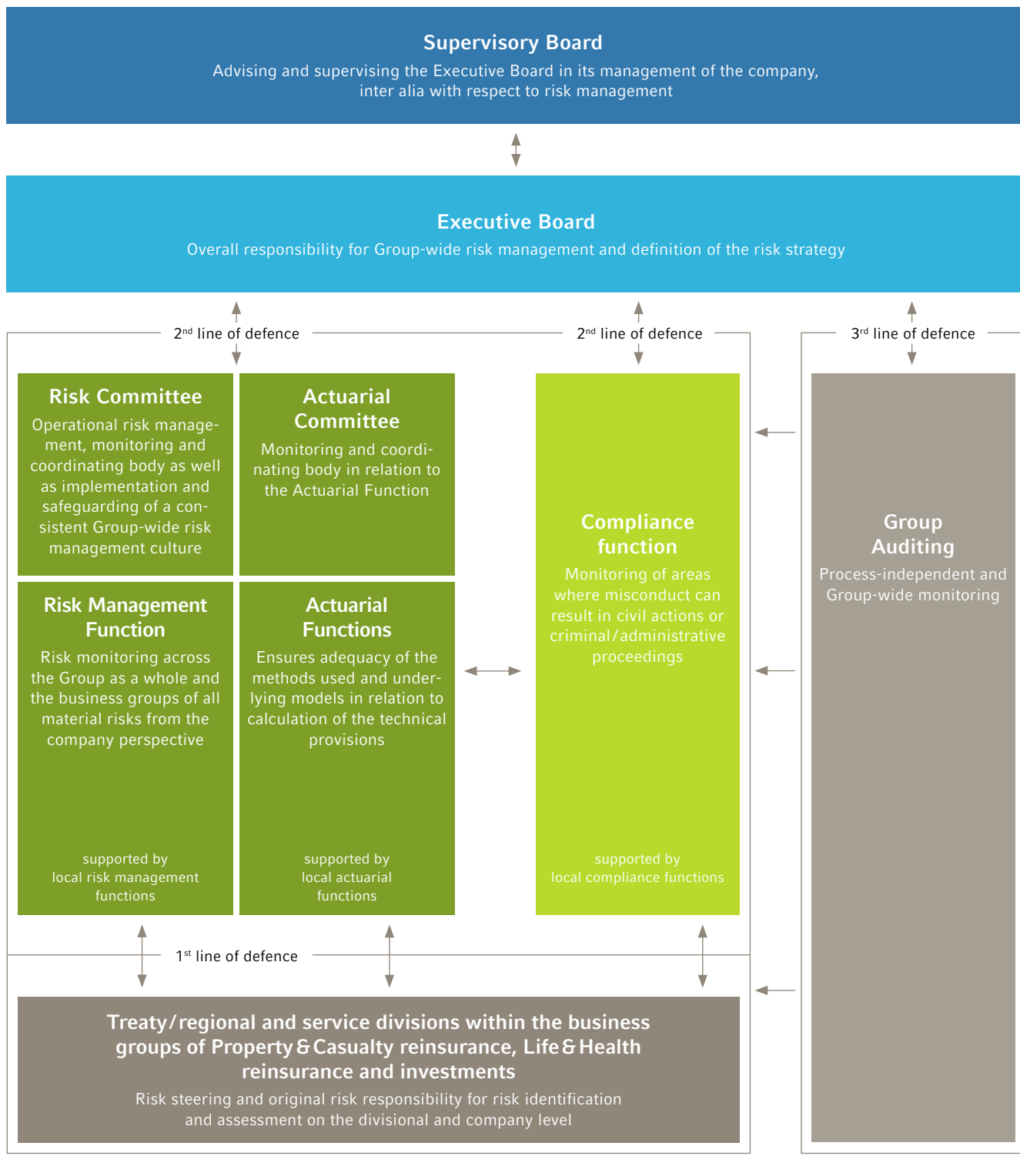
The figures shown above refer to the Hannover Re Group. In addition, Hannover Rück SE is also subject to regulatory capital requirements, which in accordance with Solvency II reporting were clearly fulfilled as at 31 December 2019 with a solvency ratio of 259.0% (the indicator includes information that has not been audited by the independent auditor). The solvency ratio of Hannover Rück SE is normally higher than the solvency ratio of the Hannover Re Group because there are no restrictions with regard to the use of own funds attributable to non-controlling interests. The details provided here regarding the solvency ratio of the solo entity Hannover Rück SE constitute information that has not been audited by the independent auditor. The calculation of the solvency capital requirement for the Hannover Re Group and Hannover Rück SE includes the dynamic volatility adjustment that is subject to the BaFin approval process at the reporting date.

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. The current financial strength is assessed as "AA-" (Very Strong, stable outlook) by Standard & Poor's and "A+" (Superior, stable outlook) by A.M. Best. In this context both S & P and A.M. Best consider Hannover Re's risk management to be a very important aspect in the evaluation of financial strength.

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 its excellent capital resources. Hannover Re's internal capital model was also subjected to expert appraisal. As a result of this review, Standard & Poor's factors the results of the Hannover Re Group's internal capital model into the determination of capital strength.

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 is made up of the core risk management functions, the actuarial function and the compliance function. These functions are responsible for process-integrated monitoring and control. The third line of defence is the process-independent monitoring performed by the internal audit function. The following chart provides an overview of the central functions and bodies within the overall system as well as of their major tasks and powers.



Group-wide risk communication and an open risk culture are important to our risk management. Regular global meetings attended by the actuarial units and risk management functions serve as a major anchor point for strategic considerations in relation to risk communication. In addition, risk management requirements are formulated in guidelines that are communicated throughout the organisation.

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 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 internal capital model. A central system of limits and thresholds is in place to monitor material risks. This system incorporates the limits and thresholds derived from the corporate strategy. Adherence 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 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 activities 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.

Process-integrated/-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 monitoring 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. The 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 as well as 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 to the Executive Board of Hannover Rück SE at each closing date 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.

Risk landscape of Hannover Re

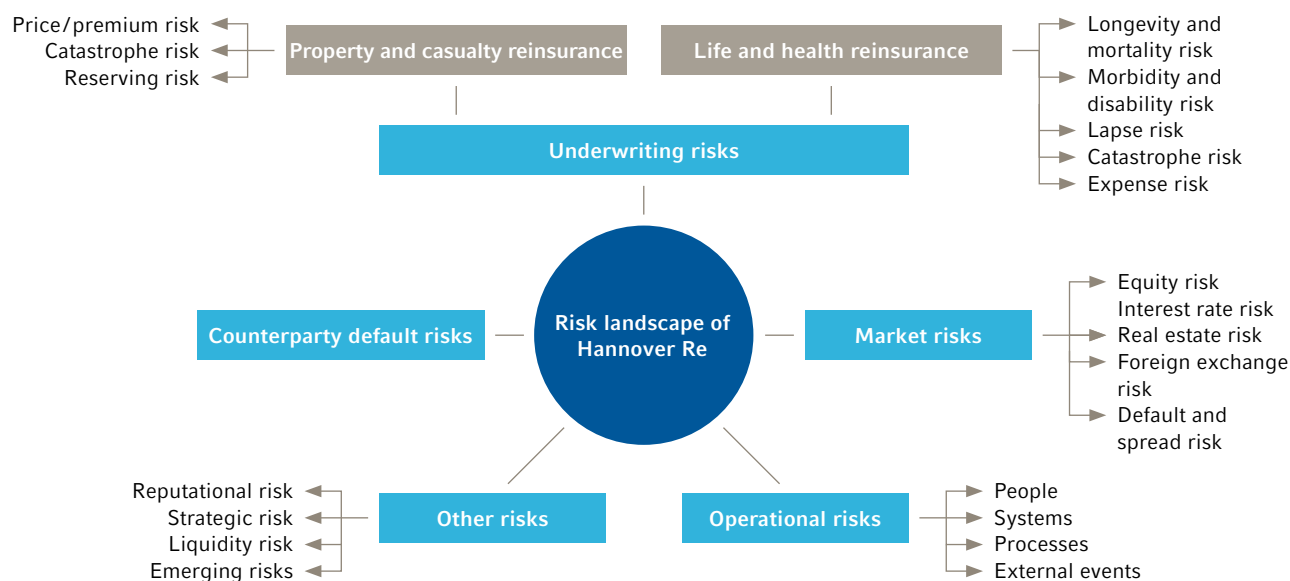
In the context of its business operations the Hannover Re Group enters into a broad variety of risks. These risks are deliberately accepted, steered and monitored in order to be able to act on the associated opportunities. The parameters and decisions of the Executive Board with respect to the risk appetite of the Hannover Re Group, which are based on the calculations of risk-bearing capacity, are fundamental to the acceptance of risks. 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 even 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, retrocessionaires and banks,
- operational risks which may derive, for example, from deficient processes or systems and
- reputational risks, liquidity risks, strategic risks and emerging risks.

At the present time our most significant individual 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. With regard to mortality risks, as a general principle annuity portfolios are impacted by improvements in mortality while death benefit portfolios are adversely affected by deteriorations in mortality.

The specific risk characteristics and the principal monitoring and steering mechanisms are described in the following sections.



Internal risk assessment

In this section we compare the available economic capital with the required risk capital in greater detail. 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 potential 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 calculated in accordance with Solvency II requirements including volatility adjustment. 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 volume of these options and guarantees in our portfolio is, however, comparatively slight. The adjustments for assets under own management shown in the following table indicate the difference between fair value and book value of those investments recognised under IFRS at book values. Other adjustments encompass above all the deferred taxes. 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. Hybrid capital is recognised at market-consistent value as required by Solvency II, with changes in the own credit risk not being included in the valuation.

The available economic capital increased to EUR 15,034.9 million as at 31 December 2019, compared to EUR 13,340.0 million (pursuant to the final Solvency II year-end reporting for 31 December 2018) as at 31 December 2018. The primary factors here were the investment income, the positive contribution made by new business in life and health reinsurance as well as a favourable run-off of the existing portfolio in property and casualty reinsurance. Economic developments such as movements in exchange rates as well as the decrease in credit spreads and associated valuation increases in fixed-income securities also played a part in the increase in economic equity. Furthermore, the issuance of another subordinated bond increases the hybrid capital and hence the available economic capital. The development of the equity is adversely impacted by, among other things, the large loss expenditure in property and casualty reinsurance and a higher risk margin – especially for life and health reinsurance – due to the decline in interest rates and the growth of the business.

**Reconciliation
(economic capital/shareholders' equity)¹**

M 64

in EUR million	31.12.2019 ²	31.12.2018 ³
Shareholders' equity including minorities	11,354.5	9,542.0
Adjustments for assets under own management	584.1	515.4
Adjustments for technical provisions ⁴	2,980.0	4,062.8
Adjustments due to tax effects and other	(1,519.5)	(1,711.4)
Economic equity	13,399.1	12,408.8
Hybrid capital	2,343.1	1,617.1
Foreseeable dividends	(707.3)	(685.9)
Available economic capital	15,034.9	13,340.0

¹ This table contains information that has not been audited by the independent auditor.

² The figures were based on the Solvency II reporting as at 31 December 2019.

³ Minor differences for 31 December 2018 compared to the Annual Report 2018. Figures based on final Solvency II year-end reporting as presented in the Solvency and Financial Condition Report.

⁴ Adjustments for technical provisions in life & health and property & casualty reinsurance including risk margin.

The required risk capital of the Hannover Re Group at the confidence level of 99.5% increased to EUR 5,719.1 million as at 31 December 2019, compared to EUR 5,135.4 million as at 31 December 2018. This was driven principally by the larger business volumes, which have led to an increase in market risks and underwriting risks. In addition, the weaker euro against our main currencies contributes to a rise in volumes denominated in foreign currencies and an increase in all risk categories, as does the lower level of interest rates.

The increase in the market risk is a reflection first and foremost of the larger volume of assets under own management as well as higher volumes in the private equity sector. Further factors here are an increased duration and a slightly higher-risk investment in fixed-income securities. An opposing effect derives from the initial application of the dynamic volatility adjustment, which leads to a decrease in the spread risk.

The underwriting risks in property and casualty reinsurance increased primarily as a consequence of higher premium and reserve levels as well as larger underwriting capacities for natural perils. The enlarged volumes are driven by interest rate and exchange rate effects associated with the business growth as well as by the large loss expenditure and the accompanying higher reserves. Moreover, in the area of catastrophe risks the modelling approach used for cyber risks was refined, leading to a rise in the risk capital.

The underwriting risks in life and health reinsurance increased primarily as a consequence of the business expansion in the area of longevity and morbidity risks as well as lower interest rates. In addition, adjustments made in the calibration of mortality risks gave rise to an increased risk. The rise in counterparty default risks can be attributed principally to a higher volume of receivables due from ceding companies and retrocessionaires as well as changes in credit rating.

The changes in the operational risk are attributable above all to an updated expert assessment regarding the impact of individual scenarios.

The loss-mitigating effect from taxes remains stable. The slight increase in the diversification effect is a consequence of the diversified business growth and the associated risk structure.

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 biometric and lapse 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.

Required risk capital at the confidence level of 99.5%

M 65

in EUR million	31.12.2019	31.12.2018
Underwriting risk property and casualty reinsurance	4,432.2	3,819.3
Underwriting risk life and health reinsurance	2,735.6	2,212.5
Market risk	4,163.0	3,833.5
Counterparty default risk	423.3	312.6
Operational risk	532.6	575.3
Diversification	(4,369.5)	(3,648.2)
Tax effects	(2,198.1)	(1,969.6)
Required risk capital of the Hannover Re Group	5,719.1	5,135.4

The required risk capital at the confidence level of 99.5% reflects the loss from the respective risk that with a probability of 0.5% will not be exceeded. The risk capital required for specific risks is shown in each case before tax.

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. In addition, the active limitation of individual risks – such as natural catastrophes – enhances the diversification effect. The risk capital with a confidence level of 99.5% for underwriting risks in property and casualty reinsurance breaks down as follows:

Required risk capital¹ for underwriting risks in property and casualty reinsurance

M 66

in EUR million	31.12.2019	31.12.2018
Premium risk (including catastrophe risk)	3,365.9	2,862.3
Reserve risk	2,496.3	2,275.7
Diversification	(1,430.0)	(1,318.7)
Underwriting risk property and casualty	4,432.2	3,819.3

¹ Required risk capital with a confidence level of 99.5%

The largest share of the required risk capital for the premium risk (including catastrophe risk) is attributable to risks from natural disasters. They constitute the main concentration risk in property and casualty reinsurance. The following table shows the required risk capital for four of our largest natural hazards scenarios:

Required risk capital¹ for four natural hazards scenarios

M 67

in EUR million	2019	2018
Hurricane US/Caribbean	1,993.48	1,774.51
Earthquake US West Coast	1,482.86	1,437.56
Earthquake Japan	817.77	707.44
Winter storm Europe	762.36	609.77

¹ Required risk capital with a confidence level of 99.5% on an aggregate annual loss basis

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 importance to maintaining a conservative reserving 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. Liability claims have a major influence on the segment

reserve. The segment reserve is calculated on a differentiated basis according to risk categories and regions. The segment reserve established by the Hannover Re Group amounted to EUR 7,609.8 million in the year under review.

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 using actuarial methods.

Our own actuarial calculations regarding the adequacy of the reserves are also subject to annual quality assurance reviews conducted by external firms of actuaries and auditors. For further remarks on the reserve risk please see our comments in section 6.7 “Technical provisions” on page 227 et seq.

In the case of asbestos- and pollution-related claims it is difficult to reliably estimate future loss payments. The adequacy of these reserves can be estimated using the so-called “survival ratio”. This ratio expresses how many years the reserves would cover if the average level of paid claims over the past three years were to continue.

Survival ratio in years and reserves for asbestos-related claims and pollution damage

M 68

in EUR million	2019			2018		
	Individual loss reserves	IBNR reserves	Survival ratio in years	Individual loss reserves	IBNR reserves	Survival ratio in years
Asbestos-related claims/ pollution damage	14.1	110.7	30.1	19.5	157.9	30.0

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. Major scenarios and stress tests are shown in the following table:

Stress tests for natural catastrophes after retrocessions

M 69

Aggregate annual loss in EUR million	2019	2018
	Effect on forecast net income	
Winter storm Europe		
100-year loss	(376.3)	(312.0)
250-year loss	(602.2)	(526.0)
Hurricane US/Caribbean		
100-year loss	(1,154.9)	(1,033.2)
250-year loss	(1,595.1)	(1,471.6)
Typhoon Japan		
100-year loss	(216.1)	(216.4)
250-year loss	(302.0)	(294.0)
Earthquake Japan		
100-year loss	(341.2)	(344.3)
250-year loss	(733.0)	(664.3)
Earthquake US West Coast		
100-year loss	(602.7)	(634.8)
250-year loss	(1,258.2)	(1,194.7)
Earthquake Australia		
100-year loss	(148.9)	(191.9)
250-year loss	(474.8)	(499.8)

Within the scope of this process, 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 equity 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 limits and thresholds for the 200-year aggregate loss as well as the utilisation thereof are set out in the following table:

Limit and threshold for the 200-year aggregate annual loss as well as utilisation thereof M 70

in EUR million	Limit 2019	Threshold 2019	Actual utilisation (July 2019)
All natural catastrophe risks ¹			
200-year aggregate annual loss	2,125	1,913	1,727

¹ Loss relative to the underwriting result

Net expenditure on major losses in the year under review amounted to EUR 956.1 million (EUR 849.8 million). Our company incurred the following catastrophe losses and major claims in the 2019 financial year:

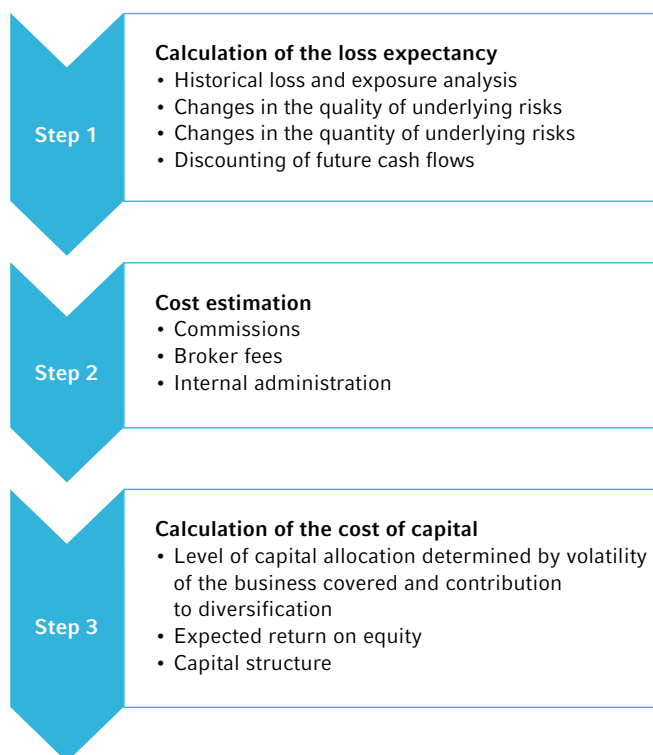
Catastrophe losses and major claims¹ in 2019

M 71

in EUR million	Date	gross	net
Typhoon "Hagibis", Japan	12–13 October 2019	447.1	183.8
Hurricane "Dorian", United States	1 September 2019	221.2	194.7
Typhoon "Faxai", Japan	8 September 2019	187.8	83.8
6 property claims		184.6	174.2
2 aviation claims		127.9	33.2
2 credit claims		97.1	97.1
Bushfires, Australia	1 – 31 December 2019	54.9	46.3
Tornadoes, Midwest, United States	25–29 May 2019	40.8	38.7
Floods, Queensland, Australia	26 January–7 February 2019	37.1	27.5
2 marine claims		24.8	15.1
Hailstorm "Jörn", Germany	10 June 2019	23.9	14.9
Storms, United States	12–13 March 2019	20.2	17.6
Earthquake, Albania	26 November 2019	15.3	14.9
Typhoon "Lekima", China	10–11 August 2019	14.8	14.3
Total		1,497.4	956.1

¹ Natural catastrophes and other major claims in excess of EUR 10 million gross

The price/premium risk lies 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 in 2019 and prior years is shown in the table below:

Combined and catastrophe loss ratio

M 73

in %	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Combined ratio (property and casualty reinsurance)	98.2	96.5	99.8	93.7	94.4	94.7	94.9	95.8	104.3	98.2
Thereof catastrophe losses ¹	7.5	7.9	12.3	7.8	7.1	6.1	8.4	7.0	16.5	12.3

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)

For further information on the run-off of the loss reserves please see our explanatory remarks in the section "Run-off of the net loss reserve in the property and casualty reinsurance segment" on page 228 et seq.

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 and occupational disability. 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. Furthermore, we are exposed to lapse risks because the cash flows resulting from our reinsurance treaties are in part dependent on lapse rates among policyholders. 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 if 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. We calculate the diversification effect between mortality and longevity risks prudently in view of the fact that the contracts are normally taken out for different regions, age groups and individuals. The required risk capital with a confidence level of 99.5% for underwriting risks in life and health reinsurance breaks down as follows:

Required risk capital¹ for underwriting risks in life and health reinsurance

M 74

in EUR million	31.12.2019	31.12.2018
Mortality risk ²	2,307.1	1,668.3
Longevity risk	1,660.9	1,176.6
Morbidity and disability risk	1,107.7	881.1
Lapse risk	385.4	426.6
Expense risk	191.5	206.5
Diversification	(2,917.0)	(2,146.6)
Underwriting risk life and health	2,735.6	2,212.5

¹ Required risk capital with a confidence level of 99.5%

² Mortality risk incl. catastrophe risk

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 and how these considerations are factored into the pricing. 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 reported regularly on the results of our US mortality business, which have been poorer than anticipated. The reason for this development was the negative earnings performance of a large portfolio that we, as reported at the time, acquired at the beginning of 2009.

As part of our inforce management measures we had initiated rate adjustments for the portfolio concerned in 2018. For the majority of the underlying business, these rate adjustments have been successfully implemented or the cedant has recaptured the business. It is to be anticipated that an arbitration procedure will take place with selected individual cedants in respect of the implemented rate increases. Based on the information currently available to us, we take a favourable view of our legal position.

The actual risk experience for the portfolio in question proved to be better than expected in 2019. We are monitoring the further development of the underlying mortality on an ongoing basis.

Based on the information available to us today, we continue to assume a positive VIF for our US mortality business as a whole. 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, one-time charges to the IFRS result may arise in a small number of remaining individual cases, insofar as the cedants affected by rate adjustments exercise their right of recapture.

We continue to monitor developments in the Australian disability portfolio on an ongoing basis.

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. Our portfolio currently consists in large part of fixed-income securities, and hence default and spread risks account for the bulk of the market risk. We minimise interest rate and foreign exchange risks through the greatest possible matching of payments from fixed-income securities with the projected future payment obligations from our insurance contracts. Market risks derive from the investments managed by Hannover Re itself and from investment risks of ceding companies that we as-

sume in connection with insurance contracts. The following table shows the risk capital with a confidence level of 99.5% for the market risks from investments under own and third-party management.

Required risk capital ¹ for market risks		M 75
in EUR million	31.12.2019	31.12.2018
Default and spread risk	2,799.6	2,689.3
Interest rate risk	963.3	711.6
Foreign exchange risk	1,389.2	1,177.9
Equity risk ²	1,159.4	932.3
Real estate risk	660.1	608.9
Diversification	(2,808.6)	(2,286.5)
Market risk	4,163.0	3,833.5

¹ Required risk capital with a confidence level of 99.5%

² Including private equity

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. They are unambiguously defined in conformity with our risk appetite and trigger specified information and escalation channels if a corresponding fair value development is overstepped.

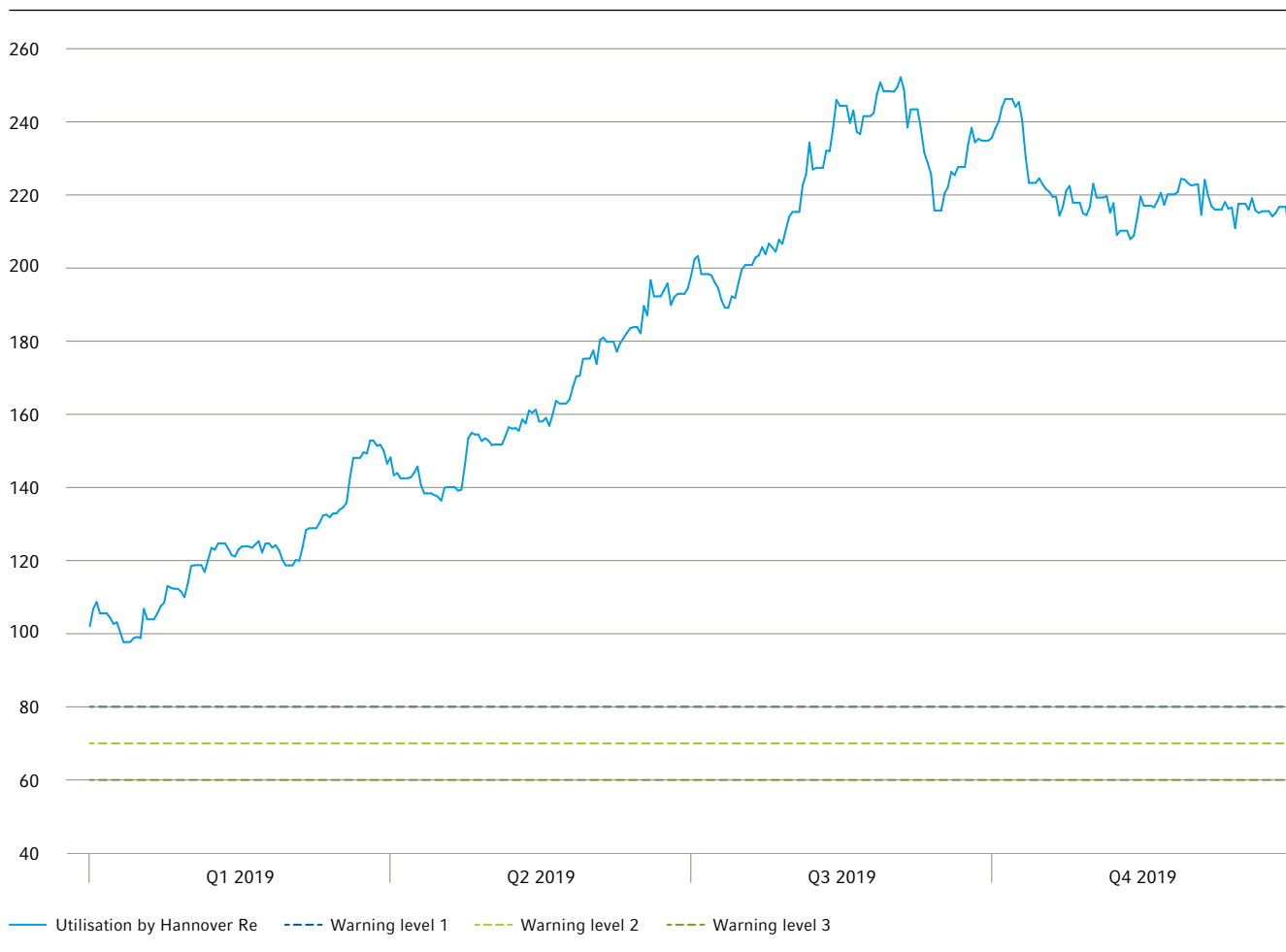
Interest rate and spread markets were relatively volatile over the course of the year under review. The already very low level of the previous year was once again pushed significantly lower in all our main currency areas. While the US dollar area recorded particularly appreciable interest rate declines, pound sterling and euro interest rates also saw sharp decreases. Risk premiums on European and US corporate bonds retreated sometimes markedly in virtually all rating categories in the reporting period. Consequently, a very substantial increase in the hidden reserves for fixed-income securities was booked over the year as a whole.

The escalation levels of the early-warning system were not triggered at any time in the reporting period. For this reason, our trigger system did not cause us to make any changes to the asset allocation.

Utilisation of the trigger system

M 76

in %



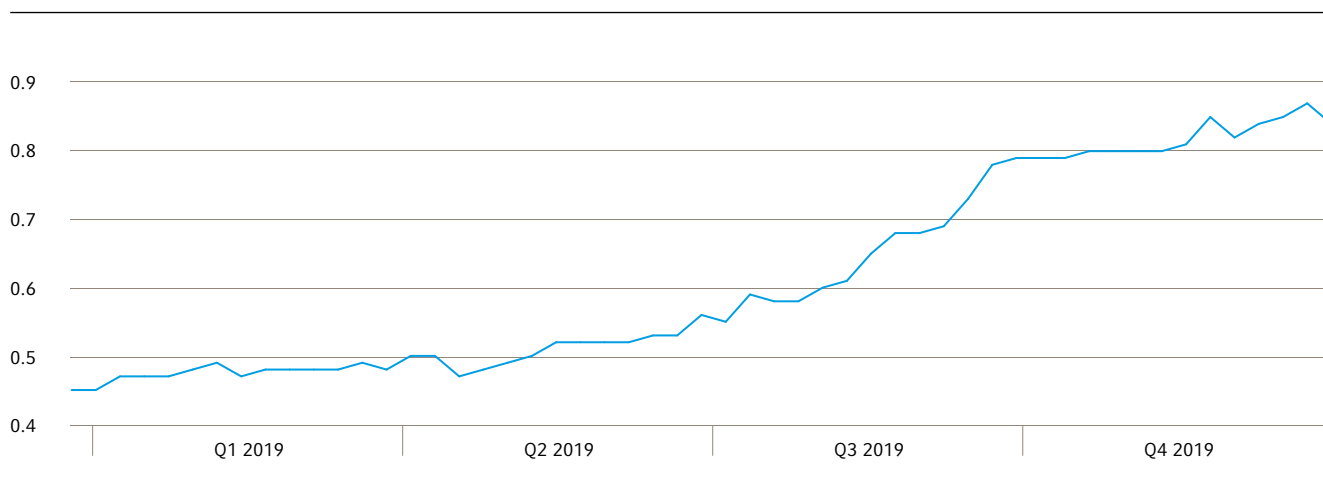
The short-term loss probability measured as the Value at Risk (VaR) is another vital tool used for operational monitoring and management of the market price risks associated with our securities positions. It is calculated on the basis of historical data, e.g. the volatility of the securities positions under own management and the correlation between these risks. As part of these calculations the decline in the fair value of our securities 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 standard market model is used to calculate the VaR indicators for the Hannover Re Group. It is based on historical time series of relevant market parameters (equity prices, yield curves, spread curves and exchange rates). Against the backdrop of what was still a difficult capital market and interest rate environment, volatilities – especially of fixed-income assets – were again on a high level in the year under review. Based on continued broad risk diversification and the orientation of our investment portfolio, our VaR was nevertheless clearly below the VaR upper limit defined in our investment guidelines. It amounted to 0.8% (previous year: 0.5%) as at the end of the reporting period.

Value at Risk¹ for the investment portfolio of the Hannover Re Group

M 77

in %



¹ VaR upper limit according to Hannover Re's investment guidelines: 2.5%

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.

Scenarios for changes in the fair value of material asset classes

M 78

in EUR million	Scenario	Portfolio change on a fair value basis	Change in equity before tax
Equity securities and private equity	Share prices -10%	-120.7	-120.7
	Share prices -20%	-241.4	-241.4
	Share prices +10%	+120.7	+120.7
	Share prices +20%	+241.4	+241.4
Fixed-income securities	Yield increase +50 basis points	-1,201.8	-1,140.9
	Yield increase +100 basis points	-2,336.8	-2,217.7
	Yield decrease -50 basis points	+1,276.3	+1,212.5
	Yield decrease -100 basis points	+2,631.8	+2,501.2
Real estate	Real estate market values -10%	-262.4	-104.9
	Real estate market values +10%	+262.4	+53.5

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. It should be borne in mind that the issued subordinated bonds and resulting induced interest rate exposure are active-

ly factored into our ALM. Further information on the risk concentrations of our investments can be obtained from the tables on the rating structure of fixed-income securities as well as on the currencies in which investments are held. Please see our comments in section 6.1 of the notes entitled "Investments under own management" on page 202 et seq.

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 was, however, very slight because we currently hold only a minimal portfolio of equities and equity funds in the context of

strategic participations. Our exposure to the private equity market remains unchanged. Changes in fair value here tend to be prompted less by general market conditions and more by entity-specific assessments. The risks are associated principally with the business model and profitability and less so with the interest rate component in the consideration of cash flow forecasts. Please see our comments in section 6.1 of the notes entitled “Investments under own management” on page 202 et seq.

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. We minimise interest rate risks by matching the durations of payments from fixed-income securities as closely as possible with the projected future payment obligations under our insurance contracts.

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 Value at Risk 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. A detailed presentation of the currency spread of our investments is provided in section 6.1 of the notes entitled “Investments under own management” on page 210.

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 worldwide; 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. A portion of our cash flows from the insurance business as well as foreign exchange risks arising

because currency matching cannot be efficiently achieved are hedged to some extent 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 holds hedges in the form of equity swaps to hedge price risks in connection with the stock appreciation rights granted 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 transactions. The remaining exposures are controlled according to the restrictive parameters set out in our investment guidelines.

With effect from this reporting period we are entering into term repurchase agreements as a supplementary liquidity management tool. The holdings exchanged in this context are fully collateralised.

Derivatives connected 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 securities¹

M 79

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	73.2	12,245.8	53.3	3,731.9	0.9	131.2	57.6	1,814.1
AA	12.9	2,161.0	25.7	1,801.9	12.1	1,712.1	22.0	694.6
A	7.8	1,302.1	7.0	493.9	28.4	4,028.6	12.4	389.4
BBB	3.8	629.0	1.3	93.1	47.8	6,767.8	6.6	208.8
< BBB	2.4	401.6	12.7	886.5	10.8	1,526.0	1.4	45.2
Total	100.0	16,739.5	100.0	7,007.2	100.0	14,165.7	100.0	3,152.2

¹ Securities held through investment funds are recognised pro rata with their corresponding individual ratings.

² Including government-guaranteed corporate bonds

In general terms, Hannover Re gears its investment portfolio to the principles of a balanced risk/return ratio coupled with broad diversification. Accordingly, we counter the risk concentrations that nevertheless arise in individual asset classes with the broadest possible spread of different issuers per asset class. This is just as much a key component of our investment policy as credit rating assessment and management based on the quality criteria defined in the investment guidelines.

On a fair value basis EUR 4,645.3 million of the corporate bonds held by our company were issued by entities in the financial sector. Of this amount, EUR 3,677.0 million was attributable to banks. The vast majority of these bank bonds (63.9%) 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. The following table shows the required risk capital for counterparty defaults with a confidence level of 99.5%.

Required risk capital¹ for the counterparty default risk

M 80

in EUR million	31.12.2019	31.12.2018
Counterparty default risk	423.3	312.6

¹ Required risk capital with a confidence level of 99.5%

Since the business that we accept is not always fully retained, but instead portions are retroceded as necessary, the counterparty default risk is also 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. The following table shows how the proportion of assumed risks that we do not retrocede (i.e. that we run in our retention) has changed in recent years:

Gross written premium retained

M 81

in %	2019	2018	2017	2016	2015
Hannover Re Group	90.0	90.7	90.5	89.3	87.0
Property and casualty reinsurance	90.3	90.7	89.7	88.5	89.3
Life and health reinsurance	89.5	90.7	91.7	90.4	84.2

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, among other things because we prefinance acquisition costs for our ceding companies. Our cedants, 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.

Lastly, short-term deposits at banks are also at risk of counterparty default.

67.5% of our recoverables from reinsurance business are secured by deposits or letters of credit. For the majority of our retrocessionaires we also function as reinsurer, meaning that in most cases recoverables can potentially be set off against our own liabilities. In terms of the Hannover Re Group's major companies, EUR 219.7 million (4.2%) of our accounts receivable from reinsurance business totalling EUR 5,269.8 million were older than 90 days as at the balance sheet date.

The average default rate from retrocessions over the past four years was 0.1%.

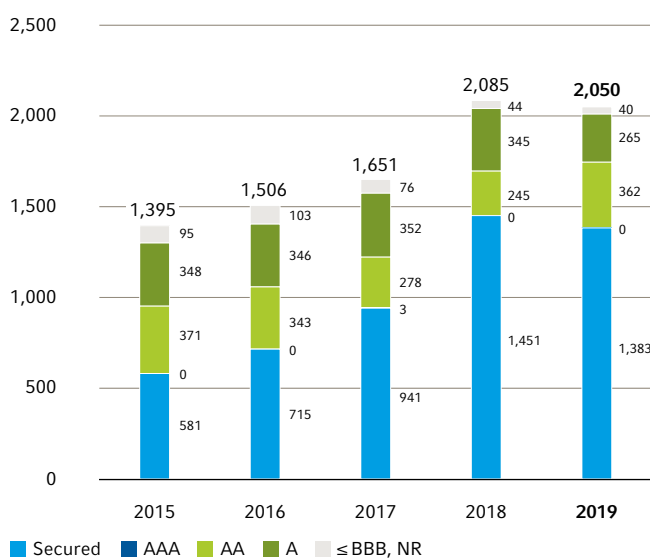
Retrocession gives rise to claims that we hold against our retrocessionaires. These reinsurance recoverables – i.e. the reinsurance recoverables on unpaid claims – amounted to EUR 2,050.1 million (EUR 2,084.6 million) as at the balance sheet date.

The following chart shows the development of our reinsurance recoverables – split by rating quality – due from our retrocessionaires.

Reinsurance recoverables as at the balance sheet date

M 82

in EUR million



The amount of assets subject to collateral arrangements is well below 60% of Hannover Re's total assets. This statement is relevant for the calculation of the counterparty default risk with respect to Hannover Re.

As the parent company, Hannover Re provides a guarantee to clients for the small number of low-risk structured transactions. In this context, it guarantees the payment of liabilities by Hannover Re under these specific transactions in the event that the subsidiary is unable to meet its assumed obligations. Since each of these guarantees is associated with a specific transaction and formulated in such a way that each potential payment can only arise once per corporate entity of Hannover Re (i.e. either at the subsidiary itself as part of the transaction or at Hannover Re as a consequence of the guarantee), the existence of a guarantee on the part of Hannover Re has no effect on the underwriting risk from Hannover Re's property & casualty or life & health reinsurance business.

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 the respective risk monitoring and reporting. The system enables us, among other things, to prioritise operational risks. In order to calculate the capital commitment in our internal capital model we perform extensive scenario analyses and use the findings as a basis for specifying the parameters for the stochastic model.

Required risk capital¹ for operational risks

M 83

in EUR million	31.12.2019	31.12.2018
Operational risk	532.6	575.3

¹ Required risk capital with a confidence level of 99.5%

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 security risks and business interruption risks.

Subcategories of operational risks

- Business process and data quality risk
- Compliance risk
- Outsourcing risk
- Fraud risk
- Personnel risk
- Information security risk
- Business interruption risk

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. We have defined criteria for managing the risk that result in a high process quality. Data quality is similarly a highly critical success factor, especially in risk management, because for example the validity of the internal model is largely based 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. Compliance with regulatory standards, the company's Code of Conduct, tax regulations, data privacy requirements as well as the stipulations of anti-trust and competition law have been defined as issues of particular relevance.

In conformity with a risk-based approach, sanctions screening software is used on the relevant parts of the Hannover Re Group's portfolio as well as on loss advices to filter out individuals who are subject to sanctions. 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. For further information on compliance-related topics, including for example lawsuits, contingent liabilities and commitments, please see section 8.6 "Lawsuits" on page 263 and section 8.7 "Contingent liabilities and commitments" on page 264 et seq.

Outsourcing risks can result from the outsourcing of functions, services and/or organisational units to third parties. 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. Our external partners are additionally 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 distribution channels, although these are minimised through the careful selection of agencies, mandatory underwriting guidelines and regular checks.

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.

Fraud risks refer to the risk of intentional violations of laws or regulations by members of staff and/or by externals in order to obtain a 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.

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 provided online in the intranet, by way of training opportunities and through a staff information campaign.

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 act as a temporary steering body in the event of an emergency. The system is complemented by regular exercises and tests. A leaflet is available setting out the correct behaviour in the event of a business interruption; this condenses in compact form the key information that all employees need to know, such as the information channels to use in a crisis situation.

Regular quarterly risk reporting to the Risk Committee and the Executive Board takes place with regard to all operational risks. Risks are also evaluated as part of the reporting.

Other risks

Under other risks we include emerging risks, strategic risks, reputational risks and liquidity risks. Reputational risks are categorised as non-financial risks.

Subcategories included under other risks

- Emerging risk
 - Strategic risk
 - Reputational risk
 - Liquidity risk
-

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, risks associated with possible climate change are analysed by this working group. Global warming would affect not only natural perils, but also human health, the world economy, the agricultural sector and much more besides. These problematic issues may also have implications for our treaty portfolio – in the form of not just risks but also opportunities, such as increased demand for reinsurance products. Further examples of emerging risks include cyber risks, risks from the use of autonomous machines and the supply of raw materials. Altogether, we are constantly monitoring 40 emerging risks.

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 operational implementation of the strategic principles and objectives; 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. The process for the management of strategic risks continues to be assessed annually as part of the monitoring of business process risks. For more information on the topic of strategy please see the section “Combined non-financial information statement” on page 70 et seq.

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 data mishap 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 reputational risk also relates to our social responsibility and is thus a control point in the context of our sustainability efforts.

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 (necessary cash could not be obtained or could only be obtained at increased costs) and the market liquidity risk (financial market transactions could 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 such as the 2008 financial crisis. Our holdings of unrestricted German, UK and US government bonds as well as cash during the year under review were larg-

er than possible disbursements for assumed extreme events, which means that our liquidity is assured even in the unlikely case of financial crises coinciding with an extreme event that needs to be paid out quickly. The liquid asset reserve stood at EUR 5.3 billion as at the balance sheet date. In addition, we manage the liquidity of the portfolio by checking on each trading day the liquidity of the instruments contained therein. These measures serve to effectively reduce the liquidity risk.

Regular quarterly risk reporting to the Risk Committee and the Executive Board takes place with regard to the other risks. Risks are also evaluated as part of the reporting.

As part of the risk management process we also take into account the impacts on the operational and reputational risks of aspects of environmental management, employee matters, social matters, respect for human rights and the combating of corruption and bribery, as required by the CSR Directive Implementation Act in accordance with § 289b and c German Commercial Code (HGB) and § 315c German Commercial Code (HGB).

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.

Key elements in Hannover Re’s opportunity management include its various market-specific innovations in the Life & Health and Property & Casualty reinsurance business groups (see the Forecast on page 147 et seq.).

Trends affecting these business groups are systematically identified and analysed with the support of external sources and partners and the needs of our clients are anticipated along the entire insurance-related value-added chain. Targeted consideration is given to new business opportunities that promise access to innovative technologies and enhance our appeal in the eyes of customers. With this in mind, Hannover Re cultivates business-related partnerships with accelerators, incubators, company builders, start-ups and research institutes in order to boost our competitiveness in the insurtech sector and the area of digital solutions. Various competence centres have been set up in the Hannover Re Group to evaluate the strategic and technical significance of innovative new

digital technologies. These include an organisational unit that provides specific support for insurtechs in the development of their digital business models and devises reinsurance solutions to this end, thereby also generating new premium potential for Hannover Re.

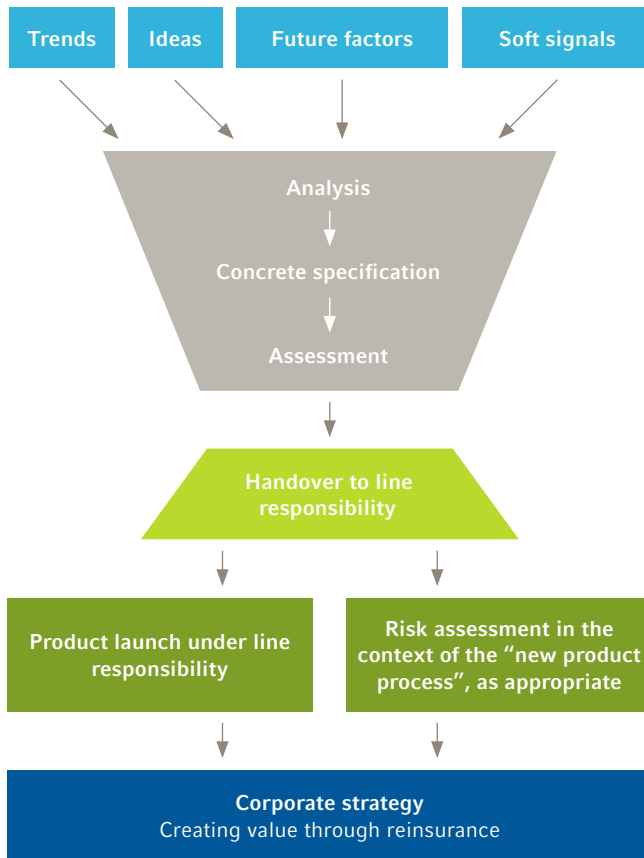
Corporate culture and entrepreneurship are increasingly coming into focus as further elements of the innovation landscape. Hannover Re has developed a structured innovation process for the in-house generation of ideas in order to actively support and foster the internal spirit of entrepreneurship. This process is embedded in the “Hannover Re Intrapreneurship Programme” (HIPE), which offers all employees worldwide a platform for contributing innovative ideas geared to increasing efficiency, inter alia in the fields of automation, risk assessment and accumulation control as well as product development. In the course of a 14-week incubator programme selected ideas were developed by employees in an external innovation ecosystem. Project participants were partially released from their line function for the duration of the incubator programme in order to elaborate on their ideas as quickly as possible in a highly focused environment. Upon completion of the conceptual development phase five teams presented their ideas to the full Executive Board. After in-depth exploration, the Board members decided to allocate a budget to three concepts for an implementation phase that will facilitate the development of prototypes. Depending upon how their implementation and commercial success are evaluated, it is likely that the project will be repeated. This promotes the ongoing consolidation of an agile working environment and dynamic enterprise culture within the established processes.

The dynamic networking of the members of staff active in the field of innovation at Hannover Re 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 115 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 “Microplastics” and “Medical advances” were analysed by the working group.

Cyber insurance

Cyber attacks on critical systems are becoming increasingly common. They can cause considerable financial losses and also damage corporate reputations. Not only that, they can severely hamper private and public life, especially if critical infrastructures are impacted – such as the health, transportation/traffic and energy sectors. In such instances supply bottlenecks with lasting effects as well as major disruptions to public safety may ensue. In a networked world the repercussions of cyber attacks are intensifying because the volume of globally stored data and the extent of system dependencies are constantly growing – and in this context it is not only one’s own technical infrastructure that needs to be secured. On the contrary, the trend towards cloud computing is increasingly shifting the focus to third-party infrastructures and the associated network connection. As part of our holistic approach to risk and opportunity management, we are also tackling the question of what new insurance products can be developed in order to protect against the relevant risks. The constant refinement of our systemic analyses for the assessment of cyber risks forms the basis for developing new (re)insurance solutions. We aim to bring transparency to the customer’s cyber risks and we seek to cover the need for risk-mitigating measures by offering suitable solutions. To this extent, we also see an opportunity to generate additional reinsurance premium in this line of business.

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. 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, corresponding notification thresholds 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 185% 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 financial strength ratings (see page 63) also testify to our financial stability. The quality of our Enterprise Risk Management (ERM), for example, is assessed by Standard & Poor’s as a key factor in the rating process. Special consideration is given to our established risk management culture, which promotes the development of appropriate risk monitoring systems and supports strategic risk management. The rating encompasses in particular the areas of risk culture, risk controls, emerging risk management, risk models and strategic risk management. This external appraisal confirms the quality of our holistic approach to risk management.

We would also refer to the explanatory remarks on the financial strength ratings of our subsidiaries in the “Financial position” section of the management report on page 63. In addition, the risk trigger mechanism and internal monitoring system are reviewed annually by the independent auditor in relation to the financial reporting. The Group-wide risk management system is also a regular part of the audits conducted by the internal audit function.

Enterprise management

Declaration on Corporate Governance pursuant to §§ 289f, 315d German Commercial Code (HGB)

This subsection is a part of the report that the legislator has expressly exempted from the audit of the financial statement/audit of the management report (§ 317 Para. 2 Sentence 6 and Sentence 4 German Commercial Code (HGB); unaudited information).

Hannover Re's objective continues to be to consolidate and further expand its position as one of the leading, globally operating reinsurance groups of above-average profitability. In aspiring towards this goal, it is particularly important to observe and fulfil the principles of good and sustainable corporate governance. In so doing, we not only comply with the German Corporate Governance Code (DCGK, hereinafter also referred to as the Code), but have also developed our own model for responsible enterprise management which we consistently pursue and adjust to the latest requirements in accordance with our best practice standards.

The Executive Board and Supervisory Board of Hannover Rück SE expressly support the suggestions and recommendations of the German Corporate Governance Code that are practicable for the reinsurance industry and recognise their central importance in guiding our activities. The principles of responsible and good enterprise management therefore constitute the core of our internal Corporate Governance principles (www.hannover-re.com/50889/corporate-governance-principles.pdf). These remained unchanged in the year under review. We cultivate integrity at all times in our dealings with business partners, staff, shareholders and other stakeholder groups and we support the principles of value-based and transparent enterprise management and supervision defined in the German Corporate Governance Code. The Supervisory Board, Executive Board and employees of Hannover Re identify with these principles, which thus form part of our corporate self-image. The Executive Board ensures that the principles are observed Group-wide.

Hannover Rück SE hereby provides insight into its enterprise management practices as part of the Declaration on Corporate Governance pursuant to § 289f German Commercial

Code (HGB) and pursuant to § 315d German Commercial Code (HGB) in conjunction with § 289f German Commercial Code (HGB) for the Hannover Re Group:

Corporate Governance

As an instrument of self-regulation for the business world, the German Corporate Governance Code – the latest version of which dates from 7 February 2017 – sets out recommendations and suggestions that are intended to maintain and foster the trust of investors, customers, employees and the general public in the management and supervision of German companies. Although the Code does not have binding legal force, the enterprises addressed by the Code are nevertheless required by § 161 Stock Corporation Act (AktG) to provide an annual declaration as to whether or not the recommendations of the Code were and are complied with in the reality of the company's business activities. If recommendations were not acted upon, this is to be explained and disclosed as part of the Declaration of Conformity.

The positive attitude of Hannover Rück SE towards the Code is not contradicted by the fact that in the year under review we did not comply with certain Code recommendations, since a well justified deviation from the recommendations of the Code may – as in the present cases – be very much in the interests of good corporate governance tailored to a particular company, i. e. by reflecting enterprise- and industry-specific features (cf. Foreword to the German Corporate Governance Code). Based on what is still a high degree of fulfilment of the recommendations and suggestions of the Code, Hannover Rück SE continues to rank very highly among the companies listed on the DAX and MDAX – as is also borne out this year for the first time by the findings of the analysis conducted by the German Association for Financial Analysis and Asset Management (DVFA).

Declaration of Conformity pursuant to § 161 Stock Corporation Act (AktG) regarding compliance with the German Corporate Governance Code at Hannover Rück SE

The German Corporate Governance Code sets out major statutory requirements governing the management and supervision of German listed companies. It contains both nationally and internationally recognised standards of good and responsible enterprise management. The purpose of the Code is to foster the trust of investors, clients, employees and the gener-

al public in German enterprise management. Under § 161 Stock Corporation Act (AktG) it is incumbent on the Management Board and Supervisory Board of German listed companies to provide an annual declaration of conformity with the recommendations of the “German Corporate Governance Code Government Commission” published by the Federal Ministry of Justice or to explain which recommendations of the Code were/are not applied.

The Executive Board and Supervisory Board declare pursuant to § 161 Stock Corporation Act (AktG) that in its implementation of the German Corporate Governance Code Hannover Rück SE diverges in three respects from the recommendations contained in the version of the Code dated 7 February 2017:

**Code Section 4.2.3 Para. 2;
Caps on the amount of variable compensation elements in Management Board contracts**

The variable compensation of the members of the Executive Board is granted in part in the form of Hannover Re share awards. The maximum number of share awards granted at the time of allocation depends upon the total amount of variable compensation, which is subject to an upper limit (cap), i.e. the allocation of share awards is limited by the cap. The share awards have a vesting period of four years. During this period the members of the Executive Board therefore participate in positive and negative developments at the company, as reflected in the share price. The equivalent value of the share awards is paid out to the members of the Executive Board after the end of the vesting period. The amount paid out is determined according to the share price of the Hannover Re share applicable at the payment date plus an amount equivalent to the total dividends per share distributed during the vesting period. The share awards consequently follow the economic fortunes of the Hannover Re share.

The amount of variable compensation deriving from the granting of share awards is thus capped at the time when the share awards are allocated, but it is not capped again at the time of payment. Bearing in mind the harmonisation of the interests of shareholders and of the members of the Executive Board of Hannover Rück SE that is sought through the share awards, the company does not consider further limitation of the amount of variable remuneration resulting from the granting of share awards at the time of payment to be expedient. From the company’s perspective, the use of Hannover Re share awards as a method of payment constitutes – in economic terms – a compulsory investment in Hannover Re shares with a four-year holding period.

For formal purposes and as a highly precautionary measure, Hannover Rück SE is therefore declaring a divergence from Code Section 4.2.3 Para. 2.

**Code Section 4.2.3 Para. 4;
Caps on severance payments in Management Board contracts**

Premature termination of a service contract without serious cause may only take the form of cancellation by mutual consent. Even if the Supervisory Board insists upon setting a severance cap when concluding or renewing an Executive Board contract, this does not preclude the possibility of negotiations also extending to the severance cap in the event of a member leaving the Executive Board. In addition, the scope for negotiation over a member leaving the Executive Board would be restricted if a severance cap were agreed, which could be particularly disadvantageous in cases where there is ambiguity surrounding the existence of serious cause for termination. In the opinion of Hannover Rück SE, it is therefore in the interest of the company to diverge from the recommendation contained in Code Section 4.2.3 Para. 4.

**Code Section 5.3.2 Para. 3 Sentence 2;
Independence of the Chair of the Audit Committee**

The current Chair of the Finance and Audit Committee of Hannover Rück SE at the same time also served as the Chair of the Board of Management of the controlling shareholder until the end of the Annual General Meeting of Talanx AG on 8 May 2018 and hence cannot, in the company’s legal assessment, be considered independent.

In the period from 1994 to 2002 he served as the company’s Chief Financial Officer. During this time he acquired superb knowledge of the company and he is equipped with extensive professional expertise in the topics that fall within the scope of responsibility of the Finance and Audit Committee. With this in mind, he is optimally suited to chairing the Audit Committee.

This assessment is also not cast into question by the fact that the Committee Chair cannot be considered independent within the meaning of the German Corporate Governance Code for the period from 1 January 2018 to 8 May 2018. Furthermore, since his service as Chief Financial Officer of Hannover Rück SE dates back to a period that is already over fifteen years ago, it is also the case that the reviews and checks performed by the Finance and Audit Committee no longer relate to any timeframe within which he himself was still a member of the Executive Board or decisions initiated by him as a member of the Executive Board were still being realised.

In the opinion of Hannover Rück SE, it is therefore in the interest of the company to diverge from the recommendation contained in Section 5.3.2 Para. 3.

We are in compliance with all other recommendations of the Code.

Hannover, 5 November 2019

Executive Board, Supervisory Board

Further enterprise management principles of Hannover Re

In addition to the Corporate Governance principles, Hannover Rück SE has adopted its own Code of Conduct (www.hannover-re.com/50943/code-of-conduct.pdf) that is applied Group-wide as a set of minimum standards. Complementing our corporate strategy and the Corporate Governance principles, it establishes rules governing integrity in the behaviour of all employees of Hannover Re and is intended to help members of staff cope with the ethical and legal challenges that they face as part of day-to-day work. The rules defined in the Code of Conduct reflect the high standards that guide our actions worldwide. It is our belief that integrity in dealings with our stakeholders constitutes the foundation of a successful enterprise. In both our strategic planning and our day-to-day business activities, we therefore aspire to consistently apply the highest ethical and legal standards; for our actions and the way in which every single one of us presents and conducts himself or herself are crucial in shaping the image of Hannover Re.

Sustainability of enterprise management

The strategic orientation of Hannover Re towards sustainability constitutes an important element of the enterprise strategy. The aim is to achieve commercial success on the basis of a results-driven business model in accordance with the needs of our staff and society as well as with an eye to protecting the environment and conserving natural resources. The current Sustainability Strategy for the period from 2018 to 2020 defines four action fields and specifies concrete goals and measures that are to be implemented in the strategy cycle. In accordance with the CSR Directive Implementation Act of 11 April 2017, Hannover Rück SE has also published a combined non-financial information statement which can be found on page 70 et seq. of this year's Group Annual Report.

We thus strive to reduce as far as possible the greenhouse gas emissions produced by our day-to-day business activities in order to come closer to reaching our goal of a net zero carbon footprint. Furthermore, we have defined strategic principles for our human resources management, since we consider our employees to be a crucial factor in the success of our company. Along with skills, qualifications and commitment, a high degree of diversity is one of the cornerstones of our successful business operations. Performance indicators have therefore been defined for executive development and employee advancement. Staff retention is encouraged, while diversity and equal opportunities are promoted.

Detailed information on the topic of sustainability is provided on our website (www.hannover-re.com/60729/sustainability).

Targets pursuant to § 289f Para. 4 Sentence 1 in conjunction with Para. 2 No. 4 German Commercial Code (HGB)

Following the election of new employee representatives by the Employee Council as well as new shareholder representatives by the Annual General Meeting, five members of the Supervisory Board of Hannover Rück SE in the year under review were women. In addition, it remains the case that one woman sits on the Supervisory Board's Finance and Audit Committee and one is a member of the Nomination Committee. The proportion of women serving on the Supervisory Board was therefore 44% in 2018 and at the beginning of 2019 and has stood at 56% in the new composition of the Supervisory Board since 8 May 2019. The proportion is thus in excess of the 30% target currently defined pursuant to §§ 76 Para. 4, 111 Para. 5 Stock Corporation Act (AktG) for the period from 1 July 2017 to 30 June 2022. The target for the Executive Board was similarly adjusted in response to the appointment of Ms. Silke Sehm to the Executive Board, which is discussed at greater length in the diversity concept.

The target for the two levels of senior management below the Executive Board is 18%.

Working practice of the Executive Board and Supervisory Board

The Executive Board and Supervisory Board of Hannover Rück SE work together on a trusting basis to manage and monitor the company and the Group as a whole. In accordance with the Rules of Procedure of the Executive Board, matters of fundamental importance require the consent of the Supervisory Board. The Supervisory Board is comprised of nine members. Six members are elected as shareholder representatives by the shareholders at the Annual General Meeting. The three seats held by employee representatives, which are currently allocated to Germany pursuant to Part III. § 13 (3) of the Agreement regarding the Participation of Employees in Hannover Rück SE of 23 January 2013, are elected in accordance with the provisions of the SE Participation Act (SEBG) by the responsible representative body (currently the joint Employee Council of Hannover Rück SE and E+S Rückversicherung AG). The Supervisory Board appoints the members of the Executive Board. Since members of the Supervisory Board cannot at the same time belong to the Executive Board, a high degree of independence in the oversight of the Executive Board is thus already ensured by structural means. In addition, the Supervisory Board is kept informed on a regular and timely basis of the business development, the execution of strategic decisions, material risks and planning as well as relevant compliance issues. The Chairman of the Supervisory Board stays in regular contact with the Chair-

man of the Executive Board in order to discuss with him significant business occurrences. The composition of the Executive Board (including areas of responsibility) as well as of the Supervisory Board and its committees is set out on pages 18 et seq. and 284 respectively of the present Annual Report.

The Rules of Procedure of the Executive Board are intended to ensure that a consistent business policy is elaborated and implemented for the company in accordance with its strategic objectives. Within the framework of a consistent business policy, the principle of “delegation of responsibility” enjoys special status. In the interests of shareholders, importance is expressly attached to an organisation that facilitates cost-effective, quick and unbureaucratic decision processes. Open and trusting cooperation geared to the interest of the whole is the foundation of success. In this context, the members of the Executive Board bear joint responsibility for the overall management of business. Irrespective of their overall responsibility, each member of the Executive Board leads their own area of competence at their individual responsibility within the bounds of the resolutions adopted by the Executive Board. Only persons under the age of 65 may be appointed to the Executive Board. The term of appointment shall be determined such that it expires no later than the end of the month in which the member of the Executive Board turns 65.

The Rules of Procedure of the Supervisory Board provide inter alia that each member of the Supervisory Board must have the knowledge, skills and professional experience required for orderly performance of their tasks and that the Supervisory Board must have a sufficient number of independent members. Currently, at least three of the six shareholder representatives are independent as defined by the German Corporate Governance Code. Persons suggested to the Annual General Meeting as candidates for election to the Supervisory Board may not be older than 72 at the time of their election and shall normally not belong to the Supervisory Board as a member for longer than three full consecutive terms of office; the term of office commencing from the end of the 2014 Annual General Meeting is the first term of office to be counted for this purpose. Nominations shall take account of the company’s international activities as well as diversity. Furthermore, it shall be ensured that the proposed person can allocate the expected amount of time. For their part, each sitting member of the Supervisory Board shall also ensure that they have sufficient time to discharge their mandate. The Supervisory Board meets at least twice each calendar half-year. The Supervisory Board’s report provides information about the attendance of individual Supervisory Board members at the meetings. No more than two former members of the company’s Executive Board may belong to the Supervisory Board.

The Supervisory Board decides in individual cases whether external advice should also be sought as a decision-making aid. This is included in a regularly conducted self-assessment with a view to assuring the general efficiency of its working approach on a lasting basis.

Working practice of the committees of the Supervisory Board

In order to efficiently perform its tasks the Supervisory Board has formed a number of committees: the Finance and Audit Committee, the Standing Committee and the Nomination Committee. The Supervisory Board committees are each comprised of three members (the names of the members can be found on page 284 of the report) and prepare matters within their scope of competence for discussion and adoption of a resolution by the full Supervisory Board. Moreover, the committees are also assigned their own authority to adopt resolutions.

The Finance and Audit Committee monitors the accounting process and the effectiveness of the internal control system, the risk management system and the internal auditing system. It also handles issues relating to compliance and the information system for the Supervisory Board and discusses the Quarterly Statements as well as the Half-yearly Financial Report prior to their publication. It prepares the Supervisory Board’s examination of the annual financial statement, management report and proposal for the appropriation of profit as well as of the consolidated financial statement and Group management report. In this context, the Finance and Audit Committee receives detailed information on the auditor’s view of the net assets, financial position and results of operations as well as explanations of the effects of any modified recognition and measurement principles on the net assets, financial position and results of operations together with available alternatives. In addition, the committee prepares the Supervisory Board’s decision on the commissioning of the independent auditor for the financial statements. It considers matters associated with the necessary independence of the auditor, the awarding of the audit mandate to the independent auditor, the determination of the audit concentrations and the fee agreement. The agendas and minutes of the meetings of the Finance and Audit Committee are also made available to the members of the Supervisory Board who do not sit on the committee.

The Standing Committee prepares personnel decisions for the Supervisory Board. It bears responsibility for granting loans to the group of persons specified in §§ 89 Para. 1, 115 Stock Corporation Act (AktG) and those considered equivalent pursuant to § 89 Para. 3 Stock Corporation Act (AktG) as well as for approving contracts with Supervisory Board members in accordance with § 114 Stock Corporation Act (AktG). It exercises the powers arising out of § 112 Stock Corporation

Act (AktG) in lieu of the Supervisory Board and – in cooperation with the Executive Board – ensures that long-term succession planning is in place. This regularly constitutes an item for reporting and deliberation in the committee meetings and it is explored in detail – also in connection with the Executive Board’s strategic objectives in the area of talent management.

The Nomination Committee is tasked with proposing to the Supervisory Board appropriate candidates for the nominations that it puts forward to the Annual General Meeting for election to the Supervisory Board.

For further details of the activities of the Supervisory Board committees, please see the explanations provided in the report of the Supervisory Board on page 297 et seq.

Compliance

Hannover Re considers a properly functioning compliance structure to be an essential tool for ensuring compliance with external rules and regulations as well as requirements imposed internally by the company. In the financial year just ended we thoroughly overhauled our compliance management system across the Group. Our compliance structure continues to be precisely tailored to the specific features of our Property & Casualty and Life & Health reinsurance business groups. The consistent decentralised implementation of our six compliance modules reflects our self-image as a company and hence also our culture and it facilitates optimal handling by the responsible actors within the organisation.

The results of our compliance activities are documented in the compliance report. The compliance report for the 2019 calendar year will be submitted to the Finance and Audit Committee of the Supervisory Board and the full Supervisory Board in March 2020. The report sets out the structure of the compliance function as well as of compliance risk identification and assessment and it describes the diverse range of activities conducted by Hannover Re in this regard. Along with the implementation of training measures and monitoring procedures, these activities include tracking the realisation of proposed potential improvements by the responsible units and responding to tips. In addition to topics frequently identified as being of particular relevance to compliance, such as regulatory compliance, international sanctions and data protection, the report also covers matters such as directors’ dealings, ad hoc and other disclosure requirements, the insider register and the handling of consulting agreements. The separate data privacy report for the 2019 calendar year is included in the compliance report as an annex.

After in-depth examination of all subject areas, work results and notifications within the period under review, the report

concludes that only a few circumstances have been identified which point to breaches of relevant compliance standards. After detailed exploration of these incidents, the necessary safeguards were put in place to ensure that in the future Hannover Re is in conformity with the internal and external requirements governing its business activities.

Risk monitoring and steering

The risk management system applicable throughout the entire Hannover Re Group is based on the risk strategy, which in turn is derived from the corporate strategy. A core component is the systematic and comprehensive recording of all conceivable risks that from the current standpoint could potentially jeopardise the company’s profitability and continued existence. Further details in this regard may be obtained from the risk report contained in the present Annual Report on pages 92 et seq.

Diversity concept – Goals for the composition of the Executive Board and Supervisory Board as well as status of implementation (§ 289f Para. 2 Number 6 German Commercial Code (HGB))

I. Implementation of the diversity concept in the 2019 financial year

In the 2019 financial year the diversity of the Supervisory Board and Executive Board was further increased. While four women belonged to the Supervisory Board at the time when the resolution regarding the expanded diversity concept was adopted, this number increased to five in the Supervisory Board’s new composition following the election of new employee representatives by the Employee Council and the election of new shareholder representatives by the Annual General Meeting on 8 May 2019. Female members of the Supervisory Board continue to sit on two of the three Supervisory Board committees. One woman belongs to the Finance and Audit Committee and one is a member of the Nomination Committee.

In selecting candidates to be put forward to the Annual General Meeting for election to the Supervisory Board, care was taken to ensure that the individuals concerned have the necessary knowledge, skills and specialist experience, can demonstrate an international background and reflect a broad range of different educational and professional profiles within this governance body.

Furthermore, the proposed election nominations for 2019 were guided in particular by the goal of assuring an adequate number of independent Supervisory Board members as de-

fined by the German Corporate Governance Code (DCGK). The Supervisory Board currently meets the target set by the Code because Dr. Lipowsky, Dr. Ollmann and Dr. Pollak are independent. Dr. Schipporeit similarly largely fulfils the independence criteria according to the 2019 version of the Code, but in view of the fact that he was first appointed on 3 May 2007 he has already belonged to the body for slightly longer than 12 years.

The diversity of the Executive Board was strengthened with the appointment of Ms. Silke Sehm as a full member by a resolution of the Supervisory Board adopted at its meeting on 6 March 2019. The goal of appointing at least one woman as a member of the company's Executive Board by the year 2022 was thereby fulfilled. Ms. Sehm brings extensive professional experience within the company to the Executive Board and succeeds Mr. Jürgen Gräber, who passed away unexpectedly on 9 November 2018.

The age diversity on the Executive Board ranged from 50 to 60 in the 2019 financial year. On the Supervisory Board the age range was from 46 to 70.

II. Diversity concept for the composition of the Executive Board and Supervisory Board

When appointments are made to the Executive Board and Supervisory Board, Hannover Rück SE is guided by a number of considerations including the principle of diversity. Wide-ranging qualifications, expertise and relevant experience on the part of the members of the Executive Board and Supervisory Board facilitate a nuanced evaluation of the commercial opportunities and risks associated with business operations and enable balanced and professional actions and decisions to be taken on this basis. Due consideration is given to the aspect of diversity when members of the Executive Board and Supervisory Board are appointed. In addition to specialist and personal qualifications (competencies), this aspect encompasses in particular age, gender, education and professional career. With a view to ensuring that the concept of diversity is applied on an ongoing basis, an assessment is made in the context of every new appointment to the Executive Board or Supervisory Board as to whether the envisaged appointment is also in keeping with the diversity concept.

The composition of the Supervisory Board shall be such that overall its members are equipped with the knowledge, abilities and specialist experience necessary for proper performance of the tasks. The make-up of the Supervisory Board shall ensure that the Executive Board in an internationally operating, broadly positioned reinsurance group receives qualified supervision and advice from the Supervisory Board. Above and beyond the legally required specialist expertise in investing, insurance practice and accounting, the topics of internationality, taxation, M&A, human resources, risk man-

agement, IT and compliance have been taken into account on a voluntary basis. The goal is that the Supervisory Board as a whole has all the know-how and experience considered to be material in light of the activities of the Hannover Re Group. Moreover, special attention is to be paid to the integrity, character, commitment, professionalism and independence of individuals put forward for election. In accordance with the Rules of Procedure for the Supervisory Board, for example, members of the Supervisory Board shall ensure that they have sufficient time at their disposal for their activities and that potential conflicts of interest are avoided. Furthermore, candidates shall be put forward to the Annual General Meeting for election to the Supervisory Board only if they will not have passed the age of 72 by the time of their election and – with effect from the election of the new Supervisory Board in 2014 – provided they have not sat on the Supervisory Board for more than three full consecutive terms of office. With regard to the appropriate number of independent Supervisory Board members from the perspective of the Supervisory Board, the Supervisory Board has decided that it shall have three independent members as defined by the German Corporate Governance Code (DCGK). Employee representatives on the Supervisory Board are disregarded in this context.

In order to ensure that the relevant selection criteria are met, the Supervisory Board followed the recommendation of the Nomination Committee and defined a requirements and competence profile for Supervisory Board members; this is intended, among other things, to assure the availability on the Supervisory Board of the expertise needed to cover all the Group's areas of business. In addition, Supervisory Board members may not hold mandates on governing bodies at major competitors of the company or of a Group undertaking, nor may they perform individual advisory tasks for such competitors.

With an eye to Hannover Re's international orientation, it is to be ensured that a sufficient number of members with long-standing international experience belong to the Supervisory Board. Based on their current or former service as a board member/ chief executive officer or in a comparable role as managing director with internationally operating undertakings or organisations, all the shareholder representatives on the Supervisory Board have long-standing international experience. In the opinion of the Supervisory Board, due consideration is given to the international dimension of operations. The goal is to maintain the currently existing international profile.

When it comes to selecting candidates who are to be put forward to the Annual General Meeting for election to the Supervisory Board, care is taken to ensure that the individuals concerned have the necessary knowledge, skills and

specialist experience. The principle of diversity is also reflected in the selection process.

In selecting members of the Executive Board the goal is to ensure that the members have the skills and experience needed to properly perform their tasks. The Supervisory Board considers diversity in the composition of the Executive Board. Moreover, on the level of the Executive Board the aim is to appoint another woman as a member of the company's Executive Board by the year 2024. The age limit for the Executive Board is set at 65. The members of the Executive Board are appointed by the Supervisory Board for a term of at most five years. Member of the Executive Board are initially appointed for no more than three years.

Information regarding the following items is provided in the remuneration report:

- Remuneration report for the Executive Board and disclosure of the remuneration received by Supervisory Board members pursuant to Items 4.2.5 and 5.4.6 of the German Corporate Governance Code,
- Securities transactions,
- Shareholdings.

Information on share-based payment pursuant to Item 7.1.3 of the German Corporate Governance Code is provided in section 8.3 of the notes "Share-based payment", page 258 et seq., and in the remuneration report with respect to the members of the Executive Board.

In addition to the present Declaration on Corporate Governance, the Declaration of Conformity pursuant to § 161 Stock Corporation Act (AktG) regarding compliance with the German Corporate Governance Code and the associated reports of recent years are published on our website pursuant to Item 3.10 of the German Corporate Governance Code (www.hannover-re.com/200801/declaration-of-conformity).

Remuneration report

The remuneration report summarises the principles used to determine the remuneration of the Executive Board of Hannover Rück SE and explains the structure, composition and amount of the components of the remuneration received by the Executive Board in the 2019 financial year on the basis of the work performed by the Board members for Hannover Rück SE and companies belonging to the Group.

In addition, the amount of remuneration paid to the Supervisory Board on the basis of its work for Hannover Rück SE and companies belonging to the Group as well as the principles according to which this remuneration is determined are described; we also explain the principles on which the remuneration for senior executives below the level of the Executive Board is based.

The remuneration report is guided by the recommendations of the German Corporate Governance Code and contains information which forms part of the notes to the 2019 consolidated financial statement as required by IAS 24 "Related Party Disclosures". Under German commercial law, too, this information includes data specified as mandatory for the notes (§ 314 HGB) and the management report (§ 315 HGB). These details are discussed as a whole in this remuneration report and presented in summary form in the notes.

The provisions of the Act on the Adequacy of Management Board Remuneration (VorstAG) and of the Insurance Supervision Act (VAG) in conjunction with the Regulation on the Supervisory Law Requirements for Remuneration Schemes in the Insurance Sector (VersVergV) have been observed. In addition, we took into account the more specific provisions of DRS 17 "Reporting on the Remuneration of Members of Governing Bodies".

Remuneration of the Executive Board

Responsibility

In order to efficiently perform its tasks the Supervisory Board has formed various committees. The Standing Committee prepares remuneration-related matters of content relating to the Executive Board for discussion and adoption of a resolution by a full meeting of the Supervisory Board.

Objective, structure and system of Executive Board remuneration

The total remuneration of the Executive Board and its split into fixed and variable components conform to regulatory requirements – especially the provisions of the Act on the Adequacy of Management Board Remuneration (VorstAG) and of Art. 275 Commission Delegated Regulation (EU) 2015/35 and supplemented by those of the Regulation on the Supervisory Law Requirements for Remuneration Schemes in the

Insurance Sector (VersVergV). An independent expert's report from July 2019 confirms that the system of remuneration meets the requirements of Art. 275 Commission Delegated Regulation (EU) 2015/35 for a remuneration policy and remuneration practices that are in line with the undertaking's business, strategy and risk profile.

The amount and structure of the remuneration of the Executive Board are geared to the size and activities of the company, its economic and financial position, its success and future prospects as well as the customariness of the remuneration, making reference to the benchmark environment (horizontal) and the remuneration structure otherwise applicable at the company (vertical). The remuneration is also guided by the

tasks of the specific member of the Executive Board, his or her individual performance and the performance of the full Executive Board.

With an eye to these objectives, the remuneration system has two components: fixed salary/non-cash compensation and variable remuneration. The variable remuneration is designed to take account of both positive and negative developments. Overall, the remuneration is measured in such a way that it reflects the company's sustainable development and is fair and competitive by market standards. In the event of 100% goal attainment the remuneration model provides for a split into roughly 40% fixed remuneration and roughly 60% variable remuneration.

Fixed remuneration (approx. 40% of total remuneration upon 100% goal attainment)

Measurement basis and payment procedures for fixed remuneration

M 85

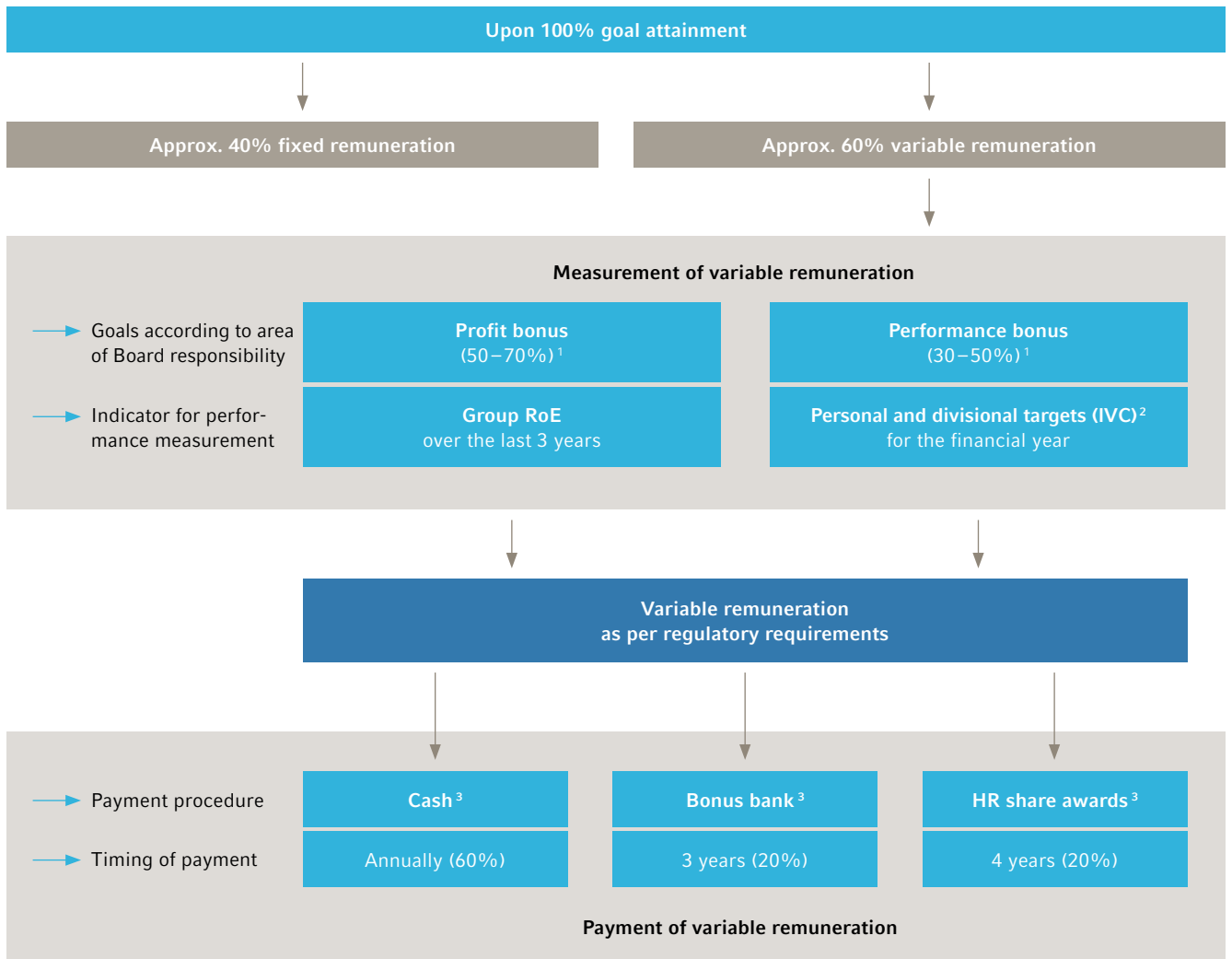
Components	Measurement basis/parameters	Condition for payment	Paid out
Basic remuneration	Function, responsibility, length of service on the Executive Board	Contractual stipulations	12 equal monthly instalments
Non-cash compensation, fringe benefits: Accident, liability and luggage insurance, company car for business and – if desired – personal use (tax on the non-cash benefit payable by the Board member), reimbursement of travel expenses and other expenditures incurred in the interest of the company	The annual fixed salary is determined upon appointment for the entire term of the appointment.		

Variable remuneration (approx. 60% of total remuneration upon 100% goal attainment)

The profit- and performance-based remuneration (variable remuneration) is contingent on certain defined results and the attainment of certain set targets. The set targets vary according to the function of the Board member in question. The variable remuneration consists of a profit bonus and a performance bonus.

The variable remuneration is defined at the Supervisory Board meeting that approves the consolidated financial statement for the financial year just ended.

The following chart summarises the make-up of the variable remuneration components. For details of measurement and payment procedures please see the two tables following the chart.



¹ Chief Executive Officer/Chief Financial Officer 70% profit bonus, 30% performance bonus (personal targets); Board members with divisional responsibility: 50% profit bonus, 50% performance bonus (25% personal targets/25% divisional targets)

² An instrument of value-based management used to measure the attainment of long-term goals on the level of the Group, business groups and operational units

³ Split defined by legal minimum requirements

Measurement bases/conditions of payment for variable remuneration

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Component	Measurement basis/parameters	Condition of payment
Profit bonus		
Proportion of variable remuneration: Chief Executive Officer/ Chief Financial Officer: 70%; Board member with divisional responsibility: 50%	The profit bonus is dependent on the risk-free interest rate and the average Group return on equity (RoE) of the past three financial years.	Contractual stipulations Attainment of three-year targets
	An individually determined and contractually defined basic amount is paid for each 0.1 percentage point by which the RoE of the past three financial years exceeds the risk-free interest rate. Goal attainment of 100% corresponds to an RoE of 8.8% plus the risk-free interest rate (2019: 0.28%). Goal attainment can amount to a maximum of 200% and a minimum of -100%. The IFRS Group net income (excluding non-controlling interests) and the arithmetic mean of the IFRS Group shareholders' equity (excluding non-controlling interests) at the beginning and end of the financial year are used to calculate the RoE. The risk-free interest rate is the average market rate for 10-year German government bonds over the past five years, with the average being calculated on the basis of the respective interest rate at year-end.	Decision of the Supervisory Board
Performance bonus		
The performance bonus for the Chief Executive Officer and the Chief Financial Officer is arrived at from individual qualitative and, as appropriate, quantitative targets defined annually by the Supervisory Board that are to be accomplished in the subsequent year. For members of the Executive Board with responsibility for a certain division, the performance bonus consists in equal parts of the divisional bonus and the individual bonus.		
Divisional bonus Proportion of variable remuneration: Board member with divisional responsibility: 25%	The basis for the divisional bonus is the return generated on the capital allocated to the division in the respective 3-year period just ended (= RoCA (Return on Capital Allocated)).	Attainment of three-year targets Contractual agreement
	An individually determined amount specified in the service contract is calculated for each 0.1 percentage point by which the average 3-year RoCA exceeds the level of 0%. Goal attainment of 100% is achieved in property and casualty reinsurance with a RoCA of 9.1% and in life and health reinsurance with a RoCA of 10.1%. These RoCA values are above the cost of capital and thus generate positive intrinsic value creation (IVC). ¹ Goal attainment can amount to a maximum of 200% and a minimum of -100%. The method used to calculate the IVC as a basis for determining the divisional performance is checked by independent experts. The divisional bonus is determined by the Supervisory Board according to its best judgement. The determination also takes into account, in particular, the contribution made by the business under the responsibility of the Board member concerned to the achieved divisional performance and the relative change in the average IVC in the remuneration year. The Supervisory Board may make additions to or deductions from the arithmetically calculated values at any time in the event of over- or underfulfilment of the criteria.	Decision of the Supervisory Board according to its best judgement

¹ An instrument of value-based management used to measure the attainment of long-term goals on the level of the Group, business groups and operational units (see also page 28 et seq.).

Component	Measurement basis/parameters	Condition of payment
Individual bonus Proportion of variable remuneration: Chief Executive Officer/ Chief Financial Officer: 30%; Board member with divisional responsibility: 25%	<p>Personal qualitative, quantitative targets (individual contribution to the overall result, leadership skills, innovative skills, entrepreneurial skills, specific features of area of responsibility).</p> <p>The individual bonus for goal attainment of 100% is contractually stipulated. Over- and underfulfilment result in additions/deductions.</p> <p>A General Performance Bonus geared to the individual overall performance of the member of the Executive Board can be determined by the Supervisory Board as part of the individual bonus.</p> <p>The minimum individual bonus amounts to EUR 0 and the maximum is double the bonus payable upon complete goal attainment.</p>	<p>Attainment of annual targets</p> <p>Decision by the Supervisory Board according to its best judgement.</p>

Payment procedures for the total variable remuneration

Of the total amount of defined variable remuneration, a partial amount of 60% is paid out in the month following the Supervisory Board meeting that approves the consolidated financial statement. The remaining amount of 40% is initially withheld as explained below with a view to encouraging long-term value creation:

Payment procedures for the total variable remuneration

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Short-term	Medium-term	Long-term
<p>60% of the variable remuneration with the next monthly salary payment following the Supervisory Board resolution</p>	<p>20% of the variable remuneration in the bonus bank; withheld for three years;</p> <p>the positive amount contributed three years prior to the payment date is available for payment, provided this does not exceed the balance of the bonus bank in light of credits/debits up to and including those for the financial year just ended;</p> <p>an impending payment not covered by a positive balance in the bonus bank is omitted;</p> <p>a positive balance in the bonus bank is carried forward to the following year after deduction of any payment made; a negative balance is not carried forward to the following year;</p> <p>loss of claims due from the bonus bank in special cases: resignation from office without a compelling reason; contract extension on the same conditions is rejected;</p> <p>no interest is paid on credit balances.</p>	<p>Automatic granting of virtual Hannover Re share awards (HR-SAs) with a value equivalent to 20% of the variable remuneration;</p> <p>payment of the value calculated at the payment date after a vesting period of four years;</p> <p>value of the share on awarding/payment: unweighted arithmetic mean of the Xetra closing prices five trading days before to five trading days after the meeting of the Supervisory Board that approves the consolidated financial statement;</p> <p>additional payment of the sum total of all dividends per share paid out during the vesting period;</p> <p>changes in a cumulative amount of 10% or more in the value of the HR-SAs caused by structural measures trigger an adjustment;</p> <p>the Board member has no entitlement to the delivery of shares.</p>

Negative variable total bonus = payment of EUR 0 variable remuneration.

Any minus value of the variable total bonus for a financial year is transferred in full to the bonus bank (see "Medium-term" column).

Handling of payment of variable remuneration components in special cases

In the event of voluntary resignation or termination/dismissal by the company for a compelling reason or if an offered contract extension on the same conditions (exception: the member of the Executive Board has reached the age of 60 and has served as a member of the Executive Board for two terms of office) is declined, all rights to payment of the balances from the bonus bank and from the HR-SAs are forfeited.

If the contractual relationship ends normally prior to the end of the vesting period for the bonus bank or HR-SAs, and if a contract extension is not offered, the member of the Executive Board retains his entitlements to payment from the bonus bank – making reference to a defined forward projection of the bonus bank – and for already awarded HR-SAs.

All claims to the allocation of amounts to the bonus bank and/or awarding of HR-SAs after leaving the company are excluded. In cases where an individual leaves the company because of non-reappointment, retirement or death this shall not apply with respect to claims to variable remuneration acquired (pro rata) in the final year of the Board member's work for the company.

Continued payment in case of disability

In the event of temporary incapacity for work the fixed annual salary shall continue to be paid in the same amount, at most until termination of the service contract.

If a member of the Executive Board is permanently incapacitated for work during the period of the service contract, the service contract shall terminate at the end of the sixth month after which the permanent incapacity for work is established – although no later than at the end of the service contract.

Other information

The contracts of the Board members do not include a commitment to benefits in the event of a premature termination of employment on the Executive Board owing to a change of control.

With regard to Item 4.2.3. Para. 2 “Caps on the amount of variable compensation elements in management board contracts” and Item 4.2.3 Para. 4 “Caps on severance payments in management board contracts” of the German Corporate Governance Code, we would refer the reader to our remarks in the 2019 Declaration of Conformity contained in the section “Statement of enterprise management practices” on page 120 et seq. of this Group Annual Report.

Amount of remuneration received by the Executive Board

The total remuneration received by the Executive Board of Hannover Rück SE on the basis of its work for Hannover Rück SE and the companies belonging to the Group is calculated from the sum of all the components set out in the following table pursuant to DRS 17.

Total remuneration of the active members of the Executive Board pursuant to DRS 17 (modified in 2010)

Name	Financial year	Non-performance-based remuneration		Performance-based remuneration ¹	
		Basic salary	Non-cash compensation/ fringe benefits ²	Short-term	
				Variable remuneration payable	
				60% ³	Netted remuneration from seats with Group bodies
in EUR thousand					
Ulrich Wallin⁷	2019	244.8	2.1	324.5	
	2018	630.4	13.5	700.7	
Jean-Jacques Henchoz⁸	2019	692.5	1,077.0	687.1	
Sven Althoff	2019	361.3	16.7	457.5	
	2018	320.0	16.7	335.5	
Claude Chèvre	2019	390.0	15.9	402.1	
	2018	380.0	10.9	346.2	
Dr. Klaus Miller	2019	420.0	1.7	496.9	43.8
	2018	389.3	1.5	322.8	
Dr. Michael Pickel	2019	440.0	14.1	567.6	5.0
	2018	440.0	14.7	459.5	5.0
Silke Sehm⁹	2019	292.7	4.7	333.0	
Roland Vogel	2019	460.0	16.3	581.3	37.0
	2018	460.0	16.2	521.5	60.8
Total	2019	3,301.3	1,148.5	3,850.0	85.8
Total	2018	2,619.7	73.5	2,686.2	65.8

¹ As at the balance sheet date no Board resolution was available regarding the performance-based remuneration for 2019.

The variable remuneration is recognised on the basis of estimates and the provisions constituted accordingly.

² The non-cash compensation has been carried in the amounts established for tax purposes.

³ In 2019 EUR 110,100 more in variable remuneration was paid out to Board members for 2018 than had been reserved. As contractually agreed, the variable remuneration for 2018 was paid out in full to Mr. Gräber's heirs in an amount EUR 64,900 higher than had been reserved.

⁴ The nominal amount is stated; full or partial repayment in 2023, depending on the development until such time of the balance in the bonus bank. In 2019 altogether EUR 36,700 more than had been originally reserved was allocated to the bonus bank for 2018.

⁵ The nominal amount is stated; virtual Hannover Re share awards are automatically granted in an amount equivalent to 20% of the variable remuneration. The equivalent amount will be paid in 2024 at the prevailing share price of Hannover Re. In 2019 nominal amounts of EUR 36,700 more than had been originally reserved were used as a basis for allocation of the 2018 share awards.

⁶ In order to calculate the number of share awards for 2019 reference was made to the Xetra closing price of the Hannover Re share on 30 December 2019 (EUR 172.30). The number to be actually awarded is established from the arithmetic mean of the Xetra closing prices of the Hannover Re share in a period from five trading days before to five trading days after the meeting of the Supervisory Board that approves the consolidated financial statement in March 2020. The applicable market price of the Hannover Re share had increased from EUR 117.70 (28 December 2018) to EUR 129.60 by the allocation date (16 March 2019) of the share awards for 2018; the share awards actually allocated for 2018 are shown here, not those estimated in the 2018 Annual Report.

⁷ Mr. Wallin's appointment ended on age grounds after mutually agreed shortening of the term of office at the end of the company's Annual General Meeting on 8 May 2019.

⁸ Mr. Henchoz was appointed to the Executive Board on 1 April 2019 and named Chief Executive Officer with effect from the end of the company's Annual General Meeting on 8 May 2019. In April 2019 Mr. Henchoz additionally received a one-time payment of EUR 1 million, which was included in the fringe benefits.

⁹ Ms. Sehm was appointed to the Executive Board on 6 March 2019. The stated amounts include her remuneration as a senior executive of Hannover Re for the period from 1 January to 5 March 2019.

	Performance-based remuneration ¹		Total	Number of share awards ⁶ 2018 = Actual 2019 = Estimate
	Medium-term	Long-term		
	Bonus bank	Share awards		
	20% (allocation) ⁴	20% (allocation) ⁵		
in EUR thousand				
	108.2	108.2	787.8	562
	233.6	233.6	1,811.8	1,888
	229.0	229.0	2,914.6	1,330
	152.5	152.5	1,140.5	829
	111.9	111.9	896.0	908
	134.0	134.0	1,076.0	779
	115.3	115.3	967.7	923
	165.6	165.6	1,249.8	963
	107.6	107.6	928.8	857
	189.2	189.2	1,400.1	1,020
	153.2	153.2	1,220.6	1,249
	104.4	117.6	852.4	683
	193.8	193.8	1,445.2	1,112
	173.8	173.8	1,345.3	1,340
	1,276.7	1,289.9	10,866.4	7,278
	895.4	895.4	7,170.2	7,165

The following table shows the expense for share-based remuneration of the Executive Board in the financial year.

The table is to be viewed independently of the presentation of the total remuneration received by active members of the Executive Board pursuant to DRS 17.

Total expense for share-based remuneration of the active members of the Executive Board

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Name	Year	Stock appreciation rights exercised	Change in reserve for stock appreciation rights in 2018	Payment of share awards	Change in reserve for share awards from previous years ¹	Expense for share awards allocated in current financial year ²	Total
in EUR thousand							
Ulrich Wallin	2019	–	–	361.1	650.4	96.8	1,108.3
	2018	–	–	427.2	472.5	172.6	1,072.3
Jean-Jacques Henchoz	2019	–	–	–	–	70.4	70.4
Sven Althoff³	2019	–	–	155.9	286.9	39.8	482.6
	2018	9.4	(9.4)	150.6	152.3	23.5	326.4
Claude Chèvre	2019	–	–	222.0	340.9	25.8	588.7
	2018	–	–	241.2	141.5	23.0	405.7
Dr. Klaus Miller	2019	–	–	213.7	289.0	35.5	538.2
	2018	–	–	241.2	166.7	21.4	429.3
Dr. Michael Pickel	2019	–	–	220.4	328.8	43.8	593.0
	2018	–	–	254.7	177.8	29.6	462.1
Silke Sehm⁴	2019	–	–	145.6	401.3	37.0	583.9
Roland Vogel	2019	–	–	217.0	366.7	58.9	642.6
	2018	–	–	256.8	188.7	40.3	485.8
Total	2019	–	–	1,535.7	2,664.0	408.0	4,607.7
Total	2018	9.4	(9.4)	1,571.7	1,299.5	310.4	3,181.6

¹ The change in the reserve for share awards from previous years derives from the higher market price of the Hannover Re share, the dividend approved for 2018, the spreading of the expense for share awards across the remaining period of the individual service contracts and the payout of the share awards allocated for 2014.

² The expense for share awards is spread across the remaining period of the individual service contracts. This gives rise to a difference relative to the nominal amount shown in the table of total remuneration.

³ The expenses for stock appreciation rights relate entirely and those for share awards pro rata to Mr. Althoff's work as a senior executive until 2014.

⁴ Ms. Sehm was appointed to the Executive Board on 6 March 2019. The share awards from prior years and a portion of the expense for share awards in the current financial year relate to her previous work as a senior executive at Hannover Re.

The following two tables show the remuneration of the Executive Board in the 2019 financial year in accordance with the recommendations of the German Corporate Governance Code:

German Corporate Governance Code, Item 4.2.5 Para. 3 – Table 1 (target/minimum/maximum remuneration as nominal amounts)

Benefits granted	Ulrich Wallin Chief Executive Officer Exit: 8 May 2019 (2019 amounts pro rata)				Jean-Jacques Henchoz Chief Executive Officer Entry: 1 April 2019 (pro rata)			
	2018	2019	2019 (Min)	2019 (Max)	2018	2019	2019 (Min)	2019 (Max)
in EUR thousand								
Fixed remuneration	630.4	244.8	244.8	244.8	–	692.5	692.5	692.5
Fringe benefits ¹	13.5	2.1	2.1	2.1	–	1,077.0	1,077.0	1,077.0
Total	643.9	246.9	246.9	246.9	–	1,769.5	1,769.5	1,769.5
One-year variable remuneration	563.3	209.1	0.0	418.1	–	495.0	0.0	990.0
Multi-year variable remuneration	421.3	184.5	(198.8)	323.9	–	330.0	0.0	660.0
Bonus bank 2018 (2022 ²)/ 2019 (2023 ²)	187.8	69.7	(243.9)	139.4	–	165.0	0.0	330.0
Share Awards 2018 (2023 ²)/ 2019 (2024 ²) ³	187.8	69.7	0.0	139.4	–	165.0	0.0	330.0
Dividend on share awards for 2017 ⁴	45.7	0.0	0.0	0.0	–	0.0	0.0	0.0
Dividend on share awards for 2018 ⁴	0.0	45.1	45.1	45.1	–	0.0	0.0	0.0
Total	1,628.4	640.5	48.1	988.9	–	2,594.5	1,769.5	3,419.5
Service cost ⁵	172.5	0	0.0	0.0	–	136.6	136.6	136.6
Total remuneration	1,800.9	640.5	48.1	988.9	–	2,731.1	1,906.1	3,556.1

Benefits granted	Dr. Klaus Miller Board member with divisional responsibility				Dr. Michael Pickel Board member with divisional responsibility			
	2018	2019	2019 (Min)	2019 (Max)	2018	2019	2019 (Min)	2019 (Max)
in EUR thousand								
Fixed remuneration	389.3	420.0	420.0	420.0	440.0	440.0	440.0	440.0
Fringe benefits ¹	1.5	1.7	1.7	1.7	14.7	14.1	14.1	14.1
Total	390.8	421.7	421.7	421.7	454.7	454.1	454.1	454.1
One-year variable remuneration	318.0	378.0	0.0	756.0	396.0	396.0	0.0	792.0
Multi-year variable remuneration	236.7	274.9	(324.5)	526.9	290.1	290.2	(390.2)	554.2
Bonus bank 2018 (2022 ²)/ 2019 (2023 ²)	106.0	126.0	(347.4)	252.0	132.0	132.0	(416.4)	264.0
Share Awards 2018 (2023 ²)/ 2019 (2024 ²) ³	106.0	126.0	0.0	252.0	132.0	132.0	0.0	264.0
Dividend on share awards for 2017 ⁴	24.7	0.0	0.0	0.0	26.1	0.0	0.0	0.0
Dividend on share awards for 2018 ⁴	0.0	22.9	22.9	22.9	0.0	26.2	26.2	26.2
Total	945.5	1,074.6	97.2	1,704.6	1,140.8	1,140.3	63.9	1,800.3
Service cost ⁵	88.1	96.3	96.3	96.3	156.4	162.3	162.3	162.3
Total remuneration	1,033.6	1,170.9	193.5	1,800.9	1,297.2	1,302.6	226.2	1,962.6

¹ The fringe benefits of Mr. Henchoz include a contractually agreed one-time payment of EUR 1 million.

² Year of payment

³ Maximum value when awarded, amount paid out dependent upon the share price in the year of payment and the dividends paid until such time.

⁴ In the case of Mr. Althoff and Ms. Sehm, the dividends paid out on share awards include the allocations for work performed as senior executives at Hannover Re.

⁵ For details of the service cost see the table "Pension commitments" on page 141.

Sven Althoff Board member with divisional responsibility Coordinator of worldwide property and casualty reinsurance				Claude Chèvre Board member with divisional responsibility			
2018	2019	2019 (Min)	2019 (Max)	2018	2019	2019 (Min)	2019 (Max)
320.0	361.3	361.3	361.3	380.0	390.0	390.0	390.0
16.7	16.7	16.7	16.7	10.9	15.9	15.9	15.9
336.7	378.0	378.0	378.0	390.9	405.9	405.9	405.9
288.0	321.7	0.0	643.5	342.0	351.0	0.0	702.0
214.0	237.0	(326.0)	451.4	256.4	260.8	(376.6)	494.8
96.0	107.3	(348.4)	214.5	114.0	117.0	(403.4)	234.0
96.0	107.3	0.0	214.5	114.0	117.0	0.0	234.0
22.0	0.0	0.0	0.0	28.4	0.0	0.0	0.0
0.0	22.4	22.4	22.4	0.0	26.8	26.8	26.8
838.7	936.7	52.0	1,472.9	989.3	1,017.7	29.3	1,602.7
129.4	147.5	147.5	147.5	140.1	118.7	118.7	118.7
968.1	1,084.2	199.5	1,620.4	1,129.4	1,136.4	148.0	1,721.4

Silke Sehm Board member with divisional responsibility Entry: 6 March 2019 (pro rata)				Roland Vogel Chief Financial Officer			
2018	2019	2019 (Min)	2019 (Max)	2018	2019	2019 (Min)	2019 (Max)
–	262.4	262.4	262.4	460.0	460.0	460.0	460.0
–	4.7	4.7	4.7	16.2	16.3	16.3	16.3
–	267.1	267.1	267.1	476.2	476.3	476.3	476.3
–	235.2	0.0	470.4	414.0	414.0	0.0	828.0
–	172.4	15.6	329.2	304.2	304.9	(448.3)	580.9
–	78.4	0.0	156.8	138.0	138.0	(477.2)	276.0
–	78.4	0.0	156.8	138.0	138.0	0.0	276.0
–	0.0	0.0	0.0	28.2	0.0	0.0	0.0
–	15.6	15.6	15.6	0.0	28.9	28.9	28.9
–	674.7	282.7	1,066.7	1,194.4	1,195.2	28.0	1,885.2
–	162.1	162.1	162.1	53.5	52.8	52.8	52.8
–	836.8	444.8	1,228.8	1,247.9	1,248.0	80.8	1,938.0

**German Corporate Governance Code, Item 4.2.5 Para. 3 – Table 2
(cash allocations in 2018 and 2019)**

Allocation	Ulrich Wallin Chief Executive Officer Exit: 8 May 2019		Jean-Jacques Henchoz Chief Executive Officer Entry: 1 April 2019	
in EUR thousand	2018	2019	2018	2019
Fixed remuneration	630.4	244.8	–	692.5
Fringe benefits ²	13.5	2.1	–	1,077.0
Total	643.9	246.9	–	1,769.5
One-year variable remuneration ³	672.0	733.8	–	0.0
Multi-year variable remuneration	643.6	600.3	–	0.0
Bonus bank 2014/2015	216.4	239.2	–	0.0
Share Awards 2013/2014 ⁴	427.2	361.1	–	0.0
Stock appreciation rights 2011 (2016–2021) ⁵	0.0	0.0	–	0.0
Total	1,959.5	1,581.0	–	1,769.5
Service cost ⁶	172.5	0.0	–	136.6
Total remuneration	2,132.0	1,581.0	–	1,906.1

Allocation	Dr. Klaus Miller Board member with divisional responsibility		Dr. Michael Pickel Board member with divisional responsibility	
in EUR thousand	2018	2019	2018	2019
Fixed remuneration	389.3	420.0	440.0	440.0
Fringe benefits ²	1.5	1.7	14.7	14.1
Total	390.8	421.7	454.7	454.1
One-year variable remuneration ³	317.4	376.8	357.5	485.4
Multi-year variable remuneration	369.2	343.7	386.7	358.2
Bonus bank 2014/2015	128.0	130.0	132.0	137.8
Share Awards 2013/2014 ⁴	241.2	213.7	254.7	220.4
Stock appreciation rights 2011 (2016–2021) ⁵	0.0	0.0	0.0	0.0
Total	1,077.4	1,142.2	1,198.9	1,297.7
Service cost ⁶	88.1	96.3	156.4	162.3
Total remuneration	1,165.5	1,238.5	1,355.3	1,460.0

¹ The stated amounts include the remuneration received by Ms. Sehm as a senior executive of Hannover Re for the period from 1 January 2019 to 6 March 2019.

² Mr. Henchoz was granted a contractually agreed one-time payment of EUR 1 million.

³ This refers in each case to payment of the variable remuneration for the previous year. Remuneration for seats with Group bodies that is counted towards the variable remuneration accrues in the year of occurrence. The company's Supervisory Board only decides on the final amount paid out for the 2019 financial year after the remuneration report has been drawn up.

⁴ In the case of Mr. Althoff and Ms. Sehm, the payment of share awards includes the allocations for their work as senior executives before their appointment to the Executive Board.

⁵ Stock appreciation rights were awarded to Mr. Althoff in 2011 as a senior executive.

⁶ For details of the service cost see the table "Pension commitments" on page 141.

Sven Althoff
Board member with divisional responsibility
Coordinator of worldwide property and
casualty reinsurance

Claude Chèvre
Board member with divisional responsibility

2018	2019	2018	2019
320.0	361.3	380.0	390.0
16.7	16.7	10.9	15.9
336.7	378.0	390.9	405.9
328.8	352.8	377.4	358.8
208.2	276.7	374.2	376.6
48.2	120.8	133.0	154.6
150.6	155.9	241.2	222.0
9.4	0.0	0.0	0.0
873.7	1,007.5	1,142.5	1,141.3
129.4	147.5	140.1	118.7
1,003.1	1,155.0	1,282.6	1,260.0

Silke Sehm¹
Board member with divisional responsibility
Entry: 6 March 2019

Roland Vogel
Chief Financial Officer

2018	2019	2018	2019
–	292.7	460.0	460.0
–	4.7	16.2	16.3
–	297.4	476.2	476.3
–	110.9	491.8	497.1
–	145.6	386.8	353.8
–	0.0	130.0	136.8
–	145.6	256.8	217.0
–	0.0	0.0	0.0
–	553.9	1,354.8	1,327.2
–	162.1	53.5	52.8
–	716.0	1,408.3	1,380.0

Sideline activities of the members of the Executive Board

The members of the Executive Board require the approval of the Supervisory Board to take on sideline activities. This ensures that neither the remuneration granted nor the time required for this activity can create a conflict with their responsibilities on the Executive Board. If the sideline activities involve seats on supervisory boards or comparable control boards, these are listed and published in the Annual Report of Hannover Rück SE. The remuneration received for such seats at Group companies and other board functions is deducted when calculating the variable bonus and shown separately in the table of total remuneration.

Retirement provision

Defined benefit pension commitment (appointment before 2009)

The contracts of members of the Executive Board first appointed prior to 2009 contain commitments to an annual retirement pension calculated as a percentage of the pensionable fixed annual remuneration (defined benefit). The target pension is at most 50% of the monthly fixed salary payable when leaving the company as contractually agreed on reaching the age of 65. A non-pensionable fixed remuneration component was introduced in conjunction with the remuneration structure applicable from 2011 onwards.

Defined contribution pension commitment (appointment from 2009 onwards)

The commitments given to members of the Executive Board from 2009 onwards are based on a defined contribution scheme.

A Board member who has reached the age of 65 and left the company's employment receives a life-long retirement pension. The amount of the monthly retirement pension is calculated according to the reference date age (year of the reference date less year of birth) and the funding contribution on the reference date. The annual funding contribution for these contracts is paid by the company in the amount of a contractually specified percentage of the pensionable income (fixed annual remuneration as at the contractually specified reference date).

In both contract variants (i.e. defined benefit and defined contribution) other income received while drawing the retirement pension is taken into account pro rata or in its entirety under certain circumstances (e.g. in the event of incapacity for work or termination of the service contract before reaching the age of 65).

Provision for surviving dependants

If the Board member dies during the period of the service contract, the surviving spouse – or alternatively the eligible children – shall be entitled to continued payment of the fixed monthly salary for the month in which the Board member dies and the six months thereafter, at most until termination of the service contract. If the member of the Executive Board dies after pension payments begin, the surviving spouse and alternatively the dependent children shall receive continued payment of the retirement pension for the month of death and the following six months.

The widow's pension amounts to 60% of the retirement pay that the Board member received or would have received if he had been incapacitated for work at the time of his death.

An orphan's pension shall be granted in the amount of 15% – in the case of full orphans 25% (final-salary pension commitment) or 30% (contribution-based pension commitment) – of the retirement pay that the Board member received or would have received on the day of his death if the pensionable event had occurred owing to a permanent incapacity for work.

Adjustments

The following parameters are used for adjustments to retirement, widow's and orphan's benefits: the price index for the cost of living of all private households in Germany (contracts from 2001 onwards) or the price index for the cost of living of four-person households of civil servants and higher-income salaried employees (contracts from 1997 to 2000).

Current pensions based on the commitments given from 2009 onwards (defined contribution commitment) are increased annually by at least 1% of their most recent (gross) amount.

Pension payments to former members of the Executive Board

The pension payments to former members of the Executive Board and their surviving dependants, for whom 18 (previous year: 17) pension commitments existed, totalled EUR 2.0 million (EUR 1.7 million) in the year under review. The projected benefit obligation of the pension commitments to former members of the Executive Board amounted to altogether EUR 34.2 million (EUR 26.0 million).

Pension commitments

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Name in EUR thousand	Financial year	Attainable annual pension (age 65)	DBO 31.12.	Personnel expense
Ulrich Wallin ¹	2019	257.5	0.00	0.00
	2018	257.5	6,874.2	172.5
Jean-Jacques Henchoz	2019	52.4	149.3	136.6
Sven Althoff ^{2,3}	2019	103.7	1,788.7	147.5
	2018	97.5	1,362.5	129.4
Claude Chèvre	2019	100.0	1,222.3	118.7
	2018	119.0	1,033.2	140.1
Dr. Klaus Miller	2019	57.8	917.7	96.3
	2018	57.7	749.0	88.1
Dr. Michael Pickel	2019	160.0	3,521.9	162.3
	2018	160.0	2,981.5	156.4
Silke Sehm ^{2,4}	2019	58.5	707.6	162.1
Roland Vogel ²	2019	97.4	2,040.2	52.8
	2018	97.3	1,705.9	53.5
Total	2019	887.3	10,347.7	876.3
Total	2018	789.0	14,706.3	740.0

¹ In accordance with IAS the service cost for active members is determined at the beginning of the year based on the data known at the time; consequently, the change in the service contract of Mr. Wallin was already reflected in the provision as at 31 December 2018 and the personnel expense in 2019 amounts to EUR 0. The pension paid to him with effect from 9 May 2019 is included in the projected benefit obligation of the pension commitments to former members of the Executive Board.

² Mr. Althoff and Mr. Vogel as well as Ms. Sehm were first granted a pension commitment prior to 2001 on the basis of their service to the company prior to their appointment to the Executive Board; the earned portion of the defined benefit obligation is therefore established as a proportion (in the ratio [currently attained service years since entry]/[attainable service years from entry to exit age]) of the final benefit. The values shown include the entitlements prior to appointment to the Executive Board, which in accordance with a resolution of the company's Supervisory Board shall remain unaffected by the pension commitment as a member of the Executive Board.

³ The personnel expense for 2019 includes a past service cost of EUR 97.5 thousand.

⁴ The personnel expense for 2019 includes a past service cost of EUR 139.2 thousand.

Remuneration of the Supervisory Board

The remuneration of the Supervisory Board is determined by the Annual General Meeting of Hannover Rück SE and regulated by the company's Statute.

In accordance with § 14 of the Statute as amended on 30 May 2016 and the resolution of the Annual General Meeting on 7 May 2013, the members of the Supervisory Board receive fixed annual remuneration of EUR 30,000 per member in addition to reimbursement of their expenses. Furthermore, each member of the Supervisory Board receives variable remuneration measured according to the average earnings per share (EPS) of the company over the past three financial years preceding the Annual General Meeting at which the actions of the Supervisory Board for the last of these three years are ratified. The variable remuneration amounts to EUR 330 for each EUR 0.10 average earnings per share (EPS) of the company. The measurement of this performance-based remuneration component according to the average earnings per share of the last three financial years ensures that the variable remuneration is geared to sustainable corporate development. The variable remuneration is limited to an annual maximum of EUR 30,000. The Chairman of the Supervisory Board re-

ceives twice the aforementioned remuneration amounts and the Deputy Chairman of the Supervisory Board receives one-and-a-half times the said amounts.

In addition, the members of the Finance and Audit Committee formed by the Supervisory Board receive remuneration of EUR 15,000 for their committee work and the members of the Standing Committee formed by the Supervisory Board receive remuneration of EUR 7,500. In this case, too, the Chairman of the Committee receives twice and the Deputy Chairman one-and-a-half times the stated amounts. No remuneration is envisaged for the Nomination Committee.

Members who have only belonged to the Supervisory Board or one of its Committees for part of the financial year receive the remuneration pro rata temporis.

All the members of the Supervisory Board receive an attendance allowance of EUR 1,000 for their participation in each meeting of the Supervisory Board and the Committees in addition to the aforementioned remuneration. If a meeting of the Supervisory Board and one or more committee meetings fall on the same day, the attendance allowance for this day is only paid once in total.

Individual remuneration received by the members of the Supervisory Board
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Name	Function	Type of remuneration	2019	2018
in EUR thousand ¹				
Torsten Leue ²	Member of the • Supervisory Board ⁴ • Standing Committee ⁵ • Finance and Audit Committee • Nomination Committee ⁵	Fixed remuneration	91.4	48.2
		Variable remuneration	91.2	47.0
		Remuneration for committee work	46.7	14.6
		Attendance allowances	13.0	7.0
			242.3	116.8
Herbert K. Haas ²	Member of the • Supervisory Board ⁶ • Standing Committee ⁷ • Finance and Audit Committee ⁸ • Nomination Committee ⁷	Fixed remuneration	57.1	100.0
		Variable remuneration	57.2	100.1
		Remuneration for committee work	40.9	68.4
		Attendance allowances	11.0	15.0
			166.2	283.5
Natalie Bani Ardalan ³ (since 8 May 2019)	Member of the Supervisory Board	Fixed remuneration	19.4	–
		Variable remuneration	19.2	–
		Remuneration for committee work	–	–
		Attendance allowances	3.0	–
			41.6	–
Wolf-Dieter Baumgartl (until 7 May 2018)	Member of the • Supervisory Board • Standing Committee • Finance and Audit Committee • Nomination Committee	Fixed remuneration	–	10.6
		Variable remuneration	0.1	11.4
		Remuneration for committee work	–	7.9
		Attendance allowances	–	4.0
			0.1	33.9
Benita Bierstedt ³ (from 1 June 2018 to 6 July 2018)	Member of the Supervisory Board	Fixed remuneration	–	3.0
		Variable remuneration	–	2.9
		Remuneration for committee work	–	–
		Attendance allowances	–	–
			–	5.9
Frauke Heitmüller ³	Member of the Supervisory Board	Fixed remuneration	30.0	30.0
		Variable remuneration	30.0	30.0
		Remuneration for committee work	–	–
		Attendance allowances	5.0	6.0
			65.0	66.0
Ilka Hundeshagen ³ (since 8 May 2019)	Member of the Supervisory Board	Fixed remuneration	19.4	–
		Variable remuneration	19.2	–
		Remuneration for committee work	–	–
		Attendance allowances	3.0	–
			41.6	–
Dr. Ursula Lipowsky	Member of the • Supervisory Board • Finance and Audit Committee	Fixed remuneration	30.0	19.5
		Variable remuneration	29.9	18.6
		Remuneration for committee work	15.0	9.8
		Attendance allowances	8.0	5.0
			82.9	52.9

Name	Function	Type of remuneration	2019	2018
in EUR thousand ¹				
Otto Müller³ (until 8 May 2019)	Member of the Supervisory Board	Fixed remuneration	10.7	26.6
		Variable remuneration	10.9	26.8
		Remuneration for committee work	–	–
		Attendance allowances	2.0	6.0
			23.6	59.4
Dr. Michael Ollmann (since 8 May 2019)	Member of the Supervisory Board	Fixed remuneration	19.4	–
		Variable remuneration	19.2	–
		Remuneration for committee work	–	–
		Attendance allowances	3.0	–
			41.6	–
Dr. Andrea Pollak	Member of the • Supervisory Board • Nomination Committee	Fixed remuneration	30.0	30.0
		Variable remuneration	30.0	30.0
		Remuneration for committee work	–	–
		Attendance allowances	5.0	6.0
			65.0	66.0
Dr. Immo Querner² (until 8 May 2019)	Member of the Supervisory Board	Fixed remuneration	30.7	50.0
		Variable remuneration	31.0	50.0
		Remuneration for committee work	–	1.8
		Attendance allowances	5.0	8.0
			66.7	109.8
Dr. Erhard Schipporeit	Member of the • Supervisory Board • Standing Committee	Fixed remuneration	30.0	30.0
		Variable remuneration	30.0	30.0
		Remuneration for committee work	7.5	10.2
		Attendance allowances	8.0	10.0
			75.5	80.2
Maike Sielaff³ (until 8 May 2019)	Member of the Supervisory Board	Fixed remuneration	10.7	30.0
		Variable remuneration	10.9	30.0
		Remuneration for committee work	–	–
		Attendance allowances	2.0	6.0
			23.6	66.0
Dr. Klaus Sturany (until 7 May 2018)	Deputy Chairman of the • Supervisory Board Member of the • Standing Committee	Fixed remuneration	–	15.9
		Variable remuneration	0.2	17.2
		Remuneration for committee work	–	2.6
		Attendance allowances	–	4.0
			0.2	39.7
Total			935.9	980.1

¹ Amounts excluding reimbursed VAT

² Including supervisory board remuneration and remuneration for committee work as well as advisory board remuneration received from entities affiliated with the Group

³ Employee representative

⁴ Deputy Chairman until 8 May 2019 and Chairman since 8 May 2019

⁵ Chairman since 8 May 2019

⁶ Chairman until 8 May 2019 and Deputy Chairman since 8 May 2019

⁷ Chairman until 8 May 2019

⁸ Chairman

The individualised presentation of the remuneration shows the expense charged to the financial year in question. Since the remuneration for a financial year becomes due at the end of the Annual General Meeting that ratifies the acts of the Supervisory Board for the financial year, the relevant reserve allocations for the variable remuneration are recognised allowing for any fractional amounts. Value-added tax payable upon the remuneration is reimbursed by the company.

In the year under review no payments or benefits were granted to members of the Supervisory Board in return for services provided individually outside the committee work described above, including for example consulting or mediation services, with the exception of the remuneration paid to employee representatives on the basis of their employment contracts.

Loans to members of the management boards and contingent liabilities

In order to avoid potential conflicts of interest, Hannover Rück SE or its subsidiaries may only grant loans to members of the Executive Board or Supervisory Board or their dependants with the approval of the Supervisory Board.

In 2019 no loan relationships existed with members of the Executive Board or Supervisory Board of Hannover Rück SE, nor did the company enter into any contingent liabilities for members of the management boards.

Securities transactions and shareholdings (directors' dealings)

Dealings in shares, options and derivatives of Hannover Rück SE effected by members of the Executive Board or Supervisory Board of Hannover Re or by other persons with managerial functions who regularly have access to insider information concerning the company and who are authorised to take major business decisions – as well as such dealings conducted by certain persons closely related to the aforementioned individuals – in excess of EUR 5,000 are to be reported. No reportable transactions took place in the 2019 financial year.

Members of the Supervisory Board and Executive Board of Hannover Rück SE as well as their spouses or registered partners and first-degree relatives hold less than 1.0% of the issued shares. The total holding as at 31 December 2019 amounted to 0.0009% (0.004%) of the issued shares, i.e. 1,125 (4,741) shares.

Remuneration of staff and senior executives

Structure and system

The remuneration scheme for senior executives below the Executive Board (management levels 2 and 3) and for key function holders in Germany belonging as a matter of principle to the ranks of senior executives consists of a fixed annual salary and a system of variable remuneration. This is comprised of a short-term variable remuneration component, the annual cash bonus and a long-term share-based remuneration component, the Share Award Plan. This variable remuneration has been uniformly applied worldwide since 1 January 2012 to all Group senior executives (i.e. Managing Directors, Directors and General Managers). As part of the reorientation of the remuneration system for senior executives the Share Award Plan of the Executive Board was consciously extended to include management levels 2 and 3. Given that at the same time the stock appreciation rights plan for senior executives was cancelled with effect from the 2012 allocation year, this means that a uniform share-based remuneration component has been maintained for the Executive Board and senior executives alike.

Members of staff on the levels of Chief Manager, Senior Manager and Manager are also able to participate in a variable remuneration system through the Group Performance Bonus (GPB). The Group Performance Bonus (GPB) is a remuneration model launched in 2004 that is linked to the success of the company. This tool is geared to the minimum return on equity of 750 basis points above the risk-free interest rate and the return on equity actually generated. For those participating in the GPB 14.15 monthly salary payments are guaranteed; a maximum of 16.7 salary payments is attainable.

The group of participants and the total number of eligible participants in the variable remuneration system of Hannover Re are set out in the following table.

Measurement of variable remuneration for senior executives

The measurement of the variable remuneration is based on three elements: Group net income, targets in the Property & Casualty and Life & Health business groups and individual targets. The weighting of the elements is dependent upon whether responsibility is carried in a treaty/regional department or in a service department. In the treaty/regional departments the measurement of the variable remuneration is based on weightings of 20% for Group net income, 40% for goal attainment in the respective Property & Casualty or Life & Health business group and 40% for individual goal attainment. In service departments the variable remuneration is based on Group net income and individual targets with a corresponding weighting of 40% and 60%. The degree of goal attainment is defined for both the Group net income and the business groups. Individual targets and the degree of goal

attainment are agreed between the senior executive and their supervisor.

The Group net income is measured by the three-year average return on equity (RoE) of the Hannover Re Group above the risk-free interest rate. Goal attainment is calculated as follows: for each individual financial year of the last three financial years it is calculated by how many percentage points the RoE of the Hannover Re Group exceeds the risk-free interest rate. The average of these three differences determines the three-year average RoE above the risk-free interest rate. The

risk-free interest rate is the average market interest rate over the past five years for 10-year German government bonds.

If the three-year average RoE above the risk-free interest rate reaches the expected minimum return on equity of 750 basis points, goal attainment stands at 85%. Goal attainment of 100% is recorded at 882 basis points. The maximum possible goal attainment is 200%. A lower limit is placed on goal attainment of -50% (penalty) for management level 2 (Managing Director) and 0% for management level 3 (Director and General Manager).

Group of participants and total number of eligible participants in variable remuneration systems

Valid: 31 December 2019

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Participants		Variable remuneration system	Number of eligible participants in the variable remuneration system
Managing Director	Management level 2	Cash bonus and Share Award Plan	Hannover Re Group All 152 Group senior executives worldwide receive a cash bonus upon corresponding goal attainment and participate in the Share Award Plan.
Director	Management level 3		
General Manager			
Chief Manager		Group Performance Bonus (GPB)	Head office Hannover 798 staff (excl. seconded employees) out of the altogether 1,396 at Hannover head office (incl. 86 senior executives) are GPB-eligible.
Senior Manager			
Manager			

The measurement of the business group targets – which in the case of the treaty/regional departments accounts for 40% of overall goal attainment – is geared to the economic value created. The Excess Return on Capital Allocated (xRoCA) of the business group encompassing the respective area of responsibility, namely Property & Casualty reinsurance or Life & Health reinsurance, is therefore taken as a one-year measurement basis. The xRoCA describes the IVC in relation to the allocated capital and shows the relative excess return generated above and beyond the weighted cost of capital. Goal attainment of 100% exists if the xRoCA in Property & Casualty reinsurance reaches 2% and the xRoCA in Life & Health reinsurance reaches 2%. Negative performance contributions are excluded; the minimum goal attainment is 0%. The maximum possible goal attainment is 150%.

Individual targets are agreed and measured for a period of one year. The degree of goal attainment is between 0% and 100%.

Amount and payment of variable remuneration for senior executives

The overall degree of goal attainment determines the amount of variable remuneration including share awards. On management level 2 (Managing Director) 60% of the variable remuneration is paid out annually in cash and 40% is granted in the form of share awards. On management level 3 (Director and General Manager) the variable remuneration is split into 65% cash payment and 35% granted as share awards.

On management level 3 (Director and General Manager) the minimum variable remuneration amounts to EUR 0 on the premise that the degree of attainment for all goals is 0%. For management level 2 (Managing Director) in treaty/regional departments the minimum limit for the variable remuneration is set at -10% if the degree of goal attainment for Group net income is -50% while at the same time goal attainment of 0% is determined for the divisional targets and individual targets. For management level 2 (Managing Director) in service departments -20% of the variable remuneration is possible as the lower limit, if the degree of goal attainment for Group net income is -50% and at the same time goal attainment of 0% is determined for the individual targets.

In view of the fact that outperformance of up to 200% is possible for Group net income and up to 150% for business group targets, a maximum total degree of goal attainment of 140% can be attained in both treaty/regional departments and service departments. Given outperformance of all targets, a maximum of 140% of the variable remuneration can therefore be attained on management levels 2 and 3.

Allocation and payment of share awards to senior executives

The total number of share awards allocated is determined according to the value per share of Hannover Re. This value is arrived at from the average of the closing prices of the shares in a period extending from 20 trading days before to 10 trading days after the meeting of the Supervisory Board at which the consolidated financial statement is approved. The number of share awards is established by dividing the specified portion of the total bonus (40% or 35%) by the value per share, rounded up to the next full share.

Following expiry of a vesting period of four years the value of one Hannover Re share calculated at the disbursement date is paid out for each share award. The value of the Hannover Re share is again determined from the average of the closing prices of the shares in a period from 20 trading days before to 10 trading days after the meeting of the Supervisory Board that approves the consolidated financial statement. In addition, a sum in the amount of the dividend is paid out for each share award, insofar as dividends were distributed to shareholders. The level of the dividend payment is the sum total of all dividends per share paid out during the period of the share awards multiplied by the number of share awards.

In the case of the allocation and payment of share awards to participants in the Share Award Plan who are located abroad, the rate of exchange used to convert the average share price is the average of the relevant exchange rate in a period from 20 trading days before to 10 trading days after the meeting of the Supervisory Board that approves the consolidated financial statement. For payment of the dividend to participants in the Share Award Plan who are located abroad, the rate of exchange used to convert the dividend per share is the average of the relevant exchange rate in a period from 20 trading days before to 10 trading days after the Annual General Meeting that approves the dividend payment for the financial year just ended.

The cash bonus for the 2018 financial year was paid out in June 2019. The share awards for the 2018 financial year were also allocated in June 2019; they will be paid out in the spring of 2023 including dividends paid for the 2018, 2019, 2020 and 2021 financial years.

Outlook

Forecast

- Gross written premium expected to grow by around 5% at constant exchange rates
- Property and casualty reinsurance: target for combined ratio of no more than 97%
- Life and health reinsurance: average EBIT growth of more than 5%
- Return on investment target of roughly 2.7% for assets under own management
- Group net income of around EUR 1.2 billion expected

Economic developments

Global economy

Following further slowing in the pace of global economic growth towards the end of the financial year just ended, there are signs of stabilisation for the current year: in its year-end forecast, the Kiel Institute for the World Economy expects growth in 2020 to improve by 0.1 percentage points to 3.1%. The highly expansionary monetary policy once again adopted in the advanced economies has a supportive effect here. Lower US interest rates have enabled central banks in emerging economies to cut interest rates across a broad front.

In the **advanced economies** the increase in output will likely remain muted against a backdrop of high capacity utilisation. This can be attributed not least to the fact that the hitherto robust US economy is losing speed and the underlying trend in the Chinese economy is towards further modestly slowing

growth. After a gain of 1.8% in the year just ended, growth in the advanced economies will therefore likely drop to 1.4% in the current year.

Manufacturing output in the **emerging economies** is forecast to rise slightly from 4.1% to 4.5%. Along with the issues already mentioned above, additional challenges in some emerging countries are hampering a more vigorous rally: in Latin America structural weaknesses are a drag on economic development. Argentina is experiencing another severe debt and currency crisis, which will probably once again result in debt relief. While Turkey has apparently come out of recession, investment has continued to contract sharply.

Further risks are posed by the simmering trade disputes, Brexit, an increased spread of the COVID-19 coronavirus as well as various geopolitical flashpoints.

Growth in gross domestic product (GDP)

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in %	2019 (forecast from previous year)	2019 (provisional calculation)	2020 (forecast)
Economic areas			
World economy	3.4	3.0	3.1
Eurozone	1.7	1.2	1.2
Selected countries			
United States	2.5	2.3	1.5
China	6.1	6.2	5.9
India	7.5	5.0	6.3
Japan	1.0	1.0	0.6
Germany ¹	1.8	0.5	1.1

¹ price-, calendar- and seasonally adjusted

Source: Kiel Institute for the World Economy; figures for Germany are calendar-adjusted.

United States

The US economy is expected to continue slowing after the vigorous surge seen in recent years. Growth will probably only reach 1.5% in 2020, after 2.3% in the previous year. Two reasons that can be cited for the slowdown in economic expansion are the petering out of fiscal stimuli and the increased uncertainties surrounding trade policy, the effects of which are also being felt in the United States. Looking beyond the coming year, it is anticipated that the underlying cyclical trend will initially soften, but output will remain on an upward trajectory. There is nothing to suggest that a recession is around the corner. Private consumption will continue to be a major growth driver in 2020, boosted by a robust job market. Moreover, consumer spending will go hand-in-hand with government spending, although the figures for both areas will likely fall well short of the levels seen in the previous year. Despite all the trade policy measures that have been taken, the US current account deficit will likely deteriorate slightly by a further 0.2 percentage points to 2.6%.

Europe

Supported by favourable financing conditions and a modestly expansionary fiscal policy, cyclical activity in the Eurozone will pick up again slightly, boosting renewed expansion from 2021 onwards. The growth rate for 2020 is, however, expected to still be on a par with the previous year's level, in other words 1.2%. The state of the employment market has improved to such a degree that wages are rising more strongly again and consumer spending is benefiting from appreciable real wage growth against a backdrop of low inflation. The jobless rate is set to fall by another 0.4 percentage points to 7.2%.

Asia

Overall, the Kiel Institute for the World Economy sees growth in Asia reviving again slightly in 2020, improving by 0.2 percentage points to 5.8%. A particularly important role here will be played by India. The country will likely bounce back quickly from the temporary crisis in its banking system to reach growth of 6.3%. With trade relations between China and the United States still overshadowed by reciprocal punitive tariffs, growth in China will probably continue to soften somewhat and should come in at 5.9%. It was too early to assess the concrete economic impacts of the coronavirus – particularly in China – at the date when this report was compiled, but negative effects must be anticipated.

The pace of growth in Japan is set to decline slightly in 2020 to 0.6% – to some extent because the previous year's growth can be attributed in part to anticipatory effects associated with the hike in consumption tax on 1 October 2019. While the Japanese central bank has pledged to prevent any rise in interest rates from their prevailing ultra-low level for the foreseeable future, it nevertheless refrained from a widely anticipated stepping up of its policy of negative rates on reserve deposits out of concerns

for adverse impacts on the profitability and stability of the country's banks.

Capital markets

It is our expectation that financial markets will bring further promising investment opportunities in 2020 but also a continued high degree of volatility. Above all, geopolitical risks and government-mandated protectionism – along with the US presidential election – have the potential to trigger significant fluctuations. The growing influence of populist movements should have less impact on the real economy because fiscal and monetary measures have a calming effect on markets.

In addition to the US presidential election, a major issue in 2020 will likely be the path taken by the United Kingdom as it leaves the European Union. In view of the importance of the US and China in world politics and global trade, the continued simmering trade dispute between the two countries is causing uncertainty among institutional investors. The emotional dialogue taking place within the European Union on its future orientation – as it seeks to strike a balance between necessary reforms and the influence of populist movements – should also have implications for investor behaviour.

The baseline economic situation can currently be described as rather muted in a number of powerhouse economies. The general pace of expansion appears to be slowing. Nevertheless, second-tier emerging markets may be able to deliver stable growth because in many instances the structural measures taken in past years are gaining traction. These are, however, vulnerable to civil unrest in some countries.

The change of course taken by some central banks in favour of market support measures compensates for structural shortcomings. The ECB, for example, resumed its programme of corporate bond purchases in December. While geopolitical tensions and moves towards economic isolationism are casting a cloud over the business outlook, monetary policy measures and announcements appear to weigh more heavily. Following the leadership change at the ECB in the autumn, we do not anticipate any significant changes in the central bank's policy. It is our expectation that the US Federal Reserve and Asian central banks will continue to pursue the programmes that have already been set in motion.

International bond markets should once again see largely below-average and divergent interest rate levels in 2020, although some convergence with European levels is likely. In the relevant currency areas for our company we expect slightly falling to stable yield curves. Sovereign bonds with higher risk premiums issued by countries of the European Monetary Union should for the most part continue to stabilise, particularly in light of recent indications of a more harmonious interaction between the EU and Italy. The continuing credit cycle in the United States – albeit with diminished momentum –

and the stabilisation of emerging markets should continue to shape the economic environment.

The renewed price surges on equity markets in 2019 can likely be attributed to, among other things, the unusually abundant supply of liquidity. This scenario can be expected to continue on a moderate scale. Ultimately, it will probably be the central banks that determine the turning point. The robust state of stock markets has less to do with corporate fundamentals than it does with the interest rate environment and a reduction in the relative return requirements for alternative asset classes. To this extent, it is hard to discern any negative omens for equity markets in the near future.

Declining credit spreads across the board were a hallmark of credit markets in 2019, albeit with clear differences in momentum between first-rate issuers and those more towards the bottom end of the spectrum. Investors appear to be somewhat more discerning and are tending to shun the more speculative end of the market. Nonetheless, unusually low risk premiums will continue to be evident in 2020 on industrials and financials, for which considerable positive impetus has already been priced in. This should tend to curb the speculative scope for further price jumps.

On US markets it remains to be seen how the slowly fading positive effects of tax reform and a further increase in government spending will play out. Higher taxes may be needed down the road to fill the funding gaps. Nor will Europe or the emerging markets escape the resulting uncertainties unscathed. With one or two exceptions, however, we still see a positive scenario for the latter going forward as they have largely been successful in responding to external pressure with economic and fiscal reforms. Based on more flexible labour markets and with inflation in check – a few exceptions notwithstanding –, our expectation here is for a healthy domestic economy and stabilisation in foreign trade.

Once again, 2020 will thus present a challenging combination of excess liquidity, geopolitical and monetary policy uncertainty and fairly stable corporate profits. Given the very different perceptions of risk among many market actors, even greater attention must be paid to risk and return considerations when making investment decisions. With this in mind, broad diversification within the investment portfolio will continue to be of considerable importance in 2020.

Insurance industry

In the current 2020 financial year the global insurance industry again finds itself confronted by numerous, in some instances substantial challenges. Nevertheless, the mood in the sector has lifted, among other things due to generally upbeat business sentiment overall. The insurance industry is thus making every effort to profitably grow its core business while at the same time developing flexible, tailored products and

business models. What is more, many companies are now actively partnering with insurtechs – increasing numbers of which are entering the market – in their business models and finding numerous nexus points for innovative products.

The insurance industry's preoccupation with the generally low level of interest rates remains unchanged. A rapid about-turn from the low interest rate environment is still not anticipated for the Eurozone. Life insurers have been particularly hard hit. They must tackle the challenge of adjusting their business models and developing new products that are adapted to market circumstances. When it comes to industry supervision, it is evident that the regulatory environment is now undergoing a fundamental shift.

The pressure on the (re)insurance industry to act to cut costs remains considerable, prompting an accelerated drive to digitalise business processes. By automating back office processes and enhancing the flexibility of their IT structures, companies are at the same time able to open up further scope to improve customer care.

The industry also remains intensely focused on the changes in customer expectations. Against a backdrop of advancing digitalisation, customers are becoming increasingly agile in their behaviour and their expectations – in terms of benefits and services – are also shifting appreciably. Insurers are responding by stepping up their customer contact management, focusing more sharply on service quality and developing new products. This move is also prompted by the demand side, since their insurance partners are increasingly calling for bespoke solutions. Against this backdrop, insurance products are created that actively support their partners' strategic objectives and growth targets. The growing need to protect against climate change, elevated political risks and the ever more important cyber risks segment offer multiple entry points for new products. The digital transformation of the industry, in particular, is opening up new avenues for loss prevention. Going forward, this will result in the industry working more closely together with partners in the technology sector.

Property & Casualty reinsurance

Overview

Supply continues to outstrip demand in the market for reinsurance coverage, both in traditional reinsurance business and in the area of alternative capital (ILS).

The treaty renewals as at 1 January 2020 gave Hannover Re grounds for satisfaction. Higher prices were obtained in some areas, as had been anticipated; the increases were particularly marked for loss-impacted programmes. On the whole, prices and conditions showed modest improvement. Nevertheless, it remains the case that the rate level for natural catastrophe covers in particular, and here above all in Japan, Latin America and the Caribbean, is too low and there is a need for further improvement.

Adjusted for exchange rate effects, we grew our premium volume in traditional property and casualty reinsurance as at 1 January on an underwriting-year basis by altogether 14% to EUR 7,049 million. On this date 67% of the traditional property and casualty reinsurance portfolio (excluding facultative reinsurance, ILS business and structured reinsurance) was up for renewal. Expectations for the development of individual markets and lines in property and casualty reinsurance are described in greater detail below.

Property & Casualty reinsurance: Forecast development for 2020

M 97

	Volume ¹	Profitability ²
North America ³	↗	+
Latin America, Iberian Peninsula and Agricultural Risks ³	↗	+
Germany, Switzerland, Austria and Italy ³	↗	+
UK, Ireland, London Market ³	↗	+/-
Continental Europe, Africa ³	→	+/-
Asia, Australia and Middle East ³	↗	+/-
Structured Reinsurance and ILS	→	+
Facultative Reinsurance and Direct Business	↗	+
Credit, Surety and Political Risks	↗	+/-
Aviation and Marine	→	+/-
Catastrophe XL (Cat XL)	→	+/-

¹ In EUR, development in original currencies can be different

² ++ = significantly above the cost of capital

+ = above the cost of capital

+/- = cost of capital earned

- = below the cost of capital

³ All lines of business except those stated separately

Regional markets

North America

The primary insurance market in **North America** should continue to develop favourably, partly in view of the general economic climate. The considerable losses incurred in recent years from windstorm events, wildfires and floods led to stronger demand. While total insured losses from natural disasters such as the fresh outbreak of wildfires in California and hurricane Dorian were lower than in the previous two years, it was nevertheless possible to secure price increases in property business across large parts of the portfolio in the 1 January treaty renewals. The rate improvements were particularly appreciable under loss-affected programmes in non-proportional reinsurance. Prices in US liability business improved against a backdrop of reduced capacities in the market. We expect the favourable pricing tendency to be sustained in the further rounds of treaty renewals to be held in June and July 2020, when the bulk of the loss-impacted programmes come up for renewal.

Latin America, Iberian Peninsula and Agricultural Risks

In **Latin America** and the Caribbean we are seeing heightened awareness of natural catastrophe and political risk exposures. Substantial price increases were already observed here in the 1 January renewals, especially for loss-affected programmes. Large parts of Hannover Re's portfolio in Latin America are, however, not renewed until later in the year. We therefore anticipate further improvement in conditions on the reinsurance market in order to ensure that such risks can continue to be reinsured going forward.

In the area of **agricultural risks** we expect further growth in demand for insurance covers. The increasing need for agricultural commodities and foodstuffs as well as the more widespread prevalence of extreme weather events are generating stronger demand for corresponding reinsurance covers, particularly in emerging and developing markets. We engage both in traditional reinsurance and in intensified cooperation with our customers and partners on the development of new tools for primary insurance. We see further growth potential for index-linked products and parametric covers that – in contrast to traditional insurance products – are geared not to loss amounts which may potentially be difficult to ascertain, but rather to previously defined and objectively quantifiable indices and are measured using weather stations or remote sensing satellites. The more widespread implementation of public-private partnerships offers us new opportunities to write profitable business in markets that have still to establish themselves.

Germany, Switzerland, Austria and Italy

We grew our premium volume in the reporting category **Germany, Switzerland, Austria and Italy** by 5.9% as at 1 January. E+S Rückversicherung AG, the Hannover Re

subsidiary responsible for the German market, was able to further strengthen its leading position and wrote numerous increased treaty shares at largely stable prices and conditions.

In Germany, E+S Rück expects to book rising premiums for directly written business in 2020. In the 1 January treaty renewals we further cemented our prominent market position and wrote numerous increased treaty shares at largely stable prices and conditions. In motor reinsurance we achieved an adequate price level for our excess of loss portfolio. When it comes to proportional treaties, we made commission adjustments on a case-by-case basis depending on the profitability of the business.

Opportunities in emerging segments such as telematics or cyber are supporting the favourable development of business. Activities undertaken by market leaders are increasingly putting the industry spotlight back on the use of telematics, in particular. In the cyber line, on the other hand, the market-wide premium volume in Germany is expected to double within the next five years.

United Kingdom, Ireland and London Market

In the **United Kingdom, Ireland and London Market**, we made every effort to push through price increases in all major reinsurance lines in the 1 January treaty renewals. Particularly in motor business, which we carry in our books exclusively on a non-proportional basis, we achieved premium increases running into double-digit percentages. In almost all property and liability lines we secured improved rates, although the increases were not as marked as in motor business.

For 2020, too, we anticipate continued hardening in the original market, especially in Lloyd's business. With further syndicates pulling out of the market and others facing restricted scope for growth in a hardening market environment, we expect to see additional upward pressure on pricing. Motor business will likely bring moderately higher prices for primary insurers in response to the adjusted Ogden rate. We shall continue to push for price increases in all major reinsurance lines and we are looking to book a slightly expanded premium volume overall on the back of these higher prices.

Continental Europe and Africa

In the other markets of **Continental Europe** we achieved slightly higher prices for the most part in the 1 January treaty renewals, above all under loss-impacted programmes and especially in Northern Europe. At the same time, demand for reinsurance was generally stronger across the entire region.

In **South Africa** we are planning to transform the companies Hannover Reinsurance Africa Ltd. and Hannover Life Reinsurance Africa Ltd. in 2020 into a single entity that will trans-

act both life & health and property & casualty reinsurance. This restructuring will give us greater capital efficiency and stability. Even though the general state of the South African economy will again limit the insurance industry's growth prospects in the year ahead, we see attractive business opportunities for our companies.

Asia, Australia and the Middle East

The above-average growth enjoyed by insurance markets in the **Asia-Pacific** region should be sustained in 2020. We therefore see particularly good opportunities here to grow our portfolio. The region is expected to deliver continued better-than-average premium growth over the coming years, most notably in property and casualty reinsurance.

In the 1 January renewals we succeeded in significantly expanding our position with a number of clients at broadly stable prices and conditions, especially in China. In Japan, we anticipate appreciably higher reinsurance prices for the renewals as at 1 April – first and foremost for catastrophe covers but also in other market segments. We continued to grow our business in China with new and existing customers alike. In traditional reinsurance we consider ourselves optimally positioned; however, given that we anticipate an ongoing oversupply of capacity, we continue to attach strategic importance to pursuing an innovation-driven approach in the development of customised solutions.

Looking ahead to the renewal season in India as at 1 April 2020, our goal is to secure a qualitative improvement in conditions. Reflecting our ambitions for the Indian market, we would be prepared to substantially expand our portfolio provided conditions are appropriate. Markets in Southeast Asia and Southern Asia similarly offer a broad range of growth opportunities. Our activities here are focused on assisting our clients with the development of products, processes and systems.

In **Australia and New Zealand**, market players are looking for clear improvements in conditions in the run-up to the treaty renewals during the year. The devastating bushfires in Australia have caused significant losses. This should further stimulate demand for catastrophe covers and is expected to be reflected on the pricing side.

A predominantly soft rate level is anticipated for our **retakaful business** in view of the oversupply of capacity in this fiercely competitive segment and the relatively low oil price. In 2020 we shall concentrate on our specialty lines. Both the portfolio and the premium volume should remain stable overall.

Global lines

Structured Reinsurance and ILS

In view of the adoption or strengthening of risk-based models for calculating solvency requirements not only within but also outside the European Union, we expect further growth in demand for **structured reinsurance**. This continues to be driven by the increasing integration of reinsurance into primary insurers' risk management as a way to counterbalance more exacting capital requirements. Moreover, the growing pressure on profit margins experienced by our clients around the world is generating a greater need for tailored-made reinsurance solutions designed to optimise their cost of capital. We expect the implementation of IFRS 17 to boost demand for solutions of this type.

In the area of **insurance-linked securities (ILS)** we anticipate rising demand over the long term. Investors are seeking a negative or minimal correlation with other financial investments and hence greater diversification. We are responding to this demand with a strong emphasis on service, offering individually tailored solutions – from collateralised reinsurance to the transformation of catastrophe bonds – for property and life reinsurance risks. Over the coming years we expect our ILS activities to deliver a positive and consistently rising profit contribution. The capital market remains an important element in the retrocession coverage taken out by our own company.

Facultative Reinsurance and Direct Business

We expect the current direction of the **facultative reinsurance** market to be sustained over the coming 18 to 24 months. In the 2020 financial year we anticipate a further rise in demand for facultative reinsurance at substantially improved conditions. This is driven by the above-average losses incurred in the previous years and also reflects the increased need for reinsurance among our clients.

Going forward, we see especially strong growth potential in Asia. We intend to step up our participation in the associated business opportunities and will expand our activities in the region accordingly.

Credit, Surety and Political Risks

Covers for **credit, surety and political risks** will be affected by the anticipated slowdown in global economic growth. This may cause the number of insolvencies around the world to rise slightly from the existing low level. Against this backdrop, we expect loss ratios in credit and surety business as well as in the area of political risks to increase moderately. This development will likely generate stronger demand, especially in credit and political risks business. Demand in the area of surety risks, on the other hand, will tend to remain

stable. With this in mind, it is our expectation that premium growth will be sustained going forward, although the pace of growth will be held back by general economic conditions. All things considered, we expect to book modestly increased premium income and a good result.

Aviation and Marine

Even though the primary insurance market for **aviation** risks has still to find an adequate pricing level, the significant losses of 2018 and 2019 further reinforced the trend towards rising prices and improved conditions. In its proportional reinsurance portfolio Hannover Re will be able to benefit directly from these improvements. Nevertheless, we also expect to be able to push through further increases for non-proportional programmes.

In **marine** reinsurance the 1 January round of treaty renewals failed to live up to expectations in some respects. Still, it was evident that customers with a long-term perspective are increasingly concerned more about stability than mere pricing considerations. While rate increases were recorded for loss-affected programmes, it was possible to renew programmes that had not suffered losses at unchanged prices despite reduced exposures. It may otherwise be noted that the reinsurance market continued to experience an oversupply of capacity. The Asian market saw price increases driven by a higher frequency of losses, while our Continental European programmes were stable. The rate level for renewals on the London Market was slightly higher for the most part. All in all, we expect the premium volume in marine reinsurance to remain stable.

Catastrophe XL (Cat XL)

In **natural catastrophe (Cat XL)** business we expect a sustained steady – albeit rather moderate – inflow of capacity from the capital markets. As in the previous year, this can be attributed to the loss experience of 2017 and 2018 – and in this regard especially the protracted run-off of certain losses – as well as to a pricing response that many capacity providers found disappointing. Following the catastrophe losses of recent years, we expect to see slightly increased demand among primary insurers for reinsurance protection, from which we will likely benefit disproportionately strongly thanks to our good rating and broad-based market presence.

Despite another considerable burden of losses from natural disasters such as hurricane Dorian, which impacted the Bahamas and the United States, and typhoons Faxai and Hagibis in Japan, together with increased additional reserves set aside for prior-year losses such as hurricane Irma in 2017 and typhoon Jebi in 2018, it was only possible to obtain stable

prices and conditions overall in the 1 January renewals that for the most part fell short of expectations.

In US catastrophe business we negotiated stable or slightly improved prices. Here, too, however, we were only able to secure appreciable price increases under loss-impacted programmes.

The global Cat XL market is expected to gain more significant pricing momentum in the further rounds of renewals during the year, which are more focused on loss-impacted regions such as Japan or Australia. With California having suffered extensive wildfires for a third year in succession, coverage for corresponding risks will also likely remain a central focus of attention.

In general terms, given the prevailing market conditions, we intend to increase our capacities for coverage of natural catastrophe risks only under certain selected programmes.

Life & Health reinsurance

For the 2020 financial year we anticipate further good business prospects in life and health reinsurance. Driven by the continuing development of their economies, it is our assumption that emerging markets, in particular, will continue to generate above-average economic growth. Based on the associated rise in incomes and improvement in living standards, demand for insurance protection – including for example disability, accident and pure mortality covers – as well as for products geared to retirement provision can be expected to continue rising.

Life & Health reinsurance: M 98 Forecast development for 2020

	Volume ¹	Profitability ²
Financial Solutions	↻	++
Risk Solutions		
Longevity	→	+
Mortality	→	+/-
Morbidity	↻	+/-

¹ In EUR, development in original currencies can be different

² ++ = significantly above the cost of capital
 + = above the cost of capital
 +/- = cost of capital earned
 - = below the cost of capital

For some years now, regulatory issues relating to capital and solvency ratios have dominated the more mature markets. We expect this trend to continue.

Looking at individual regions, it is our expectation that in Australia the tightening of regulatory requirements intended to enhance the industry's reputation will remain a key issue in the coming year. The concrete implications of the measures announced by the prudential regulator will become clearer in the course of the year. In Germany, the regulatory requirements imposed by the Federal Financial Supervisory Authority (BaFin) in combination with low interest rates, a decline in business with traditional life insurance policies and more exacting capital adequacy ratios are presenting the insurance industry with considerable sustained headwinds.

We consider Asia to be the continent that offers the greatest growth potential. The Chinese market, in particular, is recording very dynamic growth, and we therefore anticipate continued promising new business in the 2020 financial year.

Turning to our automated underwriting systems, we are similarly optimistic that we can build on the success story written so far. Numerous new deployments of hr|ReFlex and hr|Quirc are already in the pipeline. Moreover, the growing demand for lifestyle insurance products that combine health-related aspects (e.g. fitness and nutritional habits) with insurance protection will remain a trend and have major implications for the life insurance industry around the world.

The tendency among our customers to see us as more than just a pure risk carrier will be sustained in the years ahead. In our role as an expert partner, we draw on our worldwide know-how spanning a wide range of topics to give our customers comprehensive support.

Investments

Geopolitical and populist developments harbour growing uncertainties. As a consequence of the unusual capital market constellations experienced in recent years, the behaviour of capital market players can no longer be wholly explained by fundamentals. With this in mind, we maintain a conservative posture in investing substantial parts of our asset portfolio. Nevertheless, the brighter economic outlook in certain markets and countries will also be reflected in appropriate risk-taking. Our emphasis on broad diversification will remain in place. By maintaining the most neutral possible modified duration, we shall ensure that the interest rate risk is tightly managed.

The enlargement of the asset portfolio should have a positive effect on investment income. Despite the persistently low euro interest rate level, we expect to keep the average return on our investments in the region of our defined 2.7% target for the year. In view of the low returns on more secure investments, we shall continue to invest in products offering attractive credit spreads such as corporate bonds, although in this regard we shall increasingly move towards higher-quality segments. The widening of spreads towards the end of the year under review is putting a healthier risk/return ratio within reach again. We also intend to selectively expand our holdings in the areas of alternative investments, real estate and emerging markets.

If the valuation levels of listed equities experience further corrections or stabilise, we are ready to enter the market on a moderate scale.

Outlook for the 2020 financial year

For the 2020 financial year we anticipate another good business performance for Hannover Re. In view of the developments in property and casualty as well as in life and health reinsurance, we are looking to book growth of around 5% in gross premium for our total business – based on constant exchange rates.

In property and casualty reinsurance we expect solid growth at slightly improved conditions overall based on the outcome of the treaty renewals as at 1 January 2020. We shall retain unchanged our selective underwriting policy, under which in large part we write only business that satisfies our margin requirements. Looking ahead to the subsequent rounds of renewals during the year, we generally expect to see more appreciable pricing impetus – especially for natural catastrophe covers, and here above all in Japan, Latin America and the Caribbean.

Thanks to our good rating, long-standing stable customer relationships and low expense ratio, we should be able to generate another good result provided the burden of large losses remains within our expectations. We continue to aim for a combined ratio of no more than 97%. The targeted EBIT margin for property and casualty reinsurance remains unchanged at a minimum 10%.

In life and health reinsurance we expect to generate moderate growth in gross premium for the current financial year based on constant exchange rates. We anticipate EBIT growth averaging more than 5% over a three-year period. The value of new business should exceed the minimum target of EUR 220 million.

With regard to the IVC targets that we use to map economic value creation, it remains our expectation that a minimum xRoCA of 2% will be generated for property and casualty reinsurance and for life and health reinsurance.

In view of the expected positive cash flow that we generate from the technical account and the investments themselves, and assuming roughly stable exchange rates and interest rate levels, our asset portfolios should continue to grow. We are looking to deliver a return on investment of around 2.7% for 2020.

For the 2020 financial year we again expect to achieve a return on equity above our minimum target of 9.1%. We define our minimum target as 900 basis points above the five-year average return on ten-year German government bonds. As far as the solvency ratio is concerned, we continue to anticipate a level in excess of our minimum 200% target.

Group net income is expected to be in the order of EUR 1.2 billion. This is subject to the proviso that large loss expenditure does not significantly exceed the budgeted level of EUR 975 million and assumes that there are no unforeseen distortions on capital markets.

Hannover Re anticipates an unchanged payout ratio for the ordinary dividend in the range of 35% to 45% of its IFRS Group net income. The ordinary dividend will be supplemented by payment of a special dividend in light of capital management considerations if the comfortable level of capitalisation remains unchanged and Group net income is in line with expectations.



Consolidated financial statements



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Consolidated balance sheet as at 31 December 2019

Assets

in EUR thousand	Notes	31.12.2019	31.12.2018
Fixed-income securities – held to maturity	6.1	223,049	249,943
Fixed-income securities – loans and receivables	6.1	2,194,064	2,398,950
Fixed-income securities – available for sale	6.1	38,068,459	33,239,685
Fixed-income securities – at fair value through profit or loss	6.1	578,779	559,750
Equity securities – available for sale	6.1	29,215	28,729
Other financial assets – at fair value through profit or loss	6.1	235,019	190,759
Investment property	6.1	1,749,517	1,684,932
Real estate funds	6.1	534,739	433,899
Investments in associated companies	6.1	245,478	110,545
Other invested assets	6.1	2,211,905	1,805,281
Short-term investments	6.1	468,350	421,950
Cash and cash equivalents	6.1	1,090,852	1,072,915
Total investments and cash under own management		47,629,426	42,197,338
Funds withheld	6.2	10,948,469	10,691,768
Contract deposits	6.3	325,302	172,873
Total investments		58,903,197	53,061,979
Reinsurance recoverables on unpaid claims	6.7	2,050,114	2,084,630
Reinsurance recoverables on benefit reserve	6.7	852,598	909,056
Prepaid reinsurance premium	6.7	116,176	93,678
Reinsurance recoverables on other technical reserves	6.7	9,355	7,170
Deferred acquisition costs	6.4	2,931,722	2,155,820
Accounts receivable	6.4	5,269,792	3,975,778
Goodwill	6.5	88,303	85,588
Deferred tax assets	7.5	442,469	454,608
Other assets	6.6	640,956	629,420
Accrued interest and rent		15,414	11,726
Assets held for sale	4.4	36,308	1,039,184
Total assets		71,356,404	64,508,637

Liabilities

in EUR thousand	Notes	31.12.2019	31.12.2018
Loss and loss adjustment expense reserve	6.7	32,996,231	28,758,575
Benefit reserve	6.7	9,028,000	9,184,356
Unearned premium reserve	6.7	4,391,848	3,166,964
Other technical provisions	6.7	673,221	575,996
Funds withheld	6.8	1,157,815	969,261
Contract deposits	6.9	3,581,057	3,611,654
Reinsurance payable		1,505,680	1,156,231
Provisions for pensions	6.10	201,952	182,291
Taxes	7.5	191,706	244,093
Deferred tax liabilities	7.5	2,189,372	1,700,082
Other liabilities	6.11	623,075	612,093
Financing liabilities	6.12	3,461,968	2,558,884
Liabilities related to assets held for sale	4.4	–	2,246,129
Total liabilities		60,001,925	54,966,609
Shareholders' equity			
Common shares	6.13	120,597	120,597
Nominal value: 120,597			
Conditional capital: 60,299	6.13		
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		1,287,907	346,509
Cumulative foreign currency translation adjustment		385,153	201,369
Changes from hedging instruments		(1,276)	(3,160)
Other changes in cumulative other comprehensive income		(66,077)	(53,364)
Total other comprehensive income		1,605,707	491,354
Retained earnings		8,077,123	7,440,278
Equity attributable to shareholders of Hannover Rück SE		10,527,989	8,776,791
Non-controlling interests	6.14	826,490	765,237
Total shareholders' equity		11,354,479	9,542,028
Total liabilities		71,356,404	64,508,637

Consolidated statement of income 2019

in EUR thousand	Notes	1.1.–31.12.2019	1.1.–31.12.2018 ¹
Gross written premium	7.1	22,597,640	19,176,358
Ceded written premium		2,252,259	1,778,826
Change in gross unearned premium		(636,972)	(128,268)
Change in ceded unearned premium		21,317	19,869
Net premium earned		19,729,726	17,289,133
Ordinary investment income	7.2	1,380,815	1,321,712
Profit/loss from investments in associated companies	7.2	26,354	4,977
Realised gains and losses on investments	7.2	273,741	127,659
Change in fair value of financial instruments	7.2	72,855	31,160
Total depreciation, impairments and appreciation of investments	7.2	80,646	49,124
Other investment expenses	7.2	122,491	114,342
Net income from investments under own management		1,550,628	1,322,042
Income/expense on funds withheld and contract deposits	7.2	206,433	207,987
Net investment income		1,757,061	1,530,029
Other technical income	7.3	3,458	599
Total revenues		21,490,245	18,819,761
Claims and claims expenses	7.3	14,649,056	12,569,150
Change in benefit reserves	7.3	10,793	50,791
Commission and brokerage, change in deferred acquisition costs	7.3	4,805,447	4,271,736
Other acquisition costs		3,956	21,018
Other technical expenses	7.3	–	4,804
Administrative expenses	7.3	480,084	423,343
Total technical expenses		19,949,336	17,340,842
Other income	7.3	668,389	523,984
Other expenses	7.3	356,123	406,254
Other income/expenses	7.4	312,266	117,730
Operating profit/loss (EBIT)		1,853,175	1,596,649
Financing costs	6.12	87,078	78,261
Net income before taxes		1,766,097	1,518,388
Taxes	7.5	392,731	372,861
Net income		1,373,366	1,145,527
thereof			
Non-controlling interest in profit and loss	6.14	89,199	86,034
Group net income		1,284,167	1,059,493
Earnings per share (in EUR)	8.5		
Basic earnings per share		10.65	8.79
Diluted earnings per share		10.65	8.79

¹ Restated pursuant to IAS 8

Consolidated statement of comprehensive income 2019

in EUR thousand	1.1.–31.12.2019	1.1.–31.12.2018
Net income	1,373,366	1,145,527
Not reclassifiable to the consolidated statement of income		
Actuarial gains and losses		
Gains (losses) recognised directly in equity	(21,231)	(4,479)
Tax income (expense)	6,818	1,396
	(14,413)	(3,083)
Changes from the measurement of associated companies		
Gains (losses) recognised directly in equity	(149)	–
	(149)	–
Income and expense recognised directly in equity that cannot be reclassified		
Gains (losses) recognised directly in equity	(21,380)	(4,479)
Tax income (expense)	6,818	1,396
	(14,562)	(3,083)
Reclassifiable to the consolidated statement of income		
Unrealised gains and losses on investments		
Gains (losses) recognised directly in equity	1,438,957	(610,978)
Transferred to the consolidated statement of income	(157,243)	(67,306)
Tax income (expense)	(314,952)	184,801
	966,762	(493,483)
Currency translation		
Gains (losses) recognised directly in equity	201,360	266,814
Transferred to the consolidated statement of income	2,230	–
Tax income (expense)	(21,201)	592
	182,389	267,406
Changes from the measurement of associated companies		
Gains (losses) recognised directly in equity	2,641	(4,024)
Transferred to the consolidated statement of income	157	–
	2,798	(4,024)
Changes from hedging instruments		
Gains (losses) recognised directly in equity	7,545	3,228
Tax income (expense)	(2,544)	(91)
	5,001	3,137
Reclassifiable income and expense recognised directly in equity		
Gains (losses) recognised directly in equity	1,650,503	(344,960)
Transferred to the consolidated statement of income	(154,856)	(67,306)
Tax income (expense)	(338,697)	185,302
	1,156,950	(226,964)
Total income and expense recognised directly in equity		
Gains (losses) recognised directly in equity	1,629,123	(349,439)
Transferred to the consolidated statement of income	(154,856)	(67,306)
Tax income (expense)	(331,879)	186,698
	1,142,388	(230,047)
Total recognised income and expense	2,515,754	915,480
thereof		
Attributable to non-controlling interests	117,700	62,374
Attributable to shareholders of Hannover Rück SE	2,398,054	853,106

Consolidated statement of changes in shareholders' equity 2019

in EUR thousand	Common shares	Additional paid-in capital	Other reserves (cumulative other comprehensive income)	
			Unrealised gains/losses	Currency translation
Balance as at 1.1.2018	120,597	724,562	818,350	(62,548)
Changes in ownership interest with no change of control status	-	-	(1,171)	-
Changes in the consolidated group	-	-	-	-
Capital increases/additions	-	-	-	-
Capital repayments	-	-	-	-
Acquisition/disposal of treasury shares	-	-	-	-
Total income and expense recognised directly in equity	-	-	(470,670)	263,917
Net income	-	-	-	-
Dividends paid	-	-	-	-
Balance as at 31.12.2018	120,597	724,562	346,509	201,369
Balance as at 1.1.2019	120,597	724,562	346,509	201,369
Effects from initial application of new standards	-	-	-	-
Balance as at 1.1.2019 (restated)	120,597	724,562	346,509	201,369
Changes in ownership interest with no change of control status	-	-	-	-
Changes in the consolidated group	-	-	-	-
Capital increases/additions	-	-	-	-
Capital repayments	-	-	-	-
Acquisition/disposal of treasury shares	-	-	-	-
Total income and expense recognised directly in equity	-	-	941,398	183,784
Other changes recognised outside income	-	-	-	-
Net income	-	-	-	-
Dividends paid	-	-	-	-
Balance as at 31.12.2019	120,597	724,562	1,287,907	385,153

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				
(6,292)	(50,598)	6,984,407	8,528,478	758,080	9,286,558
–	–	(643)	(1,814)	(306)	(2,120)
–	–	–	–	(160)	(160)
–	–	–	–	44	44
–	–	–	–	(53)	(53)
–	–	7	7	–	7
3,132	(2,766)	–	(206,387)	(23,660)	(230,047)
–	–	1,059,493	1,059,493	86,034	1,145,527
–	–	(602,986)	(602,986)	(54,742)	(657,728)
(3,160)	(53,364)	7,440,278	8,776,791	765,237	9,542,028
(3,160)	(53,364)	7,440,278	8,776,791	765,237	9,542,028
–	–	1,732	1,732	–	1,732
(3,160)	(53,364)	7,442,010	8,778,523	765,237	9,543,760
–	–	142	142	404	546
–	466	(466)	–	(3,192)	(3,192)
–	–	–	–	498	498
–	–	–	–	(40)	(40)
–	–	37	37	–	37
1,884	(13,179)	–	1,113,887	28,501	1,142,388
–	–	(15,632)	(15,632)	–	(15,632)
–	–	1,284,167	1,284,167	89,199	1,373,366
–	–	(633,135)	(633,135)	(54,117)	(687,252)
(1,276)	(66,077)	8,077,123	10,527,989	826,490	11,354,479

Consolidated cash flow statement 2019

in EUR thousand	1.1.–31.12.2019	1.1.–31.12.2018
I. Cash flow from operating activities		
Net income	1,373,366	1,145,527
Appreciation/depreciation	110,434	95,063
Net realised gains and losses on investments	(273,741)	(127,659)
Change in fair value of financial instruments (through profit or loss)	(72,855)	(31,160)
Realised gains and losses on deconsolidation	(58,551)	(2,459)
Amortisation of investments	20,427	8,399
Changes in funds withheld	284,970	146,330
Net changes in contract deposits	(242,149)	(444,520)
Changes in prepaid reinsurance premium (net)	615,655	108,401
Changes in tax assets/provisions for taxes	100,555	(586)
Changes in benefit reserve (net)	(422,776)	225,625
Changes in claims reserves (net)	2,284,285	1,129,417
Changes in deferred acquisition costs	(568,095)	(48,109)
Changes in other technical provisions	86,940	187,329
Changes in clearing balances	(684,896)	(442,522)
Changes in other assets and liabilities (net)	(44,364)	275,497
Cash flow from operating activities	2,509,205	2,224,573

in EUR thousand

	1.1.–31.12.2019	1.1.–31.12.2018
II. Cash flow from investing activities		
Fixed-income securities – held to maturity		
Maturities	26,876	83,954
Fixed-income securities – loans and receivables		
Maturities, sales	415,703	360,109
Purchases	(194,638)	(291,581)
Fixed-income securities – available for sale		
Maturities, sales	16,972,790	18,746,680
Purchases	(19,693,765)	(20,958,519)
Fixed-income securities – at fair value through profit or loss		
Maturities, sales	1,683,337	1,643,108
Purchases	(1,673,735)	(1,987,845)
Equity securities – available for sale		
Sales	6,425	14,323
Purchases	(4,124)	(5,824)
Other financial assets – at fair value through profit or loss		
Sales	125,772	117,324
Purchases	(99,358)	(138,839)
Other invested assets		
Sales	1,243,502	403,606
Purchases	(1,416,151)	(386,219)
Affiliated companies and participating interests		
Sales	215,662	11,591
Purchases	(212,088)	(31,193)
Real estate and real estate funds		
Sales	281,451	93,726
Purchases	(399,621)	(246,824)
Short-term investments		
Changes	(37,872)	530,981
Other changes (net)	50,422	(33,760)
Cash flow from investing activities	(2,709,412)	(2,075,202)

in EUR thousand	1.1.–31.12.2019	1.1.–31.12.2018
III. Cash flow from financing activities		
Contribution from capital measures	498	44
Payment on capital measures	(40)	(53)
Structural change without loss of control	546	(601)
Dividends paid	(687,252)	(657,728)
Proceeds from long-term debts	833,007	809,485
Repayment of long-term debts	(38,541)	(1,641)
Other changes (net)	37	7
Cash flow from financing activities	108,255	149,513
IV. Exchange rate differences on cash	31,295	16,919
Cash and cash equivalents at the beginning of the period	1,151,509	835,706
Thereof cash and cash equivalents of the disposal group: 78,594		
Change in cash and cash equivalents (I. + II. + III. + IV.)	(60,657)	315,803
Cash and cash equivalents at the end of the period	1,090,852	1,151,509
Thereof cash and cash equivalents of the disposal group	–	78,594
Cash and cash equivalents at the end of the period excluding the disposal group	1,090,852	1,072,915
Supplementary information on the cash flow statement¹		
Income taxes paid (on balance)	(299,630)	(361,093)
Dividend receipts ²	214,599	212,751
Interest received	1,482,924	1,568,239
Interest paid	(296,925)	(300,418)

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.

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1. Company information

Hannover Rück SE and its subsidiaries (collectively referred to as the “Hannover Re Group” or “Hannover Re”) transact all lines of property & casualty and life & health reinsurance. With gross premium of approximately EUR 22.6 billion, Hannover Re is the third-largest reinsurance group in the world. The company’s network consists of more than 170 subsidiaries, affiliates, branches and representative offices worldwide with a total workforce of roughly 3,100. The Group’s German business is conducted by the subsidiary E+S Rückver-

sicherung AG. Hannover Rück SE is a European Company, *Societas Europaea* (SE), which has its registered office at Karl-Wiechert-Allee 50, 30625 Hannover, Germany, and is entered in the commercial register of Hannover County Court under the number HR Hannover B 6778. 50.2% (rounded) of the shares of Hannover Rück SE are held by Talanx AG, Hannover, which in turn is majority-owned – with an interest of 79% – by HDI Haftpflichtverband der Deutschen Industrie V.a.G. (HDI), Hannover.

2. Accounting principles

Hannover Rück SE and its subsidiaries are required to prepare a consolidated financial statement and group management report in accordance with § 290 German Commercial Code (HGB).

Pursuant to EU Regulation (EC) No. 1606/2002, the present consolidated financial statement and group management report of Hannover Re have been drawn up in accordance with the International Financial Reporting Standards (IFRS) that are to be applied within the European Union. In addition, we have made allowance for the regulations that are also applicable pursuant to § 315e Para. 1 German Commercial Code (HGB) and the supplementary provisions of the Articles of Association of Hannover Rück SE as amended on 30 May 2016.

The consolidated financial statement reflects all IFRS in force as at 31 December 2019 as well as all interpretations issued by the International Financial Reporting Interpretations Committee (IFRIC), application of which was mandatory for the year under review. IFRS 4.38 et seq. “Insurance Contracts” requires disclosures on the nature and extent of risks stemming from reinsurance contracts, while IFRS 7.31-42 “Financial Instruments: Disclosures” requires similar information on risks from financial instruments. Furthermore, § 315 Para. 2 Number 1 German Commercial Code (HGB) also contains requirements for insurance undertakings with regard to information on the management of underwriting and financial risks that is to be provided in the management report. The disclosures resulting from these requirements are included in the risk report. With regard to the disclosures required by IFRS 4 and IFRS 7, we would refer in particular to pages 105 to 109 “Underwriting risks in property and casualty reinsurance/Underwriting risks in life and health reinsurance” and to pages 110 to 114 “Market risks” respectively. We have dispensed with an additional presentation of the same content in the notes. In order to obtain a comprehensive overview of the risks to which Hannover Re is exposed it is therefore necessary to consider both the risk report and the relevant information in the notes. We refer the reader accordingly to the corresponding remarks in the risk report and the notes.

In view of the fact that reinsurance contracts, in conformity with IFRS 4 “Insurance Contracts”, are recognised according to the pertinent provisions of United States Generally Accepted Accounting Principles (US GAAP) as applicable on the date of initial application of IFRS 4 on 1 January 2005, we cite individual insurance-specific standards of US GAAP using the designation “Statement of Financial Accounting Standard (SFAS)” that was valid at that time.

The declaration of conformity required pursuant to § 161 Stock Corporation Act (AktG) regarding compliance with the German Corporate Governance Code has been submitted and, as described in the Declaration of the Executive Board regarding the Corporate Governance of the Company, made permanently available on the Hannover Re website.

The annual financial statements included in the consolidated financial statement were for the most part drawn up as at 31 December. Pursuant to IFRS 10 “Consolidated Financial Statements” there is no requirement to compile interim accounts for Group companies with diverging reporting dates because their closing dates are no earlier than three months prior to the closing date for the consolidated financial statement. Insofar as no interim accounts were drawn up, allowance has been made for the effects of significant transactions between the diverging reporting dates and the closing date for the consolidated financial statement.

The annual financial statements of all companies were drawn up in accordance with standard Group accounting and measurement rules pursuant to IFRS.

The consolidated financial statement was drawn up in euros (EUR), the amounts shown have been rounded to EUR thousands and – provided this does not detract from transparency – to EUR millions. Figures indicated in brackets refer to the previous year.

The present consolidated financial statement was released for publication by a resolution of the Executive Board on 6 March 2020.

New accounting standards or accounting standards applied for the first time

Hannover Re is applying IFRS 16 “Leases” for the first time with effect from 1 January 2019. The significant new requirements relate principally to accounting by lessees. The lessee recognises a lease liability for virtually all leases and at the same time recognises a right to use the underlying asset. Hannover Re has applied the standard using a modified retrospective approach and recognises the cumulative effect of adoption of the standard in retained earnings as at 1 January 2019. Comparable figures for prior-year periods were therefore not restated. Hannover Re has decided not to re-examine lease contracts concluded before the transition date with a view to establishing whether the contract is or contains a lease upon initial application, but rather to retain the assessment previously made under IAS 17 and IFRIC 4. The following transition reliefs were applied:

- recognition of leases with a remaining lease term of twelve months or less as at 1 January 2019 as short-term leases

- application of a single discount rate to a portfolio of similar lease contracts
- retrospective determination of lease terms

Disclosures regarding the new treatment of lease arrangements are provided in sections 3.1 “Change in accounting policies” and 8.8 “Leases”.

In addition, the amendments to existing standards listed below were applicable for the first time in the year under review and had no significant implications overall for the net assets, financial position or result of operations of Hannover Re.

- Amendments to IAS 28: Long-term Interests in Associates and Joint Ventures
- Amendments to IAS 19: Plan Amendment, Curtailment or Settlement
- Annual Improvements to IFRS Standards 2015–2017 Cycle
- IFRIC 23 Uncertainty over Income Tax Treatments.

Standards or changes in standards that have not yet entered into force or are not yet applicable

With the publication of IFRS 17 “Insurance Contracts” in May 2017, the IASB issued a standard that replaces the existing transitional arrangements of IFRS 4 and for the first time establishes a single common framework for the recognition, measurement and disclosure of insurance contracts, reinsurance contracts and investment contracts with discretionary participation features. In addition, IFRS 17 requires extensive new disclosures in the notes.

The measurement model of IFRS 17 requires entities to measure groups of insurance contracts based on estimates of discounted future cash flows with an explicit risk adjustment for non-financial risks (“fulfilment cash flows”) as well as a contractual service margin, representing the expected (i. e. unearned) profit for the provision of insurance coverage in the future.

Furthermore, the standard fundamentally changes the presentation in the consolidated statement of income and introduces the new concept of insurance revenue instead of the disclosure of gross written premium. Insurance revenue is reported when it is earned by recognising in each period the changes in the liability for providing coverage for which the insurance entity receives compensation as well as the part of the premiums that covers acquisition costs. Receipts and payments relating to savings components are not recognised as revenue or as profit or loss in the statement of income. Insurance finance income and expenses result from discounting effects and financial risks. In accordance with the transition

choices offered by IFRS 17, for each portfolio of insurance contracts they may be recognised either in profit or loss in the statement of income or directly in equity.

Changes in assumptions that do not relate to interest rates or financial risks are not recognised directly in the statement of income but are booked against the contractual service margin and hence spread across the remaining coverage period. Recognition in profit or loss is only immediate in the case of those groups of insurance contracts that are expected to be loss-making.

Initial application of the standard was originally mandatory on a retrospective basis for annual reporting periods beginning on or after 1 January 2021; it has still to be endorsed by the EU.

In view of the considerable complexity of the rules and the associated implementation effort, the IASB published an exposure draft of proposed amendments to IFRS 17 in June 2019, including deferral of the date of the standard’s initial application to annual reporting periods beginning on or after 1 January 2022 and other content-related changes. The exemption from initial application of IFRS 9 “Financial Instruments” granted to insurance and reinsurance entities is similarly to be extended until 1 January 2022, thereby continuing to facilitate first-time application of both standards at the same time. The draft of the amended standard is still under

discussion by the IASB, with publication anticipated for mid-2020.

Given that the standard affects Hannover Re's core business activity, significant implications are expected for the consolidated financial statement. In view of the special significance of the new accounting rules, a multi-year implementation project was launched back in 2017 to explore the implications of the standard for the consolidated financial statement – including the interdependency with IFRS 9 – and the necessary implementation steps were defined and initiated. Based on the elaboration of the accounting foundations, work on the implementation of extensive adjustments to processes and systems began in the year under review and will have to continue in 2020. The implications for the consolidated financial statement cannot yet be quantified.

In July 2014 the IASB published the first version of IFRS 9 "Financial Instruments", which supersedes all previous versions of this standard and replaces the existing IAS 39 "Financial Instruments: Recognition and Measurement". The standard contains requirements governing classification and measurement, impairment based on the new expected credit loss impairment approach and general hedge accounting. The new classification requirements result in more financial instruments being measured at fair value through profit or loss. Initial mandatory application of the standard, which was endorsed by the EU in November 2016, is set for annual periods beginning on or after 1 January 2018. In September 2016, however, the IASB published "Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts (Amendments to IFRS 4)". Under the deferral approach provided for in the amendments, entities whose predominant activity is issuing insurance and reinsurance contracts within the scope of IFRS 4 are granted an optional temporary exemption from recognising their financial instruments in accordance with IFRS 9

until probable entry into force of IFRS 17 on 1 January 2022. Hannover Re reviewed the application requirements based on the consolidated financial statement as at 31 December 2015 with a positive outcome and decided to make use of the deferral approach. Since the review of the application requirements there has been no change in business activity that would have necessitated a re-evaluation of the predominant activity.

Hannover Re primarily anticipates implications for the classification of financial instruments. The portfolio of financial instruments to be recognised at fair value through profit or loss will increase as a consequence of the new classification rules. In addition, the Group expects the new impairment model to have implications for debt instruments.

The IFRS 9 implementation project is running parallel to and in close coordination with the IFRS 17 implementation project. Disclosures regarding the fair values of financial instruments currently in the portfolio split according to the cash flow criterion as well as disclosures about the credit risks of securities that solely generate payments of principal and interest are provided in section 6.1 of the notes to the consolidated financial statement "Investments under own management". This information is intended to facilitate some comparability with entities that are already applying IFRS 9.

In addition to the accounting principles described above, the IASB has issued the following standards, interpretations and amendments to existing standards with possible implications for the consolidated financial statement of Hannover Re, application of which was not yet mandatory for the year under review and which are not being applied early by Hannover Re. Initial application of these new standards is not expected to have any significant implications for Hannover Re's net assets, financial position or result of operations:

Further IFRS Amendments and Interpretations

N 06

Published	Title	Initial application to annual periods beginning on or after the following date:
September 2019	Interest Rate Benchmark Reform (Amendments to IFRS 9, IAS 39 and IFRS 7)	1 January 2020 (still to be endorsed by the EU)
October 2018	Definition of Material (Amendments to IAS 1 and IAS 8)	1 January 2020
October 2018	Definition of a Business (Amendments to IFRS 3)	1 January 2020 (still to be endorsed by the EU)
March 2018	Amendments to References to the Conceptual Framework in IFRS Standards	1 January 2020

3. Accounting policies

3.1 Change in accounting policies

The opening balances as at 1 January 2019 were restated as follows due to the amended accounting of leases (IFRS 16):

Changes pursuant to IAS 8 – change in accounting policy		N 07
in EUR thousand		1.1.2019
Investment property		34,362
Other invested assets		55,680
Total assets		90,042
Financing liabilities		89,967
Other liabilities		(1,657)
Retained earnings		1,732
Total liabilities		90,042

The reconciliation of the commitment from operating leases stated as at 31 December 2018 to the lease liabilities recognised on 1 January 2019 is as follows:

Reconciliation of lease liabilities at the date of initial application		N 08
in EUR thousand		1.1.2019
Lease commitments as at 31 December 2018 (restated)		215,876
Commitments from lease contracts already concluded with use commencing after 31 December		635
Short-term leases		1,079
Other adjustments		5
Gross lease commitments as at 1 January 2019		214,157
Discounting		124,190
Lease commitments recognised as at 1 January 2019		89,967

The average incremental borrowing rate at the date of initial application is 3.7%.

In the consolidated financial statement for the 2018 financial year Hannover Re corrected income and expenses from for-

ign currency translation in conformity with IAS 8 retrospectively in amounts of EUR 560.5 million each with no implications for Group net income. Offsetting takes place entirely for income and expenses resulting from the same currency.

Changes pursuant to IAS 8 – Offsetting of foreign currency translation		N 09
in EUR thousand		1.1.–31.12.2018
Consolidated statement of income		
Other income		(560,527)
Other expenses		(560,527)
Group net income		–

3.2 Summary of major accounting policies

Reinsurance contracts: IFRS 4 “Insurance Contracts” represents the outcome of Phase I of the IASB project “Insurance Contracts” and constitutes a transitional arrangement. IFRS 17, which was issued by the IASB in May 2017, establishes binding principles for the measurement of insurance contracts effective for annual reporting periods beginning on or after 1 January 2021. With the publication of the Exposure Draft “Amendments to IFRS 17” in June 2019, the IASB proposed a deferral of the date of the standard’s initial application to 1 January 2022 as well as further amendments to IFRS 17.

IFRS 4 sets out basic principles for the accounting of insurance contracts. Underwriting business is to be subdivided into insurance and investment contracts. Contracts with a significant insurance risk are considered to be insurance contracts, while contracts without significant insurance risk are to be classified as investment contracts. The standard is also applicable to reinsurance contracts. IFRS 4 contains fundamental rules governing specific circumstances, such as the separation of embedded derivatives and unbundling of deposit components, but it does not set out any more extensive provisions relating to the measurement of insurance and reinsurance contracts. In conformity with the basic rules of IFRS 4 and the IFRS Framework, reinsurance-specific transactions therefore continue to be recognised in accordance with the pertinent provisions of US GAAP (United States Generally Accepted Accounting Principles) as applicable on the date of initial application of IFRS 4 on 1 January 2005.

Financial assets: as a basic principle we recognise the purchase and sale of directly held financial assets including derivative financial instruments as at the settlement date. The recognition of fixed-income securities includes apportionable accrued interest.

Financial assets held to maturity are comprised of non-derivative assets that entail fixed or determinable payments on a defined due date and are acquired with the intent and ability to be held until maturity. They are measured at amortised cost. The corresponding premiums or discounts are recognised in profit or loss across the duration of the instruments using the effective interest rate method. An impairment loss is taken in the event of permanent impairment. Please refer to our comments on impairments in this section.

Loans and receivables are non-derivative financial instruments that include fixed or determinable payments on a defined due date, are not listed on an active market and are not sold at short notice. They are carried at amortised cost.

Premiums or discounts are deducted or added within the statement of income using the effective interest rate method until the amount repayable becomes due. An impairment loss is taken only to the extent that repayment of a loan is unlikely or no longer expected in the full amount. Please refer to our comments on impairments in this section.

Valuation models

Financial instrument	Parameter	Pricing model
Fixed-income securities		
Unlisted plain vanilla bonds, interest rate swaps	Yield curve	Present value method
Unlisted structured bonds	Yield 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	Yield curves, spot and forward rates	Interest parity model
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, yield curve	Present value method

Financial assets at fair value through profit or loss consist of securities held for trading and those classified as measured at fair value through profit or loss since acquisition. This refers principally to unsecured debt instruments issued by corporate issuers and derivative financial instruments. Within the scope of the fair value option provided under IAS 39 “Financial Instruments: Recognition and Measurement”, according to which financial assets may be carried at fair value on first-time recognition subject to certain conditions, all structured securities that would have needed to have been broken down had they been recognised as available for sale or under loans and receivables are also recognised here. Hannover Re makes use of the fair value option solely for selected subportfolios of its financial assets. Securities held for trading and securities classified as measured at fair value through profit or loss since acquisition are carried at their fair value on the balance sheet date. If stock market prices are not available for use as fair values, the carrying amounts are determined using generally acknowledged measurement methods. All changes in fair values from this measurement are recognised in investment income. The classification of financial assets at fair value through profit or loss is compatible with Hannover Re’s risk management strategy and investment strategy, which are oriented extensively towards economic fair value variables.

Financial assets classified as available for sale are carried at fair value; accrued interest is recognised in this context. We allocate to this category those financial instruments that do

not satisfy the criteria for classification as held to maturity, loans and receivables, at fair value through profit or loss, or trading. Unrealised gains and losses arising out of changes in the fair value of securities held as available for sale are recognised directly in shareholder’s equity after deduction of deferred taxes.

Establishment of the fair value of financial instruments carried as assets or liabilities: we establish the fair value of financial instruments carried as assets or liabilities using the methods and models described below. The fair value of a financial instrument corresponds 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 assets, their bid price is used; financial liabilities are valued at ask price. 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 table above. Financial assets for which no publicly available prices or observable market data can be used as inputs (financial instruments belonging to fair value hierarchy level 3) are for the most part measured on the basis of proven valuations drawn up by knowledgeable, independent experts, e. g. audited net asset value, the plausibility of which has previously been subjected to systematic review. For further information

please see our explanatory remarks on the fair value hierarchy in section 6.1 “Investments under own management”.

Impairments: As at each balance sheet date we review our financial assets with an eye to the need to take impairments. Permanent impairments on all invested assets are recognised directly in the statement of income. In this context we take as a basis the same indicators as those subsequently discussed for fixed-income securities and securities with the character of equity. Qualitative case-by-case analysis is also carried out. IAS 39 “Financial Instruments: Recognition and Measurement” contains a list of objective, substantial indications for impairments of financial assets. In the case of fixed-income securities and loans reference is made, in particular, to the rating of the instrument, the rating of the issuer/borrower as well as the individual market assessment in order to establish whether they are impaired. With respect to held-to-maturity instruments as well as loans and receivables recognised at amortised cost, the level of impairment is arrived at from the difference between the book value of the asset and the present value of the expected future cash flows. The book value is reduced directly by this amount which is then recognised as an expense. With the exception of value adjustments taken on accounts receivable, we recognize impairments directly on the assets side – without using an adjustment account – separately from the relevant items. If the reasons for the write-down no longer apply, a write-up is made in income up to at most the original amortised cost for fixed-income securities.

With respect to impairments on securities with the character of equity, IAS 39 “Financial Instruments: Recognition and Measurement” states, in addition to the aforementioned principles, that a significant or prolonged decrease in fair value below acquisition cost constitutes objective evidence of impairment. Hannover Re considers equity securities to be impaired under IAS 39 if their fair value falls significantly, i.e. by at least 20%, or for a prolonged period, i.e. at least nine months, below acquisition cost. In accordance with IAS 39 the reversal of impairment losses on equities to the statement of income once impairment has been taken is prohibited, as is adjustment of the cost basis. Impairment is tested in each reporting period using the criteria defined by Hannover Re. If an equity security is considered to be impaired on the basis of these criteria, IAS 39 requires that a value adjustment be recognised in the amount of the fair value less historical cost and less prior value adjustments, meaning that depreciation is taken on the fair value as at the closing date – if available, on the publicly quoted stock exchange price. We also apply this method to participations in funds that invest in private equity. In order to reflect the specific character of these funds (in this case initially negative yield and liquidity flows from the so-called “J curve” effect during the investment period of the funds), we take an impairment to net asset value as an ap-

proximation of the fair value for the first time after a two-year waiting period if there is a significant or prolonged decrease in value. If, however, significant changes in value occur within the funds during this period that are not attributable to the J curve effect in addition to the increased investment expenses, the resulting impairment is recognised directly as a write-down.

Netting of financial instruments: financial assets and liabilities are only netted and recognised in the appropriate net amount if a corresponding legal claim (reciprocity, similarity and maturity) exists or is expressly agreed by contract, in other words if the intention exists to offset such items on a net basis or to effect this offsetting simultaneously.

Other invested assets are for the most part recognised at nominal value. Insofar as such financial assets are not listed on public markets (e.g. participating interests in private equity firms), they are carried at the latest available net asset value as an approximation of the fair value. Loans included in this item are recognised at amortised cost.

Investments in associated companies are valued at equity on the basis of the proportionate shareholders’ equity attributable to the Group. Further information is provided in section 4.1 “Consolidation principles”.

Investment property is valued at cost less depreciation and impairment. Straight-line depreciation is taken over the expected useful life – at most 50 years. Under the impairment test the market value of investment property (recoverable amount) is determined using accepted valuation methods, compared with the book value and, where necessary, impairments are recognised. Maintenance costs and repairs are expensed. Value-enhancing expenditures are capitalised if they extend the useful life.

Cash and cash equivalents are carried at face value. Cash collateral that we have received for the hedging of positive fair values of derivatives is shown under other liabilities.

Repurchase agreements (repo transactions): fully collateralised, term repurchase agreements (repos) are entered into as a supplementary liquidity management tool. In this context the Group sells securities and at the same time commits to repurchase them at a later date for an agreed price. Given that the material risks and opportunities associated with the financial instruments remain within the Group, we continue to recognise these assets. The repurchase commitment arising out of the payment received is accounted for under “sundry liabilities”; any difference between the amount received for the transfer of the securities and the amount agreed for their repurchase is spread across the term of the repo using

the effective interest rate method and shown in investment income.

Funds withheld are receivables due to reinsurers from their clients in the amount of the cash deposits contractually withheld by such clients; they are recognised at acquisition cost (nominal amount). Appropriate allowance is made for credit risks.

Contract deposits: under this item we report receivables and liabilities under insurance contracts that satisfy the test of a significant risk transfer to the reinsurer as required by IFRS 4 “Insurance Contracts” but fail to meet the risk transfer required by US GAAP. IFRS 4 in conjunction with SFAS 113 requires insurance contracts that transfer a significant technical risk from the ceding company to the reinsurer to be differentiated from those under which the risk transfer is of merely subordinate importance. Since the risk transfer under the affected transactions is of subordinate importance, these contracts are recognised using the “deposit accounting” method and hence eliminated from the technical account. The compensation for risk assumption booked to income under these contracts is netted under other income/expenses. The payment flows resulting from these contracts are shown in the cash flow statement under operating activities.

Accounts receivable: the accounts receivable under reinsurance business and the other receivables are carried at nominal value; value adjustments are made where necessary on the basis of a case-by-case analysis. We use adjustment accounts for value adjustments taken on reinsurance accounts receivable, while all other write-downs are booked directly against the underlying position.

Deferred acquisition costs principally consist of commissions and other variable costs directly connected with the acquisition or renewal of existing reinsurance contracts. These acquisition costs are capitalised and amortised over the expected period of the underlying reinsurance contracts. Deferred acquisition costs are regularly tested for impairment.

Reinsurance recoverables on technical reserves: shares of our retrocessionaires in the technical reserves are calculated according to the contractual conditions on the basis of the gross technical reserves. An appropriate impairment is taken to allow for objective substantial indications of credit risks that are based on an event after initial recognition and suggest impairment, insofar as this can be reliably measured.

Intangible assets: in accordance with IFRS 3 “Business Combinations” goodwill is not amortised; instead, impairments may be taken after an annual impairment test or as indicated. For the purposes of the impairment test, goodwill is to be al-

located pursuant to IAS 36 “Impairment of Assets” to so-called “cash generating units” (CGUs). Each CGU to which goodwill is allocated should represent the lowest level on which goodwill is monitored for internal management purposes and may not be larger than a segment. Following allocation of the goodwill it is necessary to determine for each CGU the recoverable amount, defined as the higher of the value in use and the fair value less costs to sell. For impaired goodwill the recoverable amount is to be stated. The recoverable amount is to be compared with the book value of the CGU including goodwill. When the latter exceeds the recoverable amount, an impairment expense is to be recognised. For detailed information on the impairment method used and the goodwill recognised as at the balance sheet date, please see section 6.5 “Goodwill”.

The other intangible assets include the expected profits from acquired life reinsurance portfolios. These are carried at the present value of future profits (PVFP) at time of acquisition, which is calculated as the present value of profits expected from the acquired blocks of business disregarding new business and tax effects. Amortisation is taken according to the periods of the underlying acquired contracts. The PVFP is regularly tested for impairment using a liability adequacy test and impairment losses are taken if necessary. In this regard please see section 3.3 “Major discretionary decisions and estimates”. Separately identifiable intangible assets in connection with business combinations, such as customer base or contractual/legal rights, are also recognised under this item.

Purchased and proprietary software is recognised at acquisition cost less depreciation. Intangible assets are regularly tested for impairment and an impairment loss is recognised where necessary.

Deferred tax assets: IAS 12 “Income Taxes” requires that assets-side deferred taxes be established if assets have to be recognised in a lower amount or liabilities in a higher amount in the consolidated balance sheet than in the tax balance sheet and if these temporary differences will lead to reduced tax burdens in the future. In principle, temporary differences result from the valuation differences between the tax balance sheets drawn up in accordance with national standards and the IFRS balance sheets of the companies included in the consolidated financial statement drawn up in accordance with uniform group standards as well as from consolidation processes. Deferred tax assets and liabilities are not established if they arise out of assets or liabilities, the book value of which upon first-time recognition diverges from their initial tax base.

Deferred tax assets are also recognised on tax loss carry-forwards and tax credits. Insofar as the deferred taxes refer to

items carried directly in equity, the resulting deferred taxes are also recognised directly in equity. Value adjustments are taken on deferred tax assets as soon as realisation of the receivable no longer appears likely. Deferred taxes are measured according to the tax regulations specific to the country concerned that are applicable or have been adopted as at the closing date.

Deferred tax assets may only be netted with deferred tax liabilities if an enforceable right exists to net actual tax refund claims with actual taxes owing. A precondition here is that the deferred tax assets and deferred tax liabilities refer to income taxes that are levied by the same revenue authority either for (i) the same taxable entity or for (ii) different taxable entities. In this regard, there must be an intention – in every future period in which the discharge or realisation of substantial amounts of deferred tax liabilities/deferred tax assets is to be expected – either to bring about the settlement of the actual taxes owing and refund claims on a net basis or to discharge the liabilities at the same time as the claims are realised.

Own-use real estate: the portfolio of own-use real estate is measured at cost less straight-line depreciation over a useful life of no more than 50 years. The fair values are determined for comparative purposes using the discounted cash flow method.

Right-of-use assets from lease contracts are measured at amortised cost in the amount of the initial measurement of the lease liability (cf. here the paragraph below), adjusted by prepaid lease payments, lease incentives received, initial direct costs incurred and probable restoration costs.

Right-of-use assets are amortised on a straight-line basis over the term of the lease contract.

Revenue from contracts with customers is realised when control of the promised goods or services is transferred to the customer. The amount of revenue realised corresponds to the consideration that the Group expects to receive in return for the transfer of goods or services to the customer. Under its contracts that fall within the scope of application of IFRS 15 the Group generally acts as a principal, because it normally controls the services or goods before transferring them to the customer.

Other assets are accounted for at amortised cost.

Technical reserves: the technical reserves are shown for gross account in the balance sheet, i.e. before deduction of the share attributable to our reinsurers; cf. here the remarks concerning the corresponding assets. The reinsurers' portion

is calculated and accounted for on the basis of the individual reinsurance contracts.

Loss and loss adjustment expense reserves are constituted for payment obligations from reinsurance losses that have occurred but have not yet been settled. They are subdivided into reserves for reinsurance losses reported by the balance sheet date and reserves for reinsurance losses that have already been incurred but not yet reported (IBNR) by the balance sheet date. The loss and loss adjustment expense reserves are based on estimates that may diverge from the actual amounts payable. In reinsurance business a considerable period of time may elapse between the occurrence of an insured loss, notification by the insurer and pro-rata payment of the loss by the reinsurer. For this reason the realistically estimated future settlement amount based on long-standing established practice is carried. Recognised actuarial methods are used for estimation purposes. In this regard we make allowance for past experience, currently known facts and circumstances, the expertise of the market units as well as other assumptions relating to the future development, in particular economic, social and technical influencing factors. Subsequently, based on Group-wide analyses, we give separate consideration in this context to the inherent volatility of the reserves constituted for the reinsurance business, e.g. due to large losses. The interest rate-induced portion of the change in the reserve is shown in the statement of income on a consistent Group basis.

Benefit reserves are comprised of the underwriting reserves for guaranteed claims of ceding companies in life and health reinsurance. Benefit reserves are determined using actuarial methods on the basis of the present value of future payments to cedants less the present value of premium still payable by cedants. The calculation includes assumptions relating to mortality, disability, lapse rates and the future interest rate development. The actuarial bases used in this context allow an adequate safety margin for the risks of change, error and random fluctuation. They correspond to those used in the premium calculation and are adjusted if the original safety margins no longer appear to be sufficient.

Provisions for pensions are established in accordance with IAS 19 "Employee Benefits" using the projected unit credit method. They are calculated according to actuarial principles and are based upon the commitments made by the Hannover Re Group for retirement, disability and widows' benefits. The amount of the commitments is determined according to length of service and salary level. The pension plans are defined benefit plans. The basis of the valuation is the estimated future increase in the rate of compensation of the pension beneficiaries. The benefit entitlements are discounted by applying the capital market rate for highest-rated securities. All

changes in valuation, especially actuarial gains and losses, are captured immediately in cumulative other comprehensive income. Service cost and interest cost are recognised in the statement of income. Returns on plan assets are determined using the same interest rate as that used in the calculation of the present value of the defined benefit obligation.

Contributions to defined contribution plans are expensed when the beneficiary of the commitment has performed the work that entitles them to such contributions.

Deferred tax liabilities: in accordance with IAS 12 “Income Taxes” deferred tax liabilities must be recognised if assets are to be recognised in a higher amount or liabilities in a lower amount in the consolidated balance sheet than in the tax balance sheet and if these temporary differences will lead to additional tax loads in the future; please see our explanatory remarks on deferred tax assets.

Under the balance sheet item **Other liabilities** we recognise not only the sundry non-technical provisions but also minority interests in partnerships. Direct minority interests in partnerships, i.e. liabilities to holders of minority shares in partnerships arising out of long-term capital commitments, which are puttable at fair value by the holder of the interest, are recognised as debt pursuant to IAS 32 and measured at the fair value of the redemption amount as at the balance sheet date.

Sundry non-technical provisions are established according to a realistic estimate of the amount required and shown under the balance sheet item “Other liabilities”. Allocation to such provisions is conditional upon the Group currently having a legal or actual obligation that results from a past event and in respect of which utilisation is probable and the amount can be reliably estimated.

Restructuring provisions are recognised if a detailed formal plan for restructuring measures exists and steps to implement it have already begun or if key details of the restructuring have been published. The provisions cover only expenditures arising directly as a consequence of restructuring that are not connected with the company’s regular activities.

Partial retirement obligations are carried at present value according to actuarial principles. During the phase when the employee is still working a provision is set aside to cover the liability amounting to the working hours not yet compensated. Top-up payments are accumulated in instalments until the end of the work phase. In periods when the employee is remunerated according to the partial retirement arrangements without performing any work, the provision is released.

Share-based payments: The share-based payment models existing within the Hannover Re Group are remuneration plans with cash settlement. In accordance with the requirements of IFRS 2 “Share-based Payments”, the services rendered by the eligible beneficiaries and the resulting liability are to be recognised at the fair value of the liability and expensed over the vesting period. Until settlement of the liability the fair value of the liability is remeasured at each closing date and at the settlement date. All changes in fair value are recognised in profit or loss for the period.

Financing liabilities consist of liabilities from lease contracts and above all long-term debt and notes payable. In some instances these involve subordinated liabilities that can only be satisfied after the claims of other creditors in the event of liquidation or bankruptcy. Both long-term debt and notes payable are measured at amortised cost using the effective interest rate method. The transaction costs as well as premiums/discounts arising in connection with the issuance of bonds are amortised and recognised together with the nominal interest as financing costs.

Lease **liabilities** are initially measured at the present value of essentially all lease payments that are not variable or dependent on an index or an (interest) rate. The discount factor used is the implicit interest rate of the lease contract or the lessee’s incremental borrowing rate.

Financial liabilities at fair value through profit or loss: Hannover Re does not make use of the fair value option provided by IAS 39 “Financial Instruments: Recognition and Measurement” to classify financial liabilities in this category upon first-time recognition.

Shareholders’ equity: the items “common shares” and “additional paid-in capital” are comprised of the amounts paid in by the shareholders of Hannover Rück SE on its shares. In addition to the statutory reserves of Hannover Rück SE and the allocations from net income, the retained earnings consist of reinvested profits generated by the Hannover Re Group companies in previous periods. What is more, in the event of a retrospective change of accounting policies, the adjustment for previous periods is recognised in the opening balance sheet value of the retained earnings and comparable items of the earliest reported period. Unrealised gains and losses from the fair value measurement of financial instruments held as available for sale are carried in cumulative other comprehensive income under unrealised gains and losses on investments. Translation differences resulting from the currency translation of separate financial statements of foreign subsidiaries are recognised under cumulative foreign currency translation adjustments.

Non-controlling interests are shares in the equity of affiliated companies not held by companies belonging to the Group. IAS 1 “Presentation of Financial Statements” requires that non-controlling interests be recognised separately within Group shareholders’ equity. The non-controlling interest in profit or loss is shown separately following the net income. Further information is provided in section 6.14 “Non-controlling interests”.

Disclosures about financial instruments: IFRS 7 “Financial Instruments: Disclosures” requires more extensive disclosures according to classes of financial instruments. In this context, the term “class” refers to the classification of financial instruments according to their risk characteristics. A minimum distinction is required here between measurement at amortised cost or at fair value. A more extensive or divergent distinction should, however, be geared to the purpose of the corresponding disclosures in the notes. In contrast, the term “category” is used within the meaning of the measurement categories defined in IAS 39 “Financial Instruments: Recognition and Measurement” (held to maturity, loans and receivables, available for sale and financial assets at fair value through profit or loss with the subcategories of trading and designated financial instruments). Essentially, the following classes of financial instruments are established:

- Fixed-income securities
- Equities, equity funds and other variable-yield securities
- Other financial assets – at fair value through profit or loss
- Real estate funds
- Other invested assets
- Short-term investments
- Certain financial assets in the balance sheet item “Other assets”
- Certain financial assets in the balance sheet item “Other liabilities”
- Long-term debt
- Notes payable

This grouping into classes is not, however, solely determinative for the type and structure of each disclosure in the notes. Rather, guided by the underlying business model of reinsurance, the disclosures are made on the basis of the facts and circumstances existing in the financial year and in light of the principle of materiality.

Currency translation: financial statements of Group subsidiaries were drawn up in the currencies corresponding to the economic environment in which each subsidiary primarily operates. These currencies are referred to as functional currencies. The euro is the reporting currency in which the consolidated financial statement is prepared.

Transactions in foreign currencies reported in Group companies’ individual financial statements are converted into the functional currency at the transaction rate. In accordance with IAS 21 “The Effects of Changes in Foreign Exchange Rates” the recognition of exchange differences on translation is guided by the nature of the underlying balance sheet item. Exchange differences from the translation of monetary assets and liabilities are recognised directly in the statement of income. Currency translation differences from the translation of non-monetary assets measured at fair value via the statement of income are recognised as profit or loss from fair value measurement changes. Exchange differences from non-monetary items – such as equity securities – classified as available for sale are initially recognised outside income in a separate item of shareholders’ equity and only booked to income when such non-monetary items are settled.

The individual companies’ statements of income prepared in the local currencies 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. In accordance with IAS 21 “The Effects of Changes in Foreign Exchange Rates” differences from the currency translation of financial statements of foreign Group companies must be recognised in the consolidated financial statement as a separate item in shareholders’ equity.

Currency translation differences resulting from long-term loans or lendings without specified maturity between Group companies are similarly recognised outside the statement of income in a separate item of shareholders’ equity.

Key exchange rates

N 11

	31.12.2019	31.12.2018	2019	2018
1 EUR corresponds to:	Mean rate of exchange on the balance sheet date		Average rate of exchange	
AUD	1.6000	1.6208	1.6095	1.5799
BHD	0.4219	0.4316	0.4226	0.4457
CAD	1.4620	1.5591	1.4872	1.5313
CNY	7.8181	7.8768	7.7355	7.8174
GBP	0.8520	0.9028	0.8781	0.8870
HKD	8.7135	8.9680	8.7805	9.2579
INR	79.8393	80.2219	78.9090	80.4111
KRW	1,293.5200	1,277.8700	1,301.2831	1,295.1269
MYR	4.5951	4.7590	4.6425	4.7681
SEK	10.4372	10.2769	10.5618	10.2621
USD	1.1190	1.1451	1.1208	1.1814
ZAR	15.7385	16.4522	16.1594	15.5416

Earned premium and unearned premium: assumed reinsurance premiums, commissions and claim settlements as well as assumed portions of the technical reserves are recognised according to the terms and conditions of the reinsurance treaties, giving due consideration to the underlying contracts for which reinsurance was taken out.

Ceded reinsurance premiums are deducted from the gross written premium for the purpose of reconciliation to net premium earned. Assets and liabilities in connection with reinsurance ceded are recognised on a gross basis. The reinsured portions of the reserves are estimated on a basis consistent with the reserves attributable to the reinsured risk. Income and expenses in connection with reinsurance treaties are recognised on a basis consistent with the underlying risk of the reinsured business.

Premiums for reinsurance treaties are booked to income as earned across the period of the contracts in proportion to the insurance protection already provided or when they become due. Unearned premiums are calculated individually for each treaty in order to establish the portion of the premium volume that is not booked to income. This applies principally to property and casualty reinsurance and parts of accident and health reinsurance. Premiums already collected that are attributable to future risk periods are deferred pro rata temporis and recognised in conformity with the pertinent standards of US GAAP. In this context, assumptions are to be made if the data required for a calculation pro rata temporis is not available. The unearned premium corresponds to the insurance protection afforded in future periods.

Taxes: the taxes are comprised of the actual tax load on corporate profits of the Group companies, to which the applica-

ble local tax rates are applied, as well as changes in deferred tax assets and liabilities. Income and expenses arising out of interest or penalties payable to the revenue authorities are shown under other income/expenses. The calculation of the deferred tax assets and liabilities is based on tax loss carry-forwards, unused tax credits and temporary differences between the book values of assets and liabilities in the consolidated balance sheet of the Hannover Re Group and their carrying amounts in the tax balance sheet. Further information on deferred taxes is provided in our remarks on deferred tax assets and liabilities.

Non-current assets held for sale and discontinued operations: in accordance with IFRS 5 “Non-current Assets Held for Sale and Discontinued Operations”, non-current assets and disposal groups are classified as held for sale if the relevant book value is realised largely through sale rather than through continued use. Components of an entity that can be clearly distinguished from the rest of the entity for operational and accounting purposes and were classified as sold or for sale are recognised as discontinued operations. Measurement is at the lower of book value and fair value less costs to sell. Depreciation or amortisation is not taken on non-current assets as long as they are classified as held for sale. Impairment losses on fair value less costs to sell are recognised in profit or loss; a gain for any subsequent increase in fair value less costs to sell leads to the realisation of profit up to the amount of the cumulative impairment. If the impairment loss to be taken on a disposal group exceeds the book value of the corresponding non-current assets, the need to establish a provision within the meaning of IAS 37 “Provisions, Contingent Liabilities and Contingent Assets” is reviewed.

3.3 Major discretionary decisions and estimates

In the consolidated financial statement it is to some extent necessary to make estimates and assumptions which affect the assets and liabilities shown in the balance sheet, the information on contingent claims and liabilities as at the balance sheet date and the disclosure of income and expenses during the reporting period. Key facts and circumstances subject to such assumptions and estimates include, for example, the recoverability of contingent reinsurance liabilities, the recoverability of investments in associated companies, the valuation of derivative financial instruments as well as assets and liabilities relating to employee benefits. The actual amounts may diverge from the estimated amounts.

Supplementary or complete estimates of the corresponding profit and loss items, assets and liabilities including relevant retrocessions are made where ceding company accounts with substantial premium income are missing. Missing ceding company accounts with a low premium volume are included in the following year.

In order to measure the ultimate liability in property and casualty reinsurance the expected ultimate loss ratios are calculated for all lines. Actuarial methods such as the “chain ladder” method provide the starting point for these calculations. The realistically estimated future settlement amount is recognised in the balance sheet. The development until completion of the run-off is projected on the basis of statistical triangles from the original notifications of ceding companies. The more recent underwriting years in actuarial projections are of course subject to greater uncertainty, although this can be considerably reduced with the aid of a variety of additional information on improvements in the rates and conditions of the business written and on loss trends. The amounts arrived at as the difference between the ultimate losses and the reported losses are set aside as the IBNR reserve for losses that have been incurred but are not yet known or have still to be reported. In applying statistical methods, separate consideration is given to large losses.

By analysing a broad range of observable information it is possible to classify losses as major individual loss events. Measurement of the obligations existing in this connection is carried out using a separate process, which is based largely on contract-specific estimates.

For further particulars, including information required by IFRS 4, the reader is referred to our remarks on the underwriting risks in property and casualty reinsurance on page 105 et seq. of the management report – including, for example, with regard to the modelling of natural catastrophe scenarios and the assumptions relating to asbestos and pollution

risks. We would further refer to our explanatory remarks on the technical reserves in section 3.2 “Summary of major accounting policies” and section 6.7 “Technical provisions”.

In life and health reinsurance, too, the calculation of reserves and assets is crucially dependent on actuarial projections of the covered business. So-called model points are defined according to the type of business covered. The main distinguishing criteria are the age, sex and (non-)smoker status of the insured, tariff, policy period, period of premium payment and amount of insurance. The portfolio development is simulated for each model point, in which regard the key input parameters are either predefined by the tariff (e.g. allowance for costs, amount of premium, actuarial interest rate) or need to be estimated (e.g. mortality or disability rates, lapse rates). These assumptions are heavily dependent on country-specific parameters and on the sales channel, quality of the cedant’s underwriting and claims handling, type of reinsurance and other framework conditions of the reinsurance treaty. The superimposition of numerous model points gives rise to a projection, which incorporates inter alia assumptions concerning the portfolio composition and the commencement of covered policies within the year. Such assumptions are estimated at the inception of a reinsurance treaty and subsequently adjusted to the actual projection.

The projections, which cover various model scenarios (“conservative assumptions” versus “best estimate”), constitute the starting point for numerous areas of application encompassing quotation, the determination of carrying amounts and embedded values as well as contract-specific analyses, e.g. regarding the appropriateness of the recognised reinsurance liabilities (“liability adequacy test”). In this context we would refer the reader to our comments on technical assets and provisions in section 3.2 “Summary of major accounting policies” and on the liability adequacy tests in section 6.7 “Technical provisions”.

In determining the carrying amounts for certain financial assets it is sometimes necessary to make assumptions in order to calculate fair values. In this regard we would refer the reader to our remarks in section 3.2 “Summary of major accounting policies” concerning financial assets at fair value through profit or loss and securities held as available for sale as well as in section 6.7 “Technical provisions” concerning investment property. Assumptions concerning the appropriate applicability criteria are necessary when determining the need for impairments on non-monetary financial assets held as available for sale. In this regard we would again refer the reader to our explanatory remarks in section 3.2 “Summary of major accounting policies”.

4. Consolidation

4.1 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). These principles are also applied to structured entities, on which further information is provided in section 4.2 “Consolidated companies and complete list of shareholdings”. 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. Goodwill derives from the acquisition of subsidiaries and corresponds to the sum of the consideration rendered, the amount of all non-controlling interests in the acquired company and the fair value of the equity interests previously held in the acquired company less the fair value of the acquired net assets. Under IFRS 3 goodwill is not amortised, but 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. We therefore measure investments in associated companies with the proportion of the shareholders’ equity attributable to the Group. According to the proportionate interest method required by IAS 28 “Investments in Associates”, the goodwill attributable to associated companies is recognised together with the investments in associated companies. The share of an associated company’s year-end profit or loss relating to the Group is included in the income from investments and shown separately in the consolidated statement of income. Shareholders’ equity and profit or loss are taken from the associated company’s latest available financial statement. 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. Further particulars on companies consolidated using the equity method of accounting are provided in section 6.1 “Investments under own management” under “Associated companies”.

Only subsidiaries which are of minor importance – both individually and in their entirety – for the net assets, financial position and results of operations of the Hannover Re Group are exempted from consolidation. Hannover Re assesses whether a subsidiary is of minor importance on the basis of the company’s total assets and net income relative to the corresponding values for the Group as a whole on average over the last three years. For this reason 12 (12) companies at home and abroad were not consolidated in the year under review. A further 4 (5) individual companies as well as in the previous year a subgroup account with altogether 14 individual companies were not included at equity in the consolidated financial statement for the same reason. The business object of these altogether 16 (31) companies is for the most part the rendering of services for reinsurance companies within the Group.

Consolidation of business transactions within the Group

Receivables and liabilities between the companies included in the consolidated financial statement were offset against each other. Profits and expenses from business transactions within the Group were also eliminated. Transactions between a disposal group and the continuing operations of the Group were similarly eliminated in accordance with IFRS 10.

4.2 Consolidated companies and complete list of shareholdings

In addition to Hannover Rück SE as the parent company of the Group, the scope of consolidation of the Hannover Re Group encompasses the companies listed in the table below.

Information on subsidiaries

Scope of consolidation

N 12

Number of companies	2019	2018
Consolidated companies (Group companies)		
Germany	11	16
Abroad	99	100
Total	110	116
Companies included at equity		
Germany	3	2
Abroad	6	6
Total	9	8

Information on the non-controlling interests in shareholders' equity and profit or loss as well as on the major non-controlling interests is provided in section 6.14 "Non-controlling interests". On the balance sheet date there were no significant restrictions on access to or the use of Group assets due to protective rights in favour of non-controlling interests.

The sale or transfer of shares of E+S Rückversicherung AG takes place by way of an endorsement and is permissible only with the approval of the company's Supervisory Board. The Supervisory Board enjoys the right to grant or deny approval unconditionally, without being obliged to state reasons in the event of denial.

National provisions of company law or requirements of supervisory law may in certain countries limit the ability of the Hannover Re Group to transfer assets between companies belonging to the Group. These limitations result principally from local minimum capital and solvency requirements as well as to a lesser extent from foreign exchange restrictions.

List of shareholdings

The following list of shareholdings is provided in the present Group annual financial report in accordance with § 313 Para. 2 German Commercial Code (HGB). The stipulations of IFRS 12.10 and IFRS 12.21 have also been observed.

The figures for the capital and reserves as well as the result for the last financial year are taken from the local financial statements drawn up by the companies.

With regard to the major acquisitions and disposals in the year under review please see our remarks in the following paragraphs of this section.

List of shareholdings

N 13

Name and registered office of the company in currency units of 1,000	Participation in %	Currency	Capital and reserves	Result for the last financial year
Domestic companies				
Affiliated consolidated companies				
Hannover Rück Beteiligung Verwaltungs-GmbH ^{1,2} , Hannover/Germany	100.00	EUR	4,027,406	–
FUNIS GmbH & Co. KG, Hannover/Germany	100.00	EUR	95,810	37,702
Hannover America Private Equity Partners II GmbH & Co. KG ¹ , Hannover/Germany	95.42	EUR	542,769	58,858
HAPEP II Holding GmbH ¹ , Hannover/Germany	95.42	EUR	13,432	90
Hannover Re Global Alternatives GmbH & Co. KG ¹ , Hannover/Germany	94.72	EUR	438,158	14,870
Hannover Re Euro PE Holdings GmbH & Co. KG ¹ , Hannover/Germany	91.20	EUR	362,071	53,321
Hannover Re Euro RE Holdings GmbH ¹ , Hannover/Germany	87.68	EUR	1,018,585	110,205
HR GLL Central Europe GmbH & Co. KG ¹ , Munich/Germany	87.67	EUR	180,430	33,305
HR GLL Central Europe Holding GmbH ¹ , Munich/Germany	87.67	EUR	61,753	(47)
HAPEP II Komplementär GmbH ¹ , Hannover/Germany	82.40	EUR	47	4
E+S Rückversicherung AG ¹ , Hannover/Germany	64.79	EUR	918,847	128,000
Affiliated non-consolidated companies				
HILSP Komplementär GmbH ^{3,4} , Hannover/Germany	100.00	EUR	34	(1)
HR Verwaltungs-GmbH ^{5,6,7} , Hannover/Germany	100.00	EUR	3	(5)
Associated companies				
HDI Global Specialty SE ¹ , Hannover/Germany	49.78	EUR	251,149	(12,114)
WeHaCo Unternehmensbeteiligungs-GmbH ⁷ , Hannover/Germany	32.96	EUR	81,447	1,728
HANNOVER Finanz GmbH ⁷ , Hannover/Germany	27.78	EUR	63,435	5,322
Other participations				
Perseus Technologies GmbH ⁷ , Berlin/Germany	18.22	EUR	–	(3,742)
Internationale Schule Hannover Region GmbH ⁸ , Hannover/Germany	9.17	EUR	4,214	(188)
FinLeap GmbH ⁷ , Berlin/Germany	8.68	EUR	84,465	(7,747)
ELEMENT Insurance AG ⁷ , Berlin/Germany	6.01	EUR	22,942	(7,948)
Nürnberg Beteiligungs-Aktiengesellschaft ⁷ , Nuremberg/Germany	1.75	EUR	696,420	63,642

Name and registered office of the company in currency units of 1,000	Participation in %	Currency	Capital and reserves	Result for the last financial year
Foreign companies				
Affiliated consolidated companies				
Hannover Finance (Luxembourg) S.A. ¹ , Luxembourg/Luxembourg	100.00	EUR	27,339	909
Hannover Finance (UK) Limited ¹ , London/United Kingdom	100.00	GBP	656	(24)
Hannover Life Reassurance Bermuda Ltd. ¹ , Hamilton/Bermuda	100.00	USD	495,663	95,050
Hannover Life Reassurance Company of America ¹ , Orlando/USA	100.00	USD	552,826	70,119
Hannover Life Reassurance Company of America (Bermuda) Ltd. ¹ , Hamilton/Bermuda	100.00	USD	1,616,067	166,255
Hannover Re (Ireland) Designated Activity Company ¹ , Dublin/Ireland	100.00	USD	697,296	106,124
Hannover Life Re of Australasia Ltd ¹ , Sydney/Australia	100.00	AUD	487,581	(10,838)
Hannover Re (Bermuda) Ltd. ¹ , Hamilton/Bermuda	100.00	USD	1,533,574	164,790
Hannover ReTakaful B.S.C. (c) ¹ , Manama/Bahrain	100.00	BHD	68,650	9,800
Hannover Services (UK) Limited ¹ , London/United Kingdom	100.00	GBP	927	(42)
Inter Hannover (No. 1) Limited ¹ , London/United Kingdom	100.00	GBP	–	–
Integra Insurance Solutions Limited ¹ , Bradford/United Kingdom	100.00	GBP	6,621	1,105
Argenta Holdings Limited ^{1,3} , London/United Kingdom	100.00	GBP	52,901	6,465
Argenta Private Capital Limited ^{1,3} , London/United Kingdom	100.00	GBP	4,102	2,139
APCL Corporate Director No.1 Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
APCL Corporate Director No.2 Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Fountain Continuity Limited ^{1,3} , Edinburgh/United Kingdom	100.00	GBP	–	–
Names Taxation Service Limited ^{1,3} , London/United Kingdom	100.00	GBP	10	–
Argenta Secretariat Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Argenta Continuity Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Argenta General Partner Limited ^{1,3} , Edinburgh/United Kingdom	100.00	GBP	–	–
Argenta LLP Services Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Argenta SLP Continuity Limited ^{1,3} , Edinburgh/United Kingdom	100.00	GBP	–	–
Argenta Syndicate Management Limited ^{1,3} , London/United Kingdom	100.00	GBP	4,357	2,583

Name and registered office of the company in currency units of 1,000	Participation in %	Currency	Capital and reserves	Result for the last financial year
Argenta Tax & Corporate Services Limited ^{1,3} , London/United Kingdom	100.00	GBP	386	113
Argenta Underwriting No.1 Limited ^{1,3} , London/United Kingdom	100.00	GBP	22	–
Argenta Underwriting No.2 Limited ^{1,3} , London/United Kingdom	100.00	GBP	1,347	48
Argenta Underwriting No.3 Limited ^{1,3} , London/United Kingdom	100.00	GBP	(276)	(742)
Argenta Underwriting No.4 Limited ^{1,3} , London/United Kingdom	100.00	GBP	(152)	–
Argenta Underwriting No.7 Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Argenta Underwriting No.9 Limited ^{1,3} , London/United Kingdom	100.00	GBP	552	(239)
Argenta Underwriting No.10 Limited ^{1,3} , London/United Kingdom	100.00	GBP	(18)	36
Argenta Underwriting No.11 Limited ^{1,3} , London/United Kingdom	100.00	GBP	(19)	11
Argenta No.13 Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Argenta No.14 Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Argenta No.15 Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Residual Services Limited ^{1,3,9} , London/United Kingdom	100.00	GBP	3	–
Residual Services Corporate Director Limited ^{1,3} , London/United Kingdom	100.00	GBP	–	–
Argenta Underwriting Asia Pte. Ltd. ^{1,3} , Singapore/Singapore	100.00	SGD	1,403	754
Argenta Underwriting Labuan Ltd ^{1,3,10} , Labuan/Malaysia	100.00	USD	78	–
Glencar Underwriting Managers, Inc., Chicago/USA	100.00	USD	4,702	(133)
Glencar Insurance Company ¹ , Orlando/USA	100.00	USD	57,437	(1,580)
Kubera Insurance (SAC) Ltd ¹ , Hamilton/Bermuda	100.00	USD	702	(187)
Leine Investment General Partner S.à r.l. ^{1,3} , Luxembourg/Luxembourg	100.00	EUR	1,457	587
Leine Investment SICAV-SIF ^{1,3} , Luxembourg/Luxembourg	100.00	USD	114,319	2,316
LI RE ^{1,3} , Hamilton/Bermuda	100.00	USD	–	–
Fracom FCP ¹¹ , Paris/France	100.00	EUR	1,316,056	12,321
Hannover Finance, Inc. ³ , Wilmington/USA	100.00	USD	1,405,321	27,227
Sand Lake Re, Inc. ¹ , Burlington/USA	100.00	USD	89,789	112,853
Hannover Reinsurance Group Africa (Pty) Ltd. ¹ , Johannesburg/South Africa	100.00	ZAR	251,982	100,171

Name and registered office of the company in currency units of 1,000	Participation in %	Currency	Capital and reserves	Result for the last financial year
Hannover Life Reassurance Africa Limited ¹ , Johannesburg/South Africa	100.00	ZAR	828,141	108,856
Hannover Reinsurance Africa Limited ¹ , Johannesburg/South Africa	100.00	ZAR	950,873	191,237
Compass Insurance Company Limited ¹ , Johannesburg/South Africa	100.00	ZAR	265,807	55,512
Hannover Re Real Estate Holdings, Inc. ³ , Orlando/USA	95.25	USD	969,278	4,615
HR US Infra Equity LP ^{1,3} , Wilmington/USA	95.25	USD	58,948	(599)
320AUS LLC ^{1,3} , Wilmington/USA	95.15	USD	90,289	3,392
GLL HRE CORE Properties, L.P. ^{1,3} , Wilmington/USA	95.15	USD	807,452	231
101BOS LLC ^{1,3} , Wilmington/USA	95.15	USD	49,647	1,508
402 Santa Monica Blvd, LLC ^{1,3} , Wilmington/USA	95.15	USD	(1,887)	910
111ORD LLC ^{1,3} , Wilmington/USA	95.15	USD	67,069	1,987
140EWR LLC ^{1,3} , Wilmington/USA	95.15	USD	50,104	(10,285)
7550IAD LLC ^{1,3} , Wilmington/USA	95.15	USD	68,298	(141,581)
Nashville West, LLC ^{1,3} , Wilmington/USA	95.15	USD	25,523	599
590ATL LLC ^{1,3} , Wilmington/USA	95.15	USD	79,243	1,805
975 Carroll Square, LLC ^{1,3} , Wilmington/USA	95.15	USD	45,275	(3,815)
Broadway 101, LLC ^{1,3} , Wilmington/USA	95.15	USD	14,523	(450)
River Terrace Parking, LLC ^{1,3} , Wilmington/USA	95.15	USD	17,944	(10)
3290ATL LLC ^{1,3} , Wilmington/USA	95.15	USD	69,419	3,074
1600FLL LLC ^{1,3} , Wilmington/USA	95.15	USD	30,248	1,053
2530AUS LLC ^{1,3} , Wilmington/USA	95.15	USD	24,805	360
7550BWI LLC ^{1,3} , Wilmington/USA	95.15	USD	23,758	84
7659BWI LLC ^{1,3} , Wilmington/USA	95.15	USD	–	–
M8 Property Trust ¹ , Sydney/Australia	94.72	AUD	64,927	314
Markham Real Estate Partners (KSW) Pty Limited ¹ , Sydney/Australia	94.72	AUD	–	–
PAG Real Estate Asia Select Fund Limited ¹ , George Town/Cayman Islands	94.72	USD	213,484	3,174
HR US Infra Debt LP ^{1,3} , George Town/Cayman Islands	94.71	USD	183,722	8,022

Name and registered office of the company in currency units of 1,000	Participation in %	Currency	Capital and reserves	Result for the last financial year
Orion No.1 Professional Investors Private Real Estate Investment LLC ¹ , Seoul/South Korea	94.39	KRW	27,524,567	1,042,184
Peace G.K. ¹ , Tokyo/Japan	93.77	JPY	5,088,819	173,255
Morea Limited Liability Company ¹ , Tokyo/Japan	93.77	JPY	4,447,713	(33,287)
Kaith Re Ltd. ¹ , Hamilton/Bermuda	88.00	USD	101	(272)
3541 PRG s.r.o. ¹ , Prague/Czech Republic	87.67	CZK	964,116	59,089
HR GLL Roosevelt Kft ¹ , Budapest/Hungary	87.67	HUF	34,475,317	19,422,451
HR GLL Liberty Corner SPÓŁKA Z OGRANICZONĄ ODPOWIEDZIALNOŚCIĄ ¹ , Warsaw/Poland	87.67	PLN	49,850	1,837
HR GLL Griffin House SPÓŁKA Z OGRANICZONĄ ODPOWIEDZIALNOŚCIĄ ¹ , Warsaw/Poland	87.67	PLN	34,740	(1,323)
92601 BTS s.r.o. ¹ , Bratislava/Slovakia	87.67	EUR	3,573	1,087
Akvamarín Beta s.r.o. ¹ , Prague/Czech Republic	87.67	CZK	83,662	17,722
HR GLL Europe Holding S.à r.l. ¹ , Luxembourg/Luxembourg	87.67	EUR	128,356	22,688
HR GLL CDG Plaza S.r.l. ¹ , Bucharest/Romania	87.67	RON	103,947	8,486
Pipera Business Park S.r.l. ¹ , Bucharest/Romania	87.67	RON	357,192	8,429
Commercial & Industrial Acceptances (Pty) Ltd. ¹ , Johannesburg/South Africa	79.20	ZAR	12,817	36,821
Lireas Holdings (Pty) Ltd. ¹ , Johannesburg/South Africa	70.00	ZAR	299,437	85,508
Garagesure Consultants and Acceptances (Pty) Ltd. ¹ , Johannesburg/South Africa	70.00	ZAR	3,034	1,313
SUM Holdings (Pty) Ltd. ¹ , Johannesburg/South Africa	70.00	ZAR	(594)	(125)
MUA Insurance Acceptances (Pty) Ltd. ¹ , Cape Town/South Africa	66.50	ZAR	10,224	9,561
Hospitality Industrial and Commercial Underwriting Managers (Pty) Ltd. ¹ , Johannesburg/South Africa	59.50	ZAR	2,077	13,848
Firedart Engineering Underwriting Managers (Pty) Ltd. ¹ , Johannesburg/South Africa	49.00	ZAR	677	(547)
Thatch Risk Acceptances (Pty) Ltd. ¹ , Johannesburg/South Africa	49.00	ZAR	3,365	3,806
Landmark Underwriting Agency (Pty) Ltd. ¹ , Bloemfontein/South Africa	45.85	ZAR	6,201	10,675
Film & Entertainment Underwriters SA (Pty) Ltd. ¹ , Johannesburg/South Africa	35.70	ZAR	983	446

Name and registered office of the company in currency units of 1,000	Participation in %	Currency	Capital and reserves	Result for the last financial year
Affiliated non-consolidated companies				
HR Hannover Re, Correduría de Reaseguros, S.A., Madrid/Spain	100.00	EUR	683	109
Hannover Re Services Japan ¹ , Tokyo/Japan	100.00	JPY	151,508	12,301
Hannover Re Consulting Services India Private Limited ¹² , Mumbai/India	100.00	INR	114,966	3,267
Hannover Services (México) S.A. de C.V. ⁷ , Mexico City/Mexico	100.00	MXN	9,627	833
Hannover Re Services USA, Inc., Itasca/USA	100.00	USD	4,047	158
Hannover Mining Engineering Services LLC, Itasca/USA	100.00	USD	385	45
Hannover Rück SE Escritório de Representação no Brasil Ltda. ⁷ , Rio de Janeiro/Brasil	100.00	BRL	3,405	390
Hannover Re Risk Management Services India Private Limited ¹² , New Delhi/India	100.00	INR	51,838	1,240
U FOR LIFE SDN. BHD. ¹ , Petaling Jaya/Malaysia	100.00	MYR	(26,613)	(4,709)
Hannover Re Services Italy S.r.l., Milan/Italy	99.65	EUR	371	99
Associated companies				
Clarendon Transport Underwriting Managers (Pty) Ltd. ¹ , Johannesburg/South Africa	22.87	ZAR	16,820	15,884
Clarenfin (Pty) Ltd. ¹ , Johannesburg/South Africa	22.87	ZAR	104	(9)
Monument Insurance Group Limited ^{7,13} , Hamilton/Bermuda	20.00	GBP	161,669	61,357
Pineapple Tech (Pty) Ltd ¹ , Johannesburg/South Africa	17.50	ZAR	(2,596)	(5,820)
Vela Taxi Finance (Pty) Ltd ¹ , Johannesburg/South Africa	12.58	ZAR	(6,825)	(1,554)
Marmic Taxi Parts (Pty) Ltd ¹ , Durban/South Africa	6.86	ZAR	20,206	4,661
Other participations				
Reaseguradora del Ecuador S.A. ¹ , Guayaquil/Ecuador	30.00	USD	18,560	3,798
Sureify Labs, Inc. ^{1,14} , Wilmington/USA	20.69	USD	(489)	(2,134)
Trinity Underwriting Managers Ltd. ¹⁵ , Toronto/Canada	20.00	CAD	3	(1,274)
Investsure Technologies Proprietary Limited ¹ , Johannesburg/South Africa	18.95	ZAR	1,324	(3,154)
Meribel Mottaret Limited ¹⁶ , St. Helier/Jersey	18.92	EUR	–	–
SWISS INSUREVOLUTION PARTNERS Holding (FL) AG ⁷ , Triesen/Liechtenstein	15.00	CHF	3,773	(31)
SWISS INSUREVOLUTION PARTNERS Holding (CH) AG ⁷ , Zurich/Switzerland	15.00	CHF	43,631	15,583

Name and registered office of the company in currency units of 1,000	Participation in %	Currency	Capital and reserves	Result for the last financial year
Somerset Reinsurance Ltd. ⁷ , Hamilton/Bermuda	12.31	USD	415,008	5,263
Qinematic AB ⁷ , Lidingö/Sweden	11.94	SEK	(5,767)	(1,823)
Kopano Ventures (Pty) Ltd ¹ , Johannesburg/South Africa	10.50	ZAR	2,537	(4,377)
Acte Vie S.A. ⁷ , Schiltigheim/France	9.38	EUR	9,870	394
Centaur Animal Health, Inc. ¹⁷ , Olathe/USA	6.90	USD	1,968	150
The Sociotech Institute Proprietary Limited ¹ , Cape Town/South Africa	3.84	ZAR	(434)	(7,989)
Liberty Life Insurance Public Company Ltd ¹⁵ , Nicosia/Cyprus	3.30	EUR	8,222	331
B3i Services AG ⁷ , Zurich/Switzerland	1.63	CHF	(4,612)	(12,086)

¹ Provisional (unaudited) figures

² Year-end result after profit transfer

³ IFRS figures

⁴ Financial year as at 30 September 2019

⁵ Company is in liquidation

⁶ Company was wound up with effect from the end of 31 December 2018

⁷ Figures as at 31 December 2018

⁸ Financial year as at 31 July 2019

⁹ The company holds 35 subsidiaries with capital and reserves of altogether EUR 0.5 million.

¹⁰ Company is inactive

¹¹ Financial year as at 31 October 2018

¹² Financial year as at 31 March 2019

¹³ Consolidated figures

¹⁴ Financial year as at 31 July 2018

¹⁵ Figures as at 31 December 2017

¹⁶ Company was newly established in 2018; an annual financial statement is not yet available.

¹⁷ Financial year as at 30 June 2018

Material branches of the Group

We define the branch of a Group company as an unincorporated business unit that is physically and organisationally separate from the Group company, is bound by the latter's instructions in their internal relationship and has its own independent market presence.

The Hannover Re Group companies listed in the following table maintain branches that we consider to be material to an understanding of the Group's position.

Material branches of the Group

N 14

Group company/Branch Figures in EUR thousand	Gross written premium ¹		Net income ¹	
	2019	2018	2019	2018
Hannover Rück SE				
Hannover Rueck SE Australian Branch, Sydney/Australia	426,221	489,319	10,607	16,168
Hannover Rück SE Canadian Branch, Toronto/Canada	305,894	247,225	40,272	19,432
Hannover Rück SE, Hong Kong Branch, Wanchai/Hong Kong	365,967	291,101	2,973	11,803
Hannover Rueck SE Malaysian Branch, Kuala Lumpur/Malaysia	447,232	397,170	26,894	44,681
Hannover Rück SE, Tyskland Filial, Stockholm/Sweden	349,856	253,390	19,635	35,184
Hannover Rück SE Succursale Francaise, Paris/France	876,850	783,872	36,032	42,425
Hannover Rueck SE Bahrain Branch, Manama/Bahrain	127,629	101,820	11,763	(12,523)
Hannover Rück SE Shanghai Branch, Shanghai/China	1,726,805	1,193,529	24,281	25,515
Hannover Rück SE Korea Branch, Seoul/South Korea	49,067	47,822	2,640	2,889
Hannover Re UK Life Branch, London/United Kingdom	280,647	307,867	5,183	(5,150)
Hannover Rück SE – India Branch, Mumbai/India	152,248	104,217	1,351	(5,203)

¹ IFRS figures before consolidation.

In addition, other companies belonging to the Hannover Re Group maintain further branches in New Zealand, Canada, Malaysia and Australia that both individually and collectively are to be classified as immaterial to the Group. HDI Global Specialty SE, which is included at equity in the consolidated financial statement, has branches in Australia, Canada, Italy, Sweden and the United Kingdom.

Consolidation of structured entities

Business relations with structured entities are to be examined in accordance with IFRS 10 with an eye to their implications for consolidation. In the context of their operational activities some companies belonging to the Hannover Re Group enter into business relations with structured entities that are to be analysed and accounted for according to these new provisions.

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. A structured entity frequently has some or all of the following features or attributes:

- Restricted activities;
- A narrow and well-defined business objective;
- Insufficient equity to allow it to finance its activities without subordinated financial support;

Consolidated structured entities

The following structured entities were consolidated as at the balance sheet date:

- Kaith Re Ltd., Hamilton, Bermuda
- Kubera Insurance (SAC) Ltd, Hamilton, Bermuda
- LI RE, Hamilton, Bermuda

Kaith Re Ltd. is a so-called segregated accounts company (SAC), the sole object of which is the securitisation of reinsurance risks in the form of investment products. Under this transformation a complete underwriting risk transfer always takes place to the investor in question. In a SAC further segregated accounts exist under a general account; it is in these segregated accounts, which for liability purposes are entirely separate from one another and from the general account, that the aforementioned securitisations take place for the investors.

Kubera Insurance (SAC) Ltd is similarly a segregated accounts company, the object of which is to establish segregated accounts that are made available to non-Group companies for structured finance transactions.

- Financing in the form of multiple contractually linked instruments issued to investors that create concentrations of credit or other risks (tranches).

In accordance with the consistent consolidation model, a structured entity – just like a subsidiary – must be consolidated if Hannover Re gains control over the said entity. With regard to the criteria for control please see also section 4.1 “Consolidation principles”. Within the Hannover Re Group the requirement to consolidate structured entities is examined as part of an analysis that encompasses both transactions in which a structured entity is initiated by us with or without the involvement of third parties and those in which we enter into contractual relations with an already existing structured entity with or without the involvement of third parties. Consolidation decisions are reviewed as necessary and at least once a year. The list of all consolidated structured entities forms part of the list of shareholdings.

Pursuant to IFRS 10 we consider the general account and the segregated accounts to be separate units to which the principles of so-called “silo accounting” are applied. In accordance with this concept, Hannover Re is required to consolidate the general account of Kaith Re Ltd. and Kubera Insurance (SAC) Ltd and is contractually responsible for the fees due to external service providers that are to be covered from the general account’s own funds. Each individual segregated account is to be examined separately with an eye to a consolidation requirement and consolidated according to the particular contractual arrangements in each case.

LI RE is a segregated account of Kaith Re Ltd., the purpose of which – as with all segregated accounts under Kaith Re Ltd. – is the securitisation of underwriting risks. In contrast to the other segregated accounts, the sole investor and hence the risk carrier of LI RE is the Hannover Re Group through its subsidiary Leine Investment SICAV-SIF, Luxembourg.

As at the balance sheet date Hannover Re had not rendered any financial or other support for a consolidated structured entity. Hannover Re does not intend to render financial or other support for one or more of such entities without being contractually required to do so.

Unconsolidated structured entities

The business relations of Hannover Re Group companies with structured entities set out below do not give rise to consolidation because the criteria for control pursuant to IFRS 10 contained in our consolidation principles are not met.

Investing activities and investments in catastrophe bonds (ILS)

Within the scope of its investment activities Hannover Re participates inter alia in numerous structured entities. These are predominantly special purpose entities in the form of funds, which for their part transact certain types of equity and debt capital investments. These investments encompass private equity funds, fixed income funds, collateralised debt obligations, real estate funds, index funds and other public funds. The volume of these transactions is derived from the book values of the respective investments and amounted to EUR 3,323.6 million (EUR 2,916.5 million) as at the balance sheet date. The maximum risk of loss corresponds to the book values.

Retrocession and securitisation of reinsurance risks

The securitisation of reinsurance risks takes place largely through the use of structured entities.

By way of its “K” transactions Hannover Re has raised underwriting capacity for catastrophe risks on the capital market. The “K Cession”, which was placed with investors in North and South America, Europe and Asia, involves a quota share cession on worldwide natural catastrophe business as well as aviation and marine risks. Of the total volume of the “K Cession”, a large part equivalent to EUR 409.8 million (EUR 389.0 million) was securitised via structured entities as at the balance sheet date. The transaction has an indefinite term and can be cancelled annually by the investors. Segregated accounts of Kaith Re Ltd. are used for transformer purposes

Hannover Re participates through its subsidiary Leine Investment SICAV-SIF, Luxembourg, in a number of structured entities that issue catastrophe bonds for the securitisation of catastrophe risks by investing in such bonds. Leine Investment General Partner S.à.r.l. is the managing partner of the asset management company Leine Investment SICAV-SIF, the business object of which is to build, hold and manage a portfolio of insurance-linked securities (catastrophe bonds) – including for third-party investors outside the Group. The volume of these transactions is derived from the book values of the respective investments and amounted to EUR 78.5 million (EUR 86.3 million) as at the balance sheet date. The maximum risk of loss corresponds to the book values.

for part of this transaction. Hannover Re also uses further segregated accounts of Kaith Re Ltd. and other structured entities outside the Group for various retrocessions of both its traditional and ILS covers, which in each case are passed on to institutional investors in securitised form. The volume of these transactions is measured by the ceded exposure limit of the underlying retrocession agreements and amounted to altogether EUR 3,716.0 million (EUR 2,992.4 million) as at the balance sheet date. The structured entities are in all cases fully funded by contractually defined investments in the form of cash and equivalent liquid assets. Given that the entire exposure limit of the structured entities is therefore wholly collateralised in each case, there is no risk of loss for Hannover Re.

Collateralised fronting (ILS)

As part of its extended insurance-linked securities (ILS) activities, Hannover Re has concluded so-called collateralised fronting arrangements under which risks assumed from ceding companies are passed on to institutional investors outside the Group using structured entities. The purpose of such transactions is to directly transfer clients' business. The volume of the transactions is derived from the ceded exposure limit of the underlying retrocession agreements and amounted to EUR 6,559.4 million (EUR 6,131.3 million) as at the balance sheet date. Part of the ceded exposure limit is funded and collateralised by contractually defined investments in the form of cash and equivalent liquid assets; a further part remains uncollateralised or is collateralised by less liquid

assets. The maximum risk of loss from these transactions is derived from the uncollateralised exposure limit and the credit risk of the collateral and amounted to EUR 3,125.9 million (EUR 3,063.1 million) as at the balance sheet date. This does not, however, correspond to the economic risk of loss, which is established using recognised actuarial methods. The expected loss on a modelled basis in a worst-case scenario of 10,000 years amounts to at most EUR 37.1 million (EUR 50.0 million).

The book values of the assets and liabilities from the specified transactions with unconsolidated structured entities were as follows as at the balance sheet date:

Book values from business relations with unconsolidated structured entities

N 15

in EUR thousand	31.12.2019		
	General investing activities	Investment in catastrophe bonds (ILS)	Retrocession incl. securitisations and ILS transactions
Assets			
Fixed-income securities – held to maturity	779	–	–
Fixed-income securities – loans and receivables	1,715	–	–
Fixed-income securities – available for sale	1,801,194	–	–
Fixed-income securities – at fair value through profit or loss	–	78,451	–
Equity securities – available for sale	10,510	–	–
Real estate and real estate funds	422,714	–	–
Other invested assets	1,086,735	–	–
Funds withheld	–	–	1,554
Reinsurance recoverables on unpaid claims	–	–	991,827
Prepaid reinsurance premium	–	–	71,997
Accounts receivable	–	–	162,988
Total assets	3,323,648	78,451	1,228,365
Liabilities			
Reinsurance payable	–	–	502,900
Total liabilities	–	–	502,900

in EUR thousand	31.12.2018		
	General investing activities	Investment in catastrophe bonds (ILS)	Retrocession incl. securitisations and ILS transactions
Assets			
Fixed-income securities – held to maturity	816	–	–
Fixed-income securities – loans and receivables	3,671	–	–
Fixed-income securities – available for sale	1,566,318	–	–
Fixed-income securities – at fair value through profit or loss	–	86,281	–
Equity securities – available for sale	10,638	–	–
Real estate and real estate funds	416,966	–	–
Other invested assets	918,069	–	–
Reinsurance recoverables on unpaid claims	–	–	1,125,005
Prepaid insurance premium	–	–	54,268
Accounts receivable	–	–	23,254
Total assets	2,916,478	86,281	1,202,527
Liabilities			
Reinsurance payable	–	–	320,033
Total liabilities	–	–	320,033

The income and expenses from business relations with unconsolidated structured entities are shown in investment income insofar as they result from general investment activities or investments in catastrophe bonds and are recognised in the technical account insofar as they are attributable to retrocessions and securitisations.

As at the balance sheet date Hannover Re had not rendered any financial or other support for an unconsolidated structured entity. Hannover Re does not intend to render financial or other support for one or more of such entities without being contractually required to do so.

In December 2018 Kubera Insurance (SAC) Ltd established its first segregated account, the owner of which is not

Hannover Re. The segregated account concluded a contract with a non-Group life insurance company for the assumption of a reinsurance portfolio, which is partially retroceded. In the context of this retrocession Hannover Re also concluded a reinsurance treaty with the segregated account to protect against the peak exposure through its wholly owned subsidiary Hannover Life Reassurance Company of America (Bermuda) Ltd.

With regard to commitments and obligations that we do not consider to be support, particularly outstanding capital commitments from special investments, please see our remarks in section 8.7 “Contingent liabilities and commitments”.

4.3 Major acquisitions and new formations

Within the 95.2%-owned US subgroup Hannover Re Real Estate Holdings, Inc., the special purpose property company 2530AUS LLC, Wilmington, USA, held by the subsidiary GLL HRE Core Properties, LP, for the purpose of real estate acquisition was consolidated for the first time following acquisition of an office building and commencement of business operations. An amount of roughly EUR 21.8 million was invested in this connection.

In the third and fourth quarters of 2019 GLL HRE Core Properties, LP, established 7550BWI LLC and 7659BWI LLC, both Wilmington, USA, for the purpose of real estate acquisition. An amount of roughly EUR 50.4 million was invested in this connection.

In the third quarter of 2019 Hannover Re participated in the newly established special purpose property company Morea Limited Liability Company, Tokyo/Japan, with a share of 99% through its 94.7%-owned subsidiary PAG Real Estate

Asia Select Fund Limited, George Town, Cayman Islands. A total amount of roughly EUR 88.4 million was invested in this connection.

4.4 Major disposals and retirements

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

With economic effect from 1 January 2019 HDI Global SE acquired 50.2% of the shares in Inter Hannover for a purchase price of EUR 107.2 million. Inter Hannover was subsequently rebranded as HDI Global Specialty SE. HDI Global SE transferred its specialty portfolio to the new company. The remaining shares in HDI Global Specialty SE will continue to be held by Hannover Re. Deconsolidation of the company in the first quarter of 2019 gave rise to income of EUR 6.3 million, which was recognised in other income and expenses. The remaining interest in the company in an amount of 49.8% was included at equity in the consolidated financial statement.

Upon announcement of the intention to sell and until deconsolidation in the first quarter of 2019, HDI Global Specialty SE

was classified pursuant to IFRS 5 “Non-current Assets Held for Sale and Discontinued Operations” as a disposal group 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 -4.6 million arising out of the currency translation of the assets and liabilities belonging to the disposal group was 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.

The assets and liabilities attributable to the disposal group in the previous year are presented on a consolidated basis in the following table and broken down into their major components. The fixed-income securities of EUR 238.1 million are exclusively level 2 financial instruments. The real estate funds recognised in an amount of EUR 12.4 million, on the other hand, are level 3 financial instruments.

Assets and liabilities of the disposal group

N 17

in EUR thousand	31.12.2018
Assets	
Fixed-income securities – loans and receivables	21,750
Fixed-income securities – available for sale	216,349
Real estate and real estate funds	12,370
Short-term investments and other invested assets	7,041
Cash and cash equivalents	78,594
Reinsurance recoverables on unpaid claims	87,253
Prepaid reinsurance premium	26,567
Deferred acquisition costs	126,833
Accounts receivable	443,459
Other assets	18,968
Assets held for sale	1,039,184
Liabilities	
Loss and loss adjustment expense reserve	1,642,408
Unearned premium reserve	564,230
Other liabilities	39,491
Liabilities related to assets held for sale	2,246,129

With economic effect from 1 July 2019 FUNIS GmbH & Co. KG, Hannover, a wholly owned subsidiary of Hannover Rück SE, sold its 53% interest in Svedea AB, Stockholm/Sweden, to HDI Global Specialty SE. The purchase price was EUR 52.9

million. Deconsolidation of Svedea AB resulted in income of EUR 49.3 million, which was recognised in other income and expenses. Cumulative other comprehensive income from cur-

rency translation was realised in an amount of EUR -0.4 million, which is included in the income.

On 3 September 2019 Hannover Re sold its entire interest in the amount of 27.1% of the shares in ITAS Vita S.p.A., Trento/Italy, for a price of EUR 48.0 million. Deconsolidation of the company, which had previously been recognised at equity, gave rise to income of EUR 0.8 million which was recognised under profit or loss from investments in associated companies. This included cumulative other comprehensive income of EUR -0.1 million, which was realised.

In March 2019 all shares in the special purpose property company Mustela s.r.o., Prague/Czech Republic, were sold through HR GLL Europe Holding S.à.r.l., Luxembourg, for a purchase price of EUR 76.6 million.

5. Segment reporting

Based on the “management approach” of IFRS 8, which requires segment information to be presented as it is reported internally to management and normally used by the chief operating decision maker to decide upon the allocation of resources to a segment and evaluate its performance, Hannover Re has identified the reportable segments of property & casualty reinsurance and life & health reinsurance. With regard to the object of business operations within the two segments please see our explanatory remarks on Hannover Re’s business model on page 25 of the management report. The report on economic position on page 30 et seq. contains remarks on the economic environment in which the Group operates.

The segment information shown 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.

Hannover Insurance-Linked Securities GmbH & Co. KG, Hannover, which was wholly owned by Hannover Re, was liquidated effective 1 October 2019. Deconsolidation resulted in income of EUR 2.1 million, which was recognised in other income and expenses. In this context HILSP Komplementär GmbH, Hannover, was also deconsolidated at the end of the financial year. Deconsolidation gave rise to a minimal expense.

In the context of the acquisition of Generali Lebensversicherung AG by the Viridium Group the shareholding structure was reorganised. In this connection Hannover Re sold its indirectly held participation in Viridium, realising income of EUR 99.5 million that was recognised in investment income. At the same time Hannover Re participated again indirectly in the Viridium Group including Generali Lebensversicherung AG, with the result that it holds a participating interest of 17%.

During the financial year no material changes occurred in the organisational structure that could have influenced the composition of the segments. 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.

There are no cross-segment gross premiums between the two segments of property & casualty reinsurance and life & health reinsurance. To this extent, the gross premiums shown are exclusively amounts from business with external third parties.

Virtually all the acquisitions and new formations as well as the disposals and retirements referred to in the previous two sections are allocated to the property and casualty reinsurance segment. The exceptions here are ITAS Vita S.p.A. and the indirectly held participation in the Viridium Group, both transactions attributable to the life and health reinsurance segment. Monument Insurance Group Limited, which is included for the first time in the consolidated financial statement at equity, is similarly allocated to the life and health reinsurance segment.

Consolidated segment report

Segmentation of assets

in EUR thousand

Property and casualty reinsurance

	31.12.2019	31.12.2018
Assets		
Fixed-income securities – held to maturity	171,542	198,596
Fixed-income securities – loans and receivables	2,139,810	2,349,266
Fixed-income securities – available for sale	28,806,079	24,689,122
Equity securities – available for sale	29,215	28,729
Financial assets at fair value through profit or loss	88,400	94,333
Other invested assets	4,287,654	3,735,054
Short-term investments	296,052	262,068
Cash and cash equivalents	780,340	734,942
Total investments and cash under own management	36,599,092	32,092,110
Funds withheld	2,393,222	1,931,254
Contract deposits	2,186	2,180
Total investments	38,994,500	34,025,544
Reinsurance recoverables on unpaid claims	1,868,390	1,903,289
Reinsurance recoverables on benefit reserve	–	–
Prepaid reinsurance premium	114,764	93,614
Reinsurance recoverables on other reserves	4,489	543
Deferred acquisition costs	1,061,931	774,751
Accounts receivable	3,610,380	2,689,084
Other assets in the segment	1,998,897	1,781,317
Assets held for sale	36,308	1,041,043
Total assets	47,689,659	42,309,185

Segmentation of liabilities

in EUR thousand

Liabilities		
Loss and loss adjustment expense reserve	28,364,351	24,542,826
Benefit reserve	–	–
Unearned premium reserve	4,068,957	2,915,904
Provisions for contingent commissions	353,359	300,093
Funds withheld	379,411	389,754
Contract deposits	73,023	71,607
Reinsurance payable	824,467	772,313
Financing liabilities	446,282	323,235
Other liabilities in the segment	2,157,872	1,718,949
Liabilities related to assets held for sale	–	2,246,129
Total liabilities	36,667,722	33,280,810

Life and health reinsurance		Consolidation		Total	
31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018
51,507	51,347	–	–	223,049	249,943
39,205	34,635	15,049	15,049	2,194,064	2,398,950
9,247,666	8,531,051	14,714	19,512	38,068,459	33,239,685
–	–	–	–	29,215	28,729
725,398	656,176	–	–	813,798	750,509
426,191	263,917	27,794	35,686	4,741,639	4,034,657
172,298	159,867	–	15	468,350	421,950
307,237	333,031	3,275	4,942	1,090,852	1,072,915
10,969,502	10,030,024	60,832	75,204	47,629,426	42,197,338
8,555,247	8,760,514	–	–	10,948,469	10,691,768
323,116	170,693	–	–	325,302	172,873
19,847,865	18,961,231	60,832	75,204	58,903,197	53,061,979
181,724	181,341	–	–	2,050,114	2,084,630
852,598	909,056	–	–	852,598	909,056
1,412	64	–	–	116,176	93,678
4,866	6,627	–	–	9,355	7,170
1,869,791	1,381,069	–	–	2,931,722	2,155,820
1,659,675	1,287,072	(263)	(378)	5,269,792	3,975,778
452,806	565,346	(1,264,561)	(1,165,321)	1,187,142	1,181,342
–	–	–	(1,859)	36,308	1,039,184
24,870,737	23,291,806	(1,203,992)	(1,092,354)	71,356,404	64,508,637
4,631,880	4,215,749	–	–	32,996,231	28,758,575
9,028,000	9,184,356	–	–	9,028,000	9,184,356
322,891	251,060	–	–	4,391,848	3,166,964
319,862	275,903	–	–	673,221	575,996
778,404	579,507	–	–	1,157,815	969,261
3,508,034	3,540,047	–	–	3,581,057	3,611,654
681,213	383,918	–	–	1,505,680	1,156,231
37,731	–	2,977,955	2,235,649	3,461,968	2,558,884
2,314,045	2,192,760	(1,265,812)	(1,173,150)	3,206,105	2,738,559
–	–	–	–	–	2,246,129
21,622,060	20,623,300	1,712,143	1,062,499	60,001,925	54,966,609

Consolidated segment report

Segment statement of income

in EUR thousand

Property and casualty reinsurance

	1.1.–31.12.2019	1.1.–31.12.2018
Gross written premium	14,781,258	11,976,000
Net premium earned	12,797,639	10,804,172
Net investment income	1,069,437	1,035,108
thereof		
Change in fair value of financial instruments	(1,349)	528
Total depreciation, impairments and appreciation of investments	73,566	49,093
Income/expense on funds withheld and contract deposits	47,652	35,810
Claims and claims expenses	8,831,517	7,227,544
Change in benefit reserve	–	–
Commission and brokerage, change in deferred acquisition costs and other technical income/expenses	3,554,571	3,033,430
Administrative expenses	223,843	206,171
Other income/expenses	28,612	(49,560)
Operating profit/loss (EBIT)	1,285,757	1,322,575
Financing costs	2,288	–
Net income before taxes	1,283,469	1,322,575
Taxes	325,863	309,049
Net income	957,606	1,013,526
thereof		
Non-controlling interest in profit or loss	85,897	84,418
Group net income	871,709	929,108

Life and health reinsurance		Consolidation		Total	
1.1.–31.12.2019	1.1.–31.12.2018	1.1.–31.12.2019	1.1.–31.12.2018	1.1.–31.12.2019	1.1.–31.12.2018
7,816,382	7,200,358	–	–	22,597,640	19,176,358
6,931,919	6,484,807	168	154	19,729,726	17,289,133
684,452	491,801	3,172	3,120	1,757,061	1,530,029
74,204	30,632	–	–	72,855	31,160
7,080	31	–	–	80,646	49,124
158,781	172,177	–	–	206,433	207,987
5,817,539	5,341,606	–	–	14,649,056	12,569,150
10,793	50,791	–	–	10,793	50,791
1,251,374	1,263,529	–	–	4,805,945	4,296,959
255,728	216,854	513	318	480,084	423,343
289,013	172,062	(5,359)	(4,772)	312,266	117,730
569,950	275,890	(2,532)	(1,816)	1,853,175	1,596,649
1,597	–	83,193	78,261	87,078	78,261
568,353	275,890	(85,725)	(80,077)	1,766,097	1,518,388
93,438	88,348	(26,570)	(24,536)	392,731	372,861
474,915	187,542	(59,155)	(55,541)	1,373,366	1,145,527
3,302	1,616	–	–	89,199	86,034
471,613	185,926	(59,155)	(55,541)	1,284,167	1,059,493

6. Notes on the individual items of the balance sheet

6.1 Investments under own management

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 is determined by the investment intent and complies with the requirements of IAS 39 "Financial Instruments: Recognition and Measurement".

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 and cash. The recognition and measurement of these items is based on the respective applicable IFRS for this type of assets.

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

Investments	N 19	
in EUR thousand	2019	2018
Regional origin		
Germany	8,159,917	7,781,666
United Kingdom	3,728,373	3,274,473
France	1,617,012	1,299,239
Other	6,019,997	5,479,327
Europe	19,525,299	17,834,705
USA	15,617,670	14,348,172
Other	2,070,537	1,790,371
North America	17,688,207	16,138,543
Asia	4,571,088	3,201,846
Australia	2,876,907	2,723,189
Australasia	7,447,995	5,925,035
Africa	376,152	341,005
Other	2,591,773	1,958,050
Total	47,629,426	42,197,338

Maturities of the fixed-income and variable-yield securities
N 20

in EUR thousand	2019		2018	
	Amortised cost ¹	Fair value	Amortised cost ¹	Fair value
Held to maturity				
due in one year	35,277	36,392	27,597	28,255
due after one through two years	138,711	146,834	35,210	37,680
due after two through three years	–	–	138,040	150,358
due after three through four years	48,282	52,963	–	–
due after four through five years	–	–	48,280	53,358
due after five through ten years	–	–	–	–
due after more than ten years	779	268	816	266
Total	223,049	236,457	249,943	269,917
Loans and receivables				
due in one year	114,559	116,540	178,975	182,670
due after one through two years	292,962	302,232	200,522	209,143
due after two through three years	192,558	208,214	303,603	314,716
due after three through four years	214,525	236,356	213,694	232,687
due after four through five years	97,782	105,475	228,382	252,883
due after five through ten years	803,813	937,856	842,190	959,706
due after more than ten years	477,865	506,720	431,584	453,879
Total	2,194,064	2,413,393	2,398,950	2,605,684
Available for sale				
due in one year ²	4,930,829	4,946,309	6,159,368	6,157,352
due after one through two years	2,747,789	2,774,964	3,217,098	3,230,856
due after two through three years	3,458,407	3,524,451	3,264,200	3,253,202
due after three through four years	3,022,147	3,098,443	2,828,576	2,831,536
due after four through five years	2,853,983	2,960,945	3,047,032	3,043,361
due after five through ten years	13,017,561	13,541,446	10,040,715	10,051,258
due after more than ten years	8,240,612	8,781,103	6,086,028	6,166,985
Total	38,271,328	39,627,661	34,643,017	34,734,550
Financial assets at fair value through profit or loss				
due in one year	513,831	513,831	427,918	427,918
due after one through two years	18,880	18,880	86,411	86,411
due after two through three years	16,840	16,840	13,075	13,075
due after three through four years	18,489	18,489	10,358	10,358
due after four through five years	–	–	17,740	17,740
due after five through ten years	10,739	10,739	4,248	4,248
due after more than ten years	–	–	–	–
Total	578,779	578,779	559,750	559,750

¹ Including accrued interest

² Including short-term investments, cash and cash equivalents

The stated maturities may in individual cases diverge from the contractual maturities because borrowers may have the right to call or prepay obligations with or without penalty.

Variable-rate bonds (so-called “floaters”) are shown under the maturities due in one year and constitute an interest-related, within-the-year reinvestment risk.

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

N 21

in EUR thousand	2019				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Investments held to maturity					
Fixed-income securities					
Debt securities issued by semi-governmental entities	24,048	129	1,299	–	25,347
Corporate securities	48,282	1,292	4,681	–	52,963
Covered bonds/asset-backed securities	150,719	2,981	7,940	512	158,147
Total	223,049	4,402	13,920	512	236,457

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

N 22

in EUR thousand	2018				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Investments held to maturity					
Fixed-income securities					
Debt securities issued by semi-governmental entities	23,833	130	1,865	–	25,698
Corporate securities	70,804	1,449	5,605	–	76,409
Covered bonds/asset-backed securities	155,306	3,002	13,054	550	167,810
Total	249,943	4,581	20,524	550	269,917

The carrying amount of the portfolio held to maturity is arrived at from the amortised cost plus accrued interest.

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

N 23

in EUR thousand	2019				Fair value
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	
Loans and receivables					
Debt securities issued by semi-governmental entities	1,228,959	20,108	134,288	–	1,363,247
Corporate securities	585,958	2,721	22,589	4,381	604,166
Covered bonds/asset-backed securities	379,147	6,738	66,833	–	445,980
Total	2,194,064	29,567	223,710	4,381	2,413,393

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

N 24

in EUR thousand	2018				Fair value
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	
Loans and receivables					
Debt securities issued by semi-governmental entities	1,451,697	22,045	132,424	2,487	1,581,634
Corporate securities	482,638	2,776	16,857	2,744	496,751
Covered bonds/asset-backed securities	464,615	7,511	62,684	–	527,299
Total	2,398,950	32,332	211,965	5,231	2,605,684

The carrying amount of the loans and receivables is arrived at from the amortised cost plus accrued interest.

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

N 25

in EUR thousand	2019				
	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	5,220,153	22,517	244,693	18,299	5,446,547
US Treasury notes	7,682,488	31,582	189,173	8,919	7,862,742
Other foreign government debt securities	2,965,895	25,202	99,412	10,282	3,055,025
Debt securities issued by semi-governmental entities	5,505,215	50,359	265,550	16,529	5,754,236
Corporate securities	12,654,213	130,218	563,648	32,101	13,185,760
Covered bonds/asset-backed securities	2,559,209	23,381	82,118	18,971	2,622,356
Investment funds	124,911	–	16,882	–	141,793
	36,712,084	283,259	1,461,476	105,101	38,068,459
Equity securities					
Shares	12,806	–	5,898	–	18,704
Investment funds	4,411	–	6,100	–	10,511
	17,217	–	11,998	–	29,215
Short-term investments	468,392	4,747	61	103	468,350
Total	37,197,693	288,006	1,473,535	105,204	38,566,024

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

N 26

in EUR thousand	2018				Fair value
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	
Available for sale					
Fixed-income securities					
Government debt securities of EU member states	4,812,680	24,143	104,587	8,016	4,909,251
US Treasury notes	7,620,338	24,653	8,952	111,169	7,518,121
Other foreign government debt securities	2,146,289	17,987	17,738	26,084	2,137,943
Debt securities issued by semi-governmental entities	5,039,941	41,088	144,688	25,358	5,159,271
Corporate securities	11,064,028	121,084	153,661	200,049	11,017,640
Covered bonds/asset-backed securities	2,390,624	22,052	56,340	35,917	2,411,047
Investment funds	74,388	–	12,635	611	86,412
	33,148,288	251,007	498,601	407,204	33,239,685
Equity securities					
Shares	12,194	–	5,897	–	18,091
Investment funds	5,647	–	4,991	–	10,638
	17,841	–	10,888	–	28,729
Short-term investments	421,814	4,813	145	9	421,950
Total	33,587,943	255,820	509,634	407,213	33,690,364

The carrying amounts of the fixed-income securities and equity securities classified as available for sale as well as the short-term investments allocated to this category correspond to their fair values, in the case of interest-bearing assets including accrued interest.

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

N 27

	2019	2018	2019	2018	2019	2018
in EUR thousand	Fair value before accrued interest		Accrued interest		Fair value	
Financial assets at fair value through profit or loss						
Fixed-income securities						
US Treasury notes	53,955	55,855	–	289	53,955	56,144
Other foreign government debt securities	288,315	271,933	–	–	288,315	271,933
Corporate securities	236,131	231,355	378	318	236,509	231,673
	578,401	559,143	378	607	578,779	559,750
Other financial assets						
Derivatives	234,882	190,759	137	–	235,019	190,759
	234,882	190,759	137	–	235,019	190,759
Total	813,283	749,902	515	607	813,798	750,509

The carrying amounts of the financial assets at fair value through profit or loss correspond to their fair values including accrued interest.

Hannover Re recognised in this category as at the balance sheet date designated fixed-income securities amounting to EUR 578.8 million (EUR 559.8 million) as well as derivative financial instruments in an amount of EUR 235.0 million (EUR 190.8 million) that are originally allocable to this item.

Analysis of the fair value changes in the portfolio of fixed-income securities at fair value through profit or loss indicated

that, just as in the previous year, no fair value changes were attributable to a changed credit risk.

We additionally use an internal rating method to back up this analysis. Our internal rating system is based on the corresponding credit ratings of securities assigned by the agencies Standard & Poor's and Moody's and in each case reflects the lowest of the available ratings.

For further information please see the explanatory remarks in section 8.1 "Derivative financial instruments and financial guarantees".

Carrying amounts before impairment

N 28

	2019		2018	
in EUR thousand	Carrying amount before impairment	Impairment	Carrying amount before impairment	Impairment
Fixed-income securities – held to maturity	223,049	–	249,943	–
Fixed-income securities – loans and receivables	2,194,064	–	2,398,950	–
Fixed-income securities – available for sale	38,068,588	129	33,240,195	510
Short-term investments	468,420	70	421,954	4
Equity securities – available for sale	29,215	–	28,729	–
Participating interests and other invested assets, real estate funds	2,782,340	35,696	2,257,080	17,900
Total	43,765,676	35,895	38,596,851	18,414

For further explanatory remarks on the impairment criteria please see section 3.2 "Summary of major accounting policies".

Rating structure of fixed-income securities
N 29

in EUR thousand	2019								
	AAA	AA	A	BBB	BB	B	C	Other	Total
Fixed-income securities – held-to-maturity	137,415	37,352	48,282	–	–	–	–	–	223,049
Fixed-income securities – loans and receivables	1,475,126	131,265	93,367	240,953	–	6,557	–	246,796	2,194,064
Fixed-income securities – available-for-sale	16,256,013	5,912,584	6,069,245	7,457,803	1,033,472	282,076	33,638	1,023,628	38,068,459
Fixed-income securities – at fair value through profit or loss	53,955	288,315	–	–	2,011	–	–	234,498	578,779
Total fixed-income securities	17,922,509	6,369,516	6,210,894	7,698,756	1,035,483	288,633	33,638	1,504,922	41,064,351

Rating structure of fixed-income securities
N 30

in EUR thousand	2018								
	AAA	AA	A	BBB	BB	B	C	Other	Total
Fixed-income securities – held-to-maturity	164,531	37,132	48,280	–	–	–	–	–	249,943
Fixed-income securities – loans and receivables	1,767,020	145,622	85,243	211,295	19,316	–	–	170,454	2,398,950
Fixed-income securities – available-for-sale	15,546,636	5,496,061	4,970,072	5,874,243	637,336	237,103	1,433	476,801	33,239,685
Fixed-income securities – at fair value through profit or loss	56,144	271,933	–	–	27,611	–	–	204,062	559,750
Total fixed-income securities	17,534,331	5,950,748	5,103,595	6,085,538	684,263	237,103	1,433	851,317	36,448,328

The maximum credit risk of the items shown here corresponds to their carrying amounts.

Breakdown of investments by currencies
N 31

in EUR thousand	2019								Total
	AUD	CAD	CNY	EUR	GBP	USD	ZAR	Other	
Fixed-income securities – held to maturity	–	–	–	198,656	14,716	9,677	–	–	223,049
Fixed-income securities – loans and receivables	159,486	–	40,051	1,637,453	5,933	351,141	–	–	2,194,064
Fixed-income securities – available-for-sale	2,451,101	1,241,105	1,173,321	10,122,140	3,398,166	17,253,614	337,397	2,091,615	38,068,459
Fixed-income securities – at fair value through profit or loss	–	–	–	–	–	290,464	–	288,315	578,779
Equity securities – available-for-sale	–	–	–	18,091	–	11,124	–	–	29,215
Other financial assets – at fair value through profit or loss	2,684	27	–	5,982	144,548	79,924	–	1,854	235,019
Other invested assets	82,296	–	–	2,017,952	83,659	2,331,617	4,670	221,445	4,741,639
Short-term investments, cash	124,508	26,439	82,176	117,296	243,618	507,099	138,024	320,042	1,559,202
Total	2,820,075	1,267,571	1,295,548	14,117,570	3,890,640	20,834,660	480,091	2,923,271	47,629,426

Breakdown of investments by currencies

N 32

in EUR thousand	2018								
	AUD	CAD	CNY	EUR	GBP	USD	ZAR	Other	Total
Fixed-income securities – held to maturity	–	–	–	226,485	13,972	9,486	–	–	249,943
Fixed-income securities – loans and receivables	93,297	–	33,505	1,926,512	39,083	306,553	–	–	2,398,950
Fixed-income securities – available-for-sale	2,222,892	1,098,885	685,210	8,428,778	2,908,509	16,191,456	253,826	1,450,129	33,239,685
Fixed-income securities – at fair value through profit or loss	–	–	–	19,527	–	268,290	–	271,933	559,750
Equity securities – available-for-sale	–	–	–	18,091	–	10,638	–	–	28,729
Other financial assets – at fair value through profit or loss	–	–	–	2,296	87,515	100,713	–	235	190,759
Other invested assets	82,898	–	–	1,855,383	14,080	1,950,073	5,516	126,707	4,034,657
Short-term investments, cash	102,872	32,799	50,829	189,124	194,212	501,116	141,828	282,085	1,494,865
Total	2,501,959	1,131,684	769,544	12,666,196	3,257,371	19,338,325	401,170	2,131,089	42,197,338

The maximum credit risk of the items shown here corresponds to their carrying amounts.

Associated companies

The associated companies included at equity in the consolidated financial statement that both on an individual basis and in their entirety are not material for the Hannover Re Group pursuant to IFRS 12 are comprised of

- WeHaCo Unternehmensbeteiligungs-GmbH, Hannover, Germany,
- HANNOVER Finanz GmbH, Hannover, Germany,
- HDI Global Specialty SE, Hannover, Germany
- Monument Insurance Group Limited, Hamilton, Bermuda,

as well as the following companies included at equity within the subgroup Hannover Reinsurance Group Africa (Pty) Ltd., Johannesburg, South Africa:

- Clarendon Transport Underwriting Managers (Pty) Ltd., Johannesburg, South Africa,
- Clarenfin (Pty) Ltd., Johannesburg, South Africa,
- Vela Taxi Finance (Pty) Ltd., Johannesburg, South Africa,
- Marmic Taxi Parts (Pty) Ltd., Durban, South Africa,
- Pineapple Tech (Pty) Ltd., Johannesburg, South Africa.

Information on the percentage share held by the Hannover Re Group in the capital of the associated companies as well as on the amount of capital and reserves and the result for the last financial year of these companies is provided in the list of shareholdings in section 4.2 “Consolidated companies and complete list of shareholdings”.

The following table shows combined financial information on the Hannover Re Group's individually non-material investments in associated companies.

Financial information on investments in associated companies

N 33

in EUR thousand	2019	2018
Group share of net income from continuing operations	26,354	4,977
Group share of income and expense recognised directly in equity	2,649	(4,024)
Group share of total recognised income and expense	29,003	953

The carrying amount of the investments in associated companies changed as follows in the year under review:

Investments in associated companies

N 34

in EUR thousand	2019	2018
Net book value at 31 December of the previous year	110,545	121,075
Currency translation at 1 January	51	(129)
Net book value after currency translation	110,596	120,946
Additions	171,531	334
Disposals	48,000	1,829
Profit or loss on investments in associated companies	26,354	4,977
Dividend payments	2,027	9,861
Change recognised outside income	(12,983)	(4,024)
Currency translation at 31 December	7	2
Net book value at 31 December of the year under review	245,478	110,545

No discontinued operations existed in the year under review among the companies measured at equity. Insofar as there are commitments from contingent liabilities of associated companies, the Hannover Re Group shares in such commitments in proportion to its respective shareholding.

The additions to the companies measured at equity are attributable most notably in amounts of EUR 147.2 million to HDI

Global Specialty SE, Hannover, and EUR 24.0 million to Monument Insurance Group Limited, Hamilton.

Public price listings are not available for companies valued at equity. The net book value of associated companies includes goodwill in the amount of EUR 16.0 million (EUR 18.8 million). For further details please see section 4 "Consolidation".

Real estate

Real estate is divided into real estate for own use and investment property. Own-use real estate is recognised under other assets.

The investment property in the portfolio which is used to generate income is shown under the investments. Income and expenses from rental agreements are included in the investment income.

Real estate is valued at cost of acquisition less depreciation with useful lives of at most 50 years.

Development of investment property

N 35

in EUR thousand	2019	2018
Gross book value at 31 December of the previous year	1,844,408	1,712,667
Currency translation at 1 January	19,787	36,660
Gross book value after currency translation	1,864,195	1,749,327
Additions	251,166	117,253
Disposals	214,612	23,166
Changes pursuant to IAS 8	34,362	–
Currency translation at 31 December	97	994
Gross book value at 31 December of the year under review	1,935,208	1,844,408
Cumulative depreciation at 31 December of the previous year	159,476	128,939
Currency translation at 1 January	1,923	3,131
Cumulative depreciation after currency translation	161,399	132,070
Disposals	20,930	3,708
Depreciation	36,686	34,001
Impairments	8,503	324
Appreciation	–	3,616
Currency translation at 31 December	33	405
Cumulative depreciation at 31 December of the year under review	185,691	159,476
Net book value at 31 December of the previous year	1,684,932	1,583,728
Net book value at 1 January of the year under review	1,702,796	1,617,257
Net book value at 31 December of the year under review	1,749,517	1,684,932

The addition from changes pursuant to IAS 8 results from the revised accounting of leases in accordance with IFRS 16 and refers to the initial recognition of a right-of-use asset in connection with a long-term land lease agreement in the United States. For further information please see section 8.8 “Leases”. At the end of the financial year the amortised cost of the capitalised right-of-use asset was EUR 34.7 million.

The fair value of investment property excluding capitalised right-of-use assets amounted to EUR 2,003.9 million (EUR 1,945.4 million) as at the balance sheet date.

The additions to this item are attributable to investment activities at the relevant real estate companies belonging to the Hannover Re Group, specifically in the United States and Asia.

In terms of diversification across various real estate sectors the focus is on office buildings (64%), complemented by retail (16%) and logistics properties (14%). In geographical terms, exposures are spread across the United States (44%), Europe (excluding Germany; 22%) as well as Germany (19%) and Asia (15%).

The real estate in the investment portfolio is normally subject to internal and external valuation by an appraiser as at the balance sheet date. The two analyses do not differ from one

another in the methodology used, which means that the findings are comparable at all times and on a continuous basis. Generally speaking, the fair value of the real estate is determined using the discounted cash flow (DCF) method, with rental income capitalised in consideration of the associated management costs. The valuation result is also influenced by increases and reductions based on specific property circumstances (upkeep, vacancies, rent divergences from the market level, etc.). The evaluation of international real estate also draws primarily on the discounted cash flow method. The main feature of this method is the present value estimation of projected annual free cash flows.

Real estate which is held for sale as defined by IFRS 5 is 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. In the year under review one property was reclassified to assets held for sale. At the date of reclassification and at the end of the reporting period the gross book value of the property was EUR 40.0 million (previous year: none) and the cumulative depreciation amounted to EUR 3.7 million (previous year: none). Measurement of the property in connection with classification as a non-current asset held for sale did not give rise to any impairment.

In addition, we held indirect real estate investments measured at fair values in an amount of EUR 534.7 million (EUR 433.9 million) in the year under review, the amortised costs of which amounted to EUR 475.0 million (EUR 379.8 million). The differences between the carrying amounts and amortised

Other invested assets

The other invested assets consisted largely of participating interests in partnerships measured at fair value in an amount of EUR 1,702.6 million (EUR 1,491.0 million), the amortised cost of which amounted to EUR 1,343.6 million (EUR 1,145.8 million). The differences between the carrying amounts and the amortised costs were recognised as unrealised gains of EUR 380.7 million (EUR 362.1 million) and unrealised losses of EUR 21.7 million (EUR 16.9 million) under cumulative other comprehensive income.

Short-term investments

This item comprises investments with a maturity of up to one year at the time of investment. This includes overnight and time deposits as well as shares in investment funds that invest in such securities.

Fair value hierarchy

For the purposes of the disclosure requirements pursuant to IFRS 13 “Fair Value Measurement”, financial assets and liabilities are to be assigned 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.

costs were recognised as unrealised gains of EUR 65.3 million (EUR 57.5 million) and unrealised losses of EUR 5.6 million (EUR 3.4 million) under cumulative other comprehensive income.

In addition, acquired life insurance policies measured at fair value through profit or loss were recognised under the other invested assets in an amount of EUR 24.0 million (EUR 38.6 million). Loans granted in an amount of EUR 123.2 million (EUR 141.1 million) were similarly recognised under other invested assets.

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 financial year just ended, as in the previous year, no investments were allocable to another 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

N 36

in EUR thousand	2019			Total
	Level 1	Level 2	Level 3	
Fixed-income securities	20,421	38,626,817	–	38,647,238
Equity securities	29,215	–	–	29,215
Other financial assets	–	74,601	160,418	235,019
Real estate funds	–	–	534,739	534,739
Other invested assets	–	223	1,841,392	1,841,615
Short-term investments	468,350	–	–	468,350
Other assets	–	5,871	–	5,871
Total financial assets	517,986	38,707,512	2,536,549	41,762,047
Other liabilities	–	26,353	30,042	56,395
Total financial liabilities	–	26,353	30,042	56,395

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

N 37

in EUR thousand	2018			Total
	Level 1	Level 2	Level 3	
Fixed-income securities	28,040	33,771,395	–	33,799,435
Equity securities	28,729	–	–	28,729
Other financial assets	–	58,420	132,339	190,759
Real estate funds	–	–	433,899	433,899
Other invested assets	–	–	1,647,992	1,647,992
Short-term investments	421,950	–	–	421,950
Other assets	–	988	–	988
Total financial assets	478,719	33,830,803	2,214,230	36,523,752
Other liabilities	–	57,940	24,548	82,488
Total financial liabilities	–	57,940	24,548	82,488

The following table provides a reconciliation of the fair values of financial assets and liabilities included in level 3 at the beginning of the financial year with the fair values as at 31 December of the financial year.

Movements in level 3 financial assets and liabilities

N 38

in EUR thousand	2019			
	Other financial assets	Real estate funds	Other invested assets	Other liabilities
Net book value at 31 December of the previous year	132,339	433,899	1,647,992	24,548
Currency translation at 1 January	3,093	55,561	25,487	574
Net book value after currency translation	135,432	489,460	1,673,479	25,122
Income and expenses				
recognised in the statement of income	38,369	(3,441)	(25,558)	(5,545)
recognised directly in shareholders' equity	–	(3,829)	6,219	–
Purchases	78,815	84,970	385,681	9,544
Sales	95,789	32,542	198,302	–
Transfers to level 3	–	–	–	–
Transfers from level 3	–	–	–	–
Currency translation at 31 December	3,591	121	(127)	921
Net book value at 31 December of the year under review	160,418	534,739	1,841,392	30,042

Movements in level 3 financial assets and liabilities

N 39

in EUR thousand	2018			
	Other financial assets	Real estate funds	Other invested assets	Other liabilities
Net book value at 31 December of the previous year	49,039	384,973	1,639,065	185,498
Currency translation at 1 January	2,326	31,152	46,691	8,796
Net book value after currency translation	51,365	416,125	1,685,756	194,294
Income and expenses				
recognised in the statement of income	29,037	(2,601)	41,735	(5,775)
recognised directly in shareholders' equity	–	(3,298)	(57,796)	–
Purchases	103,507	75,906	374,508	7,814
Sales	48,934	41,262	393,933	164,914
Settlements	–	–	4,746	–
Reclassifications pursuant to IFRS 5	–	(12,370)	–	–
Transfers to level 3	–	–	–	–
Transfers from level 3	–	–	–	–
Currency translation at 31 December	(2,636)	1,399	2,468	(6,871)
Net book value at 31 December of the year under review	132,339	433,899	1,647,992	24,548

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

Income and expenses from level 3 financial assets and liabilities

N 40

in EUR thousand	2019			
	Other financial assets	Real estate funds	Other invested assets	Other liabilities
Total in the financial year				
Ordinary investment income	–	–	(27)	–
Realised gains and losses on investments	–	–	272	–
Change in fair value of financial instruments	38,369	–	(1,884)	5,545
Total depreciation, impairments and appreciation of investments	–	(3,441)	(23,919)	–
Thereof attributable to financial instruments included in the portfolio at 31 December of the year under review				
Ordinary investment income	–	–	(27)	–
Change in fair value of financial instruments	38,369	–	330	5,545
Total depreciation, impairments and appreciation of investments	–	(3,441)	(23,919)	–

Income and expenses from level 3 financial assets and liabilities

N 41

in EUR thousand	2018			
	Other financial assets	Real estate funds	Other invested assets	Other liabilities
Total in the financial year				
Ordinary investment income	–	–	(10)	–
Realised gains and losses on investments	–	–	56,694	–
Change in fair value of financial instruments	29,037	–	350	5,775
Total depreciation, impairments and appreciation of investments	–	(2,601)	(15,299)	–
Thereof attributable to financial instruments included in the portfolio at 31 December of the year under review				
Ordinary investment income	–	–	(10)	–
Change in fair value of financial instruments	29,037	–	512	5,775
Total depreciation, impairments and appreciation of investments	–	(2,601)	(15,299)	–

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 2,536.5 million (EUR 2,214.2 million) as at the balance sheet date, Hannover Re measures financial assets with a volume of EUR 2,237.4 million (EUR 1,924.9 million) using the net asset value method. These items consist principally of shares in private equity and real estate funds. Assuming that the present values of the assets and liabilities contained in the funds would be 10% lower than used

for measurement as at the balance sheet date, the fair values for these items would amount to EUR 2,013.6 million. The remaining financial assets included in level 3 with a volume of EUR 299.1 million (EUR 289.3 million) relate to investments, the valuation of which is based inter alia 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 lapse rates within an underlying primary insurance portfolio. The application of alternative inputs and assumptions has no material effect on the consolidated financial statement.

Fair value hierarchy of financial assets and liabilities measured at amortised cost

N 42

in EUR thousand	2019			
	Level 1	Level 2	Level 3	Total
Fixed-income securities	–	2,442,381	207,469	2,649,850
Investment property	–	–	2,003,910	2,003,910
Other invested assets	–	91,967	280,674	372,641
Total financial assets	–	2,534,348	2,492,053	5,026,401
Financing liabilities	–	3,594,309	–	3,594,309
Total financial liabilities	–	3,594,309	–	3,594,309

Fair value hierarchy of financial assets and liabilities measured at amortised cost

N 43

in EUR thousand	2018			
	Level 1	Level 2	Level 3	Total
Fixed-income securities	–	2,719,789	155,812	2,875,601
Investment property	–	–	1,945,401	1,945,401
Other invested assets	–	8,089	154,973	163,062
Total financial assets	–	2,727,878	2,256,186	4,984,064
Financing liabilities	–	2,677,938	35	2,677,973
Total financial liabilities	–	2,677,938	35	2,677,973

Disclosures relating to deferred adoption of IFRS 9

The table below shows the financial assets that are to be recognised in future in accordance with IFRS 9 and splits them into a group that satisfies the cash flow criterion for financial assets as well as all other financial assets. The latter encompass the financial assets currently measured at fair value through profit or loss, especially equity instruments held and

shares in investment funds that by their very nature cannot fulfil the cash flow criterion enshrined in IFRS 9. The cash flow criterion is met if the contractual conditions of the financial instrument give rise to cash flows at set times that are solely payments of principal and interest (SPPI test).

Fair value disclosures for financial assets

N 44

in EUR thousand	2019			
	Financial assets that give rise solely to payments of principal and interest		All other financial assets	
	Fair value as at 31.12.	Fair value change in the financial year	Fair value as at 31.12.	Fair value change in the financial year
Fixed-income securities – held to maturity	236,457	(6,566)	–	–
Fixed-income securities – loans and receivables	2,411,678	35,872	1,715	(1,332)
Fixed-income securities – available for sale	37,524,249	1,417,611	544,210	22,969
Fixed-income securities – at fair value through profit or loss	–	–	578,779	20,105
Equity securities – available for sale	–	–	29,215	2,092
Other financial assets – at fair value through profit or loss	–	–	228,803	28,075
Real estate funds	–	–	534,739	43,931
Other invested assets	115,985	2,320	1,818,407	(7,688)
Short-term investments	–	–	468,350	(356)
Other assets	96,561	929	6,829	–
Total	40,384,930	1,450,166	4,211,047	107,796

Fair value disclosures for financial assets

N 45

in EUR thousand	2018			
	Financial assets that give rise solely to payments of principal and interest		All other financial assets	
	Fair value as at 31.12.	Fair value change in the financial year	Fair value as at 31.12.	Fair value change in the financial year
Fixed-income securities – held to maturity	269,651	(14,398)	266	216
Fixed-income securities – loans and receivables	2,602,013	(35,616)	3,671	(3,544)
Fixed-income securities – available for sale	32,746,438	(70,690)	493,247	(18,879)
Fixed-income securities – at fair value through profit or loss	–	–	559,750	(19,933)
Equity securities – available for sale	–	–	28,729	(1,170)
Other financial assets – at fair value through profit or loss	–	–	173,865	(9,619)
Real estate funds	–	–	433,899	(41,181)
Other invested assets	133,262	(1,525)	1,537,851	(78,798)
Short-term investments	–	–	421,950	(187)
Other assets	146,641	–	933	1,767
Total	35,898,005	(122,229)	3,654,161	(171,328)

Rating structure of financial assets that give rise to solely payments of principal and interest

N 46

in EUR thousand	2019	2018
AAA	17,847,042	17,440,918
AA	6,080,832	5,583,940
A	6,085,948	4,937,493
BBB	7,513,101	5,954,039
BB or lower	1,229,492	843,942
No rating		
low credit risk	1,011,199	594,427
more than a low credit risk	258,399	175,447
Total	40,026,013	35,530,206

The fair value for financial assets that meet the cash flow criterion and have more than a low credit risk corresponds to the carrying amount before impairment shown in the table.

6.2 Funds withheld (assets)

The funds withheld totalling EUR 10,948.5 million (EUR 10,691.8 million) represent the cash deposits furnished by our company to our cedants that do not trigger any cash flows and cannot be realised by cedants without our consent. The

maturities of these deposits are matched to the corresponding provisions. In the event of default on such a deposit our reinsurance commitment is reduced to the same extent.

6.3 Contract deposits (assets)

The contract deposits on the assets side increased by EUR 152.4 million in the year under review from EUR 172.9 million to EUR 325.3 million.

6.4 Technical assets

The retrocessionaires' portions of the technical provisions are based on the contractual agreements of the underlying reinsurance treaties. For further details please refer to our comments on the technical provisions in section 6.7 "Technical provisions". With regard to the nature and scope of risks arising out of insurance contracts we would also refer to the explanatory remarks on page 100 et seq. of the risk report.

SFAS 60 requires that acquisition costs be capitalised as assets and amortised in proportion to the earned premium.

In the case of reinsurance treaties for unit-linked life insurance policies classified as "universal life-type contracts" pursuant to SFAS 97, the capitalised acquisition costs are amortised on the basis of the estimated gross profit margins from the reinsurance treaties, making allowance for the period of

the insurance contracts. A discount rate based on the interest for medium-term government bonds was applied to such contracts. In the case of annuity policies with a single premium payment, these values refer to the expected policy period or period of annuity payment.

In life and health reinsurance the deferred acquisition costs associated with life and annuity policies with regular premium payments are determined in light of the period of the contracts, the expected surrenders, the lapse expectancies and the anticipated interest income.

In property and casualty reinsurance acquisition costs directly connected with the acquisition or renewal of contracts are deferred for the unearned portion of the premium.

Development of deferred acquisition costs

N 47

in EUR thousand	2019	2018
Net book value at 31 December of the previous year	2,155,820	2,228,246
Currency translation at 1 January	56,945	(1,494)
Net book value after currency translation	2,212,765	2,226,752
Change in the consolidated group	146,068	–
Additions	1,455,795	782,122
Amortisations	887,700	668,351
Portfolio entries/exits	–	(64,252)
Reclassifications pursuant to IFRS 5	–	(126,833)
Currency translation at 31 December	4,794	6,382
Net book value at 31 December of the year under review	2,931,722	2,155,820

The change in the consolidated group refers in particular to acquisition costs that were formerly deferred internally within the Group in connection with HDI Global Specialty SE, following the partial disposal and associated loss of control these were no longer eliminated in the context of debt consolidation.

For further explanatory remarks please see section 3.2 “Summary of major accounting policies”.

The age structure of the accounts receivable which were unadjusted but classified as overdue at the balance sheet date is presented below.

Age structure of overdue accounts receivable

N 48

in EUR thousand	2019		2018	
	Three months to one year	More than one year	Three months to one year	More than one year
Accounts receivable	219,279	144,022	241,637	90,747

Within the scope of our management of receivables we expect to receive payment of accounts receivable within three months of the date of creation of the debit entry unless otherwise agreed – a period for which we also make allowance in our risk analysis. Please see our comments on the counterparty default risk within the risk report on page 112 et seq.

The default risks associated with accounts receivable under reinsurance business are determined and recognised on the basis of case-by-case analyses.

The value adjustments on accounts receivable that we recognise in adjustment accounts changed as follows in the year under review:

Value adjustments on accounts receivable

N 49

in EUR thousand	2019	2018
Cumulative value adjustments at 31 December of the previous year	29,503	17,391
Currency translation at 1 January	379	182
Cumulative value adjustments after currency translation	29,882	17,573
Value adjustments	15,912	19,151
Reversal	10,152	5,506
Utilisation	1,802	1,500
Reclassifications pursuant to IFRS 5	–	(215)
Cumulative value adjustments at 31 December of the year under review	33,840	29,503
Gross book value of accounts receivable at 31 December of the year under review	5,303,632	4,005,281
Cumulative value adjustments at 31 December of the year under review	33,840	29,503
Net book value of accounts receivable at 31 December of the year under review	5,269,792	3,975,778

In addition, we took specific value adjustments on reinsurance recoverables on unpaid claims in the year under review. We would refer the reader to the corresponding remarks on the loss and loss adjustment expense reserve in section 6.7

“Technical provisions”. With regard to the credit risks resulting from technical assets we would also refer the reader to our comments on page 112 et seq. of the risk report.

6.5 Goodwill

In accordance with IFRS 3 “Business Combinations” amortisation is not taken on goodwill. Goodwill was subject to an impairment test.

Development of goodwill

N 50

in EUR thousand	2019	2018
Net book value at 31 December of the previous year	85,588	91,692
Currency translation at 1 January	2,715	(1,289)
Net book value after currency translation	88,303	90,403
Additions	–	3,506
Value adjustments	–	8,389
Currency translation at 31 December	–	68
Net book value at 31 December of the year under review	88,303	85,588

This item principally includes the goodwill from the acquisitions of E+S Rückversicherung AG, Integra Insurance Solutions Limited and Argenta Holdings Limited.

For the purposes of the impairment test, the goodwill was allocated to the cash-generating units (CGUs) that represent the lowest level on which goodwill is monitored for internal management purposes. In the instances of goodwill recognised as at the balance sheet date, the CGUs are the respective legal entities. The recoverable amount is established on the basis of the value in use, which is calculated using the discounted cash flow method. In this context, the detailed planning phase draws on the planning calculations of the CGUs/companies covering the next five years. These planning calculations represent the outcome of a detailed planning process in which all responsible members of management are involved and where allowance is made for the latest market developments affecting the relevant entity (in relation to the sector and the economy as a whole). The subsequent perpetuity phase is guided by the profit margins and revenue growth rates that management believes can be sustainably generated. The capitalisation rate is based on the Capital Asset Pricing Model (CAPM) as well as growth rates that are considered realistic in light of the specific market environment. The risk-free basic interest rate is determined, where possible, using corresponding yield curve data from the respective national banks. If this data cannot be obtained or can only be obtained with a disproportionately high effort, reference is made to the yields of the respective 30-year government bonds. Both the yield curves and the government bonds reflect the current interest rate trend on financial markets.

The selection of the market risk premium is guided by the current recommendations of the Institute of Public Auditors in Germany (IDW). The beta factor is calculated for Hannover Rück SE on the basis of publicly accessible capital market data. The foreign exchange rates used for currency translation correspond to the situation on the balance sheet date.

The following capitalisation rates and growth rates were recognised for the individual cash-generating units:

Capitalisation rates

N 51

	Capitalisation rate	Growth rate
Argenta Holdings Limited	6.76%	1.00%
E+S Rückversicherung AG	5.56%	0.00%
Integra Insurance Solutions Limited	6.60%	1.00%

Sensitivity analyses were performed in which the capitalisation rates as well as material and value-influencing items of the relevant planning calculations (such as premium volumes, investment income or loss ratios) were varied. In this context individual parameters were each varied within appropriate ranges that could be anticipated in view of the prevailing market circumstances and developments. It was established that in the event of changes in parameters within ranges that could reasonably occur, the values in use were in each case higher than the corresponding book values. We would also refer to our basic remarks in section 3.2 “Summary of major accounting policies”.

6.6 Other assets

Other assets

N 52

in EUR thousand	2019	2018
Present value of future profits on acquired life reinsurance portfolios	33,815	39,609
Other intangible assets	134,092	129,397
Insurance for pension commitments	97,231	93,962
Own-use real estate	109,186	63,551
Tax refund claims	89,268	83,173
Fixtures, fittings and equipment	27,003	29,804
Receivables from advance payments and services	71,604	74,018
Other	78,757	115,906
Total	640,956	629,420

With regard to the right-of-use assets from lease contracts included in the items “Own-use real estate”, “Fixtures, fittings and equipment” and “Other”, please see section 8.8 “Leases”.

The other receivables include unadjusted items of EUR 0.3 million (EUR 0.3 million) that were overdue by more than twelve months as at the balance sheet date.

Present value of future profits (PVFP) on acquired life reinsurance portfolios

Development of the present value of future profits (PVFP) on acquired life reinsurance portfolios

N 53

in EUR thousand	2019	2018
Gross book value at 31 December of the previous year	126,578	121,859
Currency translation at 1 January	2,572	4,719
Gross book value at 31 December of the year under review	129,150	126,578
Cumulative depreciation at 31 December of the previous year	86,969	58,574
Currency translation at 1 January	1,647	1,718
Cumulative depreciation after currency translation	88,616	60,292
Amortisation	6,708	25,859
Currency translation at 31 December	11	818
Cumulative depreciation at 31 December of the year under review	95,335	86,969
Net book value at 31 December of the previous year	39,609	63,285
Net book value at 31 December of the year under review	33,815	39,609

This item comprises the present value of future cash flows recognised on business acquired in 2009 in the context of the acquisition of the ING life reinsurance portfolio. This intangible asset is amortised over the term of the underlying reinsurance contracts in proportion to the future premium income. The period of amortisation amounts to altogether 30 years.

Insurance for pension commitments

Effective 1 July 2003 Hannover Rück SE took out insurance for pension commitments. The commitments involve deferred annuities with regular premium payment under a group insurance policy. In accordance with IAS 19 “Employee Bene-

The increased amortisation in the previous year results from treaty recaptures made by individual cedants as a consequence of rate increases. For further information please refer to our explanatory notes on intangible assets in section 3.2 “Summary of major accounting policies”.

fits” they were carried as a separate asset at fair value as at the balance sheet date in an amount of EUR 97.2 million (EUR 94.0 million).

Fixtures, fittings and equipment

Fixtures, fittings and equipment

N 54

in EUR thousand	2019	2018
Gross book value at 31 December of the previous year	159,365	157,511
Currency translation at 1 January	1,439	953
Gross book value after currency translation	160,804	158,464
Additions	7,264	11,791
Disposals	3,758	5,567
Changes pursuant to IAS 8	672	–
Change in the consolidated group	(767)	(64)
Reclassifications pursuant to IFRS 5	–	(5,101)
Currency translation at 31 December	(45)	(158)
Gross book value at 31 December of the year under review	164,170	159,365
Cumulative depreciation at 31 December of the previous year	129,561	127,858
Currency translation at 1 January	1,066	1,143
Cumulative depreciation after currency translation	130,627	129,001
Disposals	3,397	5,199
Depreciation	10,085	10,042
Change in the consolidated group	(162)	(39)
Reclassifications pursuant to IFRS 5	–	(4,119)
Currency translation at 31 December	14	(125)
Cumulative depreciation at 31 December of the year under review	137,167	129,561
Net book value at 31 December of the previous year	29,804	29,653
Net book value at 31 December of the year under review	27,003	29,804

With regard to the measurement of fixtures, fittings and equipment, the reader is referred to our explanatory notes on the other assets in section 3.2 “Summary of major accounting policies”.

The changes pursuant to IAS 8 result from the revised recognition of leases in accordance with IFRS 16. For further information we would refer to section 8.8 “Leases”.

Other intangible assets

Development of other intangible assets

N 55

in EUR thousand	2019	2018
Gross book value at 31 December of the previous year	370,192	364,879
Currency translation at 1 January	6,075	(2,603)
Gross book value after currency translation	376,267	362,276
Changes in the consolidated group	689	(289)
Additions	18,625	21,800
Disposals	1,413	–
Reclassifications pursuant to IFRS 5	–	(13,538)
Currency translation at 31 December	(80)	(57)
Gross book value at 31 December of the year under review	394,088	370,192
Cumulative depreciation at 31 December of the previous year	240,795	231,166
Currency translation at 1 January	993	(815)
Cumulative depreciation after currency translation	241,788	230,351
Changes in the consolidated group	–	(3)
Disposals	947	–
Depreciation	19,114	18,965
Reclassifications pursuant to IFRS 5	–	(8,316)
Currency translation at 31 December	41	(202)
Cumulative depreciation at 31 December of the year under review	259,996	240,795
Net book value at 31 December of the previous year	129,397	133,713
Net book value at 31 December of the year under review	134,092	129,397

The item includes EUR 34.8 million (EUR 37.8 million) for purchased software as at the balance sheet date, on which depreciation is taken over useful lives of three to ten years. Of the additions, an amount of EUR 6.6 million (EUR 8.7 million) is attributable to purchased software.

The gross book values include rights from long-term reinsurance treaties still existing as at the balance sheet date. The

intangible assets resulting from these rights were recognised in the context of business acquisitions in the years 1997 and 2002 and were written off in full as at the balance sheet date.

Credit risks may result from other financial assets that were not overdue or adjusted as at the balance sheet date. In this regard, the reader is referred in general to our comments on the credit risk contained in the risk report on page 92 et seq.

6.7 Technical provisions

In order to show the net technical provisions remaining in the retention the following table compares the gross provisions with the corresponding retrocessionaires' shares, which are shown as assets in the balance sheet.

Technical provisions

N 56

in EUR thousand	2019			2018		
	gross	retro	net	gross	retro	net
Loss and loss adjustment expense reserve	32,996,231	2,050,114	30,946,117	28,758,575	2,084,630	26,673,945
Benefit reserve	9,028,000	852,598	8,175,402	9,184,356	909,056	8,275,300
Unearned premium reserve	4,391,848	116,176	4,275,672	3,166,964	93,678	3,073,286
Other technical provisions	673,221	9,355	663,866	575,996	7,170	568,826
Total	47,089,300	3,028,243	44,061,057	41,685,891	3,094,534	38,591,357

The loss and loss adjustment expense reserves are in principle calculated on the basis of the information supplied by ceding companies. Additional IBNR reserves are established for losses that have been incurred but not as yet reported. The development of the loss and loss adjustment expense

reserve is shown in the following table. Commencing with the gross reserve, the change in the reserve after deduction of the reinsurers' portions is shown in the year under review and the previous year.

Loss and loss adjustment expense reserve

N 57

in EUR thousand	2019			2018		
	gross	retro	net	gross	retro	net
Net book value at 31 December of the previous year	28,758,575	2,084,630	26,673,945	28,378,545	1,651,335	26,727,210
Currency translation at 1 January	614,450	39,753	574,697	385,920	38,332	347,588
Net book value after currency translation	29,373,025	2,124,383	27,248,642	28,764,465	1,689,667	27,074,798
Reclassifications pursuant to IFRS 5	–	–	–	(1,642,408)	(87,253)	(1,555,155)
Incurred claims and claims expenses (net) ¹						
Year under review	12,772,636	807,151	11,965,485	11,553,628	1,383,873	10,169,755
Previous years	3,571,258	887,687	2,683,571	2,849,915	450,520	2,399,395
	16,343,894	1,694,838	14,649,056	14,403,543	1,834,393	12,569,150
Less:						
Claims and claims expenses paid (net) ¹						
Year under review	(3,974,059)	(121,410)	(3,852,649)	(3,435,681)	(145,670)	(3,290,011)
Previous years	(10,159,143)	(1,651,853)	(8,507,290)	(9,337,763)	(1,192,926)	(8,144,837)
	(14,133,202)	(1,773,263)	(12,359,939)	(12,773,444)	(1,338,596)	(11,434,848)
Changes in the consolidated group	1,398,836	(2,871)	1,401,707	–	–	–
Specific value adjustment for retrocessions	–	5,351	(5,351)	–	9,257	(9,257)
Reversal of impairments	–	596	(596)	–	1,155	(1,155)
Portfolio entries/exits	(3,367)	1,464	(4,831)	(8,160)	(3,274)	(4,886)
Currency translation at 31 December	17,045	10,318	6,727	14,579	(2,205)	16,784
Net book value at 31 December of the year under review	32,996,231	2,050,114	30,946,117	28,758,575	2,084,630	26,673,945

¹ Excluding effects from portfolio entries/exits recognised in income

On balance, cumulative specific value adjustments of EUR 60.6 million (EUR 54.6 million) were recognised in these reinsurance recoverables as at the balance sheet date.

The total amount of the net reserve before specific value adjustments was EUR 30,885.5 million (EUR 26,619.3 million) as at the balance sheet date.

Run-off of the net loss reserve in the property and casualty reinsurance segment

To some extent the loss and loss adjustment expense reserves are inevitably based upon estimations that entail an element of uncertainty. The difference between the loss reserves constituted in the previous year and the losses paid out of these reserves is reflected in the net run-off result. In this regard, owing to the fact that the period of some reinsurance treaties is not the calendar year or because they are concluded on an underwriting-year basis, it is frequently impossible to make an exact allocation of claims expenditures to the current financial year or the previous year.

The run-off triangles provided by the reporting units are shown after adjustment for the currency effects arising out of translation of the respective transaction currency into the local reporting currency. The run-off triangles of the reporting units delivered in foreign currencies are translated to euro at the current rate on the balance sheet date in order to show run-off results after adjustment for currency effects. In cases where the originally estimated ultimate loss corresponds to the actual ultimate loss in the original currency, it is ensured that also after translation to the Group reporting currency (EUR) a run-off result induced purely by currency effects is not shown.

The run-off triangles show the run-off of the net loss reserve (loss and loss adjustment expense reserve) established as at each balance sheet date, this reserve comprising the provisions constituted in each case for the current and preceding occurrence years.

The following table shows the net loss reserve for the property and casualty reinsurance business group in the years 2009 to 2019 as well as the run-off of the reserve (so-called run-off triangle). The figures reported for the 2009 balance sheet year also include the amounts for previous years that are no longer shown separately in the run-off triangle. The run-off results shown reflect the changes in the ultimate loss arising in the 2019 financial year for the individual run-off years.

Net loss reserve and its run-off in the property and casualty reinsurance segment
N 58

in EUR million	31.12. 2009	31.12. 2010	31.12. 2011	31.12. 2012	31.12. 2013	31.12. 2014	31.12. 2015	31.12. 2016	31.12. 2017	31.12. 2018	31.12. 2019
Loss and loss adjustment expense reserve (from balance sheet)	14,007.8	15,271.3	16,620.3	17,248.1	17,820.9	19,728.3	21,756.6	22,690.4	22,830.3	24,262.5 ¹	26,496.0
Cumulative payments for the year in question and previous years											
One year later	2,776.6	2,463.9	3,148.9	2,922.9	3,212.6	3,537.4	3,291.9	3,761.8	4,805.2	4,877.7	
Two years later	4,010.8	4,111.5	4,889.1	4,553.3	5,025.6	5,289.1	5,208.0	6,004.0	6,864.8		
Three years later	4,835.1	5,104.4	5,826.8	5,756.5	6,148.2	6,559.4	6,671.2	7,255.7			
Four years later	5,484.1	5,756.4	6,766.9	6,609.5	7,144.4	7,633.0	7,656.5				
Five years later	5,991.5	6,520.2	7,488.5	7,403.3	8,045.7	8,468.5					
Six years later	6,495.4	7,065.6	8,084.8	8,088.6	8,631.8						
Seven years later	6,844.9	7,504.1	8,592.1	8,561.1							
Eight years later	7,173.7	7,904.2	8,894.8								
Nine years later	7,467.7	8,142.2									
Ten years later	7,679.3										
Loss and loss adjustment expense reserve (net) for the year in question and previous years plus payments made to date on the original reserve											
End of year	14,007.8	15,271.3	16,620.3	17,248.1	17,820.9	19,728.3	21,756.6	22,690.4	22,830.3	24,262.5¹	26,496.0
One year later	13,486.2	14,612.9	16,327.1	16,764.8	17,636.1	19,223.3	20,858.0	21,511.6	22,101.0	23,428.7	
Two years later	12,715.7	14,005.1	15,930.0	16,411.2	16,996.1	18,103.8	19,420.5	20,520.2	20,795.4		
Three years later	12,135.5	13,561.9	15,484.4	15,891.0	15,956.6	17,131.3	18,427.9	19,441.7			
Four years later	11,707.3	13,105.9	14,859.4	15,192.5	15,082.3	16,250.8	17,442.7				
Five years later	11,246.6	12,537.5	14,199.7	14,476.7	14,323.3	15,407.6					
Six years later	10,716.6	12,010.2	13,550.3	13,792.3	13,518.6						
Seven years later	10,351.3	11,408.8	12,867.0	13,183.0							
Eight years later	9,854.7	11,009.1	12,330.6								
Nine years later	9,554.5	10,572.7									
Ten years later	9,207.7										
Change relative to previous year											
Net run-off result	346.8	89.6	99.9	73.0	195.3	38.5	142.1	93.3	227.1	(471.8)	
As percentage of original loss reserve	2.5	0.6	0.6	0.4	1.1	0.2	0.7	0.4	1.0	-1.9	

¹ Restated based on the disposal of International Insurance Company of Hannover SE in the financial year.

The run-off profit of altogether EUR 833.8 million (EUR 996.7 million) in the 2019 financial year derives above all from positive run-offs of reserves in the areas of general liability, motor, marine/aviation as well as in credit business.

Maturities of the technical reserves

IFRS 4 “Insurance Contracts” requires information which helps to clarify the amount and timing of cash flows expected from reinsurance contracts. In the following tables we have shown the future maturities of the technical provisions broken down by the expected remaining times to maturity. As part of our maturity analysis we have immediately deducted the de-

posits put up as collateral for these reserves, since the cash inflows and outflows from these deposits are to be allocated directly to the ceding companies. For further explanation of the recognition and measurement of the reserves please see section 3.2 “Summary of major accounting policies”.

Maturities of the technical reserves

N 59

in EUR thousand	2019					
	Loss and loss adjustment expense reserves			Benefit reserve		
	gross	retro	net	gross	retro	net
Due in one year	9,136,467	459,123	8,677,344	1,334,505	618,789	715,716
Due after one through five years	12,155,030	1,032,938	11,122,092	981,506	58,866	922,640
Due after five through ten years	5,083,742	324,170	4,759,572	674,078	44,806	629,272
Due after ten through twenty years	3,204,969	174,164	3,030,805	428,902	53,327	375,575
Due after twenty years	1,251,761	66,641	1,185,120	1,436,364	75,295	1,361,069
	30,831,969	2,057,036	28,774,933	4,855,355	851,083	4,004,272
Deposits	2,164,262	53,680	2,110,582	4,172,645	1,515	4,171,130
Total	32,996,231	2,110,716	30,885,515	9,028,000	852,598	8,175,402

Maturities of the technical reserves

N 60

in EUR thousand	2018					
	Loss and loss adjustment expense reserves			Benefit reserve		
	gross	retro	net	gross	retro	net
Due in one year	7,766,589	485,851	7,280,738	980,953	37,475	943,478
Due after one through five years	10,363,466	956,613	9,406,853	1,411,465	573,539	837,926
Due after five through ten years	4,426,226	349,296	4,076,930	777,725	163,443	614,282
Due after ten through twenty years	2,937,053	207,093	2,729,960	595,049	113,647	481,402
Due after twenty years	1,215,338	85,827	1,129,511	1,221,986	18,970	1,203,016
	26,708,672	2,084,680	24,623,992	4,987,178	907,074	4,080,104
Deposits	2,049,903	54,553	1,995,350	4,197,178	1,982	4,195,196
Total	28,758,575	2,139,233	26,619,342	9,184,356	909,056	8,275,300

The average maturity of the loss and loss adjustment expense reserves was 4.9 years (5.2 years), or 5.0 years (5.2 years) after allowance for the corresponding retrocession shares. The benefit reserve had an average maturity of 11.9 years (11.0 years) – or 13.5 years (12.3 years) on a net basis.

The average maturity of the reserves is determined using actuarial projections of the expected future payments. A payment pattern is calculated for each homogenous category of our portfolio – making allowance for the business sector, geographical considerations, treaty type and the type of reinsurance – and applied to the outstanding liabilities for each underwriting year and run-off status.

The payment patterns are determined with the aid of actuarial estimation methods and adjusted to reflect changes in payment behaviour and outside influences. The calculations can also be distorted by major losses, and these are therefore considered separately using reference samples or similar losses. The payment patterns used can be compared year for year by contrasting the projected payments with the actual amounts realised. Liabilities in liability and motor reinsurance traditionally have long durations, sometimes in excess of 20 years, while liabilities in property business are settled within the first ten years.

A benefit reserve is established for life, annuity, personal accident and health reinsurance contracts. Based on the duration of these contracts, long-term reserves are constituted for life and annuity policies and predominantly short-term reserves are set aside for health and personal accident business.

The parameters used to calculate the benefit reserve are interest income, lapse rates and mortality/morbidity rates.

The values for the first two components (interest income and lapse rates) differ according to the country concerned, product type, investment year etc.

The mortality and morbidity rates used are chosen on the basis of national tables and the insurance industry standard. Empirical values for the reinsured portfolio, where available, are also taken into consideration. In this context insights into the gender, age and smoker structure are incorporated into

the calculations, and allowance is also made for factors such as product type, sales channel and the frequency of premium payment by policyholders.

At the inception of every reinsurance contract, assumptions about the three parameters are made and locked in for the purpose of calculating the benefit reserve. At the same time, safety/fluctuation loadings are built into each of these components. In order to ensure at all times that the originally chosen assumptions continue to be adequate throughout the contract, checks are made on a regular – normally annual – basis in order to determine whether these assumptions need to be adjusted (“unlocked”).

The benefit reserve is established in accordance with the principles set out in SFAS 60. The provisions are based on the Group companies’ information regarding mortality, interest and lapse rates.

Development of the benefit reserve

N 61

in EUR thousand	2019			2018		
	gross	retro	net	gross	retro	net
Net book value at 31 December of the previous year	9,184,356	909,056	8,275,300	8,977,946	959,533	8,018,413
Currency translation at 1 January	340,541	21,712	318,829	61,871	28,384	33,487
Net book value after currency translation	9,524,897	930,768	8,594,129	9,039,817	987,917	8,051,900
Changes	(122,671)	(133,464)	10,793	(27,007)	(77,798)	50,791
Portfolio entries/exits	(380,167)	53,402	(433,569)	173,143	(1,691)	174,834
Currency translation at 31 December	5,941	1,892	4,049	(1,597)	628	(2,225)
Net book value at 31 December of the year under review	9,028,000	852,598	8,175,402	9,184,356	909,056	8,275,300

The development in the year under review was influenced by portfolio exits attributable principally to Chinese business and UK longevity business.

The unearned premium reserve derives from the deferral of ceded reinsurance premium. The unearned premium is determined by the period during which the risk is carried and established in accordance with the information supplied by ceding companies. In cases where no information was received, the unearned premium was estimated using suitable methods. Premium paid for periods subsequent to the date of the balance sheet was deferred from recognition within the statement of income.

in EUR thousand	2019			2018		
	gross	retro	net	gross	retro	net
Net book value at 31 December of the previous year	3,166,964	93,678	3,073,286	3,541,194	96,402	3,444,792
Currency translation at 1 January	90,519	1,762	88,757	46,294	1,884	44,410
Net book value after currency translation	3,257,483	95,440	3,162,043	3,587,488	98,286	3,489,202
Reclassifications pursuant to IFRS 5	–	–	–	(564,230)	(26,567)	(537,663)
Changes in the consolidated group	477,736	(948)	478,684	–	–	–
Changes	636,972	21,317	615,655	128,268	19,869	108,399
Portfolio entries/exits	–	–	–	2	–	2
Currency translation at 31 December	19,657	367	19,290	15,436	2,090	13,346
Net book value at 31 December of the year under review	4,391,848	116,176	4,275,672	3,166,964	93,678	3,073,286

The adequacy of the technical liabilities arising out of our re-insurance treaties is reviewed as at each balance sheet date. In the context of the adequacy testing of technical liabilities (liability adequacy test pursuant to IFRS 4 in conjunction with loss recognition test as per US GAAP) the anticipated future contractual payment obligations are compared with the anticipated future income. Should the result of the test indicate

that the anticipated future income will not be sufficient to fund future payments, the entire shortfall is recognised in income by first writing off capitalised present values of future profits on acquired life reinsurance portfolios and acquisition costs corresponding to the shortfall. Any remaining difference is constituted as an additional provision.

6.8 Funds withheld (liabilities)

The funds withheld under reinsurance treaties totalling EUR 1,157.8 million (EUR 969.3 million) represent the cash and securities deposits furnished to our company by our retrocessionaires that do not trigger any cash flows and cannot be realised without the consent of our retrocessionaires. The

maturities of these deposits are matched to the corresponding shares of the reinsurers in the technical provisions. If such a share no longer exists the corresponding funds withheld are reduced to the same extent.

6.9 Contract deposits (liabilities)

The contract deposits on the liabilities side decreased by EUR 30.6 million in the year under review from EUR 3,611.7 million to EUR 3,581.1 million. The contract deposits item on the

liabilities side essentially encompasses balances deriving from non-traditional life insurance contracts that are to be carried as liabilities.

6.10 Provisions for pensions and other post-employment benefit obligations

Pension commitments are given in accordance with the relevant version of the pension plan as amended. The 1968 pension plan provides for retirement, disability, widows' and orphans' benefits. The pension entitlement is dependent on length of service; entitlements under the statutory pension insurance scheme are taken into account. The pension plan was closed to new participants with effect from 31 January 1981.

On 1 April 1993 (1 June 1993 in the case of senior executives) the 1993 pension plan came into effect. This pension plan provides for retirement, disability and surviving dependants'

benefits. The scheme is based upon annual determination of the pension contributions, which are calculated according to the pensionable employment income and the company's performance. The pension plan was closed to new participants with effect from 31 March 1999.

From 1997 onwards it has been possible to obtain pension commitments through deferred compensation. The employee-funded commitments included in the provisions for accrued pension rights are protected by an insurance contract with HDI Lebensversicherung AG, Cologne.

As at 1 July 2000 the 2000 pension plan came into force for the entire Group. Under this plan, new employees included in the group of beneficiaries are granted an indirect commitment from HDI Unterstützungskasse e.V. This pension plan provides for retirement, disability and surviving dependants' benefits. The provident fund takes out insurance coverage with HDI Lebensversicherung AG that maps the entire spectrum of benefits (matching coverage). These pension commitments are considered to be contribution-based pension benefits under German employment law, and for economic purposes the pension scheme is classified as a defined benefit plan. The relevant assets of the provident fund are recognised as plan assets.

Employees also have the option to accumulate additional, insurance-type retirement provision by way of deferred compensation. Pension provisions are not recognised in this regard.

In addition to these pension plans, senior executives and members of the Executive Board, in particular, enjoy individual commitments as well as commitments given under the benefits plan of the Bochumer Verband.

The commitments to employees in Germany predominantly comprise benefit obligations financed by the Group companies. The provisions for pensions in Germany and abroad were calculated on the basis of uniform standards according to prevailing economic circumstances.

Provisions for pensions are established in accordance with actuarial principles and are based upon the commitments made by the Hannover Re Group for retirement, disability and widows' benefits. The amount of the commitments is determined according to length of service and salary level.

The defined benefit plans expose Hannover Re to the following actuarial risks:

- longevity
- currency
- interest rate
- disablement
- pension progression
- rate of compensation increase

Longevity entails the risk that the mortality contained in the actuarial bases does not correspond to the actual mortality and that pension payments have to be rendered and funded for a longer duration than had been assumed.

Disablement entails the risk that the assumed number of retirements from the subportfolio of eligible beneficiaries on grounds of disability does not correspond to the actual experience and for this reason increased benefit obligations have to be met.

The pension progression entails the risk that the anticipated development of the consumer price index factored into the trend assumptions was too low and that increased benefit obligations arise on account of pension indexation required by law.

The rate of compensation increase entails the risk that the increases in pensionable salaries factored into the trend assumptions on a parallel basis do not adequately reflect the actual developments. In addition, in the case of plans under which the determinative income components above and below the income threshold for contributions to the statutory pension insurance scheme are differently weighted for the purpose of calculating the benefit, there is a risk of a diverging trend in the future with respect to salary and income threshold.

The calculation of the provisions for pensions is based upon the following assumptions:

Measurement assumptions

N 63

in %	2019			2018		
	Germany	Australia	United Kingdom	Germany	Australia	United Kingdom
Discount rate	1.10	2.87	2.10	1.60	2.87	2.90
Rate of compensation increase	2.50	3.00	2.15	2.50	3.00	2.15
Pension indexation	1.74	3.00	2.15	1.74	3.00	2.15

The movements in the net pension liability for the Group's various defined benefit plans were as follows:

Movements in net liability from defined benefit pension plans

N 64

	2019	2018	2019	2018	2019	2018
	Defined benefit obligation		Fair value of plan assets		Impact of minimum funding requirement/asset ceiling	
in EUR thousand						
Position at 1 January of the financial year	223,604	210,855	39,989	33,675	41	135
Recognised in profit or loss						
Current service costs	5,412	5,310	–	–	–	–
Past service cost and plan curtailments	175	725	–	–	–	–
Net interest component	3,699	3,787	913	775	1	19
	9,286	9,822	913	775	1	19
Recognised in cumulative other comprehensive income						
Actuarial gain (–)/loss (+) from change in biometric assumptions	1,453	373	–	–	–	–
Actuarial gain (–)/loss (+) from change in financial assumptions	20,324	4,597	–	–	–	–
Experience gains (–)/losses (+)	2,985	2,618	–	–	–	–
Return on plan assets, excluding amounts included in interest income	–	–	3,561	2,681	–	–
Change in asset ceiling	–	–	–	–	(41)	(113)
Exchange differences	800	(397)	788	(340)	–	–
	25,562	7,191	4,349	2,341	(41)	(113)
Other changes						
Employer contributions	–	–	4,053	3,489	–	–
Employee contributions and deferred compensation	4	63	–	(5)	–	–
Benefit payments	(5,254)	(4,358)	(552)	(313)	–	–
Additions and disposals	(188)	31	(50)	27	–	–
Changes in the consolidated group	(2,655)	–	(943)	–	(1)	–
Effects of plan settlements	(723)	–	–	–	–	–
	(8,816)	(4,264)	2,508	3,198	(1)	–
Position at 31 December of the financial year	249,636	223,604	47,759	39,989	–	41

The plan assets consist exclusively of qualifying insurance policies as defined by IAS 19.

The reconciliation of the projected benefit obligations with the recognised provisions for pensions is as follows:

Provisions for pensions		N 65	
in EUR thousand		2019	2018
Projected benefit obligations at 31 December of the financial year		249,636	223,604
Fair value of plan assets at 31 December of the financial year		47,759	39,989
Effect of minimum funding requirement on asset ceiling		–	41
Recognised pension obligations at 31 December of the financial year		201,877	183,656
thereof: Capitalised assets		75	349
thereof: Recognised pension obligations from IFRS 5		–	1,714
Provisions for pensions		201,952	182,291

In the current financial year Hannover Re anticipates contribution payments of EUR 3.8 million under the plans set out above. The weighted average duration of the defined benefit obligation is 18.2 (18.0) years.

Sensitivity analysis

An increase or decrease in the key actuarial assumptions would have the following effect on the present value of the defined benefit obligation as at the balance sheet date:

Effect on the defined benefit obligation		N 66	
in EUR thousand		Parameter increase	Parameter decrease
Discount rate	(+/- 0.5%)	(19,958)	22,705
Rate of compensation increase	(+/- 0.25%)	467	(461)
Pension indexation	(+/- 0.25%)	7,100	(6,760)

Furthermore, a change is possible with respect to the assumed mortality rates and lifespans. The underlying mortality tables were adjusted by reducing the mortalities by 10% in order to determine the longevity risk. Extending the lifespans in this way would have produced a EUR 7.7 million (EUR 6.6 million) higher pension commitment at the end of the financial year.

Defined contribution plans

In addition to the defined benefit plans, some Group companies have defined contribution plans that are based on length of service and the employee's income or level of contributions. The expense recognised for these obligations in the financial year in accordance with IAS 19 "Employee Benefits" was EUR 20.4 million (EUR 20.6 million), none of which (EUR 0 million) was attributable to commitments to employees in key positions. Of the expense for defined contribution plans, an amount of EUR 10.8 million (EUR 11.5 million) relates to state pension schemes, thereof EUR 8.3 million (EUR 7.9 million) to contributions to the statutory pension insurance scheme in Germany.

6.11 Other liabilities

Other liabilities

N 67

in EUR thousand	2019	2018
Liabilities from derivatives	56,671	82,488
Interest	43,002	40,674
Deferred income and prepayments received	112,323	182,729
Sundry non-technical provisions	197,985	180,412
Sundry liabilities	213,094	125,790
Total	623,075	612,093

With regard to the liabilities from derivatives in an amount of EUR 56.7 million (EUR 82.5 million), please see our explanatory remarks on derivative financial instruments in section 8.1 “Derivative financial instruments and financial guarantees”.

The sundry liabilities include, among other things, trade accounts payable and clearing balances. In addition, they include distributions within the year of EUR 5.3 million (EUR 19.1 million) from interests in private equity funds that

had still to be recognised in income as at the balance sheet date.

With effect from this reporting period we are entering into term repurchase agreements (repos) as a supplementary liquidity management tool. The asset portfolios exchanged in this context are fully collateralised. As at the balance sheet date the liabilities from repos recognised in the sundry liabilities amounted to EUR 66.3 million.

Development of sundry non-technical provisions

N 68

in EUR thousand	Balance at 31 December 2018	Currency translation at 1 January	Balance at 1 January of the year under review
Provisions for			
Audits and costs of publishing the annual financial statements	6,698	86	6,784
Consultancy fees	5,878	43	5,921
Suppliers' invoices	3,918	74	3,992
Partial retirement arrangements and early retirement obligations	1,371	–	1,371
Holiday entitlements and overtime	10,032	56	10,088
Anniversary bonuses	4,849	24	4,873
Management and staff bonuses	77,949	1,006	78,955
Other	69,717	473	70,190
Total	180,412	1,762	182,174

The maturities of the sundry non-technical provisions as at the balance sheet date are shown in the following table:

Maturities of the sundry non-technical provisions

N 69

in EUR thousand	2019	2018
Due in one year	110,111	100,971
Due after one through five years	83,519	74,905
Due after five years	4,355	4,536
Total	197,985	180,412

Changes in consolidated group	Additions	Utilisation	Release	Other changes	Currency translation at 31 December	Balance at 31 December 2019
(3)	6,257	5,243	252	–	7	7,550
–	3,413	3,436	1,887	–	(9)	4,002
(1)	11,245	8,148	661	–	30	6,457
–	500	38	–	–	(2)	1,831
(625)	6,808	6,052	65	–	–	10,154
–	343	35	72	–	–	5,109
–	52,205	42,038	2,030	–	(144)	86,948
–	13,213	(3,346)	10,759	75	(131)	75,934
(629)	93,984	61,644	15,726	75	(249)	197,985

6.12 Financing liabilities

On 9 October 2019 Hannover Re placed subordinated debt in a nominal amount of EUR 750 million on the European capital market. The bond has a total maturity of 20 years with a first scheduled call option on 9 July 2029. It carries a fixed coupon of 1.125% p. a. in the first ten years, after which the interest rate basis changes to a floating rate of 3-month EURIBOR +238 basis points.

On 18 April 2018 Hannover Rück SE placed a senior bond with a volume of EUR 750.0 million on the European capital market. The bond has a maturity date of 18 April 2028 and may be redeemed at any time from 18 January 2028 onwards, although not later than 18 April 2028. It carries a fixed coupon of 1.125% p. a.

On 15 September 2014 Hannover Rück SE placed a EUR 500.0 million subordinated bond on the European capital market. The issue has a perpetual maturity with a first scheduled call option on 26 June 2025 and may be redeemed at each coupon date thereafter. It carries a fixed coupon of 3.375% p. a. until 26 June 2025, after which the interest rate basis changes to 3-month EURIBOR +325 basis points.

On 20 November 2012 Hannover Rück SE placed a EUR 500.0 million subordinated bond on the European capital market via its subsidiary Hannover Finance (Luxembourg) S.A. The bond has a maturity of approximately 30 years with a first scheduled call option on 30 June 2023 and may be redeemed at each coupon date thereafter. It carries a fixed coupon of 5.00% p. a. until this date, after which the interest rate basis changes to a floating rate of 3-month EURIBOR +430 basis points.

On 14 September 2010 Hannover Rück SE placed a subordinated bond on the European capital market through its subsidiary Hannover Finance (Luxembourg) S.A. This subordinated debt of EUR 500.0 million has a maturity of 30 years with a first scheduled call option after ten years and may be redeemed at each coupon date thereafter. The bond carries a fixed coupon of 5.75% in the first ten years, after which the interest rate basis changes to a floating rate of 3-month EURIBOR +423.5 basis points.

Altogether five (four) bonds were recognised as at the balance sheet date with an amortised cost of EUR 2,977.7 million (EUR 2,235.6 million).

Long-term debt and notes payable

N 70

in EUR thousand				2019			
	Coupon	Maturity	Currency	Amortised cost	Fair value measurement	Accrued interest	Fair value
Notes payable							
Hannover Rück SE, 2019	1.125	2039	EUR	739,982	(6,482)	1,913	735,413
Hannover Rück SE, 2018	1.125	2028	EUR	743,335	50,015	5,925	799,275
Hannover Rück SE, 2014	3.375	n/a	EUR	496,243	70,082	8,668	574,993
Hannover Finance (Luxembourg) S. A., 2012	5.00	2043	EUR	498,529	79,536	12,568	590,633
Hannover Finance (Luxembourg) S. A., 2010	5.75	2040	EUR	499,635	19,820	8,484	527,939
				2,977,724	212,971	37,558	3,228,253
Long-term debt				395,043	8,571	712	404,326
Total				3,372,767	221,542	38,270	3,632,579

Long-term debt and notes payable

N 71

in EUR thousand	2018						
	Coupon	Maturity	Currency	Amortised cost	Fair value measurement	Accrued interest	Fair value
Notes payable							
Hannover Rück SE, 2018	1.125	2028	EUR	742,537	(7,177)	5,941	741,301
Hannover Rück SE, 2014	3.375	n/a	EUR	495,616	16,269	8,692	520,577
Hannover Finance (Luxembourg) S.A., 2012	5.00	2043	EUR	498,150	68,550	12,603	579,303
Hannover Finance (Luxembourg) S.A., 2010	5.75	2040	EUR	499,346	38,949	8,507	546,802
				2,235,649	116,591	35,743	2,387,983
Long-term debt				323,200	2,498	747	326,445
Total				2,558,849	119,089	36,490	2,714,428

The aggregated fair value of the extended subordinated loans is based on quoted, active market prices. If such price information was not available, fair value was determined on the basis of the recognised effective interest rate method or esti-

mated using other financial assets with similar rating, duration and return characteristics. Under the effective interest rate method the current market interest rate levels in the relevant fixed-interest-rate periods are always taken as a basis.

Net gains and losses from long-term debt and notes payable

N 72

in EUR thousand	2019		2018		2019		2018	
	Ordinary income/expenses		Amortisation		Net result			
Long-term debt	(8,343)	(8,410)	(276)	(289)	(8,619)	(8,699)		
Notes payable	(80,878)	(76,566)	(2,314)	(1,695)	(83,192)	(78,261)		
Total	(89,221)	(84,976)	(2,590)	(1,984)	(91,811)	(86,960)		

The ordinary expenses principally include interest expenses of nominally EUR 80.9 million (EUR 76.6 million) resulting from the issued subordinated and senior bonds.

Maturities of financial liabilities

N 73

in EUR thousand	2019						
	Less than three months	Three months to one year	One to five years	Five to ten years	Ten to twenty years	More than twenty years	No maturity
Other financial liabilities ¹	99,249	262,910	6,260	–	–	–	–
Long-term debt	–	34,444	304,738	55,861	–	–	–
Notes payable	–	–	–	743,335	739,982	998,164	496,243
Other long-term liabilities	1,814	3,340	31,906	16,380	287	35,474	–
Total	101,063	300,694	342,904	815,576	740,269	1,033,638	496,243

¹ Excluding sundry non-technical provisions and derivative financial instruments; the maturities of these items are broken down separately.

Maturities of financial liabilities

N 74

in EUR thousand	2018						
	Less than three months	Three months to one year	One to five years	Five to ten years	Ten to twenty years	More than twenty years	No maturity
Other financial liabilities ¹	93,888	248,687	2,910	3,708	–	–	–
Long-term debt	–	74,152	208,896	40,152	–	–	–
Notes payable	–	–	–	742,537	–	997,496	495,616
Other long-term liabilities	–	–	35	–	–	–	–
Total	93,888	322,839	211,841	786,397	–	997,496	495,616

¹ Excluding sundry non-technical provisions and derivative financial instruments; the maturities of these items are broken down separately.

The following table shows the movements in long-term debt, notes payable and other long-term liabilities with respect to cash and non-cash changes.

Reconciliation of financing liabilities

N 75

in EUR thousand	Balance at 31 December 2018	Cash flow	Non-cash items		Balance at 31 December 2019
			Currency translation	Other changes	
Long-term debt	323,200	67,815	3,752	276	395,043
Notes payable	2,235,649	739,761	–	2,314	2,977,724
Other long-term liabilities	35	(36)	1	–	–
Lease liabilities	–	(13,074)	1,780	100,495	89,201
Total	2,558,884	794,466	5,533	103,085	3,461,968

Reconciliation of financing liabilities

N 76

in EUR thousand	Balance at 31 December 2017	Cash flow	Non-cash items		Balance at 31 December 2018
			Currency translation	Other changes	
Long-term debt	250,083	65,841	6,987	289	323,200
Notes payable	1,491,951	742,003	–	1,695	2,235,649
Other long-term liabilities	39	–	(4)	–	35
Total	1,742,073	807,844	6,983	1,984	2,558,884

6.13 Shareholders' equity 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-value shares. The shares are paid

in full. Each share carries an equal voting right and an equal dividend entitlement.

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. Authorised capital is also available in an amount of up to EUR 60,299 thousand. Both have a time limit of 9 May 2021; the subscription right of shareholders may be excluded with the consent of the Supervisory Board under certain conditions. The Executive Board is 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 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 Annual General Meeting of Hannover Rück SE resolved on 8 May 2019 that a gross dividend of EUR 5.25 per share should be paid for the 2018 financial year. This corresponds to a total distribution of EUR 633.1 million (EUR 603.0 million). The distribution consists of a dividend of EUR 3.75 per share and a special dividend of EUR 1.50 per share.

The decrease in the other reserves arising out of currency translation, which is recognised in equity, was attributable in an amount of EUR 27.3 million (increase of EUR 16.0 million in the previous year) to the translation of long-term debt or

Treasury shares

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 16,467 (16,530) treasury shares during the second and third quarter of 2019 on the legal basis of § 71 Para. 1 No. 2 Stock Corporation Act (AktG) and delivered them to eligible employees at preferen-

loans with no maturity date extended to Group companies and branches abroad.

The disclosures on capital management arising out of IAS 1.134 – 136 "Presentation of Financial Statements" are provided in the "Financial position" section of the management report, to which the reader is referred. This includes both a presentation of our capital management objectives and procedures (page 57 et seq., section entitled "Investment policy") and a description of our policyholders' surplus (page 59 et seq., section entitled "Management of policyholders' surplus"), together with a summary of the diverse external capital requirements to which we are subject. The Solvency II regulatory framework, in particular, gives rise to capital requirements and consequences for capital management, which we discuss more closely on pages 93 et seq. of the risk report.

tial conditions. These shares are blocked until 31 May 2023. 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.

6.14 Non-controlling interests

Non-controlling interests in the shareholders' equity of subsidiaries are reported separately within Group shareholders' equity in accordance with IAS 1 "Presentation of Financial Statements". They amounted to EUR 826.5 million (EUR 765.2 million) as at the balance sheet date.

Non-controlling interests in partnerships are reported in accordance with IAS 32 "Financial Instruments: Presentation" under long-term liabilities. 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 89.2 million (EUR 86.0 million) in the year under review.

Subsidiaries with material non-controlling interests
N 77

in EUR thousand	2019	2018
	E+S Rückversicherung AG, Hannover, Germany	
Participation of non-controlling interests	35.21%	35.21%
Voting rights of non-controlling interests	35.21%	35.21%
Net income	189,768	235,431
thereof attributable to non-controlling interests	66,814	82,892
Income/expense recognised directly in equity	71,985	(73,491)
Total recognised income and expense	261,753	161,940
Shareholders' equity	2,117,159	2,005,406
thereof attributable to non-controlling interests	745,418	706,072
Dividends paid	150,000	151,566
thereof attributable to non-controlling interests	52,813	53,364
Assets	10,460,993	10,022,883
Liabilities	8,343,834	8,017,477
Cash flow from operating activities	230,846	79,866
Cash flow from investing activities	(88,065)	80,399
Cash flow from financing activities	(150,000)	(151,566)

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

7.1 Gross written premium

The following table shows the breakdown of the gross written premium according to regional origin.

Gross written premium	N 78	
in EUR thousand	2019	2018
Regional origin		
Germany	1,490,616	1,168,186
United Kingdom	3,017,091	2,560,443
France	954,044	813,904
Other	2,673,085	2,389,166
Europe	8,134,836	6,931,699
USA	6,863,194	5,812,457
Other	925,131	796,322
North America	7,788,325	6,608,779
Asia	3,793,197	2,955,658
Australia	1,245,897	1,263,171
Australasia	5,039,094	4,218,829
Africa	570,707	524,109
Other	1,064,678	892,942
Total	22,597,640	19,176,358

7.2 Investment income

Investment income

N 79

in EUR thousand	2019	2018
Income from real estate	185,704	172,466
Dividends	5,309	2,526
Interest income	1,002,124	929,337
Other investment income	187,678	217,383
Ordinary investment income	1,380,815	1,321,712
Profit or loss on investments in associated companies	26,354	4,977
Appreciation	–	3,616
Realised gains on investments	353,007	286,253
Realised losses on investments	79,266	158,594
Change in fair value of financial instruments	72,855	31,160
Impairments on real estate	48,630	36,927
Impairments on fixed-income securities	129	510
Impairments on participating interests and other financial assets	31,887	15,303
Other investment expenses	122,491	114,342
Net income from assets under own management	1,550,628	1,322,042
Interest income on funds withheld and contract deposits	297,831	333,069
Interest expense on funds withheld and contract deposits	91,398	125,082
Total investment income	1,757,061	1,530,029

Of the impairments totalling EUR 44.0 million (EUR 18.7 million), an amount of EUR 23.9 million (EUR 15.3 million) was attributable to private equity and EUR 6.9 million (EUR 0.0 million) to a loan. An impairment loss of EUR 11.9 million (EUR 2.9 million) was recognised on real estate and real estate funds.

The impairments taken on fixed-income securities amounted to just EUR 0.1 million (EUR 0.5 million).

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

N 80

in EUR thousand	2019	2018
Fixed-income securities – held to maturity	9,588	11,116
Fixed-income securities – loans and receivables	80,858	83,186
Fixed-income securities – available for sale	864,794	792,161
Financial assets – at fair value through profit or loss	12,669	13,769
Other	34,215	29,105
Total	1,002,124	929,337

The net gains and losses on investments held to maturity, loans and receivables and the available-for-sale portfolio shown in the following table are composed of interest income, realised gains and losses as well as impairments and appreciation. In the case of the fixed-income securities at fair value through profit or loss designated in this category and the other financial assets, which include the technical derivatives, income and expenses from changes in fair value are also recognised.

Making allowance for the other investment expenses of EUR 122.5 million (EUR 114.3 million), net income from assets under own management of altogether EUR 1,550.6 million (EUR 1,322.0 million) was recognised in the year under review.

Net gains and losses on investments

N 81

in EUR thousand	2019				
	Ordinary investment income ¹	Realised gains and losses	Impairments/ appreciation	Change in fair value	Net income from assets under own management ²
Held to maturity					
Fixed-income securities	8,877	(17)	–	–	8,860
Loans and receivables					
Fixed-income securities	75,548	14,540	–	–	90,088
Available for sale					
Fixed-income securities	878,374	81,015	129	–	959,260
Equity securities	944	1,217	–	–	2,161
Other invested assets	231,122	98,610	35,696	–	294,036
Short-term investments	26,796	120	70	–	26,846
At fair value through profit or loss					
Fixed-income securities	12,780	5,093	–	9,063	26,936
Other financial assets	–	–	–	63,453	63,453
Other invested assets	508	1,905	–	(787)	1,626
Other	172,220	71,258	44,751	1,126	199,853
Total	1,407,169	273,741	80,646	72,855	1,673,119

¹ Including income from associated companies, for reconciliation with the consolidated statement of income

² Excluding other investment expenses

Net gains and losses on investments

N 82

in EUR thousand	2018				
	Ordinary investment income ¹	Realised gains and losses	Impairments/ appreciation	Change in fair value	Net income from assets under own management ²
Held to maturity					
Fixed-income securities	10,078	(18)	–	–	10,060
Loans and receivables					
Fixed-income securities	78,911	36,373	–	–	115,284
Available for sale					
Fixed-income securities	835,225	17,275	510	–	851,990
Equity securities	935	800	–	–	1,735
Other invested assets	219,298	64,382	17,900	–	265,780
Short-term investments	25,729	246	4	–	25,971
At fair value through profit or loss					
Fixed-income securities	14,165	2,431	–	(20,324)	(3,728)
Other financial assets	–	2,558	–	34,317	36,875
Other invested assets	24	(981)	–	2,423	1,466
Other	142,324	4,593	30,710	14,744	130,951
Total	1,326,689	127,659	49,124	31,160	1,436,384

¹ Including income from associated companies, for reconciliation with the consolidated statement of income

² Excluding other investment expenses

7.3 Reinsurance result

Reinsurance result

N 83

in EUR thousand	2019	2018
Gross written premium	22,597,640	19,176,358
Ceded written premium	2,252,259	1,778,826
Change in unearned premium	(636,972)	(128,268)
Change in ceded unearned premium	21,317	19,869
Net premium earned	19,729,726	17,289,133
Other technical income	3,458	599
Total net technical income	19,733,184	17,289,732
Claims and claims expenses paid	12,359,939	11,438,631
Change in loss and loss adjustment expense reserve	2,289,117	1,130,519
Claims and claims expenses	14,649,056	12,569,150
Change in benefit reserve	10,793	50,791
Net change in benefit reserve	10,793	50,791
Commissions	5,286,621	4,198,598
Change in deferred acquisition costs	568,095	112,361
Change in provision for contingent commissions	86,921	185,499
Other acquisition costs	3,956	21,018
Other technical expenses	–	4,804
Administrative expenses	480,084	423,343
Net technical result	(216,152)	(51,110)

With regard to the claims and claims expenses as well as the change in the benefit reserve the reader is also referred to section 8.1 “Derivative financial instruments and financial guarantees”. The change in the benefit reserve relates exclu-

sively to the life and health reinsurance segment. The administrative expenses amounted to altogether 2.4% (2.4%) of net premium earned.

Other technical income

N 84

in EUR thousand	2019	2018
Other technical income (gross)	3,458	1,769
Reinsurance recoverables	–	1,170
Other technical income (net)	3,458	599

Commissions and brokerage, change in deferred acquisition costs**N 85**

in EUR thousand	2019	2018
Commissions paid (gross)	5,749,421	4,411,114
Reinsurance recoverables	462,800	212,516
Change in deferred acquisition costs (gross)	767,361	113,861
Reinsurance recoverables	199,266	1,500
Change in provision for contingent commissions (gross)	89,004	185,231
Reinsurance recoverables	2,083	(268)
Commissions and brokerage, change in deferred acquisition costs (net)	4,805,447	4,271,736

Other technical expenses**N 86**

in EUR thousand	2019	2018
Other technical expenses (gross)	–	5,537
Reinsurance recoverables	–	733
Other technical expenses (net)	–	4,804

7.4 Other income/expenses**Other income/expenses****N 87**

in EUR thousand	2019	2018 ¹
Other income		
Exchange gains	105,167	163,295
Reversals of impairments on receivables	10,748	6,661
Income from contracts recognised in accordance with the deposit accounting method	297,411	206,525
Income from services	136,180	72,064
Deconsolidation	57,767	2,459
Other interest income	32,072	27,599
Sundry income	29,044	45,381
	668,389	523,984
Other expenses		
Other interest expenses	12,485	14,163
Exchange losses	95,990	121,259
Expenses from contracts recognised in accordance with the deposit accounting method	2,561	2,375
Separate value adjustments on receivables	20,076	32,948
Expenses for the company as a whole	86,321	88,923
Expenses for services	92,602	46,555
Sundry expenses	46,088	100,031
	356,123	406,254
Total	312,266	117,730

¹ Restated pursuant to IAS 8

The sundry expenses include the amortisation of the PVFP in an amount of EUR 6.7 million (EUR 25.9 million). For details we would refer to section 6.6 “Other assets”.

The other income includes revenues from contracts with customers set out below in accordance with IFRS 15.

Revenue categories

N 88

in EUR thousand	2019	2018
Revenue realised at a point in time		
Brokerage commissions, performance fees and similar forms of remuneration	74,415	4,457
Other insurance-related services	10,398	28,010
Revenue realised over time		
Other insurance-related services	50,598	44,054
Total	135,411	76,521

The brokerage commissions, performance fees and similar forms of remuneration in an amount of EUR 74.4 million (EUR 4.5 million) were realised at a point in time. Of this amount, EUR 65.6 million (none) is attributable to brokerage commissions earned by Group-internal insurance intermediaries on the North American, UK and Swedish markets. A further EUR 7.8 million (none) was earned in the form of structuring revenues on the North American market. In addition, EUR 0.5 million (EUR 0.5 million) was generated through activities on the Lloyd’s market in the United Kingdom.

An amount of EUR 50.6 million (EUR 44.1 million) was realised over time in the current financial year in connection with other insurance-related services.

This involves revenues from administrative services amounting to EUR 21.3 million (EUR 24.2 million) that were generated on the Lloyd’s markets in the United Kingdom and in the Asia-Pacific region. The transaction prices are essentially calculated according to the general fee scales as well as a percentage share of the gross premium. The revenues from the administrative services described here are largely earned over a period of three to four years and for the most part realised pro rata temporis in accordance with the contractual term.

In addition, other revenues known as “binding fees” were earned from administrative activities on the South African market in an amount of EUR 14.2 million (EUR 2.8 million). The transaction price is calculated from a percentage rate in relation to the acknowledged invoice amount. Binding fees are considered to be earned over a period of time as soon as the corresponding insurance service has been rendered.

On the North American market revenues of EUR 3.9 million (EUR 3.9 million) were earned from the assumption of administrative tasks. The performance obligation is considered to have been fulfilled when the company has rendered the con-

tractually agreed services. Further revenues as defined by IFRS 15 were generated from the transfer of use of application software used for the underwriting of insurance risks. These amounted to EUR 2.4 million (EUR 1.0 million) and are deemed to be earned over a period of time when the customer makes use of the software. In both cases the transaction price is derived from the contractually agreed contract prices.

A further EUR 2.1 million (EUR 0.2 million) was earned on the UK market from the performance of management services. The performance obligation is considered to have been fulfilled when the administrative activities specified in the contract were carried out.

In addition, revenues of EUR 10.4 million (EUR 28.0 million) were realised at a point in time in the current financial year from other insurance-related services.

In this context revenues of EUR 7.0 million (EUR 3.0 million) were realised on the South African market which are connected with commission-based business but cannot be characterised as commissions. The transaction price is arrived at as a percentage of the underlying gross premium share. The performance obligation is deemed to be fulfilled at a point in time upon issuance of the insurance certificate for the end customer.

An amount of EUR 2.1 million (EUR 3.6 million) was also earned on the North American market from the performance of administrative activities. The transaction price corresponds to the agreed contract price. The performance obligation is deemed to be satisfied when the administrative activities specified in the contract were carried out.

7.5 Taxes on income

Actual taxes on income at the domestic companies, comparable actual taxes on income at foreign subsidiaries as well as deferred taxes in accordance with IAS 12 "Income Taxes" are recognised under this item.

The reader is referred to the remarks in section 3.2 "Summary of major accounting policies" regarding the basic approach to the recognition and measurement of deferred taxes.

An unchanged tax rate of 32.63% (rounded to 32.7%) was used to calculate the deferred taxes of the major domestic companies. It is arrived at from the corporate income tax rate of 15.0%, the German solidarity surcharge of 5.5% and a

trade earnings tax rate of 16.8%. The Group tax rate consequently also amounts to 32.7% (32.7%). The deferred taxes at the companies abroad were calculated using the applicable country-specific tax rates.

Tax-relevant bookings on the Group level are made using the Group tax rate unless they refer specifically to individual companies.

Deferred tax liabilities on profit distributions of significant affiliated companies are established in the year when they are received.

Breakdown of taxes on income

The breakdown of actual and deferred income taxes was as follows:

Income tax	N 89	
in EUR thousand	2019	2018
Actual tax for the year under review	283,293	328,355
Actual tax for other periods	(59,880)	(33,330)
Deferred taxes due to temporary differences	(52,274)	562,259
Deferred taxes from loss carry-forwards	218,413	(473,668)
Change in deferred taxes due to changes in tax rates	100	(3,160)
Value adjustments on deferred taxes	3,079	(7,595)
Total	392,731	372,861

Domestic/foreign breakdown of recognised tax expenditure/income	N 90	
in EUR thousand	2019	2018
Actual taxes		
Germany	143,045	249,690
Abroad	80,368	45,335
Deferred taxes		
Germany	130,087	30,306
Abroad	39,231	47,530
Total	392,731	372,861

The following table presents a breakdown of the deferred tax assets and liabilities into the balance sheet items from which they are derived.

Deferred tax assets and deferred tax liabilities of all Group companies

N 91

in EUR thousand	2019	2018
Deferred tax assets		
Tax loss carry-forwards	401,647	610,922
Loss and loss adjustment expense reserves	404,555	413,488
Benefit reserve	121,291	191,162
Other technical/non-technical provisions	60,166	79,217
Funds withheld	96,482	84,627
Deferred acquisition costs	7,308	6,149
Accounts receivable/reinsurance payable	62,339	13,714
Valuation differences relating to investments	48,302	69,640
Contract deposits	527,813	504,403
Other valuation differences	12,488	57,460
Value adjustments ¹	(69,906)	(69,102)
Total	1,672,485	1,961,680
Deferred tax liabilities		
Loss and loss adjustment expense reserves	51,135	129,821
Benefit reserve	1,277,185	1,307,439
Other technical/non-technical provisions	22,534	64,601
Equalisation reserve	1,141,661	1,063,392
Funds withheld	14,260	8,492
Deferred acquisition costs	190,234	178,598
Accounts receivable/reinsurance payable	158,235	133,223
Valuation differences relating to investments	359,679	70,868
Contract deposits	105,289	168,049
Other valuation differences	99,176	82,671
Total	3,419,388	3,207,154
Deferred tax liabilities	1,746,903	1,245,474

¹ Thereof on tax loss carry-forwards: EUR -69,906 thousand (EUR -68,488 thousand)

The deferred tax assets and deferred tax liabilities are shown according to their origin in the above table. Deferred taxes resulting from a single transaction and with respect to which the corresponding temporary valuation differences are simultaneously reversed were already netted on recognition. Fur-

ther netting was made based on the timing of the reversal of temporary differences and other offsetting possibilities, ultimately resulting in the following disclosure of deferred tax assets and deferred tax liabilities in the balance sheet:

Netting of deferred tax assets and deferred tax liabilities

N 92

in EUR thousand	2019	2018
Deferred tax assets	442,469	454,608
Deferred tax liabilities	2,189,372	1,700,082
Net deferred tax liabilities	1,746,903	1,245,474

In view of the unrealised components of profit and loss recognised directly in equity in the financial year, actual and deferred tax expenditure – including amounts attributable to non-controlling interests – of EUR -331.9 million (EUR 186.7 million) was also recognised directly in equity. The following

table presents a reconciliation of the expected expense for income taxes with the actual expense for income taxes reported in the statement of income. The pre-tax result is multiplied by the Group tax rate in order to calculate the Group's expected expense for income taxes.

Reconciliation of the expected expense for income taxes with the actual expense

N 93

in EUR thousand	2019	2018
Profit before taxes on income	1,766,097	1,518,388
Group tax rate	32.7%	32.7%
Expected expense for income taxes	577,514	496,513
Change in tax rates	100	(3,160)
Differences in tax rates affecting subsidiaries	(154,368)	(72,848)
Non-deductible expenses	45,842	47,807
Tax-exempt income	(81,961)	(37,374)
Tax expense/income not attributable to the reporting period	24,178	(26,752)
Value adjustments on deferred taxes/loss carry-forwards	3,079	(7,595)
Trade tax modifications	(26,312)	(27,288)
Other	4,659	3,558
Actual expense for income taxes	392,731	372,861

The expense for income taxes in the financial year was EUR 19.9 million higher than in the previous year at EUR 392.7 million (EUR 372.9 million). Despite a higher pre-tax profit,

the effective tax rate of 22.2% (24.6%) was lower than in the previous year due to increased tax-privileged income.

Availability of non-capitalised loss carry-forwards

Unused tax loss carry-forwards, deductible temporary differences and tax credits of EUR 1,899.4 million (EUR 2,924.7 million) existed as at the balance sheet date. In the previous year a capitalised loss of USD 332.5 million was recognised for Hannover Life Reassurance Company of America (Bermuda) Ltd., which at this time was based on an estimation of tax implications. When the tax return was subsequently prepared, management established that the amount of the provisions for tax purposes in 2018 had to be corrected. As a consequence of this, the amount recognised for the loss carry-forwards was also too high by USD 112.1 million. The corrected capitalised loss carry-forward amounts to USD 220.4 million. This did not have any impact on the income recognition and balance sheet reporting. Of existing tax loss carry-forwards, EUR 330.3 million (EUR 329.4 million) was not capitalised in consideration of local tax rates because their realisation is not sufficiently certain.

In the year under review the actual taxes on income were reduced by EUR 0.1 million (EUR 2.2 million) because loss carry-forwards were used for which no deferred tax assets were established.

The write-down of deferred tax assets recognised in previous years resulted in a deferred tax expense of EUR 2.8 million (EUR 0.8 million) in the year under review. This is not opposed by any deferred tax income (previous year: EUR 6.3 million) from the reversal of earlier write-downs.

Excess deferred tax assets are recognised with respect to losses in the year under review or in the previous year only to the extent that, based on strong evidence, it is likely that the company concerned will generate sufficiently positive taxable results in the future. This evidence was provided for deferred tax assets of EUR 21.0 million (EUR 40.5 million).

The assets-side unadjusted deferred taxes on loss carry-forwards and tax credits amounting to EUR 332.4 million (EUR 545.6 million) will probably be realised in an amount of EUR 15.2 million (EUR 18.1 million) within one year and in an amount of EUR 317.2 million (EUR 527.5 million) in the subsequent years.

No deferred taxes were established on liabilities-side taxable temporary differences amounting to EUR 43.5 million (EUR 40.6 million) in connection with interests in Group companies because the Hannover Re Group can control their reversal and will not reverse them in the foreseeable future.

Availability of loss carry-forwards that have not been capitalised:

Expiry of non-capitalised loss carry-forwards and temporary differences

N 94

in EUR thousand	One to five years	Six to ten years	More than ten years	Unlimited	Total
Temporary differences	–	–	–	–	–
Loss carry-forwards	–	–	8,572	321,715	330,287
Total	–	–	8,572	321,715	330,287

8. Other notes

8.1 Derivative financial instruments and financial guarantees

Derivatives are financial instruments, the fair value of which is derived from an underlying trading instrument such as equities, bonds, indices or currencies. We use derivative financial instruments in order to hedge parts of our portfolio against interest rate and market price risks, optimise returns or realise intentions to buy/sell. In this context we take special care to limit the risks, select first-class counterparties and adhere strictly to the standards defined by investment guidelines.

The fair values of the derivative financial instruments were determined on the basis of the market information available at the balance sheet date. Please see section 3.2 “Summary of major accounting policies” with regard to the measurement models used.

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 1.5 million (EUR 0.5 million) and other financial assets at fair value through profit or loss in an amount of EUR 0 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 15.9 million (EUR 6.1 million) and other financial assets at fair value through profit or loss in an amount of EUR 5.9 million (EUR 16.4 million). The increase in equity from hedging instruments recognised directly in equity pursuant to IAS 39 in an amount of EUR 0.3 million (EUR 2.9 million) derived solely 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 0.3 million (EUR 3.8 million) and other liabilities of EUR 0.3 million (EUR 0 million). Ineffective components of the hedge were recognised in profit or loss in a negligible amount under other investment income.

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 has taken out hedges since 2014 in the form of so-called equity swaps. The fair value of these instruments amounted to EUR 5.9 million (EUR 1.0 million) as at the balance sheet date and was recognised under other financial assets at fair value through profit or loss. The hedge gave rise to an increase in equity from hedging instruments recognised directly in equity in an amount of EUR 7.8 million (EUR 0.3 million). Ineffective components of the hedge were recognised in a minimal amount under other investment income.

The maturities of the fair values and notional values of the hedging instruments described above can be broken down as follows:

Maturity structure of derivative financial instruments

N 95

in EUR thousand	2019			31.12.2019
	Less than one year	One to five years	Five to ten years	
Interest rate hedges				
Fair values	(84)	(1,371)	–	(1,455)
Notional values	4,623	89,706	–	94,329
Currency hedges				
Fair values	(10,001)	221	(160)	(9,940)
Notional values	1,656,799	200,143	16,000	1,872,942
Share price hedges				
Fair values	5,871	–	–	5,871
Notional values	23,946	–	–	23,946
Total hedging instruments				
Fair values	(4,214)	(1,150)	(160)	(5,524)
Notional values	1,685,368	289,849	16,000	1,991,217

Maturity structure of derivative financial instruments

N 96

in EUR thousand	2018			31.12.2018
	Less than one year	One to five years	Five to ten years	
Interest rate hedges				
Fair values	13	35	–	48
Notional values	65,213	33,822	–	99,035
Currency hedges				
Fair values	13,202	(2,980)	–	10,222
Notional values	886,485	10,670	–	897,155
Share price hedges				
Fair values	988	–	–	988
Notional values	24,572	–	–	24,572
Total hedging instruments				
Fair values	14,203	(2,945)	–	11,258
Notional values	976,270	44,492	–	1,020,762

The net changes in the fair value of these instruments reduced the result of the financial year by EUR 0.7 million (improvement in the result of EUR 3.2 million).

Hannover Re enters into derivative transactions on the basis of standardised master agreements that contain global netting agreements. The netting agreements set out below nor-

mally do not meet the criteria for netting in the balance sheet, since Hannover Re has no legal right whatsoever at the present moment in time to netting of the recognised amounts. The right to netting can, as a matter of principle, only be enforced upon occurrence of certain future defined events. Collateral furnished or received is recognised per counterparty up to at most the amount of the respective net liability or net asset.

Netting agreements

N 97

in EUR thousand	2019				Net amount
	Fair value	Netting agreement	Cash collateral received/ furnished	Other collateral received/ furnished	
Derivative receivables	12,087	2,565	8,471	–	1,051
Derivative liabilities	15,879	2,565	4,040	8,262	1,012

in EUR thousand	2018				Net amount
	Fair value	Netting agreement	Cash collateral received/furnished	Other collateral received/furnished	
Derivative receivables	17,349	573	15,312	–	1,464
Derivative liabilities	6,140	573	304	4,638	625

Derivative financial instruments in connection with reinsurance

A number of treaties in life and health reinsurance meet criteria which require application of the stipulations contained in IFRS 4 “Insurance Contracts” governing embedded derivatives. These accounting regulations require that certain derivatives embedded in reinsurance contracts be separated from the underlying insurance contract (“host contract”), reported separately at fair value in accordance with IAS 39 “Financial Instruments: Recognition and Measurement” and recognised under investments. Fluctuations in the fair value of the derivative components are to be recognised through profit and loss in subsequent periods.

Within the scope of the accounting of “modified coinsurance” and “coinsurance funds withheld” (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 values 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 has no value 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 derivative had a positive value of EUR 23.2 million (EUR 14.0 million) as at the balance sheet date and was recognised under other financial assets at fair value through profit or loss. In this connection an external cession led to recognition of other liabilities in an amount of EUR 0.7 million (EUR 0 million). In total, the change in the fair value of the derivative over the course of the year gave rise to income of EUR 8.1 million before tax (expense of EUR 11.9 million).

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 25.9 million (EUR 4.8 million).

The performance of this derivative improved the result by EUR 20.2 million in the financial year (decrease in the result of EUR 2.6 million).

A number of transactions concluded in the Life & Health reinsurance business group in previous years, under which Hannover Re companies offer their contracting parties coverage for risks from possible future payment obligations arising out of hedging instruments, are also to be classified as derivative financial 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 categorised and recognised as stand-alone credit derivatives pursuant to IAS 39. These derivative financial instruments were carried in equity on initial recognition. Please see section 6.6 “Other assets”. The fair value of these instruments was EUR 43.7 million (EUR 53.2 million) on the balance sheet date and was recognised under other financial assets at fair value through profit or loss. The change in value in subsequent periods is dependent upon the risk experience and led to an improvement of EUR 37.8 million (EUR 32.9 million) in investment income in the financial year.

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 14.1 million (EUR 22.7 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 a charge of EUR 9.2 million (income of EUR 19.8 million). Conversely, the performance of the structured bond, which is also measured at fair value, gave rise to income (expense) in the same amount.

In the area of life and health reinsurance a reinsurance treaty with a financing component was also written in the previous

year 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 30.0 million (EUR 24.5 million) and other financial assets at fair value through profit or loss in an amount of EUR 116.7 million (EUR 79.2 million). Altogether, these arrangements gave rise to an improvement in income of EUR 6.1 million (EUR 1.9 million) in the year under review.

At the end of the 2017 financial year under review an index-linked cover was written for longevity risks. The resulting derivative was recognised as at the balance sheet date with a positive fair value of EUR 5.2 million under other financial assets at fair value through profit or loss (EUR 45.5 million

Financial guarantees

Structured transactions were entered into in the life and 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 3,345.1 million (EUR 3,268.7 million); an amount equivalent to EUR 2,742.3 million (EUR 2,623.4 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

under other liabilities). The change in the fair value of the derivative gave rise to income of EUR 5.8 million (EUR 7.1 million) in the course of the year.

All in all, application of the standards governing the accounting for derivatives in connection with the technical account led to recognition of assets totalling EUR 228.8 million (EUR 173.9 million) as well as recognition of liabilities in an amount of EUR 39.1 million (EUR 75.9 million) from the derivatives resulting from technical items as at the balance sheet date. Improvements in investment income amounting to EUR 78.0 million (EUR 62.4 million) as well as charges to income of EUR 11.7 million (EUR 14.5 million) were recognised in the year under review from all separately measured derivatives in connection with the technical account.

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 year 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 (HDI), Hannover, holds a stake of 79.0% in Talanx AG.

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. The exclusive responsibilities of E+S Rückversicherung AG for German business and of Hannover Rück SE for international markets have been preserved.

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. Divisions of Hannover Rück SE performed services in connection with the insurance and

reinsurance business of HDI Global Specialty SE, a joint venture of Hannover Rück SE and HDI Global SE.

Talanx Reinsurance Broker GmbH 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 GmbH.

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 Hannover Re's consolidation. This includes business both assumed and ceded at usual market conditions.

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

Business assumed and ceded in Germany and abroad

N 99

in EUR thousand	2019			2018		
	Property and casualty reinsurance	Life and health reinsurance	Total	Property and casualty reinsurance	Life and health reinsurance	Total
Material items in the statement of income						
Business assumed						
Premium	1,369,966	143,521	1,513,487	352,659	149,411	502,070
Underwriting result	(175,536)	22,023	(153,513)	(56,002)	24,347	(31,655)
Business ceded						
Premium	(8,098)	(58,110)	(66,208)	(3,395)	(58,792)	(62,187)
Underwriting result	(5,057)	(10,303)	(15,360)	(1,519)	(9,555)	(11,074)
Total						
Premium	1,361,868	85,411	1,447,279	349,264	90,619	439,883
Underwriting result	(180,593)	11,720	(168,873)	(57,521)	14,792	(42,729)
Material items in the balance sheet						
Assets						
Funds withheld	75,033	920,458	995,491	54,767	906,427	961,194
Deferred acquisition costs	214,466	14,265	228,731	32,651	33,153	65,804
Accounts receivable	361,572	16,049	377,621	35,491	16,050	51,541
Liabilities						
Loss and loss adjustment expense reserve	2,770,357	47,002	2,817,359	1,166,164	46,553	1,212,717
Benefit reserve	–	104,905	104,905	–	118,207	118,207
Unearned premium reserve	713,091	148	713,239	92,643	25	92,668
Contract deposits	–	788,577	788,577	–	770,066	770,066
Reinsurance payable	8,007	4,756	12,763	27,065	6,252	33,317

The significant changes in some instances compared to the previous year can be attributed very largely to business with HDI Global Specialty SE (previously trading under the name International Insurance Company of Hannover SE), which was consolidated in the previous year. With economic effect from 1 January 2019 Hannover Rück SE sold 50.22% of the

shares in the wholly-owned International Insurance Company of Hannover SE to HDI Global SE, a subsidiary of Talanx AG, for a purchase price of EUR 107.2 million.

With economic effect from 1 July 2019 FUNIS GmbH & Co. KG, Hannover, a wholly owned subsidiary of Hannover Rück

SE, sold all its shares in Svedea AB, Stockholm, to HDI Global Specialty SE, Hannover, a subsidiary of HDI Global SE, for a purchase price of EUR 52.9 million. For details of both transactions please refer to the information provided in section 4.4 "Major disposals and retirements".

In addition, other assets of EUR 3.4 million (EUR 3.4 million) as well as other liabilities of EUR 41.5 million (EUR 18.3 million) exist with respect to Talanx AG and its subsidiaries which are not part of the scope of consolidation of Hannover Re.

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 48.3 million (EUR 48.3 million) including accrued interest of EUR 1.3 million (EUR 1.3 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 Ampega Asset Management GmbH (name change in January 2019, formerly: Talanx Asset Management GmbH) performs investment and asset management services for Hannover Rück SE and the vast majority of its subsidiaries. A total amount of EUR 43.9 million (EUR 42.2 million) was expensed for the rendering of these services in the financial year just ended. Assets in special funds are managed by Ampega Investment GmbH. Ampega Real Estate GmbH (name change in January 2019, formerly: Talanx Immobilien Management GmbH) performs services for Hannover Re under a number of management contracts.

Hannover Rück SE has concluded agreements with Ampega Asset Management GmbH and with HDI Global Specialty SE

that enable these companies 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 HDI Service AG, Hannover (name change in January 2019, formerly: Talanx Service AG).

Furthermore, IT and management services were performed for Talanx Reinsurance Broker GmbH, 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 HDI Pensionsmanagement AG (name change in January 2019, formerly: 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 purchase of services for operation of data acquisition software.

Hannover Rück SE has concluded a service contract with HDI 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 use of market security services and access to the business partner information system of Hannover Rück SE.

Remuneration and shareholdings of the management boards of the parent company

The remuneration of the active members of the Executive Board of Hannover Re amounted to altogether EUR 10.9 million (EUR 8.4 million). The pension payments to previous members of the Executive Board and their surviving dependants, for whom 18 (17) pension commitments existed, totalled EUR 2.0 million (EUR 1.7 million) in the year under review; altogether, a provision of EUR 34.2 million (EUR 26.0 million) has been set aside for these commitments.

The total remuneration of the Supervisory Board of Hannover Re amounted to EUR 0.9 million (EUR 1.0 million). There are no pension commitments to former members of the Supervisory Board or their surviving dependants.

The members of the governing bodies did not receive any advances or loans in the year under review. Nor were there any other material reportable circumstances or contractual relationships as defined by IAS 24 between companies of the Hannover Re Group and the members of the governing bodies or their related parties in the year under review. Furthermore, above and beyond the aforementioned remuneration as Supervisory Board members at Group companies, the members of the Supervisory Board were not in receipt of any remuneration or benefits for personally rendered services as defined by section 5.4.6 Para. 3 of the German Corporate Governance Code.

The information required pursuant to IAS 24.17 “Related Party Disclosures” as well as all other information on the remuneration of the governing bodies, directors’ dealings and shareholdings as well as the structure of the remuneration system for the Executive Board is contained in the remunera-

tion report from page 126 onwards. With regard to the disclosures required by IAS 24.17 we would refer in particular to the tables M 89 (Total remuneration of the active members of the Executive Board), M 93 (Pension commitments) and M 94 (Individual remuneration received by the members of the Supervisory Board). The remuneration report is based on the recommendations of the German Corporate Governance Code and contains information which also forms part of the notes to the 2019 consolidated financial statement as required by IAS 24 “Related Party Disclosures”. In addition, we took into account the more specific provisions of DRS 17 “Reporting on the Remuneration of Members of Governing Bodies”. Under German commercial law, too, this information includes data specified as mandatory for the notes (§ 314 HGB) and the management report (§ 315 HGB). These details are discussed as a whole in the remuneration report. Consequently, we have not provided any further explanation in the notes.

8.3 Share-based payment

In the year under review the following share-based payment plans with cash settlement existed within the Hannover Re Group:

1. Stock Appreciation Rights Plan (in effect since 2000, cancelled in stages from 2011 onwards and currently being wound up)
2. Share Award Plan (valid since 2011)

Stock Appreciation Rights Plan

With effect from 1 January 2000 the Executive Board of Hannover Rück SE, with the consent of the Supervisory Board, introduced a virtual stock option plan that provides for the granting of stock appreciation rights to certain managerial staff. The content of the stock option plan is based solely on the Conditions for the Granting of Stock Appreciation Rights. All the members of the Group’s management are eligible for the award of stock appreciation rights. Exercise of the stock appreciation rights does not give rise to any entitlement to the delivery of shares of Hannover Rück SE, but merely to payment of a cash amount linked to the performance of the Hannover Rück SE share.

The Conditions for the Granting of Stock Appreciation Rights were cancelled for all eligible recipients. Awarded stock appreciation rights continue to be exercisable until the end of their period of validity.

Stock appreciation rights were first granted for the 2000 financial year and were awarded separately for each subsequent financial year (allocation year) until cancellation of the plan, provided the performance criteria defined in the Conditions for the Granting of Stock Appreciation Rights were satisfied.

The maximum period of the stock appreciation rights is ten years, commencing at the end of the year in which they are awarded. Stock appreciation rights which are not exercised by the end of the 10-year period lapse. Stock appreciation rights may only be exercised after a waiting period and then only within four exercise periods each year. Upon expiry of a four-year waiting period a maximum 60% of the stock appreciation rights awarded for an allocation year may be exercised. The waiting period for each additional 20% of the stock appreciation rights awarded for this allocation year to a member of the managerial staff is one further year. Each exercise period lasts for ten trading days, in each case commencing on the sixth trading day after the date of publication of the quarterly report of Hannover Rück SE.

Upon exercise of a stock appreciation right the amount paid out to the entitled party is the difference between the basic price and the current market price of the Hannover Rück SE share at the time of exercise. In this context, the basic price corresponds to the arithmetic mean of the closing prices of the Hannover Rück SE share on all trading days of the first full calendar month of the allocation year in question. The current market price of the Hannover Rück SE share at the time when stock appreciation rights are exercised is determined by the

arithmetic mean of the closing prices of the Hannover Rück SE share on the last twenty trading days prior to the first day of the relevant exercise period.

The amount paid out is limited to a maximum calculated as a quotient of the total volume of compensation to be granted in the allocation year and the total number of stock appreciation rights awarded in the year in question. In the event of cancellation or termination of the employment relationship as a consequence of a termination agreement or a set time limit, a holder of stock appreciation rights is entitled to exercise all

such rights in the first exercise period thereafter. Stock appreciation rights not exercised in this period and those in respect of which the waiting period has not yet expired shall lapse. Retirement, disability or death of the member of management shall not be deemed to be termination of the employment relationship for the purpose of exercising stock appreciation rights.

The allocations for the years 2009 to 2011 gave rise to commitments in the 2019 financial year shown in the following table. No commitments exist for years prior to 2009.

Stock appreciation rights of Hannover Rück SE

N 100

in EUR thousand	Allocation year		
	2011	2010	2009
Award date	15 March 2012	8 March 2011	15 March 2010
Period	10 years	10 years	10 years
Waiting period	4 years	4 years	2 years
Basic price (in EUR)	40.87	33.05	22.70
Participants in year of issue	143	129	137
Number of rights granted	263,515	1,681,205	1,569,855
Fair value at 31 December 2019 (in EUR)	32.21	8.92	8.76
Maximum value (in EUR)	32.21	8.92	8.76
Weighted exercise price	32.21	8.92	8.76
Number of rights existing at 31 December 2019	6,807	23,601	–
Provisions at 31 December 2019 (in EUR million)	0.22	0.21	–
Amounts paid out in the 2019 financial year (in EUR million)	0.22	0.42	0.04
Expense in the 2019 financial year (in EUR million)	–	–	–

In the 2019 financial year the waiting period expired for 100% of the stock appreciation rights awarded in 2009, 2010 and 2011. 5,050 stock appreciation rights from the 2009 allocation year, 46,665 stock appreciation rights from the 2010 allocation year and 6,754 stock appreciation rights from the 2011 allocation year were exercised. The total amount paid out stood at EUR 0.68 million.

Share Award Plan

With effect from the 2011 financial year the Supervisory Board of Hannover Rück SE implemented a Share Award Plan for the members of the Executive Board of Hannover Re; this provides for the granting of stock participation rights in the form of virtual shares (referred to as “share awards”). The Executive Board of Hannover Re decided to adopt a Share Award Plan for certain management levels at Hannover Re as well with effect from the 2012 financial year.

The Share Award Plan replaced the cancelled Stock Appreciation Rights Plan. The share awards do not establish any

claim against Hannover Re to the delivery of stock, but merely to payment of a cash amount in accordance with the conditions set out below.

The members of the Executive Board and management of Hannover Re who are eligible recipients under the Share Award Plan are those who have been allowed a contractual claim to the granting of share awards and whose service/employment relationship exists at the time when the share awards are granted and does not end through cancellation or

a termination agreement on an effective date prior to expiry of the vesting period.

Share awards were granted separately for the first time for the 2011 financial year and then for each financial year (allocation year) thereafter. The first payout of share awards took place in the 2016 financial year for those share awards that had been allocated in the 2011 financial year to the eligible members of the Executive Board. In the 2017 financial year the first payout was also made to the participating senior executives.

The total number of share awards granted is based on the value per share of Hannover Rück SE. The value per share is established according to the unweighted arithmetic mean of the Xetra closing prices of the Hannover Re share. In the conditions applicable to members of the Executive Board a period of five trading days before to five trading days after the meeting of the Supervisory Board that approves the consolidated financial statement for the financial year just-ended is envisaged for the calculation. For senior executives a period of twenty trading days before to ten trading days after the meeting of the Supervisory Board that approves the consolidated financial statement for the financial year just-ended has been agreed. The prices calculated in this way also determine the payout value of the share awards that have become payable. The total number of share awards granted is established by dividing the amount available for the granting of share awards to the respective eligible recipients by the value per share, rounded up to the next full share. For members of the Executive Board 20% and for senior executives 40% or 35% – according to management levels – of the defined variable remuneration shall be granted in the form of share awards.

The share awards are granted automatically without any requirement for a declaration. Following expiry of a vesting period of four years the value of one Hannover Re share calculated at the disbursement date is paid out for each share award. This value is calculated according to the provisions of the preceding paragraph.

The eligible recipient shall be paid an amount that corresponds to the sum total of the values of the share awards calculated at the disbursement date for which the vesting period of four years has expired. The amount is to be paid in the month after expiry of the determinative period for calculating the value per share according to the preceding paragraphs.

In addition, upon payment of the value of the share awards, a sum shall be paid out in the amount of the dividend insofar as dividends were distributed to shareholders. The amount of the dividend is the sum total of all dividends per share paid out during the term of the share awards multiplied by the number of share awards due for disbursement to the eligible recipient at the disbursement date. In the event of early disbursement of the share awards, the value of the dividends shall only be paid out for the period until occurrence of the event that triggers early disbursement. No pro rata allowance shall be made for dividends that have not yet been distributed.

In the event that the Board mandate or service relationship with the member of the Executive Board or the employment relationship with the manager ends, the eligible recipient shall retain his claims to payment of the value of already granted share awards after expiry of the applicable vesting period, unless such termination is based on resignation of office/voluntary termination on the part of the member of the Executive Board or voluntary termination on the part of the manager or dismissal by Hannover Re for a compelling reason. In the event of death the claims arising out of the already granted and/or still to be granted share awards pass to the heirs.

Any entitlement to the granting of share awards after leaving the company is excluded. This shall not apply with respect to claims to variable remuneration acquired (pro rata) in the last year of service of the eligible recipient in the event of exit from the company on account of non-reappointment, occurrence of the pensionable event or death.

The Share Award Plan of Hannover Rück SE gives rise to the amounts shown in the following table.

	Allocation year								
	2019	2018		2017		2016		2015	
	Anti- cipated allocation	Final allocation 2019 for 2018	Anti- cipated allocation	Final allocation 2018 for 2017	Anti- cipated allocation	Final allocation 2017 for 2016	Anti- cipated allocation	Final allocation 2016 for 2015	Anti- cipated allocation
Valuation date									
Executive Board	30.12.2019	14.03.2019	28.12.2018	16.03.2018	29.12.2017	16.03.2017	30.12.2016	17.03.2016	30.12.2015
Senior executives	30.12.2019	21.03.2019	28.12.2018	23.03.2018	29.12.2017	23.03.2017	30.12.2016	24.03.2016	30.12.2015
Value per share award in EUR									
Executive Board	172.30	129.60	117.70	111.65	104.90	107.15	102.80	97.64	105.65
Senior executives	172.30	129.38	117.70	111.32	104.90	107.03	102.80	95.30	105.65
Number of allocated share awards in the allocation year									
Executive Board	7,278	7,882	9,010	9,060	9,537	10,244	10,704	11,244	9,355
Senior executives	45,103	58,471	67,421	57,642	64,902	77,325	81,322	79,383	65,107
Other adjustments ¹	-	-	-	(2,325)	-	(5,634)	-	(6,096)	-
Total	52,381	66,353	76,431	64,377	74,439	81,935	92,026	84,531	74,462

¹ This figure results from originally granted share awards that have since lapsed.

Development of the provision for share awards of Hannover Rück SE

in EUR thousand	Allocation year							Total
	2019	2018	2017	2016	2015	2014	2013	
Allocation 2013	-	-	-	-	-	-	1,426	1,426
Allocation 2014	-	-	-	-	-	1,534	2,364	3,898
Allocation 2015	-	-	-	-	1,658	3,102	4,288	9,048
Allocation 2016	-	-	-	1,918	2,429	1,920	2,177	8,444
Allocation 2017	-	-	1,559	2,127	2,284	2,409	2,861	11,240
Allocation 2018	-	2,018	2,002	2,739	2,920	3,263	1,212	14,154
Utilisation 2018	-	-	-	-	-	-	14,328	14,328
Provision at 31 December of the previous year	-	2,018	3,561	6,784	9,291	12,228	-	33,882
Allocation 2019	1,895	2,963	3,832	5,628	6,664	1,097	-	22,079
Utilisation 2019	-	-	-	-	-	13,047	-	13,047
Release 2019	-	-	195	225	264	278	-	962
Provision at 31 December of the year under review	1,895	4,981	7,198	12,187	15,691	-	-	41,952

The aggregate provision – recognised under the sundry non-technical provisions – amounted to EUR 42.0 million (EUR 33.9 million) as at the balance sheet date.

The personnel expense for share awards in the case of members of the Executive Board is spread on an accrual basis across the relevant term of the share awards or the shorter term of the service contracts; in the case of senior executives the personnel expense is spread across the relevant term of the share awards. The allocation of the financial year recognised in the expenditures on personnel totalled altogether

EUR 22.1 million (EUR 14.2 million). This consists of the expense for share awards of the 2019 financial year as well as the dividend claim and the additionally earned portion of the share awards granted in earlier financial years. The value of the share awards finally granted is also influenced by movements in the share price. The sum total of the dividends included in the expenditures on personnel for earlier financial years amounted to EUR 1.6 million (EUR 1.6 million). The distributed dividend is recognised, with no allowance made for expected dividend payments. Dividend claims are recognised in the discounted amounts.

In the year under review the 10,299 share awards of the Executive Board finally allocated in 2014 with a value of EUR 129.60 each plus the dividend entitlement of EUR 19.00 were paid out to the eligible members of the Executive Board. The 79,104 share awards of the senior executives for the 2014 financial year were paid out in 2019 with a value of EUR 129.38 each plus the dividend entitlement of EUR 19.00. The allocation to the provision for the 2014 share awards results from the difference between the share price as at the last balance

sheet date (EUR 117.70) and the price from March 2019 on which the payout of the share awards was based (EUR 129.60 and EUR 129.38 respectively).

With regard to the effects of the equity swaps taken out to hedge price risks, please see our explanatory remarks in section 8.1 “Derivative financial instruments and financial guarantees”.

8.4 Staff and expenditures on personnel

Staff

The average number of staff at the companies included in the consolidated financial statement of the Hannover Re Group during the reporting period was 3,151 (3,272). As at the balance sheet date altogether 3,083 (3,317) staff were employed

by the Hannover Re Group, with 1,396 (1,426) employed in Germany and 1,687 (1,891) working for the consolidated Group companies abroad.

Personnel information

N 103

	2019					2018	
	31.3.	30.6.	30.9.	31.12.	Average	31.12.	Average
Number of employees (excluding Board members)	3,149	3,169	3,038	3,083	3,151	3,317	3,272

Expenditures on personnel

The expenditures on insurance business, claims expenses (claims settlement) and expenditures on the administration of investments include the following personnel expenditures:

Personnel expenditures

N 104

in EUR thousand	2019	2018
a) Wages and salaries	281,945	287,012
	281,945	287,012
b) Social security contributions and expenditure on provisions and assistance		
ba) Social security contributions	20,749	26,928
bb) Expenditures for pension provision	24,245	26,117
bc) Expenditures for assistance	4,281	4,067
	49,275	57,112
Total	331,220	344,124

8.5 Earnings per share and dividend proposal

Calculation of the earnings per share

N 105

	2019	2018
Group net income in EUR thousand	1,284,167	1,059,493
Weighted average of issued shares	120,596,994	120,596,995
Basic earnings per share in EUR	10.65	8.79
Diluted earnings per share in EUR	10.65	8.79

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 year under review nor in the previous reporting period were there any dilutive effects. The weighted average of the issued shares was, as in the previous year, slightly lower than the value of the shares in circulation on the balance sheet date. In the context of the employee share option plan Hannover Re acquires treasury shares and sells them at a later date to eligible employees. The weighted average

Dividend per share

A dividend of EUR 633.1 million (EUR 603.0 million) was paid in the year under review for the 2018 financial year.

It will be proposed to the Annual General Meeting on 6 May 2020 that a dividend of EUR 4.00 per share as well as a special

number of shares does not include 16,467 (16,530) treasury shares pro rata temporis for the duration of the holding period. For further details please see our comments in section 6.13 “Shareholders’ equity 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.

dividend of EUR 1.50 per share should be paid for the 2019 financial year. This corresponds to a total distribution of EUR 663.3 million. The dividend proposal does not form part of this consolidated financial statement.

8.6 Lawsuits

Member companies of the Hannover Re Group are involved in judicial and supervisory procedures as well as in arbitration proceedings as part of the conduct of insurance and reinsurance business. Depending upon the subject matter of the procedure, the Hannover Re Group sets aside provisions for the amount in dispute in such proceedings – for the most part in the technical account and in exceptional cases as a charge to other income/expenses – if and to the extent that the resulting commitments are likely to materialise and their amount can be estimated with sufficient accuracy. The provision established in each case covers the expense that can be expected in our assessment as at the balance sheet date.

Neither the outcome nor the duration of pending procedures can be definitively foreseen at the time when provisions are established. The final liabilities of Hannover Re may diverge considerably from the constituted provisions because the assessment of probability and the quantification of these uncertain liabilities in large measure require estimates that may prove not to be accurate as the proceedings in question con-

tinue to progress. This is also true of procedures for which no provisions were established. Insofar as a commitment exists under such procedures as at the balance sheet date that may possibly but will probably not result in a loss, the Hannover Re Group estimates this potential loss – where practicable – and reports a contingent liability. For estimation purposes Hannover Re takes into account a number of factors. These include, among others, the nature of the claim, the status of the procedure concerned, decision of courts and arbitration bodies, prior settlement discussions, experience from comparable cases as well as expert opinions and the assessments of legal advisers and other experts. If a provision has been established for a particular procedure, a contingent liability is not recognised.

The lawsuits pending in the year under review and as at the balance sheet date were not material for the Hannover Re Group either individually or combined. Furthermore, there were no contingent liabilities from lawsuits to report as at the balance sheet date.

8.7 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 4,135.7 million (EUR 3,904.8 million) and EUR 172.4 million (EUR 132.3 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 3,155.7 million (EUR 2,555.3 million) in the form of so-called "single trust funds". This amount includes a sum equivalent to EUR 2,716.6 million (EUR 2,042.6 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 2,994.2 million (EUR 2,915.0 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.

Letter of credit (LoC) facilities existed with a number of financial institutions as at the balance sheet date in a total volume equivalent to EUR 3,039.5 million (EUR 2,417.3 million) and with various terms maturing at the latest in 2023.

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 1,568.1 million (EUR 1,330.3 million).

A number of LoC facilities include standard market contractual clauses that allow the banks rights of cancellation in the event of material changes in our shareholding structure or trigger a requirement on the part of Hannover Re to furnish collateral upon materialisation of major events, for example if our rating is significantly downgraded. Please see also our explanatory remarks in the "Financial position" section of the management report, page 63 et seq., on the information pursuant to § 315a Para. 1 German Commercial Code (HGB).

We put up own investments with a book value of EUR 12.9 million (EUR 5.6 million) as collateral for existing derivative transactions. We received collateral with a fair value of EUR 10.5 million (EUR 15.6 million) for existing derivative transactions.

As security for liabilities 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 700.9 million (EUR 647.4 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 1,429.9 million (EUR 1,326.4 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 provided an open-ended guarantee limited to EUR 11.1 million in favour of the pension fund "The Congregational & General Insurance Plc Pension and Life Assurance Scheme" 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 Re 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.

8.8 Leases

Leased properties

Hannover Re leases various office premises, technical facilities, office equipment and vehicles. A long-term land lease agreement also exists in connection with investment property.

The following items were recognised in the balance sheet as at 31 December 2019 in connection with leases.

Leases in the balance sheet

N 106

in EUR thousand	2019
Investment property	34,727
Own-use property	47,390
Fixtures, fittings and equipment	158
Sundry assets	3,022
Lease liabilities	89,201

The allocation to the right-of-use assets amounted to EUR 10.0 million in the financial year.

The following amounts were recognised in the statement of income in connection with leases.

Amortisation of right-of-use assets in connection with leases

N 107

in EUR thousand	2019
Investment property	438
Own-use real estate	11,291
Fixtures, fittings and equipment	200
Sundry assets	1,490
Total	13,419

The interest expenses for lease liabilities totalled EUR 3.9 million. Expenses in connection with short-term leases were recognised in an amount of EUR 1.2 million. The total amounts payable for leases came to EUR 12.4 million. Non-cancellable future minimum payments payable in connection with leases for which the contract inception date has already occurred but which have still to commence exist in an amount of EUR 4.0 million.

Rented properties

Future minimum lease payments receivable

N 108

in EUR thousand	Amounts receivable
2020	106,924
2021	101,581
2022	93,562
2023	84,369
2024	69,681
Subsequent years	256,427

The rental payments receivable result from the long-term renting out of properties by the Group's real estate companies. The leases in question are operating leases. The rental income received in the financial year amounted to EUR 145.4 million.

8.9 Fee paid to the auditor

At its meeting on 8 March 2018 the Supervisory Board of Hannover Re appointed PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC GmbH) as the auditor of the consolidated financial statement of Hannover Re as de-

finied by § 318 German Commercial Code (HGB). The expense recognised for the fees paid to PwC GmbH and worldwide member firms of PwC International Limited (PwC) in the year under review can be broken down as follows:

Fee paid to the auditor

N 109

in EUR thousand	2019		2018	
	PwC worldwide	thereof PwC GmbH	PwC worldwide	thereof PwC GmbH
Services relating to auditing of the financial statements	8,345	2,430	7,521	2,671
Other assurance services	293	97	74	36
Tax consultancy services	74	65	11	11
Other services	85	82	202	–
Total	8,797	2,674	7,808	2,718

The fee for services relating to auditing of the financial statements performed by PwC GmbH includes above all the fees for the auditing of the consolidated financial statement including legally required extensions of the mandate, the review report on the interim report as well as audits of annual financial statements and audits of the Solvency II balance sheets of the subsidiaries included in the consolidated financial statement.

The fees for other assurance services relate to legally or contractually required audits. A further distinction is made for

fees for tax consultancy services. The fees for other services encompass, for example, consultancy services in connection with valuation services.

The auditor responsible for performance of the audit engagement as defined by § 38 Para. 2 of the Professional Charter for Accountants/Certified Auditors (Berufssatzung WP/vBP) as amended on 21 June 2016 is Mr. Mathias Röcker. He first served as the engagement partner responsible for the audit of the annual and consolidated financial statements effective 31 December 2018.

8.10 Events after the balance sheet date

No significant events beyond the scope of ordinary business activities have occurred since the balance sheet date.

Hannover, 6 March 2020

Executive Board



Henchoz



Althoff



Chèvre



Dr. Miller



Dr. Pickel



Sehm



Vogel

Independent Auditor's Report

(this auditor's report is issued on financial statements prepared in German language)

to Hannover Rück SE, Hannover

Report on the audit of the consolidated financial statement and the Group management report

Audit opinions

We have audited the consolidated financial statements of Hannover Rück SE, Hannover, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2019, and the consolidated statement of comprehensive income, consolidated statement of profit or loss, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from 1 January to 31 December 2019, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Hannover Rück SE, which is combined with the Company's management report, for the financial year from 1 January to 31 December 2019. In accordance with the German legal requirements, we have not audited the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of Ger-

man commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2019, and of its financial performance for the financial year from 1 January to 31 December 2019, and

- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis of the audit opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany]

(IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our

other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that

the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key audit matters in the auditing of the consolidated financial statement

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2018. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

- (1) Fair value measurement of certain financial instruments
- (2) Measurement of provisions for claims outstanding in the property reinsurance business segment
- (3) Measurement of premium reserves
- (4) Calculation of estimated gross premium

Our presentation of these key audit matters has been structured in each case as follows:

- (a) Matter and issue
- (b) Audit approach and findings
- (c) Reference to further information

Hereinafter we present the key audit matters:

(1) Fair value measurement of certain financial instruments

- (a) In the Company's consolidated financial statements financial instruments amounting to EUR 58,903.2 million (82,6% of total assets) are reported.

Of these financial instruments, financial assets amounting to EUR 41,762.0 million are measured at fair value. Of those financial instruments in turn, the fair value of EUR 41,244.1 million is calculated using valuation models or based on third-party value indicators. The measurement of financial instruments whose fair value must be determined based on valuation models and third-party value indicators is subject to uncertainty because the most recent market data or comparable figures are not always available and therefore estimated values and parameters that cannot be currently observed on the market are also used.

Financial instruments measured using models are subject to an increased measurement risk due to their lower objectivity and the underlying judgments, estimates and as-

sumptions of the executive directors. Since the estimates and assumptions, in particular with regard to interest rates and cash flows, and the valuation methods applied could materially affect the measurement of these financial instruments and the assets, liabilities and financial performance of the Group and also extensive disclosures in the note to the consolidated financial statements on measurement methods and scope of judgments are necessary, this matter was of particular significance in the context of our audit.

- (b) During our audit, we analyzed the financial instruments based on valuation models and third-party value indicators, with the focus on measurement uncertainties. Thereby, we assessed the appropriateness and effectiveness of the relevant controls for the measurement of these financial instruments and the model validation. Therewith, we evaluated, among other things, the integrity of the underlying data and the process for at the determination of the assumptions and estimates used in the valuation.

With the help of our internal financial mathematics specialists, we also assessed the appropriateness of the methods applied by the executive directors to test the assets for impairment and the inputs used for that purpose. We have compared the methods and assumptions used to calculate valuation adjustments in the financial year with recognized practices and industry standards and ascertained to what extent these are suitable for determining an appropriate accounting treatment.

Based on our audit procedures performed, we were able to satisfy ourselves that the methods and assumptions

used by the executive directors to measure certain financial instruments (valued based on models and third-party value indicators) are suitable overall and that the disclosures contained in the notes to the consolidated financial statements are appropriate.

- (c) The Company's disclosures on the measurement of the financial instruments are contained in the sections "Accounting policies" and "Notes to the individual items of the balance sheet", subsection "Assets under own management" of the notes to the consolidated financial statements.

(2) Measurement of provisions for claims outstanding in the property reinsurance business segment

- (a) In the consolidated financial statements of the Company technical provisions ("claims provisions") amounting to EUR 32,996.2 million (46.2% of total assets) are reported under the "Provisions for unsettled claims" balance sheet item. Of that amount, EUR 28,364.4 million was attributable to the Property reinsurance segment.

The claims provisions under property reinsurance are estimated taking into account cedant information based on empirical values. The provision is measured based on actuarial methods, which require a sufficiently long data history and stability of the observed data. The mathematical methods use assumptions concerning premiums, ultimate loss ratios and run-off patterns, which are based on an expert estimate derived from past experience. The executive directors calculate the amount of the claims provisions taking into account.

The determination of the claims provision required the use of judgments, estimates and assumptions by the executive directors. Minor changes to those assumptions or to the methods used may have a material impact on the measurement of this provision.

Against this background and also due to the material significance of the amount of this provision for the assets, liabilities and financial performance of the Group, the measurement of this provision was of particular significance in the context of our audit.

- (b) Given the significance of claims provisions, as part of our audit we assessed together with our actuaries the methods used by the Company and the assumptions made by the executive directors. The assessment was based on our industry expertise and experience, among other things.

Among other things, we evaluated the appropriateness of the design of the process for recognizing reserves as well as carried out functional tests in order to assess the effectiveness of the internal controls. We focused in particular on controls designed to ensure that the data used are appropriate and complete and that the calculation process is subject to a sufficient form of quality assurance.

Based on the controls testing, we carried out additional analytical and substantive audit procedures relating to the measurement of the claims provision. In light of the significance of the claims provision for the overall business of the Company, our internal measurement specialists assessed the appropriateness of the methods used by the Company. Furthermore, our internal measurement specialists evaluated the models used by the Company and assumptions made by the executive directors based on industry expertise and experience with recognized actuarial practice. Thereby, we verified the valuation methods for consistency of use.

Based on our audit procedures, we were able to satisfy ourselves that the estimates and assumptions made by the executive directors with respect to the claims provisions are appropriate overall.

- (c) The Company's disclosures on the property reinsurance claims provisions are contained in the sections "Accounting policies" and "Notes to the individual items of the balance sheet", subsection "technical provisions" of the notes to the consolidated financial statements. Disclosures on risks are contained in the group management report in the section "Risk report", subsection "Technical risks of property reinsurance".

(3) Measurement of premium reserves

- (a) In the consolidated financial statements technical provisions amounting to EUR 9,028.0 million (12.7% of total consolidated assets) are reported under the “Premium reserves” balance sheet item. The premium reserves were recognized primarily for the reinsurance activities in the life and health reinsurance segments.

The premium reserve is measured by using actuarial methods to derive the present value of future benefits to cedants, less the present value of premiums still to be paid by cedants in future. The respective policies are initially recognized in accordance with recognized accounting bases. Depending on the structure of the relevant policy and the regular business, the calculation is based either on a combination of available cedant settlements, where necessary adjusted to account for estimates of the course of the policy for settlement periods not yet settled or based on model-driven own calculations of the premium reserve. In so doing, actuarial assumptions must be made with respect to interest rates, investment yields, mortality, invalidity, longevity, costs and future behavior of policyholders.

Annual appropriateness tests are conducted to verify at the level of portfolios subject to standardized management whether the technical provisions calculated as of the reporting date in accordance with the accounting bases used upon initial recognition, and hence the premium reserve in particular, less existing deferred costs of concluding the policy, are sufficient to cover the present value of future benefits as best estimated at the balance sheet date, less the present value of contributions to be paid in connection with the standardized managed portfolios.

The estimate of the sufficiency of the reported premium reserves, the estimates made in the absence of cedant settlements as well as model-driven calculations of the premium reserve is subject to considerable scope for judgment on the part of the executive directors and the associated uncertainties in the estimations made.

Against this background and due to the material significance of the amount of the premium reserves for the assets, liabilities and financial performance of the Group as well as the complexity of the underlying calculations, this matter was of particular significance in the context of our audit.

- (b) Given the significance of premium reserves, as part of our audit we assessed together with our actuaries the methods used by the Company and the assumptions made by the executive directors. The assessment was based on our industry expertise and experience, among other things.

For the purposes of the assessment, we also evaluated the design and effectiveness of the controls established by the Company for the purpose of calculating and recording the premium reserves. We focused in particular on controls designed to ensure that new products and policies are correctly classified and that changes in assumptions are correctly implemented in the systems.

Based on the controls testing, we carried out additional analytical and substantive audit procedures relating to the measurement of the premium reserves. With the help of our actuaries, we have compared the respective actuarial methods applied and the material assumptions with generally recognized actuarial practices and industry standards and ascertained to what extent these are appropriate for the valuation. In our tests of details procedures we evaluated the correct and proper use of the available cedant settlements for calculating the premium reserves. Thereby, we also assessed the appropriateness of the material assumptions by analyzing how the actuarial methods applied were derived.

Based on the tests of appropriateness conducted, we assessed whether the accounting bases and methods were appropriately applied. Where market rates of interest were used in the valuation, we verified the appropriateness of the discount rates used by comparing these with observable market parameters. Given the significance of the business for the Group, we focused in particular on the appropriateness test for the business of covering mortality risks in the USA in the Mortality Solutions division. Furthermore, we analyzed the development of premium reserves as compared to the previous year, particularly in light of the fact that the assumptions consistently correspond to the currently available cedant information, current business developments of the cedants and our expectations based on market observations.

Based on our audit procedures, we were able to satisfy ourselves that the methods and assumptions used by the executive directors for measuring the premium reserves are appropriate overall.

- (c) The Company’s disclosures on the premium reserve are contained in the sections “Accounting policies” and “Notes to the individual items of the balance sheet”, subsection “technical provisions” of the notes to the consolidated financial statements. Disclosures on risks are contained in the group management report in the section “Risk report”, subsection “Technical risks of personal reinsurance”.

(4) Calculation of the estimated gross premium

(a) In its consolidated financial statements, the Company reported gross premiums of EUR 22,597.6 million in the income statement.

Assumed reinsurance premiums are accounted for in accordance with the terms and conditions of the reinsurance policies. In the absence of settlements of cedants, the Company made supplementary or complete estimates of the contributions. The estimates were based on assumptions and are therefore subject to considerable uncertainties and scope of judgment.

Due to the material significance of the amount of the estimated premiums for the assets, liabilities and financial performance of the Group as well as the considerable scope for judgment on the part of the executive directors and the associated uncertainties in the estimations made, this matter was of particular significance in the context of our audit.

(b) For the assessment of the estimated gross premium, we first conducted a design testing of the contribution and estimation process. In that connection, we identified the material key controls and analyzed their design. Based on

that analysis, we conducted a functional testing regarding the effectiveness of the key controls implemented in the process and assessed the appropriateness of the material assumptions by verifying and analyzing the calculating method for deriving the estimated gross premium.

In context of our tests of details procedures, we critically questioned the material assumptions underlying an estimate and had the Company explain to us the reasons for such estimates. Based on information on the contributions expected in the previous year, we reconciled the expectations against the actual results and thus were able to draw conclusions as to the quality of the estimates.

Based on our audit procedures, we were able to satisfy ourselves that the calculation procedures applied by the executive directors to derive the estimated gross premium are appropriate overall.

(c) The Company's disclosures on the recognized and estimated gross premiums are contained in the sections "Accounting policies" and "Notes to the individual items of the income statement" of the notes to the consolidated financial statements.

Other information

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the group management report:

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB included in section "Enterprise management" of the group management report
- the non-financial statement pursuant to § 289b Abs. 1 HGB and § 315b Abs. 1 HGB included in section "Combined non-financial information statement" of the group management report
- the disclosures contained in the group management report and marked as unaudited regarding Solvency II reporting

The other information comprises further the remaining parts of the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness

of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its con-

formity with German law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the supervisory board on 6 March 2019. We were engaged by the supervisory board on 26 June 2019. We have been the group auditor of the Hannover Rück SE, Hannover, without interruption since the financial year 2018.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

German public auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Mathias Röcker.

Hannover, 9 March 2020

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Mathias Röcker
Wirtschaftsprüfer

ppa. Dennis Schnittger
Wirtschaftsprüfer

Independent Practitioner's Report on a Limited Assurance Engagement on Non-financial Reporting

(PricewaterhouseCoopers GmbH WPG has performed a limited assurance engagement on the German version of the combined Non-financial Statement and issued an independent assurance report in German language, which is authoritative. The following text is a translation of the independent assurance report.)

To Hannover Rück SE, Hannover

We have performed a limited assurance engagement on the disclosures in the section "Combined Non-financial Statement" of the combined Non-financial Statement (hereinafter the "Non-financial Statement") included in the combined

management report pursuant to §§ (Articles) 341a Abs. (paragraph) 1a und 341j Abs 4 i. V. m. 289b Abs. 1 und 315b Abs. 1 HGB ("Handelsgesetzbuch": "German Commercial Code") of Hannover Rück SE, Hannover, (hereinafter the "Company") for the period from 1 January to 31 December 2019.

Responsibilities of the Executive Directors

The executive directors of the Company are responsible for the preparation of the Non-financial Statement in accordance with §§ 315c in conjunction with 289c to 289e HGB.

This responsibility of Company's executive directors includes the selection and application of appropriate methods of non-financial reporting as well as making assumptions and

estimates related to individual non-financial disclosures which are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as they have considered necessary to enable the preparation of a Non-financial Statement that is free from material misstatement whether due to fraud or error.

Independence and Quality Control of the Audit Firm

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

Our audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Standard on Quality

Control 1 published by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW): Requirements to quality control for audit firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis – IDW QS 1) – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's Responsibility

Our responsibility is to express a limited assurance conclusion on the Non-financial Statement based on the assurance engagement we have performed.

Within the scope of our engagement, we did not perform an audit on external sources of information or expert opinions, referred to in the Non-financial Statement.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or

Reviews of Historical Financial Information, issued by the IAASB. This Standard requires that we plan and perform the assurance engagement to allow us to conclude with limited assurance that nothing has come to our attention that causes us to believe that the Company's Non-financial Statement for the period from 1 January to 31 December 2019 has not been prepared, in all material aspects, in accordance with §§ 315c in conjunction with 289c to 289e HGB.

In a limited assurance engagement, the assurance procedures are less in extent than for a reasonable assurance en-

agement, and therefore a substantially lower level of assurance is obtained. The assurance procedures selected depend on the practitioner's judgment.

Within the scope of our assurance engagement, we performed amongst others the following assurance procedures and further activities:

- Obtaining an understanding of the structure of the sustainability organization and of the conducted materiality analyses
- Inquiries of management and personnel involved in the preparation of the Non-financial Statement regarding

the preparation process, the internal control system relating to this process and selected disclosures in the Non-financial Statement

- Identification of the likely risks of material misstatement of the Non-financial Statement
- Analytical evaluation of selected disclosures in the Non-financial Statement
- Comparison of selected disclosures with corresponding data in the consolidated financial statements and in the combined management report
- Evaluation of the presentation of the non-financial information

Assurance Conclusion

Based on the assurance procedures performed and assurance evidence obtained, nothing has come to our attention that causes us to believe that the Company's Non-financial State-

ment for the period from 1 January to 31 December 2019 has not been prepared, in all material aspects, in accordance with §§ 315c in conjunction with 289c to 289e HGB.

Intended Use of the Assurance Report

We issue this report on the basis of the engagement agreed with the Company. The assurance engagement has been performed for purposes of the Company and the report is solely intended to inform the Company about the results of the lim-

ited assurance engagement. The report is not intended for any third parties to base any (financial) decision thereon. Our responsibility lies only with the Company. We do not assume any responsibility towards third parties.

Frankfurt am Main, 9 March 2020

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Nicolette Behncke
Wirtschaftsprüfer
[German public auditor]

ppa. Benedikt Tschinkl

Responsibility statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group management report 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.

Hannover, 6 March 2020

Executive Board



Henchoz



Althoff



Chèvre



Dr. Miller



Dr. Pickel



Sehm



Vogel

Supervisory Board

Report of the Supervisory Board

of Hannover Rück SE

In our function as the Supervisory Board we considered at length during the 2019 financial year the position and development of the company and its major subsidiaries. We advised the Executive Board on the direction of the company and monitored the management of business on the basis of written and verbal reports from the Executive Board. The Supervisory Board of Hannover Rück SE held four regular meetings in order to adopt the necessary resolutions after appropriate discussion. A further meeting was a constituent meeting of the Supervisory Board held following the General Meeting. In addition, the Supervisory Board adopted two resolutions in the reporting period by a written procedure. All the Supervisory Board members attended the Supervisory Board meetings held in 2019 in person. Two representatives of the Federal Financial Supervisory Authority attended one meeting on a routine basis. We were informed by the Executive Board in writing and orally on the basis of the quarterly statements about the course of business as well as the position of the company and the Group. With regard to reports on topics that fall under the responsibility of key functions, we had an opportunity to engage directly in a dialogue with the respective key function holders, who attended parts of the meetings as guests. The quarterly reports with the components of the financial statements and the key figures for the

Key points of deliberation

At its meeting on 6 March 2019 the Supervisory Board discussed the audited annual and consolidated financial statements as well as the Executive Board's proposal for the appropriation of the disposable profit for the 2018 financial year. In this regard, as in the previous year, the Executive Board described all material indicators from the technical and non-technical accounts as well as key data on the investment side. The independent auditor directly presented the results of the audit and elaborated on the audit procedure. The Executive Board outlined the prospects for the current 2019 financial year and we discussed the major insights from the compliance, audit and risk reports. Among the steps taken as part of the annual revision of the investment guidelines, adjustments were made inter alia with respect to certain formal and procedural clarifications for the asset managers and specifications regarding limit calculations were described in greater detail. Additionally, the already defined budget for the "impact investment funds" variant of the private equity asset class was included in the procedural stipulations and the

Hannover Re Group constituted an important source of information for the Supervisory Board. We also regularly held discussions without the presence of the Executive Board, inter alia regarding personnel matters on the level of the Executive Board.

We received an analysis of the 2018 results in property & casualty and life & health reinsurance as well as a presentation from the Executive Board covering the profit expectations for the 2019 financial year and the operational planning for the 2020 financial year. In addition, the Chairman of the Supervisory Board was constantly kept informed by the Chairman of the Executive Board of major developments and impending decisions as well as of the risk situation within the company and the Group. All in all, we were involved in decisions taken by the Executive Board and assured ourselves of the lawfulness, regularity and efficiency of the company's management as required by our statutory responsibilities and those placed upon us by the company's Articles of Association.

No audit measures pursuant to § 111 Para. 2 Sentence 1 Stock Corporation Act (AktG) were required in the 2019 financial year.

thresholds contained in the guidelines. At the recommendation of the Finance and Audit Committee, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft – following its initial appointment in 2017 – was again awarded the mandate to audit the annual financial statements. In preparation for the Annual General Meeting on 8 May 2019, the agenda and the proposal for the election of new shareholder representatives was discussed and approved by the Supervisory Board. In this context consideration was given to the competencies within the entire Supervisory Board as well as aspects relating to diversity and the independence of the members of the Supervisory Board. In concrete terms, the Supervisory Board deliberated on the election of Dr. Michael Ollmann, who also attended the meeting for this purpose as a guest. Furthermore, after extensive consideration and in accordance with the recommendation of the Standing Committee, we appointed Ms. Silke Sehm as a member of the company's Executive Board to succeed Mr. Jürgen Gräber, whose long-standing commendable service on the Executive Board

of Hannover Re was singled out for special praise. We approved the resulting amendment to the schedule of responsibilities within the Executive Board. In addition, the variable remuneration of the members of the Executive Board was defined on the basis of the findings with respect to attainment of the respective targets for the 2018 financial year. In this context, as usual, we factored the findings of external surveys into our deliberations for the purpose of making a market comparison.

On 6 May 2019 the Executive Board reported to us on the first quarter of 2019 and we explored the overall results of the previous year in greater detail; in this regard the Executive Board presented relevant analyses regarding the quality of the loss reserves in property and casualty reinsurance and the intrinsic value creation (IVC). In addition to the outlook for the current financial year, the examination of the Own Risk and Solvency Assessment (ORSA) and the capitalisation under Solvency II constituted further key points of deliberation. Following up on this, the structure of the Regular Supervisory Report (RSR) and its differences and overlaps relative to the ORSA were explained. We also received a report on the return on investment as compared with peer companies and a detailed report on non-US life business. Lastly, a resolution was adopted that created the basis for issuance of subordinated capital later in the year. In view of the personnel changes on the Executive Board that had already been approved in the previous year, under which Mr. Jean-Jacques Henchoz was initially appointed as a member of the Executive Board and subsequently also as Chief Executive Officer, further adjustments to the schedule of responsibilities for the Executive Board were then approved.

Following the General Meeting on 8 May 2019, at which the shareholder representatives were elected, we came together for a constituent meeting. This was also attended for the first time by the employee representatives who had been newly elected by the workforce, namely Ms. Natalie Bani Ardalan, Ms. Ilka Hundeshagen and Ms. Frauke Heitmüller (re-elected). At the meeting we chose from among our ranks the Chairman and Deputy Chairman as well as the members of the Finance and Audit Committee, the Standing Committee and the Nomination Committee (composition shown on pages 4 to 5 of the Annual Report of Hannover Rück SE). In this regard, particular emphasis was placed on ensuring that the necessary expertise, experience and independence are preserved on the committees.

On 7 August 2019 the Executive Board reported on the first half of 2019; in this context, as usual, it described the materi-

al indicators from the technical and non-technical accounts and outlined the attainment status of the strategic objectives. The outlook for the current financial year was followed by a discussion of the key insights from the risk report. Hannover Re's activities in the insurance-linked securities (ILS) market, on which we received a detailed report, were another major focus of the August meeting. In addition, we considered a strategic transaction relating to a participating interest. We also received the audit report on the solvency balance sheet. With an eye to the self-assessment of the Supervisory Board's areas of expertise that had once more been carried out, the Supervisory Board decided that the extensive list of topics which goes beyond the regulatory requirements will be used again in 2020.

At the last meeting of the year on 5 November 2019, we deliberated at length on the key preliminary results in the business performance together with the outlook for the current financial year. We were provided with the report on employee capacities. The Executive Board also presented to us the operational planning for 2020; we considered this in detail and subsequently approved the annual/results planning submitted to us. We discussed the latest insights from the risk report and were informed of the status of major pending legal proceedings. In addition, the 100-day report by the Chief Executive Officer on the strategic orientation of Hannover Re and the measures for ensuring profitability during the P&C underwriting process were focal points of our deliberations. The capital increase at a subsidiary was approved in advance. As in every year, the full Supervisory Board considered the adequacy of the remuneration system for the members of the Executive Board. Based on the findings of the "Fit & Proper" self-assessment that had been conducted among the Supervisory Board members and against the backdrop of the new composition of the Supervisory Board, we engaged in an extensive exchange of views on a development plan for the entire Supervisory Board. It was again the case this year that the individual members of the Supervisory Board attended numerous advanced training measures in relation to various core topics and competencies. We also decided to update the policy regarding the specialist and personal requirements for members of the Supervisory Board. Furthermore, we dedicated a significant part of our discussion to corporate governance issues and in this regard we approved the revised diversity concept and the updated Declaration of Conformity (see also further information below).

As in every year, we were regularly briefed on the work of the Supervisory Board committees.

Committees of the Supervisory Board

Of the committees formed by the Supervisory Board within the meaning of § 107 Para. 3 Stock Corporation Act (AktG), the Finance and Audit Committee met on four occasions, with one resolution adopted by a written procedure, and the Standing Committee met three times. The Chairman of the Supervisory Board updated the full Supervisory Board on the major deliberations of the committee meetings at its next meeting and provided an opportunity for further questions.

The Finance and Audit Committee considered inter alia the consolidated financial statement and the quarterly reports drawn up in accordance with IFRS and the individual financial statement of Hannover Rück SE drawn up in accordance with the German Commercial Code (HGB), and it discussed with the independent auditors their reports on these financial statements. As in the previous years, an expert opinion on the adequacy of the loss reserves in property and casualty reinsurance was noted, the retrocession structure of the Hannover Re Group, the risk reports and the compliance report were discussed, and reports on the major subsidiaries were received and considered. In addition, the Committee examined the investment structure and investment income – including the stress tests with regard to the investments and their implications for net income and the equity base. The audit concentrations of the independent auditors for the 2019 financial year were defined. The Committee continued to be provided with ongoing detailed reports on the recognition and measurement of the risk-oriented book of US life reinsurance business acquired in 2009 from Scottish Re as well as on

Corporate Governance

The Government Commission on the German Corporate Governance Code (DCKG) adopted an extensive revision of the German Corporate Governance Code in May 2019, although this had not entered into force by year-end. We nevertheless devoted considerable attention to the topic of corporate governance and the proposed changes. For example, the Supervisory Board updated the diversity concept in the year under review (cf. page 124 et seq. of the combined management report in the present Annual Report) and reported on the manner of its implementation as well as the results achieved in the financial year. The diversity on the Supervisory Board and Executive Board was increased accordingly in the financial year and steps were initiated to bring about a further improvement in the coming years.

We considered the report by the Executive Board on non-financial matters (cf. page 70 et seq. of the combined management report in the present Annual Report) and examined it. PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft also audited the information statement with limited assurance in accordance with the audit standard ISAE 3000 (Revised) (see here the Independent Auditor's Report on page 268 et seq.).

the rate increases that had been initiated and/or implemented. The measures for ensuring profitability during the P&C underwriting process – which were also subsequently reported to the full Executive Board – were discussed in detail and the Committee was able to obtain a good understanding of the established, transparent system. Furthermore, the Committee examined in detail Hannover Re's activities in the insurance-linked securities (ILS) market.

The Standing Committee considered, in the first place, the appointment of Ms. Silke Sehm as a member of the Executive Board, in which regard Ms. Sehm – who had already worked for Hannover Re for many years – also attended part of the meeting as a guest. As in the previous years, among other things, the adequacy of the system of remuneration for the members of the Executive Board was reviewed, the variable remuneration of the members of the Executive Board for the 2018 financial year was determined based on the findings pertaining to attainment of their respective targets and the remuneration for the Board members who were due for review was examined. More specific consideration was also given to the occupational pension commitments in the adequacy review. In all these matters the Committee drew up corresponding recommendations for the full Supervisory Board. The Committee deliberated at length on the medium- and long-time succession arrangements for the Executive Board. In addition, the individual objectives of the members of the Executive Board for 2020 were defined.

In addition, the Supervisory Board received a report on the design of the remuneration schemes as well as the compliance, internal audit and risk reports. The Supervisory Board further noted that at least three of its members – namely Dr. Andrea Pollak, Dr. Ursula Lipowsky and Dr. Michael Ollmann – are to be considered independent members of the Supervisory Board.

Notwithstanding the high importance that the Supervisory Board attaches to the standards of good and responsible enterprise management defined in the German Corporate Governance Code as amended on 7 February 2017, the Supervisory Board decided not to fully comply with the recommendations contained in Code Section 4.2.3 Para. 2 regarding caps on the amount of variable compensation elements in management board contracts, in Code Section 4.2.3 Para. 4 concerning a cap on severance payments in management board contracts and in Code Section 5.3.2 Para. 3 Sentence 2 concerning the independence of the Chair of the Audit Committee. Justification for these divergences is provided in the Declaration of Conformity pursuant to § 161 Stock Corporation Act (AktG) regarding compliance with the German Corporate Governance Code, which is reproduced in the pres-

ent Annual Report as part of the Declaration on Corporate Governance (cf. page 120 et seq.). Further information on the

topic of corporate governance is available on the website of Hannover Rück SE.

Audit of the annual financial statements and consolidated financial statements

The accounting, annual financial statements, consolidated financial statements and the combined management report were audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft. The Supervisory Board chose the auditor and the Chairman of the Supervisory Board awarded the audit mandate. The auditor's independence declaration was received. Along with the audit concentrations of the German Financial Reporting Enforcement Panel (DPR), the additional audit concentrations defined by the European Securities and Markets Authority (ESMA) also formed part of the scope of the audit. The mandate for the review report by the independent auditors on the Half-yearly Financial Report as at 26 June 2019 was also awarded again. The special challenges associated with the international aspects of the audits were met without reservation. Since the audits did not give rise to any objections, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft issued unqualified audit certificates. It was also determined that the annual financial statement contains the information pursuant to § 289f German Commercial Code (HGB). The Finance and Audit Committee discussed the financial statements and the combined management report with the participation of the auditors and in light of the audit reports, and it informed the Supervisory Board of the outcome of its reviews. The audit reports were distributed to all the members of the Supervisory Board and explored in detail – with the participation of the auditors – at the Supervisory Board meeting held to consider the annual results. The auditors will also be present at the Annual General Meeting.

The report on the company's relations with affiliated companies drawn up by the Executive Board has likewise been examined by PricewaterhouseCoopers GmbH Wirtschaftsprü-

fungsgesellschaft and given the following unqualified audit certificate:

“Having audited the report in accordance with our professional duties, we confirm that

1. the factual details of the report are correct;
2. in the case of the transactions detailed in the report, the expenditure of the company was not unreasonably high.”

We have examined

- a. the annual financial statements of the company, the financial statements of the Hannover Re Group and the combined management report prepared by the Executive Board for the company and the Group, and
- b. the report of the Executive Board pursuant to § 312 Stock Corporation Act (AktG) (Report on relations with affiliated companies)

– in each case drawn up as at 31 December 2019 – and have no objections in this regard; nor do we have any objections to the statement made by the Executive Board at the end of the report on relations with affiliated companies.

The Supervisory Board concurred with the opinions of the auditors and approved the annual financial statements and the consolidated financial statements; the annual financial statements are thereby adopted. Our proposal regarding the appropriation of the disposable profit for 2019 is in accordance with that of the Executive Board.

Changes on the Supervisory Board and the Executive Board

Changes occurred in the composition of the Supervisory Board, its committees and the Executive Board in the year under review. The term of office of the company's Supervisory Board expired pursuant to § 10 (3) of the Articles of Association of Hannover Rück SE at the end of the General Meeting on 8 May 2019. At the suggestion of the Nomination Committee and bearing in mind the targets for the composition of the Supervisory Board, the former Supervisory Board therefore proposed the following persons for election as representatives of the shareholders of the company with effect from the end of the Annual General Meeting on 8 May 2019 for the period until the end of the General Meeting that ratifies the actions taken for the 2023 financial year, although at most for a term of six years:

- Herbert K. Haas
- Torsten Leue
- Dr. Ursula Lipowsky

- Dr Michael Ollmann
- Dr. Andrea Pollak
- Dr. Erhard Schipporeit

The resolution was adopted by the General Meeting as proposed. Dr. Immo Querner was therefore not re-elected to the Supervisory Board, from which he stepped down at the end of the General Meeting. We are grateful to him for his valuable contributions to the discussions and for his highly valued expertise.

Furthermore, in accordance with the provisions of the SE Participation Act (SEBG) the following employee representatives were elected to the Supervisory Board by the workforce with effect from the end of the Annual General Meeting on 8 May 2019:

- Natalie Bani Ardalan
- Frauke Heitmüller
- Ilka Hundeshagen

Mr. Otto Müller and Ms. Maike Sielaff thus routinely stepped down from the Supervisory Board at this time. The Supervisory Board would like to express its sincere thanks for their good cooperation and the conscientious fulfilment of their duties on the Supervisory Board over the past few years.

On 6 March 2019, following the sudden and entirely unexpected passing of Mr. Jürgen Gräber on 9 November 2018, Ms. Silke Sehm was appointed to the Executive Board. In this connection changes arose in the Board responsibilities for property and casualty reinsurance, which we discussed in conjunction with the appointment and the implementation of which we approved in the context of the revised schedule of responsibilities for the Executive Board. In addition to the areas of structured reinsurance and insurance-linked securities, Ms. Sehm now bears responsibility for French-speaking

markets in Europe and the Nordic countries as well as Central and Eastern Europe and the company's natural catastrophe business. In appointing Ms. Sehm, the Standing Committee and subsequently the full Supervisory Board were able to form a good picture of her extensive personal and specialist competencies. We wish Ms. Sehm every success in her new role and look forward to continued good cooperation going forward.

Mr. Henchoz, who had already been appointed by the Supervisory Board in the previous year, commenced his duties as a member of the Executive Board on 1 April 2019 and as Chief Executive Officer with effect from the end of the Annual General Meeting on 8 May 2019. His predecessor, Mr. Ulrich Wallin, retired at this time. The Supervisory Board greatly appreciated working with Mr. Wallin. We believe that his vast expertise and experience, combined with his prudent leadership of the company, were essential ingredients in Hannover Re's success in recent years.

Word of thanks to the Executive Board and members of staff

The good result generated by Hannover Rück SE for the 2019 financial year was made possible by the exceptional performance of the Executive Board and the members of staff work-

ing for the company and the Group. The Supervisory Board would like to express its recognition and special appreciation to the Executive Board and all the employees for their efforts.

Hannover, 10 March 2020

The Supervisory Board



Leue



Haas



Bani Ardalan



Heitmüller



Hundeshagen



Dr. Lipowsky



Dr. Ollmann



Dr. Pollak



Dr. Schipporeit

Supervisory Board of Hannover Rück SE

Torsten Leue^{1,2,3}

Hannover
(since 7 May 2018)⁵

Chairman

Chief Executive Officer of HDI Haftpflichtverband der Deutschen Industrie V.a.G.

Chief Executive Officer of Talanx AG

Herbert K. Haas^{1,2,3}

Burgwedel
(since 24 May 2002)⁵

Deputy Chairman

Former Chief Executive Officer of Talanx AG and HDI Haftpflichtverband der Deutschen Industrie V.a.G.

Natalie Bani Ardalan⁴

Springe
(since 8 May 2019)⁵

Employee

Frauke Heitmüller⁴

Hannover
(since 3 May 2012)⁵

Employee

Ilka Hundeshagen⁴

Hannover
(since 8 May 2019)⁵

Employee

Dr. Ursula Lipowsky²

Munich
(since 7 May 2018)⁵

Member of the Supervisory Board of the Association, Association of German Dioceses (VDD), Corporation under Public Law

Dr. Michael Ollmann

Hamburg
(since 8 May 2019)⁵

Member of various supervisory boards

Dr. Andrea Pollak³

Vienna, Austria
(since 3 May 2011)⁵

Independent management consultant

Deputy Chairwoman of the Supervisory Board of Fronius International GmbH, Pettenbach, Austria⁵

Dr. Immo Querner

Celle
(until 8 May 2019)

Member of the Board of Management of Talanx AG

Member of the Board of Management of HDI Haftpflichtverband der Deutschen Industrie V.a.G.

Dr. Erhard Schipporeit¹

Hannover
(since 3 May 2007)⁵

Member of various supervisory boards

Maike Sielaff⁴

Burgwedel
(until 8 May 2019)

Employee

¹ Member of the Standing Committee

² Member of the Finance and Audit Committee

³ Member of the Nomination Committee

⁴ Staff representative

⁵ Date when member was first appointed/elected to the company's Supervisory Board, current term of office for the entire Supervisory Board commenced at the end of the Annual General Meeting on 8 May 2019

Details of memberships of legally required supervisory boards and comparable control boards at other domestic and foreign business enterprises are contained in the Annual Report of Hannover Rück SE.

Further information

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Managing Director & CEO:

Gerd Obertopp

Hannover Rueck SE

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General Manager –

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Adham El-Muezzin

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Chantal Cardinez

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President & CEO:

Jeffrey Robert Burt

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President & CEO:

Dr. Konrad Rentrup

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Hannover Rück SE

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Laurel E. Grant

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Wilbur Lo

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Glossary

Accumulation loss: sum of several individual losses incurred by various policyholders as a result of the same loss event (e.g. windstorm, earthquake). This may lead to a higher loss for the direct insurer or reinsurer if several affected policyholders are insured by the said company.

Acquisition cost, deferred (DAC): cost of an insurance company that arises from the acquisition or the renewal of an insurance contract (e.g. commission for the closing, costs of proposal assessment and underwriting etc.). Capitalisation results in a distribution of the cost over the duration of the contract.

Aggregate excess of loss treaty: the reinsurance treaty attaches if a ceding insurer incurs losses on a particular line of business during a specific period (usually twelve months) in excess of a stated amount.

Allocated capital: cf. → capital allocation

Alternative risk financing: use of the capacity available on the capital markets to cover insurance risks, e.g. through the securitisation of natural catastrophe risks.

American Depositary Receipt (ADR): share certificates written by US banks on foreign shares deposited there. The ADRs are traded instead of the foreign shares. In the United States Hannover Re has enabled trading on the OTC (over-the-counter) market through an ADR Level 1 program. New capital cannot be raised and the ADR is not listed on a US exchange under a Level 1 program. The main advantage of an ADR Level 1 program compared to higher-level programs is that there is no requirement for accounting or financial reporting in accordance with US GAAP.

BaFin: Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht)

Benefit reserves: value arrived at using mathematical methods for future liabilities (usually prospectively as present value of future liabilities minus present value of future incoming premiums), primarily in life and health insurance (that is transacted in a similar way to life insurance).

Book value per share: shareholders' equity divided by the number of shares outstanding

Capital allocation: risk-appropriate allocation of the economic capital to the business segments of property & casualty reinsurance and life & health reinsurance as well as the investments on the basis of the respective economic risk content.

Our internal capital model supplies key parameters such as the volatility of the covered business/investments and the contribution to diversification.

Capital asset pricing model (CAPM): model used to explain the materialisation of prices/returns on the capital market based on investor expectations regarding the future probability distribution of returns. Under this method, the opportunity cost rate for the shareholders' equity consists of three components – a risk-averse interest rate, a market-specific risk loading and an enterprise-specific risk assessment, the beta coefficient. The cost of shareholders' equity is therefore defined as follows: risk-averse interest rate + beta * enterprise-specific risk assessment.

Cash flow statement: statement on the origin and utilisation of cash and cash equivalents during the accounting period. It shows the changes in liquid funds separated into cash flows from operating, investing and financing activities.

Cat. bonds: securitised (re)insurance risks in respect of which the payment of interest and/or repayment of capital is dependent on the occurrence and severity of a predefined insured event. Purchasers of a catastrophe bond assume the risk carried by the (re)insurer upon occurrence of the catastrophic event. Catastrophe bonds are part of the insurance-linked securities market. Cf. → securitisation instruments

Cedant: direct insurer or reinsurer which passes on (also: cedes) shares of its insured or reinsured risks to a reinsurer in exchange for premium.

Cession: transfer of a risk from the direct insurer to the reinsurer.

Claims and claims expenses: sum total of paid claims and provisions for loss events that occurred in the business year; this item also includes the result of the run-off of the provisions for loss events from previous years, in each case after the deduction of own reinsurance cessions.

Coinsurance Funds Withheld (CFW) Treaty: reinsurance treaty under which the ceding company retains a portion of the original premium at least equal to the ceded reserves.

Combined ratio: sum of the loss ratio and expense ratio.

Compliance: compliance by an enterprise with legal requirements.

Confidence (also: probability) level: the confidence level defines the probability with which the defined amount of risk will not be exceeded.

Corporate Governance: serves to ensure responsible management and supervision of enterprises and is intended to foster the trust of investors, clients, employees and the general public in companies.

Credit spread: Mark-up between a risky and a risk-free interest-bearing security with the same maturity, as a risk premium for the credit risk entered into by the investor.

Critical illness cover: cf. → dread disease cover

Deposit accounting: an accounting method originating in US GAAP for the recognition of short-term and multi-year insurance and reinsurance contracts with no significant underwriting risk transfer. The standard includes inter alia provisions relating to the classification of corresponding contract types as well as the recognition and measurement of a deposit asset or liability upon inception of such contracts.

Deposits with ceding companies/deposits received from retrocessionaires (also: funds held by ceding companies/funds held under reinsurance treaties): collateral provided to cover insurance liabilities that a (re-)insurer retains from the liquid funds which it is to pay to a reinsurer under a reinsurance treaty. In this case, the retaining company shows a deposit received, while the company furnishing the collateral shows a deposit with a ceding company.

Derivatives, derivative financial instruments: financial products derived from underlying primary instruments such as equities, fixed-income securities and foreign exchange instruments, the price of which is determined on the basis of an underlying security or other reference asset. Notable types of derivatives include swaps, options and futures.

Direct (also: primary) insurer: company which accepts risks in exchange for payment of an insurance premium and pays indemnification for the insured loss in the event of a claim. A direct insurer has a direct contractual relationship with the policyholder (private individual, company, organisation).

Discounting of loss reserves: determination of the present value of future profits through multiplication by the corresponding discount factor. In the case of the loss reserves this is necessary because of the new profit calculation methods for tax purposes applicable to German joint-stock corporations.

Diversification: orientation of business policy towards various revenue streams in order to mitigate the effects of e.g. economic fluctuations or natural catastrophes and thereby minimise the volatility of results. Diversification is an instrument of growth policy and risk policy for a company.

Dread disease (also: critical illness) cover: personal rider on the basis of which typically a lump-sum cash payment is made in the event of previously defined severe illnesses.

Earnings per share, diluted: ratio calculated by dividing the consolidated net income (loss) by the weighted average number of shares outstanding. The calculation of the diluted earnings per share is based on the number of shares including subscription rights already exercised or those that can still be exercised.

Earnings retention: non-distribution of a company's profits leading to a different treatment for tax purposes than if profits were distributed.

Excess of loss treaty: cf. → non-proportional reinsurance

Excess return on capital allocated (xRoCA): indicator which describes the IVC in relation to the allocated capital and shows the relative excess return generated above and beyond the weighted cost of capital.

Expense ratio: administrative expenses (gross or net) in relation to the (gross or net) premium earned.

Exposure: level of danger inherent in a risk or portfolio of risks; this constitutes the basis for premium calculations in reinsurance.

Facultative reinsurance: participation on the part of the reinsurer in a particular individual risk assumed by the direct insurer. This is in contrast to obligatory (also: treaty) reinsurance.

Fair value: price at which a financial instrument is freely traded between two parties.

Financial Solutions: reinsurance transactions which – in addition to the transfer of biometric risks – also include financing components such as financing arrangements for new and existing business, reserve relief, smoothing of volatility in results, optimisation of the solvency position.

Frequency losses: losses that occur frequently in a foreseeable amount, i.e. where the underlying risks are associated with relatively high probabilities of occurrence and usually low loss amounts.

Funds held by ceding companies/funds held under reinsurance treaties: cf. → deposits with ceding companies/deposits received from retrocessionaires

Goodwill: the excess of the cost of an acquired entity over the net of the amounts assigned to assets acquired and liabilities assumed.

Gross/Retro/Net: gross items constitute the relevant sum total deriving from the acceptance of direct insurance policies or reinsurance treaties; retro items constitute the relevant sum total deriving from own reinsurance cessions. The difference is the corresponding net item (gross – retro = net, also: for own account).

Group net income: Group net income under IFRS corresponds to the profit for the year available to the shareholders of Hannover Re.

Hybrid capital: debt structure which because of its subordination bears the character of both debt and equity.

IBNR (Incurred but not reported) reserve: provision for claims which have already occurred but which have not yet been reported.

Impairment: extraordinary amortisation taken when the present value of the estimated future cash flow of an asset is less than its book value.

Insurance-linked securities (ILS): securitised insurance risks, such as catastrophe bonds, derivatives or collateralised reinsurance.

Insurance pool: a risk-sharing partnership under civil law formed by legally and economically independent insurers and reinsurers in order to create a broader underwriting base for particularly large or unbalanced risks. The members undertake to write certain risks only within the scope of the insurance pool. They include such risks – while maintaining their commercial independence – in the insurance pool against a commission fee. Each insurer participates in the profit or loss of the insurance pool according to its proportionate interest. Reinsurance is often ceded or accepted in order to further diversify the risk. Pools can be divided into two types: coin-surance pools, in which all members take the role of primary insurers according to their interests, and reinsurance pools, in which a primary insurer writes the risks and then spreads them among the participating insurers by way of reinsurance.

Insurtech: term referring to new business models/companies in the insurance industry that focus primarily on the use of new technologies.

Internal model: economic capital model verified and approved by the Federal Financial Supervisory Authority that better reflects the company's risk profile than the standard formula under Solvency II.

International Securities Identification Number (ISIN): ten-character universal code used to identify securities internationally. It is prefixed by a country code that specifies the country where the issuer entity is legally registered or in which it has legal domicile, e.g. DE = Germany.

Intrinsic value creation (IVC): the IVC is calculated according to the following formula: real operating value creation = adjusted operating profit (EBIT) – (capital allocated x weighted cost of capital). IVC is a tool of value-based enterprise management used to measure the accomplishment of long-term targets on the level of the Group, the individual business groups and the operating units (profit centres).

Investment grade: investment grade ratings are awarded to companies and assigned to securities that have a low risk profile. They contrast with non-investment-grade ratings, which by definition include speculative elements and therefore entail a significantly higher risk.

IVC: cf. → Intrinsic value creation

Issuer: private enterprise or public entity that issues securities, e.g. the federal government in the case of German Treasury Bonds and a joint-stock corporation in the case of shares.

Leader: if several (re-)insurers participate in a contract, one company assumes the role of leader. The policyholder deals exclusively with this lead company. The lead (re-)insurer normally carries a higher percentage of the risk for own account.

Letter of credit (LOC): bank guarantee under which, at the request of the guaranteed party, the bank undertakes to render payment to the said party up to the amount specified in the LOC. This method of providing collateral in reinsurance business is typically found in the USA.

Life and health (re-)insurance: collective term for the lines of business concerned with the insurance of persons, i.e. life, pension, health and personal accident insurance.

Life business: this term is used to designate business activities in our life and health reinsurance business group.

Longevity risk: in general terms, the actuarial risk that a person receiving regular living benefits – such as annuities or pensions – lives longer than expected.

Loss, economic: total loss incurred by the affected economy as a whole following the occurrence of a loss. The economic loss must be distinguished from the insured loss.

Loss, insured: the insured loss reflects the total amount of losses covered by the insurance industry (insurers and reinsurers).

Loss ratio: proportion of loss expenditure in the retention relative to the (gross or net) premium earned.

Major loss: loss which has special significance for the direct insurer or reinsurer due to the amount involved; it is defined as a major loss in accordance with a fixed loss amount or other criteria (in the case of Hannover Re more than EUR 10 million gross).

Major loss budget: annual budget for major losses determined from the modelled loss expectancy for business with natural perils exposure as well as for man-made net losses larger than EUR 10 million.

Mark-to-market valuation: the evaluation of financial instruments to reflect current market value or fair value.

Matching currency cover: coverage of technical liabilities in foreign currencies by means of corresponding investments in the same currency in order to avoid exchange-rate risks.

Modified Coinsurance (ModCo) treaty: type of reinsurance treaty where the ceding company retains the assets with respect to all the policies reinsured and also establishes and retains the total reserves on the policies, thereby creating an obligation to render payments to the reinsurer at a later date. Such payments include a proportional share of the gross premium plus a return on the assets.

Morbidity risk: in general terms, the actuarial risk that the state of health of a person is adversely impacted by illness, malfunctioning of organs or other body parts (functional disability), injury or frailty and that higher costs are triggered by medical treatment, long-term care or protracted periods of disability.

Mortality risk: in general terms, the actuarial risk that a person upon whose death a benefit is payable lives shorter than expected. From a (re)insurer's perspective, this is the risk that the observed mortality experience in an underlying portfolio deviates from what had previously been calculated on the basis of actuarial assumptions.

Net: cf. → Gross/Retro/Net

Non-proportional reinsurance: reinsurance treaty under which the reinsurer assumes the loss expenditure in excess of a particular amount (priority) (e.g. under an excess of loss treaty). This is in contrast to proportional reinsurance.

Obligatory (also: treaty) reinsurance: reinsurance treaty under which the reinsurer participates in a cedant's total, precisely defined insurance portfolio. This is in contrast to facultative reinsurance.

Other securities, available-for-sale: securities that cannot be clearly allocated to the "trading" or "held-to-maturity" portfolios; these securities can be disposed of at any time and are reported at their fair value at the balance sheet date. Changes in fair value are not recognised in the statement of income.

Other securities, held-to-maturity: investments in debt securities that can and are intended to be held to maturity. They are measured at amortised cost.

Other securities, trading: securities that are held principally for short-term trading purposes. They are measured at their fair value at the balance sheet date.

Portfolio: a) all risks assumed by an insurer or reinsurer in a defined sub-segment (e.g. line of business, country) or in their entirety; b) group of investments defined according to specific criteria.

Premium: remuneration for the risks accepted from an insurance company. Unlike the earned premiums, the written premiums are not deferred.

Present value of future profits (PVFP): intangible asset primarily arising from the purchase of life and health insurance companies or portfolios. The present value of expected future profits from the portfolio assumed is capitalised and amortised according to schedule.

Price/earnings ratio (PER): a valuation ratio of a company's share price compared to its per-share earnings.

Primary insurer: cf. → direct insurer

Priority: direct insurer's loss amount stipulated under non-proportional reinsurance treaties; if this amount is exceeded, the reinsurer becomes liable to pay. The priority may refer to an individual loss, an accumulation loss or the total of all annual losses.

Probability level: cf. → confidence level

Property and casualty (re-)insurance: collective term for the lines of business concerned with the insurance of property, including for example liability, fire, hail or marine insurance.

Proportional reinsurance: reinsurance treaties on the basis of which shares in a risk or portfolio are reinsured under the relevant direct insurer's conditions. Premiums and losses are shared proportionately on a pro-rata basis. This is in contrast to non-proportional reinsurance.

Protection cover: protection of segments of an insurer's portfolio against major losses (per risk/per event), primarily on a non-proportional basis.

Provision: liability item as at the balance sheet date to discharge obligations which exist but whose extent and/or due date is/are not known. Technical provisions, for example, are for claims which have already occurred but which have not yet been settled, or have only been partially settled (= provision for outstanding claims, abbreviated to: claims provision).

Provision for unearned premiums (also: unearned premium reserve): premiums written in a financial year which are to be allocated to the following period on an accrual basis. This item is used to defer written premiums.

Purchase cost, amortised: the cost of acquiring an asset item including all ancillary and incidental purchasing costs; in the case of wasting assets less scheduled and/or special amortisation.

Quota share reinsurance: form of proportional reinsurance under which the reinsurer assumes a contractually set percentage share of the written risk. Since the insurer is responsible for acquisition, pricing, policy administration and claims handling, the administrative expenditure for the reinsurer is very low. The latter therefore participates in the aforementioned expenses through payment of a reinsurance commission.

Rate: percentage rate (usually of the premium income) of the reinsured portfolio which is to be paid to the reinsurer as reinsurance premium under a non-proportional reinsurance treaty.

Reinsurance: passing on of a primary insurer's or reinsurer's risks to a reinsurer.

Reinsurer: company which accepts risks or portfolio segments from a direct insurer or another reinsurer in exchange for an agreed premium.

Reserve ratio: ratio of (gross or net) technical provisions to the (gross or net) premiums.

Retention: the part of the accepted risks which an insurer/reinsurer does not reinsure, i. e. shows as net (retention ratio: percentage share of the retention relative to the gross written premiums).

Retrocession (also: Retro): ceding of risks or shares in risks which have been reinsured. Retrocessions are ceded to other risk carriers (retrocessionaires) in exchange for a pro-rata or separately calculated premium (cf. → Gross/Retro/Net).

Risk, insured: risk that can lead to the occurrence of a loss. The insured risk is the subject of the insurance contract.

Securitisation instruments: instruments for transferring reinsurance business to the capital markets with the goal of refinancing or placing insurance risks.

Segment reporting: presentation of items in the balance sheet and income statement split according to functional criteria such as business sectors and regions.

Solvency II: European directive for the insurance industry. The new European regulatory regime for (re)insurers that entered into force on 1 January 2016 on the basis of the Solvency II Directive (Directive 2009/138/EC) is comprised of risk-based capital requirements and imposes quantitative, qualitative and reporting-related requirements in three main areas known as pillars.

Solvency capital ratio: Percentage coverage of the supervisory capital requirement (target solvency capital) under Solvency II by eligible own funds.

Spread loss treaty: treaty between an insurer and a reinsurer that covers risks of a defined portfolio over a multi-year period.

Structured entity: entity with specific characteristics not bound to a particular legal form that is used to conduct closely defined activities or to hold assets and for which the traditional concept of consolidation – based on voting rights – is often inadequate for determining who exercises control over the entity.

Structured reinsurance: reinsurance with limited potential for profits and losses. In most cases customers strive for risk equalisation over time or solvency relief, both of which have a stabilising effect on the ceding company's balance sheet.

Surplus reinsurance: form of proportional reinsurance under which the risk is not spread between the insurer and reinsurer on the basis of a previously agreed, set quota share. Instead, the insurer determines a maximum sum insured per risk up to which it is prepared to be liable. Risks that exceed the ceding company's retention (surpluses) are borne by the reinsurer. The reinsurer's lines thus vary according to the level of the retention and the sum insured of the reinsured contract. The reinsurer's liability is generally limited to a multiple of the ceding company's retention.

Surplus relief treaty: reinsurance contract under which an admitted reinsurer assumes (part of) a ceding company's portfolio to relieve stress on the cedant's policyholders' surplus.

Survival ratio: ratio of loss reserves to paid losses under a specific contract or several contracts in a balance sheet year.

Target solvency capital: regulatory solvency capital requirement in accordance with Solvency II standards. At Hannover Re this is calculated using an internal model.

Technical result: balance of income and expenditure allocated to the insurance business and shown in the technical statement of income.

Treaty reinsurance: cf. → obligatory reinsurance

Underwriting: process of examining, accepting or rejecting (re-)insurance risks and classifying those selected in order to charge the proper premium for each. The purpose of underwriting is to spread the risk among a pool of (re-)insureds in a manner that is equitable for the (re-)insureds and profitable for the (re-)insurer.

Unearned premium reserve: cf. → provision for unearned premiums

Volatility adjustment: Addition to the risk-free curve used under Solvency II to calculate technical provisions. Its use must be approved by the responsible supervisory authority and is intended to smooth volatility in the measurement of bonds due to changes in credit spreads.

xRoCA: cf. → Excess Return on Capital Allocated

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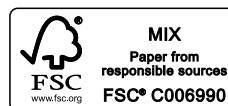
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Financial calendar 2020/2021

11 March 2020

Publication of the annual financial statements 2019

Annual Results Press Conference, Hannover

Analysts' Meeting, webcast

6 May 2020

Quarterly Statement as at 31 March 2020

6 May 2020

Annual General Meeting

Hannover Congress Centrum

Theodor-Heuss-Platz 1–3

30175 Hannover

5 August 2020

Half-yearly Financial Report 2020

21 October 2020

23rd International Investors' Day, London

4 November 2020

Quarterly Statement as at 30 September 2020

4 February 2021

Results of treaty renewals as at 1 January 2021

11 March 2021

Publication of the annual financial statements 2020

Annual Results Press Conference, Hannover

Analysts' Meeting, webcast

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